City of Walterboro
242 Hampton Street
Walterboro, SC 29488
843.782.1000

BID: CPST-14.1
I-95 Loop Project Streetscape Phases 2 & 10

DUE: Wednesday, June 2, 2021 @ 11:00am

MAIL RESPONSE TO:
City of Walterboro
Attn: Hank Amundson
242 Hampton Street
Walterboro, SC 29488

DELIVER RESPONSE TO:
City of Walterboro
Attn: Hank Amundson
242 Hampton Street
Walterboro, SC 29488

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A. OVERVIEW

City of Walterboro, South Carolina (the "City") request bids from contractors for a streetscape project on SC 63 (Sniders Highway/South Jefferies Hwy) from Cane Branch Road (S-15-193) to Beachwood Road (S-15-54) and US 15 (North Jefferies Hwy) from Wichman Street (US 17A) to Bells Hwy (SC 64), approximately 3.5 miles, in Walterboro, SC.

Subject to the terms, conditions, provisions, and the enclosed specifications, responses to this solicitation will be received at this office until the stated date and time. Responses received after the scheduled due date and time will be rejected. Bids must be submitted in a sealed package marked on the outside with the Contractor's name, address, and the solicitation name and number.

This solicitation does not commit the City of Walterboro to award a contract, to pay any costs incurred in the preparation of bids submitted, or to procure or contract for the services. The City reserves the right to accept or reject or cancel in part, or in its entirety offers received as a result of this request if deemed to be in the best interest of the City to do so.

Questions regarding this solicitation must be submitted via email to Carla Harvey, Colleton County Engineer at charvey@colletoncounty.org no later than 11:00AM on Wednesday, May 26, 2021. On behalf of the City, answers to all questions will be posted on the Colleton County website: www.colletoncounty.org/bids-and-proposal-requests as addendums to this bid.

B. SCOPE OF WORK

The project consists of adding a landscaped median and U-turn bump-outs on SC 63/US 15 which is an SCDOT roadway in Walterboro. The project also includes sidewalk, landscaping, and other streetscape enhancements as found in the bid drawings. Roadways must be open to traffic at all times during construction. Utilities may be present along certain roads. It will be the responsibility of the contractor for coordination with the local utility providers and for making the necessary adjustments. All road work is to be performed within the existing or obtained Right-of-Way of the road and construction easements.

This contract is a unit price contract.

C. INSTRUCTIONS TO CONTRACTOR

1. Submittal must include one **(1) original bid** response clearly marked as original, and **three (3) complete copies** of the Contractor's bid along with a completed **W-9 form**. Responses must be in a sealed envelope/package containing the solicitation name. The individual signing the response must be an Agent legally authorized to bind the company.

2. Show solicitation name on the outside of mailing package. The City of Walterboro assumes no responsibility for unmarked or improperly marked envelopes.

3. It is the contractor's sole responsibility to ensure that solicitation responses, amendments thereto or withdrawal requests are submitted by the scheduled due date and time.

4. The contractor must clearly mark as "Confidential" each part of their response, which they consider to be proprietary information that could be exempt from disclosure under Section 30-40(C) Code of

Laws of South Carolina, 1976, Freedom of Information Act. The City of Walterboro reserves the right to determine whether this information should be exempt from disclosure and legal action may not be brought against the City or its agents for its determination in this regard.

5. The contractor shall complete and submit all forms listed in the **Bid Forms** of the table of contents. All responses shall be printed in ink or typewritten. Bids written in pencil will be disqualified.

6. Each Contractor shall submit with his/her bid a Bid Bond with a good and sufficient surety or sureties company licensed in South Carolina, in the amount of five percent (5%) of the total Bid amount. The Bid bond penalty may be expressed in terms of a percentage of the Bid price or may be expressed in dollars and cents.

7. The successful contractor shall pay the cost and furnish within ten days after written notice of acceptance of Bid, an irrevocable Surety in the form of a Performance and Payment Bond, Certificate of Deposit, Cashier's Check or irrevocable letter of credit. Performance Bond shall include a one-year warranty of workmanship and materials and shall commence upon completion and acceptance of the total contract by the City of Walterboro. The Surety shall be issued in the amount of 100% of the total contract covering the entire term of the contract as awarded. The cost of performance bond is to be included in the unit prices listed on the bid form.

A "No Response" qualifies as a response; however, it is the responsibility of the Contractor to notify the City if you receive solicitations that do not apply.

D. SELECTION CRITERIA

It is the intent of the City of Walterboro to award one contract to the lowest responsive, responsible Contractor based on the estimated quantities on the Bid Form with final approval by City Council. Whereas the City of Walterboro Purchasing Ordinance Section 2-251 has provisions for Local Vendor preference. Bidders are encouraged to review this section for their rights under the Local Vendor Preference as this preference could be used in determining the lowest responsible bidder.

E. SPECIFIC TERMS AND CONDITIONS

1. COMPETITION: This solicitation is intended to promote full and open competition. If any language, specifications, terms and conditions, or any combination thereof restricts or limits the requirements in this solicitation to a single source, it shall be the responsibility of the interested contractor to notify the City in writing no later than five (5) business days prior to the scheduled due date and time.

2. RESPONDANTS QUALIFICATION: The City reserves the right to request satisfactory evidence of their ability to furnish services in accordance with the terms and conditions listed herein. The City further reserves the right to make the final determination as to the Contractor's ability to provide said services.

3. RESPONSE WITHDRAWAL: Any responses may be withdrawn prior to the established closing date and time, but not thereafter with proper approval from the City Manager.

4. REJECTION: The City of Walterboro reserves the right to reject any and all bids, to cancel or withdraw this solicitation, and to waive any technicality if deemed to be in the best interest of the City.

5. WAIVER: The City reserves the right to waive any Instructions to Bidder, General or Special Provisions, General or Special Conditions, or specifications deviation if deemed to be in the best interest of the City.

6. RESPONSE PERIOD: All responses shall be good for a minimum period of 60 calendar days.

7. DEVIATIONS FROM SPECIFICATIONS: Any deviation from specifications indicated herein must be clearly pointed out; otherwise, it will be considered that items offered are in strict compliance with these specifications, and successful contractor will be held responsible therefore. Deviations must be explained in detail on separate attached sheet(s). The listing of deviations, if any, is required but will not be construed as waiving any requirements of the specifications. Unidentified deviations found during the evaluation of the response may be cause for rejection.

8. AMENDMENTS: All amendments to and interpretations of this solicitation shall be in writing and issued by the City Manager of the City of Walterboro.

9. DEBARMENT: By submitting a qualification package, the contractor is certifying that they are not currently debarred from responding to any request for bids by any agency or subdivision of the State of South Carolina or the United States Federal Government, nor are they an agent of any person or entity that is currently debarred from submitting bids on contracts by any agency or subdivision of the State of South Carolina.

10. DEFAULT: In case of default by the Contractor, the City reserves the right to purchase any or all items in default in the open market, charging the Contractor with any excessive costs. Should such charge be assessed, no subsequent solicitation response of the defaulting Contractor will be considered in future bids, until the assessed charge has been satisfied.

11. HOLD HARMLESS: All respondents to this bid shall indemnify and hold harmless the City of Walterboro and any of their officers and employees from all suits and claims alleged to be a result of this request for bid. The issuance of this request of bids constitutes only an invitation to present a bid. The City of Walterboro reserves the right to determine, at its sole discretion, whether any aspect of a respondent's submittal meets the criteria in this request for bids. The City of Walterboro also reserves the right to seek clarifications, to negotiate with any Contractor submitting a response, to reject any or all responses with or without cause, and to modify the procurement process and schedule.

12. CANCELLATION: In the event that this request for bid is withdrawn or the project canceled for any reason, the City of Walterboro shall have no liability to any respondent for any costs or expenses incurred in connection with this request for bids or otherwise.

13. FAILURE TO SUBMIT ALL MANDATORY FORMS: Failure to submit all the mandatory forms from this request for bid shall be just cause for the rejection of the qualification package. However, the City of Walterboro reserves the right to decide, on a case by case basis, in its sole discretion, whether or not to reject such a bid as non-responsive.

14. CONTRACT AWARD:

    a. This solicitation and submitted documents, when properly accepted by the City of Walterboro shall constitute an agreement equally binding between the successful Contractor and the City.

       No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting agreement. The City shall not be legally bound by any amendment or interpretation that is not fully executed by both parties in writing.

    b. The successful Contractor shall be required to execute a formal agreement with the City Manager's Office within ten (10) business days after issuance of the Notice of Award.

15. CONTRACT ADMINISTRATION: Questions or problems arising after award of an agreement shall be directed to the City Manager by calling (843) 782-1000. Copies of all correspondence concerning this solicitation or resulting agreement shall be sent to the City of Walterboro, 242 Hampton Street, Walterboro, SC 29488.

F. GENERAL CONTRACTUAL REQUIREMENTS

1. ABANDONMENT OR DELAY: If the work to be done under this contract shall be abandoned or delayed by the Contractor, or if at any time the City shall be of the opinion and shall so certify in writing that work has been abandoned or delayed by the Contractor, the City may annul the contract or any part thereof if the Contractor fails to resolve the matter within thirty (30) days of written notice.

2. CONTRACTOR'S COOPERATION: The Contractor shall maintain regular communications with the Project Manager and shall actively cooperate in all matters pertaining to this contract.

3. RESPONSIBILITY: The Contractor shall at all times observe and comply with all federal, state, local and municipal laws, ordinances, rules and regulations in any manner affecting the contract.

4. NON-APPROPRIATION/SUBSTITUTION PERMITTED: If the City of Walterboro Council fails to appropriate or authorize the expenditure of sufficient funds to provide the continuation of this contract or if a lawful order issued in, or for any fiscal year during the term of the agreement, reduces the funds appropriated or authorized in such amounts as to preclude making the payments set out therein, the agreement shall terminate on the date said funds are no longer available without any termination charges or other liability incurring to City. Following any such non-appropriation, the master lease agreement shall contain no limitation on the City's ability to replace the equipment financed with any other equipment.

5. INDEMNIFICATION: Except for expenses or liabilities arising from the negligence of the City, the Contractor hereby expressly agrees to indemnify and hold the City harmless against any and all expenses and liabilities arising out of the performance or default of any resulting agreement or arising from or related to the Work as follows:

   Contractor expressly agrees to the extent that there is a causal relationship between its negligence, action or inaction, or the negligence, action or inaction of any of its employees or any person, Contractor, or corporation directly or indirectly employed by the Contractor, and any damage, liability, injury, loss or expense (whether in connection with bodily injury or death or property damage or loss) that is suffered by the City and its employees or by any member of the public, to indemnify

and save the City and its employees harmless against any and all liabilities, penalties, demands, claims, lawsuits, losses, damages, costs, and expenses arising out of the performance or default of any resulting agreement or arising from or related to the equipment. Such costs are to include defense, settlement and reasonable attorneys' fees incurred by the City and its employees. This promise to indemnify shall include bodily injuries or death occurring to Contractor's employees and any person, directly or indirectly employed by Contractor (including without limitation any employee of any subcontractor), the City's employees, the employees of any other independent contractor, or occurring to any member of the public. When the City submits notice, Contractor shall promptly defend any aforementioned action.

The prescribed limits of insurance set forth herein shall not limit the extent of the Contractor's responsibility under this Section. The terms and conditions contained in this Section shall survive the termination of any resulting agreement or the suspension of the Work hereunder. Additionally, the City will not provide indemnity to the successful CONTRACTOR. Failure to comply with this section may result in your request for bid to be deemed non-responsive.

6. FORCE MAJEURE: The Contractor shall not be liable for any excess costs if the failure to perform the resulting agreement arises out of causes beyond the control and without fault or negligence of the Contractor. Such causes may include, but are not restricted to acts of God or of the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case the failure to perform must be beyond the control and without the fault or negligence of the contractor. If the failure to perform is caused by default of a subcontractor, and if such default arises out of causes beyond the control of both the Contractor and subcontractor and without excess costs for failure to perform, unless the supplies or services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit the contractor to meet the required delivery schedule.

7. ARBITRATION: Under no circumstances and with no exception will the City of Walterboro act as arbitrator between the Contractor and any sub-contractor.

8. PUBLICITY RELEASES: Contractor agrees not to refer to award of this 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 City. The Contractor shall not have the right to include the City's name in its published list of customers without prior approval of the City Manager. With regard to news releases, only the name of the City, type and duration of any resulting agreement may be used and then only with prior approval of the City. The Contractor also agrees not to publish, or cite in any form, any comments or quotes from the City's staff unless it is a direct quote from the City Manager.

9. GOVERNING LAWS: Any agreement arising from this solicitation shall be governed by the laws of the State of South Carolina and any and all disputes arising out of said agreement shall, if litigation is necessary, be litigated only in a Circuit Court for the Fourteenth Judicial Circuit sitting in Colleton County, South Carolina. The prevailing party shall be entitled to attorney's fees and all costs of said litigation.

10. ASSIGNMENT: The Contractor shall not assign in whole or in part any agreement resulting from this Request for Bids without the prior written consent of the City. The Contractor shall not assign any money due or to become due to him under said agreement without the prior written consent of the City.

11. AFFIRMATIVE ACTION: The successful Contractor will take affirmative action in complying with all Federal and State requirements concerning fair employment and treatment of all employees, without regard or discrimination by reason of race, color, religion, sex, national origin or physical handicap.

12. FAILURE TO DELIVER GOODS IN ACCORDANCE WITH TERMS & CONDITIONS: In case of failure to deliver goods in accordance with the contract terms and conditions, the City of Walterboro, after due oral or written notice, may procure substitute goods or services from other sources and hold the contractor responsible for any resulting additional purchasing and administrative costs. This remedy shall be in addition to any other remedies which the City of Walterboro may have.

13. TERMINATION OF CONTRACT
    Subject to the Provisions below, the contract may be terminated by the City Manager providing a thirty (30) days advance notice in writing is given to the Contractor.
    a. Termination for Convenience: In the event that this contract is terminated or canceled upon request and for the convenience of the City without the required thirty (30) days advance written notice, then the City shall negotiate reasonable termination costs, if applicable.
    b. Termination for Cause: Termination by the City for cause, default or negligence on the part of the Contractor shall be excluded from the foregoing provisions; termination costs, if any, shall not apply. The thirty (30) days advance notice requirement is waived and the default provision in this request for bids shall apply.
    c. The City shall be obligated to reimburse the Contractor only for those services rendered prior to the date of notice of termination, less any liquidation damages that may be assessed for non-performance.

    Non-Appropriations Clause: Notwithstanding any other provisions of the contract, if the funds anticipated for the continued fulfillment of this contract are at any time. Not forthcoming, through the failure of the City of Walterboro to appropriate funds, discontinuance or material alteration of the program under which funds were provided, the City shall have the right to terminate the contract without penalty by giving not less than thirty (30) days written notice documenting the lack of funding. Unless otherwise agreed to by the City and the Contractor, the contract shall become null and void on the last day of the fiscal year for which appropriations were received.

14. GOVERNING LAWS: Any contract resulting from this request for bids shall be governed in all respects by the laws of the State of South Carolina and any litigation with respect thereto shall be brought in the courts of the State of South Carolina.

15. BONDS: Bid (5% of bid amount), Payment, and Performance Bonds are required.

16. OWNERSHIP OF MATERIAL: Ownership of all data, material, and documentation originated and prepared for the City pursuant to this contract shall belong exclusively to the City.

17. INSURANCE: The City of Walterboro will require the following remain in force at all times through the life of the contract:

    Workers' Compensation - $100,000 – each accident
    Statutory Coverage and Employer's - $100,000 each employee
    Liability - $500,000 – policy limit

    Comprehensive General Liability -$2,000,000 – bodily injury each occurrence
    $2,000,000 – bodily injury aggregate
    $2,000,000 – property damage each occurrence

$2,000,000 – property damage aggregate
Products – Completed Operations - $1,000,000 – aggregate
Business Auto Liability – Same as Comprehensive General Liability
Excess or Umbrella Liability - $2,000,000

City of Walterboro will be named as an "additional insured" party

G. SPECIAL PROVISIONS & SPECIFICATIONS – CITY/SCDOT

This project is to be constructed under the South Carolina Department of Transportation's Specifications for Highway Construction Edition of 2007, the South Carolina Department of Transportation's 2004 Construction Manual, and the Supplemental Technical Specifications in effect at the time of the letting, and the following Special Provisions.

DEFINITION AND TERMS

The project Owner is City of Walterboro. In the specifications where the terms "SCDOT" or "Department" or other like terms are used to describe the facility Owner, it shall be interpreted as meaning City of Walterboro, as appropriate.

Add "Notice-to-Proceed" to Section 101 as follows:

Notice-to-Proceed. A written notice to the Contractor fixing the date on which the Contract Time will commence to run and on which the Contractor may start to perform obligations under the Contract Documents.

It is the intentions of the owner to have the Contractor begin work on this project as soon as practical. The owner anticipates that an award and contract will be issued within two weeks after bids are received. The owner will require that the completed contract, bonds, insurance and other information required by the contract shall be completed within two weeks after bids are received.

ERRATA TO 2007 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION

See attached Supplemental Specification dated **May 4, 2009**.

SUBSTANTIAL COMPLETION OF WORK

Section 101.3.76 is hereby replaced with the following:

101.3.76 Substantial Completion of Work

Substantial Completion of Work is the point in the project when work has been constructed to the typical section in the Plans over the entire length of the project including tie-ins, all pay items have been installed in reasonable conformance with the plans and specifications over the entire length of the project and all lanes of traffic are open to the public in their final configuration with the only remaining work to be performed being punch list items.

Substantial Completion for this project must be within 180 days of NTP.

STANDARD DRAWINGS

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

The Standard Drawings are available to purchase through the SCDOT Engineering Publications Sales Center. The Engineering Publication Sales Center is in Room G-19 (basement level) of the SCDOT Headquarters Building, 955 Park Street, Columbia, South Carolina.

All references in the plans, standard specifications, supplemental specifications, supplemental technical specifications or special provisions to drawings under the previous numbering system are hereby updated to the new drawing numbers. Refer to sheets 000-205-01 through 000-205-07 to find new drawing numbers when looking for references to older drawing numbers.

All references to Resident Construction Engineer (RCE) should be replaced with County Engineer or assigned engineering agent.

CONSTRUCTION STAKES, LINES AND GRADES

Stakes, Lines, and Grades shall be provided by the Contractor as necessary.

QUALIFIED PRODUCT LISTINGS

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

SOUTH CAROLINA MINING ACT

See Attached Supplemental Specification Dated **March 20, 2003.**
This Supplemental Specification is hereby modified as follows:

Paragraph 9 is hereby deleted and replaced with the following:
The deputy secretary for engineering, or his duly appointed representative, will make a final inspection of the reclaimed area and keep a permanent record of his approval thereof. A map or sketch providing the location and approximate acreage of each pit used on the project will be provided to the engineer for inclusion in the final plans.

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

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.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL PERMITS

A copy of the permits will be made available from the design and permitting engineer. The Contractor shall comply with all provisions and requirements of the permits.

Failure to adequately comply with the provisions of these permits or any other requirements from these permitting agencies will result in the stoppage of all contract operations until corrective actions have been taken.

Fines assessed by these agencies to the Department as the result of the Contractor's non-compliance or violation of said permit provisions will be paid by the Department and subsequently deducted from the Contractor's monthly pay estimate.

SOUTH CAROLINA OFFICE OF COASTAL RESOURCE MANAGEMENT PERMITS

A copy of the permits will be made available from the design and permitting engineer. The Contractor shall comply with all provisions and requirements of the permits.

Failure to adequately comply with the provisions of these permits or any other requirements from these permitting agencies will result in the stoppage of all contract operations until corrective actions have been taken.

CONSTRUCTION QUALITY CONTROL AND ASSURANCE TESTING

The contractor shall provide construction quality control and quality assurance testing for this project, except for MANUFACTURERS MATERIALS CERTIFICATIONS AND CERTIFIED TEST REPORTS as required by the provision included below.

MANUFACTURERS MATERIALS CERTIFICATIONS AND CERTIFIED TEST REPORTS

The contractor shall supply the Engineer with all required materials certifications and manufacturers test reports for items to be permanently incorporated into the project, prior to their use. The City must approve these certifications and reports before payment can be made to the contractor for these items.

RETAINAGE

The City shall retain ten (10) percent of the amount of each payment until completion and acceptance of all work covered by the Contract Documents. Upon substantial completion of the work, any amount retained may be paid to the Contractor. When the Work has been substantially completed except for Work which cannot be completed because of weather conditions, lack of materials or other reasons which in the judgment of the City are valid reasons for non- completion, the City may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the Work still to be completed.

PAYMENT SCHEDULE

Partial Payments will be made no more than once each month as the work progresses. The monthly partial payment periods end at the end of the day on the last day of each month. Pay applications are to be submitted to the County Engineer for review and approval. Upon approval, the County Engineer submits the pay application to the City Finance Department for processing. Payment processing is performed on a weekly basis.

REQUIRED MEDIA NOTIFICATION FOR CONSTRUCTION PROJECTS

Contractors are encouraged to co-operate 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 co-operate with the media. However, the safety, security and construction schedule on site should not be disrupted in order to accomplish this. The Contractor may coordinate these activities with and receive guidance from the Engineer.

CONTRACT PROVISION TO REQUIRE CERTIFICATION AND COMPLIANCE CONCERNING ILLEGAL ALIENS

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

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

CONSTRUCTION SCHEDULE

The successful Contractor shall, prior to commencement of work, submit to the City a schedule showing the order in which he proposes to carry on the Work indicating the periods during which he will perform work on each roadway. The City reserves the right to determine priority of schedule items, but unless modified by the parties, in writing, the successful Bidder shall have sole Responsibility for following and coordinating its schedule.

PROSECUTION OF THE ROAD IMPROVEMENT WORK

It is the City's intentions that work on this contract be performed in a sequential manner. Once a construction activity has started on a road, the Contractor will continue this activity until it is complete before moving to another road. In the event the Contractor elects to use multiple crews on this project, work may proceed on more than one area. However, in no case will construction activities be initiated on more area than the number of work crews engaged in the work without the approval of the Engineer.

CONTRACT TIME AND DETERMINATION AND EXTENSION OF CONTRACT TIME

Any extensions of these completion dates will adhere to Section 108.6 of the Standard Specifications.

FAILURE TO COMPLETE THE WORK ON TIME

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

Owner and Contractor recognize that time is of the essence and that the Owner will suffer financial loss if the work is not substantially complete in accordance with the time(s) specified herein. They also recognize the delays, expenses and difficulties involved in proving in a legal or arbitration preceding the actual loss suffered by the Owner if the work is not completed on time.

Accordingly, instead of requiring such proof, the Owner and the Contractor agree that as liquidated damages for delay (but not as a penalty) the Contractor shall pay the Owner **$500.00 per day** for each calendar day past the contract specified interim and final completion dates.

COORDINATION OF UTILITY RELOCATION WORK WITH HIGHWAY CONSTRUCTION

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

It shall be the responsibility of the contractor to inspect the site for potential utility conflicts. 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.

ROADWAYS TO BE INCLUDED IN THIS PROJECT

City of Walterboro, due to budget considerations or any other reason, reserves the right to adjust the amount of work to be performed on this project. Projects (complete roads) may be added or deleted only at the discretion of the City. The Contractor shall, by signing this request for bids, agree to adjust, as indicated by the City, the lengths or quantities of roadways and corresponding pay items to be performed, at the times and locations determined to be beneficial to the City.

MAINTENANCE OF TRAFFIC

Roadways must be open to traffic at all times. Should a roadway require temporary closure, approval must be given by the County Engineer and all public safety agencies be notified in advance.

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

The Contractor is advised that all work involving design or installation of traffic control devices, including but not limited to signs, pavement markings, elements of work zone traffic control, signals, etc., shall be following the FHWA's Manual on Uniform Traffic Control Devices (MUTCD), latest edition. The latest edition is defined as the edition that the Traffic Engineering Division of SCDOT recognizes as having been officially adopted (Engineering Directive, Memorandum 19) at the time the project is let, unless stated otherwise in the Special Provisions.

A suggested permanent construction sign schedule has been included. It shall be the responsibility of the contractor to verify the correctness and mark the location of all signs.

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:

LUMP SUM BID ITEMS

It is predetermined that all lump sum bid items shall be applied equally among all roads, unless otherwise stated. This will apply to pay estimates as well deletion or addition of a road should one be deleted or added.

HOT MIX ASPHALT

All driveways will be paved to the right of way line or to a distance needed to safely transition from the final riding surface to the existing paved driveway surface as approved by the County Engineer.

TESTING

The contractor will be responsible for all quality control and testing. Roller patterns, daily plant test reports, and other tests required by SCDOT will be required on HMA. Proof roll testing on subgrade and base course will be accepted in lieu of compaction testing.

ASPHALT BINDER ADJUSTMENT INDEX

For this project the Basic Bituminous Material Index will be determined on the first calendar day of the month in which this project is let. The index and adjustment table will be available on the internet at http://www.scdot.org/doing/constructionletting_monthlyindex.aspx.

WARRANTY

The Contractor agrees to a one-year warranty against defects, failures etc. caused by materials and workmanship, beginning on the date of final acceptance of punch list.

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H. SPECIAL PROVISIONS – STANTEC

(Begins Next Page)

PROJECT ID: | **COUNTY** COLLETON

1. **LIST OF TRAFFIC SIGNALS WITHIN PROJECT**

#	Intersection Name	Description of Signal Work
TS1	US 15 (North Jefferies Boulevard) & US 17A (Wichman Street)	Rebuild Signal as Mast Arm
TS2	US 15 (North Jefferies Boulevard) & S-229 (Ireland Creek Drive/Sweat Street)	Rebuild Signal as Mast Arm
TS3	US 15 (Jefferies Boulevard) & SC 64 (Bells Highway)	Rebuild Signal as Mast Arm

2. **PROJECT DESCRIPTION**

This Project is a streetscape improvement project and involves the signal construction of 3 intersections along US 15 in the City of Walterboro, Colleton County, South Carolina. The intersections involved are shown on the above "List of Traffic Signals within Project or listed on the plans.

Specific Description of the signal work*:*

Three (3) signals are to be completely rebuilt with mast arms per the Plans.

The contractor is to furnish and install base mounted 332A cabinets assemblies on new foundations including 2070 controller / 2010 conflict IP monitor. The cabinet and controller will be programmed by the District Six Signal Shop and will be picked up by the contractor. The contractor will be responsible for designing, furnishing and installing mast arm steel pole structures and foundations, signal heads and back plates with retroreflective borders, pedestrian poles, countdown pedestrian heads, push button assemblies with signs, conductor wire, loops, conduits, and splice boxes as shown on the signal plans or as directed by the District Traffic Engineer.

The contractor will remove existing signal pole and cabinet foundations to a minimum depth of 18" below grade. Return all salvageable signal equipment to the District Six signal shop. Equipment and workmanship shall comply with the Traffic Signal Supplemental Specifications.

All signal work shall be inspected by the District Six Signal Shop. Any modifications to the signal work shall be approved by the District Traffic Engineer.

Include the District Six Signal Shop in all Preconstruction conferences.

Provide a redline signal plan to the District Six Signal Shop after the signal work is completed.

3. **PAY ITEM ADDITIONAL INFORMATION**

Below is more information concerning any changes, revisions, or clarifications to the SCDOT Traffic Signal Supplemental Specifications and/or pay items for this particular contract:

Mobilization:

Wiring:

Refer to SCDOT Standard Drawings section 677-100-XX for wiring guidance. Install 12-conductor black to FYA signal heads with 8-conductor jumpers to adjacent heads. Install (1) 8-conductor gray per phase per approach from cabinet to corner with 4-conductor gray to loop lead-in.

Communications:

Detection:

Sheet TS2 – Wiring for Ø2 set back loops is shown to be routed via new PVC conduit affixed to the outside of the existing bridge structure over Ireland Creek. This work is not shown in detail on the plan and may be completed as recommended by the contractor and agreed to by the construction engineer.

Signal Supports:

Decorative design and color of mast arm structures to be determined through coordination with Jeff Molinari, City Manager, City of Walterboro.
Phone: (843) 782-1000
Address: 242 Hampton Street, Walterboro, SC 29488

Signal Heads, Pedestrian Treatments, Illuminated signs, solar flashing assemblies:

Decorative design of pedestrian poles and color pedestrian equipment and vehicle signal heads to be determined through coordination with Jeff Molinari, City Manager, City of Walterboro.
Phone: (843) 782-1000
Address: 242 Hampton Street, Walterboro, SC 29488

Cabinet Items:

Service Items:

Contractor shall maintain continuity of signal operations at all locations through the duration of project.

I. SPECIAL PROVISIONS – WOOD+PARTNERS

(Begins Next Page)

SECTION 015635 – TREE TRANSPLANTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Relocating, storing, maintaining, protecting trees, pruning, vine clearing, injection and other measures needed to ensure health of transplanted trees.

1.3 QUALITY ASSURANCE

A. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

B. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.

C. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory.
   1. Report suitability of topsoil for plant growth. State-recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.

D. Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in ANSI Z60.1, "American Standard for Nursery Stock."

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Qualifications: Statement of qualifications including not less than five years experience in tree transplantation in the South Carolina.

C. Product certificates.

D. Planting Schedule: Indicating anticipated planting dates for transplanting trees including:
   1. Time of year for transplanting.
   2. Transplanting methods.
   3. Follow-up care and maintenance.

E. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of exterior plants during a calendar year.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Do not prune trees before delivery. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees in such a manner as to destroy their natural shape. Provide protective covering of trees during delivery. Do not drop during delivery and handling.

B. Handle planting stock by root ball.

C. Deliver trees after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior trees in shade, protect from weather and mechanical damage, and keep roots moist.

1.6 SEQUENCING AND SCHEDULING

A. Proceed and coordinate work as the site becomes available, consistent with seasonal limitations for transplanting.

B. Owner's representative will select and tag at the site, those plants to be transplanted to new locations.

C. Transplant trees during cool weather. Avoid moving plants on very hot, dry, or windy days.

1.7 FINAL ACCEPTANCE

A. Work under this Section will be accepted by Landscape Architect upon satisfactory completion of all work including maintenance, but exclusive of replacement of plant materials under warranty period. Upon Final Acceptance, Owner will assume responsibility of maintenance of the work.

1.8 WARRANTY

A. Special Warranty: Installer's standard form in which Installer agrees to repair or replace plantings which fail in materials, workmanship, or growth within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, abuse by Owner, or incidents that are beyond Contractor's control.
      b. Structural failures including plantings falling or blowing over.
   2. Any delay in completion of planting operations which extends planting into more than one planting season shall extend Warranty Period correspondingly.
   3. Warranty Periods from Date of Substantial Completion:
   4. Warrant that all trees planted under this Contract will be healthy and in flourishing condition of active growth one year from date of Final Acceptance.

B. Replace, without cost to Owner, and as soon as weather conditions permit, all dead plants and all plants not in vigorous, thriving condition as determined by Owner during and at the end of Warranty Period. Plants shall be free of dead or dying branches and branch tips, and shall bear foliage of a normal density, size, and color. Replacements

shall closely match adjacent specimens of the same species and shall be subject to all specified requirements.

1.9 MAINTENANCE SERVICE

A. Initial Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until plantings are acceptably healthy and well established, but for not less than maintenance period below.
   1. Maintenance Period for Trees and Shrubs: 12 months from date of planting completion.

PART 2 - PRODUCTS

2.1 TREE PROTECTION MATERIALS

A. General: Furnish nursery-grown or field collected trees with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.

B. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

C. Provide balled and burlapped trees.

D. Lumber for Holding Area Barricades: Southern yellow pine; used for holding area protection.

E. Safety Fence: Safety fence may be used as alternative to wood fencing. Height and other dimensions shall be as required to adequately protect trees, while allowing proper access for maintenance, etc. Install in accordance with manufacturer's recommendations.

2.2 INJECTION MATERIALS

A. Pesticides and Fertilizer: In accordance with accepted arboricultural practice in location of work. Conform to requirements of all authorities having jurisdiction over use of pesticides and other chemicals. Apply chemicals in accordance with label directions on chemical container.
   1. Tree Planting Fertilizer:
      a. Davey Arborgreen Organic Liquid Soil or approved equal injected at 115 psi. Apply at manufacturer's recommended rates.
      b. Fertilizer Injector:
         1) Power injector capable of delivering 225 to 250 psi at nozzle with Hydraulic, agitated mixing tank.
         2) Hydraulic, agitated mixing tank.
         3) Nozzle point with three distribution orifices 120 degrees apart, capable of delivering fluid perpendicular to direction of shaft.
         4) Adjustable or permanent stop plate nozzle shaft to stop shaft at required depth.

5) Ability to meter amount of material applied per injection.

2. Tree Injection System: Provide system by Mauget or equivalent.
3. Transplant Enhancer: Mycorrhiza organic root enhancer.

2.3 EQUIPMENT

A. Pruning Tools: Use only sharp, clean tools, sterilized prior to use.

B. Transplanting Tools: Size of Vermeer Spade, if used is to be large enough to encompass fibrous feeder roots of each plant, consistent with standard nursery sizes for plant being relocated.

C. Watering Tubes: Gray, perforated SDR PVC drainage pipe, four inches in diameter.

D. Vehicles: Do not drive onto or operate a vehicle on jobsite carrying dirt or plant debris from another site. Wash all dirt and mud from tires prior to entering jobsite.

PART 3 - EXECUTION

3.1 PREPARATION

A. Verify with Owner all plants to be transplanted prior to beginning work.

B. Stake plant layout for adjustment and approval prior to transplanting.

C. Transplant all plantings as shown on Drawings. Proceed with transplanting operations based upon Owner accepted schedule and methods.

D. Rootball Size: Minimum 10-inches in diameter per 1-inch tree caliper.

E. Crown Pruning: Upon award of contract, prune trees back about 1/4th. Prune side branches only. Do not cut leaders.

3.2 MECHANICAL TREE TRANSPLANTING

A. Use machinery in good condition with a minimum tolerance (max 2") between cutting blades. All blades shall be true to their designed shape and free of bends, which could interfere with their operation. Mount tree spade on a suitable stable machine capable of supporting the weight of all removed material and heavy enough to force the blades into the soil.

B. Machine transplant trees in accordance with the following criteria:
1. Caliper < 3” - Min. Machine Size: 44”, Vermeer, Davy, or approved equal
2. Caliper 3”-5” – Min. Machine Size: 60”, Vermeer or approved equal
3. Caliper 5”-8” – Min. Machine Size: 90”, Big John, Vermeer, or approved equal
4. Caliper 8”-16” – Min. Machine Size: 12’ Box

C. Do not excavate tree pits more than 24 hours prior to transplanting.

D. Cut and remove all vines and underbrush from the trunk and branches of the tree to facilitate access by machine.

E. Prune and thin the tree by removing interior branches and entangled limbs. Remove not less than 10 percent of all branching before digging but not more than 20 percent. Do not indiscriminately cut branch tips to achieve the above percentages.

F. Use the same machine to dig receiving hole and to dig tree for transplanting.

G. Reroute irrigation lines transplanting operation to maintain integrity of receiving hole.

H. After tree is placed in hole, immediately fill all crevices with sand and water to fill all voids. Apply 4-inches of mulch.

I. Provide periodic watering and misting of main foliage.

J. Spray trunks with insecticide for control of borers and wrap hardwoods to first branch.

3.3 DIGGING FOR BOX TRANSPLANTATION

A. Trenching: Dig trench outside trench previously dug for root pruning.

B. Do not damage new roots. Do not permit cracking of rootball or loss of soil.
   1. Protect rootball by completely wrapping with burlap per standard nursery practice.

3.4 POST PLANTING FERTILIZATION

A. Apply fertilization 30-45 days after installation.

B. Inject specified material with high pressure injector into soil at depth and diameter shown below:
   1. Caliper <2” – Application Points: 3, Depth 4”-6”, Radius 16”-18”, Rate/Tree 1-1/2 Gal.
   2. Caliper 2” to 4” – Application Points: 3, Depth 4”-6”, Radius 18”-24”, Rate/Tree 2 Gal.
   3. Caliper 4” to 5” – Application Points: 4, Depth 4”-6”, Radius 2’-3’, Rate/Tree 2-1/2 Gal.
   4. Caliper 5” to 6” – Application Points: 5, Depth 4”-6”, Radius 3’-4’, Rate/Tree 3 Gal.
   5. Caliper >6” – Application 3’ O.C., Depth 4”-6”, Radius Dripline, Rate/Tree 5 Gal/100sf of root area

3.5 TREE PRUNING

A. Remove only dead, dying, or broken branches. Do not prune for shape.

B. Prune, thin, and shape trees and shrubs according to standard horticultural practice. Prune trees to retain required height and spread. Do not cut tree leaders; remove only injured or dead branches from flowering trees. Prune shrubs to retain natural character.

C. Paint cuts over 3/4-inches in diameter with tree paint, covering all exposed, living tissue.

3.6 PLANT MAINTENANCE

A. Tree and Shrub Maintenance: Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, restoring planting saucers, and resetting to proper grades or

vertical position, as required to establish healthy, viable plantings. Spray or treat as required to keep trees and shrubs free of insects and disease.

B. Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.

3.7 FIELD QUALITY CONTROL

A. Make written request for inspection after planting operations are complete.

B. Submit requests for inspection to Owner at least two (2) days prior to anticipated inspection date.

3.8 CLEANING AND DISPOSAL

A. Clean all areas as required for complete and acceptable inspection.

B. Disposal: Remove surplus plant materials and debris, and legally dispose of them off Owner's property.

END OF SECTION 015635

SECTION 015639 – TREE PROTECTION AND ARBORIST SERVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Protecting trees, pruning, tree surgery, vine clearing, injection and other arborist measures needed to ensure health of existing trees.

1.3 SUBMITTALS

A. Arborist’s Report: Submit written recommendation by qualified arborist of measures needed to ensure health of existing trees.

B. Qualification Data: For qualified arborist. Include list of similar projects completed by arborist demonstrating capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.

1.4 QUALITY ASSURANCE

A. Arborist Qualifications: A qualified arborist who specializes in tree surgery.

1. Professional Membership: Arborist shall be a member in good standing of a recognized Arborist Society.
2. Arborist's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.

B. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.5 PROJECT CONDITIONS

A. Coordinate work schedule with Owner, General Contractor and other trades and cooperate to insure optimum construction progress for overall project.

B. During work, keep work area in a clean and orderly condition. Unless notified in writing, all material taken from the trees becomes the property of the Contractor.

C. Proceed with and complete work as rapidly as portions of site become available, working within seasonal limitations for each kind of work required.

PART 2 - PRODUCTS

2.1 TREE PROTECTION MATERIALS

A. Lumber for Barricades: Southern yellow pine; dimensions indicated on drawings.

B. Safety Fence: Safety fence by Exxon or equivalent may be used as alternative to wood fencing. Height and other dimensions shall be same as for wood fence shown on plan. Install in accordance with manufacturer's recommendations.

2.2 INJECTION MATERIALS

A. Pesticides and Fertilizer: In accordance with accepted arboricultural practice in location of work. Conform to requirements of all authorities having jurisdiction over use of pesticides and other chemicals. Apply chemicals in accordance with label directions on chemical container.

B. Injection System: Provide system by Mauget or equivalent.

C. Transplant Enhancer: Mycorrhiza organic root enhancer.

PART 3 - EXECUTION

3.1 TREE PROTECTION

A. Erect and maintain temporary fencing around tree protection zones before starting site clearing. Remove fence when construction is complete.

1. Do not store construction materials, debris, or excavated material within fenced area.
2. Do not permit vehicles, equipment, or foot traffic within fenced area.
3. Maintain fenced area free of weeds and trash.

B. Do not excavate within tree protection zones, unless otherwise indicated.

C. Where excavation for new construction is required within tree protection zones, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.

1. Cover exposed roots with burlap and water regularly.
2. Temporarily support and protect roots from damage until they are permanently redirected and covered with soil.
3. Coat cut faces of roots more than 1-1/2 inches in diameter with an emulsified asphalt or other approved coating formulated for use on damaged plant tissues.
4. Backfill with soil as soon as possible.

D. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by Architect.

1. Employ an arborist, licensed in jurisdiction where Project is located, to submit details of proposed repairs and to repair damage to trees and shrubs.
2. Replace trees that cannot be repaired and restored to full-growth status, as determined by Architect.

3.2 ARBORIST SERVICES

A. Climbing: Spiked climbing shoes are prohibited. Use climbing method that ensures protection of trees and prevents scrapes, holes and wounds of any kind.

B. Pruning:

1. Conform to accepted horticultural practice for pruning. Make cuts vertically. Use pruning method which prevents splintering of bark.
2. Perform pruning work within seasonal limitations of each tree species.
3. Never remove more than 1/3 of any tree canopy.
4. Remove all dead wood, weak branches, branches that must be removed for buildings or landscape development, and other limbs necessary to ensure health of tree.

C. Vine Clearing: Remove all vines from existing trees to remain. Use removal method which prevents damage to tree.

D. Root Pruning: Where roots are to be removed due to site development, make vertical, clean cuts, minimizing wound area. Do not remove more than 1/3 of any tree roots. If needed, prune branches to equalize the loss of roots and canopy.

E. Injection and Other Measures:

1. Provide injection of nutrients and pesticides, along with other measures included in arborist’s written recommendations.
2. Perform all work in accordance with accepted arboricultural practice in location of site. Conform to requirements of authorities having jurisdiction. Perform injection in accordance with manufacturer’s directions and recommendations.

3.3 DISPOSAL

A. Disposal: Remove surplus plant materials and debris, and legally dispose of them off Owner's property.

END OF SECTION 015639

SECTION 328400 - IRRIGATION SYSTEM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Automatic irrigation system including piping, fittings, sprinkler heads, and accessories.
2. Battery-operated clocks and valves.
3. Coordination with appropriate officials for permitting and taps.
4. Testing.
5. Excavation and back-filling irrigation system work.

B. Contractor to provide labor and material to provide power to irrigation system.

C. Related Sections:

1. Division 32 Section “Turf and Grasses.”
2. Division 32 Section “Plants.”

1.3 PERFORMANCE REQUIREMENTS

A. Location of Sprinklers and Specialties: Design location is approximate. Make minor adjustments necessary to avoid plantings and obstructions such as signs and light standards. Maintain 100 percent irrigation coverage of areas indicated.

B. Delegated Design: Contractor shall design irrigation system, using performance requirements and design criteria indicated and as directed by Owner.

C. Minimum Working Pressures: The following are minimum pressure requirements for piping, valves, and specialties, unless otherwise indicated:

1. Irrigation Main Piping: 200 psi.
2. Lateral Piping: 200 psi.

1.4 SUBMITTALS

A. Delegated-Design Submittal: For irrigation systems indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional responsible for their preparation.

B. Product Data: For each of the system components to include battery-operated clocks, battery-operated valves, meters, backflow preventers, heads, pipe, fittings, valve boxes, manual valves, and all other equipment installed on project. Include installation instructions for each component. Submittals must be organized and semi-permanently bound in booklet form with a

table of contents to each section. This book must be updated as material changes on the project.

C. Shop Drawings: Irrigation systems, drawn to scale, on which components are shown and coordinated with each other. Also include adjustments necessary to avoid plantings and obstructions such as signs and light standards.

D. Submit the following material samples:

1. Piping and fittings
2. Clamps

E. Submit the following equipment samples:

1. Sprinkler heads, 1 of each type, complete with housing
2. Valves and valve access boxes
3. Battery-operated clocks and valves
4. Drip tubing.

F. Approved equipment samples will be returned to contractor and may be used in the work.

G. Qualification Data: For qualified Installer.

H. Operation and Maintenance Data: For all system components to include in operation and maintenance manuals. Provide format and content as directed by Irrigation Designer.

1.5 QUALITY ASSURANCE

A. Installer Qualifications:

1. Upon request, contractor must provide the following, to include name of contact, name of project, address of project, & phone number of contact. If this criteria cannot be met, then the contractor will be disqualified:

   a. General liability insurance to $1,000,000.
   b. Five verifiable references in South Carolina to attest to the contractor's ability to install, based on projects of the size and complexity of this project

2. Experience of individual working for the contracting company will not be accepted as qualified job submittals. Experience must come from the company. Omission of any required information will be grounds for disqualification.
3. Contractor's primary business is to be irrigation installation. Primary defined as 60% of the contractors business is to be derived from irrigation installation. Verification may be required.
4. Only one irrigation bid will be accepted for the project. No qualified bids will be accepted.

B. Conform to applicable codes for piping and component requirements.

C. Materials, equipment, and methods of installation shall comply with the following codes and standards:

1. Public Utilities and Public Works Standards.
2. National Fire Protection Association (NFPA): National Electric Code.
3. American Society of Testing and Materials (ASTM).
4. National Sanitation Foundation (NSF).

D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver irrigation system components in manufacturer's original undamaged and unopened containers with labels intact and legible. Site contractor will provide staging area.

B. Deliver plastic piping in bundles, packaged to provide adequate protection of pipe ends, both threaded or plain.

C. Store and handle materials to prevent damage and deterioration.

D. Provide secure, locked storage for valves, sprinkler heads, and similar components that cannot be immediately replaced, to prevent installation delays.

1.7 PROJECT CONDITIONS

A. Known underground and surface utility lines are indicated on the utilities drawings.

B. Protect existing trees, plants, lawns, and other features designated to remain as natural area.

C. Promptly repair damage to adjacent facilities caused by irrigation system work operations. Cost of repairs at Contractor's expense.

D. Promptly notify the Owner's Rep of unexpected sub-surface conditions.

E. Directional Drilling, Cutting and patching:
   1. Unless otherwise indicated on the drawings, directional drilling for irrigation sleeving is required for under roadway pavement work. All other areas cut through concrete and masonry with core drills. Jack hammers not permitted.
   2. Materials and finishes for patching shall match existing cut surface materials and finish. Exercise special care to provide patching at openings and exterior walls.
   3. Methods and materials used for cutting and patching shall be acceptable to the Owner's Rep.

F. Interruption of Existing Water Service: Do not interrupt water service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water service according to requirements indicated:

   1. Notify Owner's Rep no fewer than two days in advance of proposed interruption of water service.

G. Do not proceed with interruption of water service without Owner's Rep's written permission.

PART 2 - PRODUCTS

2.1 GENERAL

A. Substitutions of materials or equipment will not be allowed without written approval by Owner's Rep prior to bid opening.

B. Provide only new materials, without flaws or defects and of the highest quality of their specified class and kind to be provided.

C. Provide pipe continuously and permanently marked with manufacturer's name or trademark, size schedule and type of pipe, working pressure at 73 degrees F. and National Sanitation Foundation (NSF) approval.

D. Basis-of-Design Manufacturer: Hunter Industries Incorporated.

2.2 PIPES, FITTINGS, AND CONNECTIONS

A. Comply with requirements in the piping schedule for applications of pipe, tube, and fitting materials, and for joining methods for specific services, service locations, and pipe sizes.

B. Polyvinyl chloride pipe: ASTM D2241, rigid, un-plasticized PVC, extruded from virgin parent material. Provide pipe homogeneous throughout and free from visible cracks, holes, foreign materials, blisters, wrinkles, and dents. All PVC piping shall be SDR21, Class 200, glue end PVC.

C. PVC pipe fittings: ASTM D2241 schedule 40 PVC molded fittings suitable for solvent weld connections. Fittings made of other materials are not permitted. Saddle and cross fittings not permitted.

D. Insert fittings: ASTM D2466 insert type fittings.

2.3 IRRIGATION CONTROLLER, VALVES, SLEEVES AND ASSOCIATED EQUIPMENT

A. Valves:

1. Battery-operated control valves (BOV) shall be sized as specified on drawings. BOV's shall be installed per manufacturer's recommendations and shall be rated for pressure and flow as required. Valves shall be constructed of plastic.
2. Basis-of-Design Products: Valves shall be Model PVG100-GS as manufactured by Hunter Industries Incorporated.

B. Sleeves

1. Sleeves shall be Class 200 PVC as indicated on the plan. Any additional sleeves shall be two sizes larger than the pipe routed through them.

C. Sprinklers

1. Sprinklers shall be as designed by Contractor.

    a. Pop-Up Fixtures/Bubblers at Each Planter: Owner provided and Contractor installed.

2. Basis-of-Design Products: All sprinklers are as manufactured by Hunter Industries Incorporated.

D. Drip Products

1. Drip tubing and valves shall be as designed by Contractor.

E. Swing Joints: Sprinkler heads shall be installed in polyethylene flex pipe (funny pipe) swing joints.

2.4 ACCESSORIES

A. Drainage Fill: 1" washed pea gravel

B. Fill: Clean soil free of stones larger than 1" diameter foreign matter, organic material, and debris

1. Provide imported fill material as required to complete the work. Obtain rights and pay all costs for imported materials.

2. Suitable excavated materials removed to accommodate the irrigation system work may be used as fill material subject to the Irrigation Designer's review and acceptance.

C. Clamps: Stainless steel, worm gear hose clamps with stainless steel screws or ear tye clamps.

D. Valve access boxes:

1. Valve access boxes shall be Ford Yokebox and Sigma Corporation Jumbo, or approved equal, as indicated on schematic irrigation plan.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine final grades and installation conditions. Verify that field measurements are as shown on drawings. Do not start irrigation system work until unsatisfactory conditions are corrected.

B. Verify the location of utilities, plant materials, shrub bed lines, and tree lines. No irrigation lines are to be routed within 5 feet of any tree on project. Contractor is responsible for coordinating the location of all trees with landscape contractor. No irrigation heads will be installed until all trees have been installed or staked.

C. Verify that required utilities are available, in proper location, and ready for use.

D. Beginning of installation means installer accepts existing conditions.

E. Contractor must provide one experienced on-site foreman or supervisor subject to approval of the irrigation designer, who must be on site at all times when a crew is working.

3.2 PREPARATION

A. Prior to excavation, utility companies shall be notified in accordance with local codes and ordinances. Contractor must contact utility company prior to beginning of installation. All current utility company rules for contact and digging will be followed

B. Contractor shall be responsible for damage to existing utilities and structures due to negligence and/or misuse by his crews or equipment.

C. Layout and stake the location of each pipe run and all sprinkler heads and sprinkler valves.

D. Strip sod for pipe trenches with a mechanical sod stripper uniformly 6" to 12" wide with clean cut edges.

E. Place sleeves as necessary for installation of piping. All piping under walks and walls shall be within a Class 200 PVC sleeve 2 sizes larger than the pressure pipe.

3.3 INSTALLATION

A. Excavating and back filling:

1. All excavation shall be considered unclassified excavation and include all material encountered.
2. Excavate trenches of sufficient depth and width to permit proper handling and installation of pipe and fittings
3. Excavate to depths required to provide 3" depth of debris free earth fill or sand bedding for piping when rock or other unsuitable bearing material is encountered.
4. Fill to match adjacent grade elevations with approved earth fill material. Place and compact fill in layers not greater than 8" depth

    a. Provide approved earth fill or sand to a point 4" above the top of pipe.
    b. Fill to within 6" of final grade with approved excavated or borrow fill materials free of lumps or rocks larger than 1" in any dimension
    c. Provide clean topsoil fill free of rocks and debris for top 6" of fill.

5. Install irrigation lateral lines with a minimum cover of 18" based on finished grades. Install irrigation mainline with a minimum of 24" based on finished grade
6. Excavate trenches and install piping and fill during the same working day. Do not leave open trenches or partially filled trenches open overnight.

    a. Replace stripped sod in sufficient time to allow for satisfactory sod recovery and growth. Water stripped and reinstalled sod until irrigation system is place in operation.

7. Valves boxes installed per manufacturer's recommendations or as approved by Owner's Rep, in accordance with approved shop drawings.

B. Plastic Pipe:

1. Install plastic pipe in accordance with manufacturer's installation instructions. Provide for thermal expansion and contraction. Do not install plastic pipe if temperature is below 32 degrees.
2. Saw cut plastic pipe. Use an electric miter saw, to ensure a square cut. Remove burrs and shavings at cut ends prior to installation. Use a hand beveler on all gasket pipe cuts.
3. Make plastic to plastic joints with solvent weld joints or slip seal joints. Use only solvent recommended by the pipe manufacturer. Install plastic pipe fittings in accordance with pipe manufacturer's instructions. Contractor shall make arrangements with pipe manufacturer for all necessary field assistance.
4. Make plastic to metal joints with plastic male adapters.
5. Make solvent weld joints in accordance with manufacturer's recommendations.
6. Allow joints to set **at least 24 hours** before pressure is applied to the system.
7. Maintain pipe interiors free of dirt and debris. Close open ends of pipe by acceptable methods (duct tape ends) when pipe installation is not in progress.
8. All pipe routed through sleeves will be banded with a steel banding tool to wooden blocks to prevent vibration of the pipe inside of sleeve.

C. Sprinklers, fittings, valves, and accessories:

1. Install fittings, valves, sprinkler heads, risers, and accessories in accordance with manufacturer's instructions, except as otherwise indicated.

2. Set sprinkler heads perpendicular to finished grades, except as otherwise indicated.
3. Locate sprinkler heads to assure proper coverage of indicated areas. Do not exceed sprinkler head spacing distances indicated.
4. Install battery-operated clocks in accordance with manufacturer's written instructions.
5. Install valve access boxes on a suitable base of bricks to provide a level foundation at proper grade and to provide drainage of the access box. 1 cubic feet of pea gravel below box to be provided for drainage.
6. Battery-operated valves shall be installed plumb with valve access box with all valve handles, bolts, connections and electrical splices accessible through the valves box opening (not less than 6" below valve box cover).
7. All seal threaded connections of control valves with Teflon tape. **Plastic joint type compound is not acceptable.**

D. Flushing, testing, and adjustment

1. After sprinkler piping and risers are installed and before sprinkler heads are installed, open control valves and flush out the system with full head of water.
2. Perform system testing upon completion of each section. Make necessary repairs and re-test repaired sections as required.
3. Adjust sprinklers after installation for proper and adequate distribution of the water over the coverage pattern. Adjust for the proper arc of coverage.
4. Adjust all electric remote control valve flow control stems for system balance. Contractor must set pressure-regulating valves prior to acceptance specification on design.
5. Test and demonstrate the controller by operating all programs, day, hour, and station selection features as required to automatically start and shut down irrigation cycles to accommodate plant requirements and weather conditions.

E. Service:

1. When requested, return to the site during the subsequent fall season and winterize the system. Drain all water from the system and blow out the system with compressed air.
2. When requested, return to the site during the subsequent spring season and demonstrate to the Owner Representative the proper procedures for the system start-up, operation, and maintenance.
3. After 3 months of continuous operation, after acceptance of job, contractor must return to the site and re-adjust all irrigation heads, by re-packing heads that have become dislodged due to resettling of ground, torque of spray, or vibration. Re-adjust radius, arc, and trajectory of spray of all heads.

3.4 DISPOSAL OF WASTE MATERIAL

A. Stockpile, haul from site, and legally dispose of waste materials, including unsuitable excavated materials, rock, trash, and debris.

B. Maintain disposal route clear, clean, and free of debris.

3.5 ACCEPTANCE

A. Test and demonstrate to the Irrigation Designer the satisfactory operation of the system free of leaks.

B. Instruct the Owner's designated personnel in the operation of the system including adjustment of sprinklers, controller(s), valves, and pump controls.

C. Upon acceptance, the Owner will assume operation of the system.

D. Provide owner with 3 quick coupler keys with swivels for use on project.

E. Provide owner with all manuals for products used on project.

F. Provide owner with 1 key for every seven manual valves used on project. More than one type of valve may require more than one type of key.

G. Provide irrigation system record drawings:

1. Submit 3 copies of As-Built drawings (in AutoCAD DWG format) to the owner on base drawings provided by the irrigation designer.

3.6 GUARANTEE

A. The contractor shall guarantee all workmanship covered by the specifications to be free of defects for a period of one (1) year from the date of final acceptance of the project. He shall replace any part or parts found to be defective within the period of guarantee at no cost to the owner, except repairs or replacement necessitated by damage by others.

B. Back filling of all excavation shall be guaranteed. If, at any time during the first year of the guarantee period, trenches or heads should settle, the irrigation contractor shall repair any settling at no cost to the owner. Flush dirt and debris from piping before installing sprinklers and other devices.

3.7 CLEANING

A. Perform cleaning during installation of work and upon completion of work. Remove from site all excess materials, soil, debris, and equipment. Repair damage resulting from irrigation system installation.

END OF SECTION 328400

SECTION 329200 - TURF AND GRASSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Seeding.
2. Hydroseeding.
3. Sodding.
4. Erosion-control material.

B. Related Sections:

1. Division 32 Section "Irrigation System" for turf irrigation.
2. Division 32 Section "Plants" for landscape edgings.

1.3 DEFINITIONS

A. Duff Layer: The surface layer of native topsoil that is composed of mostly decayed leaves, twigs, and detritus.

B. Finish Grade: Elevation of finished surface of planting soil.

C. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.

D. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.

E. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. These include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.

F. Planting Soil: Standardized topsoil; existing, native surface topsoil; existing, in-place surface soil; imported topsoil; or manufactured topsoil that is modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.

G. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or top surface of a fill or backfill before planting soil is placed.

H. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

I. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil, but in disturbed areas such as urban environments, the surface soil can be subsoil.

J. Weeds: Includes Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass and other unspecified growth.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

1. Pesticides and Herbicides: Include product label and manufacturer's application instructions specific to this Project.

B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

C. Certification of Sod: From sod vendor for each grass-seed monostand or mixture stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

D. Qualification Data: For qualified landscape Installer.

E. Product Certificates: For soil amendments and fertilizers, from manufacturer.

F. Material Test Reports: For existing in-place surface soil and imported or manufactured topsoil.

G. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of turf during a calendar year. Submit before expiration of required initial maintenance periods.

1.5 QUALITY ASSURANCE

A. All landscaping and irrigation shall be performed by the same contractor and shall be a firm specializing in this work and must have a minimum of 5 years experience.

B. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful turf establishment.

1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress
2. Pesticide Applicator: State licensed, commercial.

C. Sod/Sprig Producer: Company specializing in sod/sprig production and harvesting with a minimum 5 years experience and certified by the State of South Carolina or the State of Georgia.

D. Soil-Testing Laboratory Qualifications: An independent laboratory or university laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.

E. Soil Analysis: For each unamended soil type, furnish soil analysis and a written report by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant-nutrient content of the soil.

1. Testing methods and written recommendations shall comply with USDA's Handbook No. 60.
2. The soil-testing laboratory shall oversee soil sampling, with depth, location, and number of samples to be taken per instructions from Architect. A minimum of three representative samples shall be taken from varied locations for each soil to be used or amended for planting purposes.
3. Report suitability of tested soil for turf growth.

    a. Based on the test results, state recommendations for soil treatments and soil amendments to be incorporated. State recommendations in weight per 1000 sq. ft. or volume per cu. yd. for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.
    b. Report presence of problem salts, minerals, or heavy metals, including aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, lithium, and vanadium. If such problem materials are present, provide additional recommendations for corrective action.

F. Preinstallation Conference: Conduct conference at Project site to comply with requirements of Division 01 “Project Meetings”.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws, as applicable.

B. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" in TPI's "Guideline Specifications to Turfgrass Sodding." Deliver sod in time for planting within 24 hours of harvesting. Protect sod from breakage and drying. Deliver sod on pallets. Do not deliver more sod than can be laid within 24 hours. Do not harvest or transport sod when moisture content may adversely affect sod survival.

C. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.

3. Accompany each delivery of bulk fertilizers, lime, and soil amendments with appropriate certificates.

1.7 WARRANTY

A. It is the responsibility of the Contractor to make known any site conditions which may be harmful or growth inhibiting to the plan materials specified, prior to the installation of said materials.

B. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner, or incidents that are beyond Contractor's control. Warranty shall cover any plant loss due to weather damage to plants installed out of normal planting season.

2. Warranty Periods from Date of Substantial Completion :

a. Seed, Hydroseed, and Sod: 12 months.

1.8 PROJECT CONDITIONS

A. Planting Restrictions: Coordinate installation of seed and sod during normal planting seasons for each type of plant materials required.

B. Temporary Grassing:

1. If a project requires grassing outside of the recommended planting season, the Contractor shall install, at his expense, temporary grassing until such time as permanent grassing can be installed.
2. Temporary grassing shall be winter rye (Lolium multiforum) and shall be applied at a rate of 10 pounds per 1000 square feet. At time of permanent grassing the Contractor shall kill existing temporary grass with contact herbicide, disc, fine grade and compact soil to properly receive sod or seed.

C. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

1.9 MAINTENANCE SERVICE

A. Initial Turf Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until acceptable turf is established but for not less than the following periods:

1. Seeded Turf: from time of installation until time of Final Acceptance or 60 days from date of Substantial Completion, whichever is greater.

a. When initial maintenance period has not elapsed before end of planting season, or if turf is not fully established, continue maintenance during next planting season.

2. Sodded Turf: from time of installation until time of Final Acceptance or 60 days from date of Substantial Completion, whichever is greater.

B. Continuing Maintenance Proposal: From Installer to Owner, in the form of a standard yearly (or other period) maintenance agreement, starting on date initial maintenance service is concluded. State services, obligations, conditions, and terms for agreement period and for future renewal options.

PART 2 - PRODUCTS

2.1 SEED

1. Refer to civil engineering plans/specifications for seeding mixtures.

2.2 TURFGRASS SOD

A. Turfgrass Species: Certified approved nursery grown grade; cultivated grass sod; minimum age 18 months; type indicated on Drawings with fibrous root system, free of stones, burned or bare spots, disease, nematodes, soil borne insects and containing no more than 5 weeds per 1000 square feet.

1. Celebration Bermuda Grass ('Celebration' Cynodon dactylon) or approved equal.

2.3 INORGANIC SOIL AMENDMENTS

A. Lime: ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:

1. Class: T, with a minimum of 99 percent passing through No. 8 sieve and a minimum of 75 percent passing through No. 60 sieve.
2. Provide lime in form of ground dolomitic limestone.

B. Aluminum Sulfate: Commercial grade, unadulterated.

C. Perlite: Horticultural perlite, soil amendment grade.

D. Sand: Clean, washed, natural or manufactured, and free of toxic materials.

2.4 ORGANIC SOIL AMENDMENTS

A. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture and free of chips, stones, sticks, soil, or toxic materials.

1. In lieu of decomposed wood derivatives, mix partially decomposed wood derivatives with ammonium nitrate at a minimum rate of 0.15 lb/cu. ft. of loose sawdust or ground bark, or with ammonium sulfate at a minimum rate of 0.25 lb/cu. ft. of loose sawdust or ground bark.

B. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

C. Water: Potable

2.5 FERTILIZERS

A. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 4 percent nitrogen and 20 percent phosphoric acid.

B. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.

C. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:

1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

2.6 PLANTING SOILS

A. Planting Soil: ASTM D 5268 topsoil, with pH range of 5.5 to 7, a minimum of 4 > percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.

2.7 MULCHES

A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:

1. Type: Pine needles.
2. Color: Natural

2.8 PESTICIDES

A. General: Pesticide, registered and approved by EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

B. Pre-Emergent Herbicide (Selective and Non-Selective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.

C. Post-Emergent Herbicide (Selective and Non-Selective): Effective for controlling weed growth that has already germinated.

2.9 EROSION-CONTROL MATERIALS

A. Erosion-Control Fiber Mesh: Biodegradable burlap or spun-coir mesh, a minimum of 0.92 lb/sq. yd., with 50 to 65 percent open area. Include manufacturer's recommended steel wire staples, 6 inches long.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to be planted for compliance with requirements and other conditions affecting performance.

1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.

D. Beginning of installation means acceptance of existing condition.

3.2 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.

B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.3 TURF AREA PREPARATION

A. Limit turf subgrade preparation to areas to be planted in the immediate future.

B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 4 inches. Remove stones larger than 1/2 inchin any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.

1. Spread planting soil to as required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.

a. Spread approximately 1/2 the thickness of planting soil over loosened subgrade. Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil.
b. Reduce elevation of planting soil to allow for soil thickness of sod.

C. Unchanged Subgrades: If turf is to be planted in areas unaltered or undisturbed by excavating, grading, or surface-soil stripping operations, prepare surface soil as follows:

1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.
2. Loosen surface soil to a depth of at least 6 inches [. Apply soil amendments and fertilizers according to planting soil mix proportions and mix thoroughly into top 4 inches of soil. Till soil to a homogeneous mixture of fine texture.
3. Remove stones larger than 1/2 inch in any dimension and sticks, roots, trash, and other extraneous matter.
4. Legally dispose of waste material, including grass, vegetation, and turf, off Owner's property.

D. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit finish grading to areas that can be planted in the immediate future.

E. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

F. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.4 PREPARATION FOR EROSION-CONTROL MATERIALS

A. Prepare area as specified in "Turf Area Preparation" Article.

B. For erosion-control mats, install planting soil in two lifts, with second lift equal to thickness of erosion-control mats. Install erosion-control mat and fasten as recommended by material manufacturer.

C. Fill cells of erosion-control mat with planting soil and compact before planting.

D. For erosion-control blanket or mesh, install from top of slope, working downward, and as recommended by material manufacturer for site conditions. Fasten as recommended by material manufacturer.

E. Moisten prepared area before planting if surface is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

3.5 SEEDING

A. Sow seed with spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 mph. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.

1. Do not use wet seed or seed that is moldy or otherwise damaged.
2. Do not seed against existing trees. Limit extent of seed to outside edge of planting saucer.

B. Sow seed at a total rate of 2 lb/1000 sq. ft.

C. Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with fine spray.

D. Protect seeded areas with erosion-control mats where shown on Drawings; install and anchor according to manufacturer's written instructions.

E. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre to form a continuous blanket 1-1/2 inches in loose thickness over seeded areas. Spread by hand, blower, or other suitable equipment.

1. Anchor straw mulch by crimping into soil with suitable mechanical equipment.

3.6 HYDROSEEDING

A. Hydroseeding: Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.

1. Apply slurry uniformly to all areas to be seeded. Apply slurry at a rate to obtain the specified seed-sowing rate.

3.7 SODDING

A. Moisten prepared surface immediately prior to laying sod.

B. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.

C. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to subgrade or sod during installation. Tamp and roll lightly to ensure contact with subgrade, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.

1. Lay sod across angle of slopes exceeding 1:3.
2. Anchor sod on slopes exceeding 1:6 with wood pegs or steel staples spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage.

D. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 4 inches below sod.

3.8 TURF MAINTENANCE

A. Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.

1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.

B. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches.

1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
2. Water turf with fine spray at a minimum rate of 1 inch per week unless rainfall precipitation is adequate.

C. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 1/3 of grass height. Remove no more than 1/3 of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:

1. Mow bermudagrass to a height of 1/2 to 1 inch.
2. Mow centipedegrass to a height of 1 to 2 inches.

D. Turf Postfertilization: Apply fertilizer after initial mowing and when grass is dry.

1. Use fertilizer that will provide actual nitrogen of at least 1 lb/1000 sq. ft. to turf area.

3.9 SATISFACTORY TURF

A. Turf installations shall meet the following criteria as determined by Architect:

1. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities. Scattered bare spots exceeding 4 inches by 4 inches shall not total more than two square feet (2 SF) in any 100 square foot area.
2. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities. Scattered bare spots exceeding 4 inches by 4 inches shall not total more than two square feet (2 SF) in any 100 square foot area.

B. Use specified materials to reestablish turf that does not comply with requirements and continue maintenance until turf is satisfactory.

3.10 PESTICIDE APPLICATION

A. Apply pesticides and other chemical products and biological control agents in accordance with requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.

B. Post-Emergent Herbicides (Selective and Non-Selective): Apply only as necessary to treat already-germinated weeds and in accordance with manufacturer's written recommendations.

3.11 CLEANUP AND PROTECTION

A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.

C. Remove nondegradable erosion-control measures after grass establishment period.

END OF SECTION 329200

SECTION 329300 – PLANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Trees.
2. Shrubs.
3. Ground Covers.
4. Plants.
5. Planting soils and soil amendments.
6. Fertilizers and Mulches
7. Stakes and guys.
8. Biobarrier.
9. Portable drip irrigation units for trees ("Treegators").
10. Initial Maintenance of Landscape Material

B. Related Sections:

1. Division 01 Section "Temporary Tree and Plant Protection" for protecting, trimming, pruning, repairing, and replacing existing trees to remain that interfere with, or are affected by, execution of the Work.
2. Division 32 Section "Turf and Grasses" for turf (lawn) and meadow planting, hydroseeding, and erosion-control materials.
3. Division 32 Section “Irrigation System” for irrigation.

1.3 DEFINITIONS

A. Backfill: The earth used to replace or the act of replacing earth in an excavation.

B. Balled and Burlapped Stock: Plants dug with firm, natural balls of earth in which they were grown, with ball size not less than sizes indicated; wrapped with burlap, tied, rigidly supported, and drum laced with twine with the root flare visible at the surface of the ball as recommended by ANSI Z60.1.

C. Balled and Potted Stock: Plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than sizes indicated.

D. Bare-Root Stock: Plants with a well-branched, fibrous-root system developed by transplanting or root pruning, with soil or growing medium removed, and with not less than minimum root spread according to ANSI Z60.1 for type and size of plant required.

E. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.

F. Duff Layer: The surface layer of native topsoil that is composed of mostly decayed leaves, twigs, and detritus.

G. Fabric Bag-Grown Stock: Healthy, vigorous, well-rooted plants established and grown in-ground in a porous fabric bag with well-established root system reaching sides of fabric bag. Fabric bag size is not less than diameter, depth, and volume required by ANSI Z60.1 for type and size of plant.

H. Finish Grade: Elevation of finished surface of planting soil.

I. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.

J. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.

K. Pests: Living organisms that occur where they are not desired, or that cause damage to plants, animals, or people. These include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.

L. Planting Area: Areas to be planted.

M. Planting Soil: Standardized topsoil; existing, native surface topsoil; existing, in-place surface soil; imported topsoil; or manufactured topsoil that is modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.

N. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.

O. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.

P. Stem Girdling Roots: Roots that encircle the stems (trunks) of trees below the soil surface.

Q. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

R. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

S. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.

T. Weeds: Includes Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison

Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass and other unspecified growth.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated, including soils.

1. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.
2. Pesticides and Herbicides: Include product label and manufacturer's application instructions specific to the Project.

B. Plant Photographs: Include color photographs in digital format of specimen plant material as it will be furnished to the Project. Take photographs from an angle depicting true size and condition of the typical plant to be furnished. Include a scale rod or other measuring device in each photograph. Identify each photograph with the full scientific name of the plant, plant size, and name of the growing nursery.

C. Qualification Data: For qualified landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.

D. Product Certificates: For each type of manufactured product, from manufacturer, and complying with the following:

1. Manufacturer's certified analysis of standard products.
2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.

E. Material Test Reports: For existing in-place surface soil and imported or manufactured topsoil.

F. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of plants during one calendar year. Submit before start of required maintenance periods.

G. Warranty: Sample of special warranty.

H. Planting Schedule indicating anticipated dates and locations for each type of planting.

I. Plant Material Record Drawings:

1. Legibly mark drawings to record actual construction
2. Indicate horizontal locations, referenced to permanent surface improvements.
3. Identify field changes of dimensions and detail changes made by change order.

1.5 QUALITY ASSURANCE

A. All landscaping and irrigation shall be performed by same contractor and shall be a single firm specializing in this work and must have a minimum of 5 years experience.

B. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful establishment of plants.

1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
2. Pesticide Applicator: State licensed, commercial.

C. Soil-Testing Laboratory Qualifications: An independent or university laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.

D. Soil Analysis: For each unamended soil type, furnish soil analysis and a written report by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant-nutrient content of the soil.

1. Report suitability of tested soil for plant growth.

a. Based upon the test results, state recommendations for soil treatments and soil amendments to be incorporated. State recommendations in weight per 1000 sq. ft. or volume per cu. yd. for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.
b. Report presence of problem salts, minerals, or heavy metals, including aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, lithium, and vanadium. If such problem materials are present, provide additional recommendations for corrective action.

E. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.

1. Do not make substitutions. If specified material is not obtainable, submit proof of non-availability to Landscape Architect and Owner’s Rep with a proposal for use of equivalent material.
2. Provide healthy, vigorus stock, grown in recognized nursery in accordance with good horticultural practice and free of disease, insects, eggs, larvae, and defects such as knots, sun-scald, injuries, abrasions, or disfigurement.

F. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.

1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Take caliper measurements 6 inches above the root flare for trees up to 4-inch caliper size, and 12 inches above the root flare for larger sizes.
2. Other Plants: Measure with stems, petioles, and foliage in their normal position.

G. Plant Material Observation: Architect and/or Owner’s Rep may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Architect and Owner’s Rep retain right to observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.

1. Notify Architect of sources of planting materials seven days in advance of delivery to site.

H. Preinstallation Conference: Conduct conference at Project site to comply with requirements of Division 01 “Project Meetings”.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws if applicable. Protect materials from deterioration during delivery and while stored at site.

B. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery of bulk fertilizers, lime, and soil amendments with appropriate certificates.

C. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.

D. Handle planting stock by root ball.

E. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in shade, protect from weather and mechanical damage, and keep roots moist.

1. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
2. Do not remove container-grown stock from containers before time of planting.
3. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly-wet condition.
4. Spray deciduous plants in foliage with an approved anti-transpirant immediately after digging to prevent dehydration.

F. Inspection certifications required by law shall accompany each shipment invoice or order to stock and on arrival the certificate shall be filed with the Owner’s Rep.

1.7 PROJECT CONDITIONS

A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.

B. Any damage to utilities shall be repaired at contractor’s expense.

C. Interruption of Existing Services or Utilities: Do not interrupt services or utilities to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary services or utilities according to requirements indicated:

1. Notify Owner’s Rep] no fewer than two days in advance of proposed interruption of each service or utility.
2. Do not proceed with interruption of services or utilities without Owner's Rep’s written permission.

D. Planting Restrictions: Coordinate installation of planting materials during normal planting season for each type of plant material required.

E. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

F. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated or approved by Owner’s Rep.

1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.
2. Coordination with Irrigation: Coordinate the work of this section with installation of underground sprinkler system piping and watering heads. Repair irrigation components damaged during planting operations at Contractor’s expense.

1.8 WARRANTY

A. It is the responsibility of the Contractor to make known any site conditions which may be harmful or growth inhibiting to the plan materials specified, prior to the installation of said materials.

B. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner, or incidents that are beyond Contractor's control. Warranty shall cover any plant loss due to weather damage to plants installed out of normal planting season.

2. Warranty Periods from Date of Substantial Completion :

a. Trees, Shrubs, Vines, and Ornamental Grasses: 12 months.
b. Ground Covers, Biennials, Perennials, and Other Plants: 12 months.

3. Include the following remedial actions as a minimum:

a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
b. Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
c. Replace with plants of same size and species as specified.
d. A limit of one replacement of each plant will be required except for losses or replacements due to failure to comply with requirements.

e. Provide extended warranty for period equal to original warranty period, for replaced plant material.

4. Satisfaction of Warranty:

a. Contractor shall request, by written notice, inspection of final acceptance to take place within one week before or after end of warranty period.
b. If plants are in satisfactory condition, the Contractor shall receive a written notice of warranty compliance.
c. Replace rejected work and continue maintenance until work is inspected by Owner's Rep and found acceptable.

1.9 MAINTENANCE SERVICE

A. Initial Maintenance Service for Trees and Shrubs: Provide maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established but for not less than maintenance period below.

1. Maintenance Period: Unless indicated on the drawings, from time of installation until time of Final Acceptance or for 60 days after Substantial Completion, whichever is greater

B. Initial Maintenance Service for Ground Cover and Other Plants: Provide maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established but for not less than maintenance period below.

1. Maintenance Period: Unless indicated on the drawings, from time of installation until time of Final Acceptance or for 60 days after Substantial Completion, whichever is greater.

C. Continuing Maintenance Proposal: From Installer to Owner's Rep, in the form of a standard yearly (or other period) maintenance agreement, starting on date initial maintenance service is concluded. State services, obligations, conditions, and terms for agreement period and for future renewal options.

1. Include cutting and trimming methods; types, applications frequency, and recommended coverage of fertilizer.

D. Submit written instructions for proposed Contractor maintenance and continuing Owner maintenance.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL

A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant Schedule or Plant Legend shown on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.

1. Trees with damaged, crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); crossing trunks; cut-off limbs more than 3/4 inch in diameter; or with stem girdling roots will be rejected.
2. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.

B. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Architect, with a proportionate increase in size of roots or balls.

C. Labeling: Label each plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant as shown on Drawings.

D. If formal arrangements or consecutive order of plants is shown on Drawings, select stock for uniform height and spread, and number the labels to assure symmetry in planting.

2.2 INORGANIC SOIL AMENDMENTS

A. Lime: ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:

1. Class: T, with a minimum of 99 percent passing through No. 8 sieve and a minimum of 75 percent passing through No. 60 sieve.
2. Provide lime in form of ground dolomitic limestone.

B. Perlite: Horticultural perlite, soil amendment grade.

C. Sand: Clean, washed, natural or manufactured, and free of toxic materials.

D. Peat Humus: Finely divided or granular texture with a pH range of 6 to 7.5, composed of partially decomposed moss peat (other than sphagnum), peat humus, or reed-sedge peat.

2.3 ORGANIC SOIL AMENDMENTS

A. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture and free of chips, stones, sticks, soil, or toxic materials.

1. In lieu of decomposed wood derivatives, mix partially decomposed wood derivatives with ammonium nitrate at a minimum rate of 0.15 lb/cu. ft. of loose sawdust or ground bark, or with ammonium sulfate at a minimum rate of 0.25 lb/cu. ft. of loose sawdust or ground bark.

B. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, debris, and material harmful to plant growth.

C. Water: Potable.

2.4 FERTILIZERS

A. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 4 percent nitrogen and 20 percent phosphoric acid.

B. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.

C. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:

1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

2.5 PLANTING SOILS

A. Planting Soil: ASTM D 5268 topsoil, with pH range of 5.5 to 7, a minimum of 4 > percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.

2.6 MULCHES

A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:

1. Type: Shredded Cypress to match existing.
2. Color: Natural.

2.7 WEED-CONTROL BARRIERS

A. Nonwoven Geotextile Filter Fabric: Polypropylene or polyester fabric, 3 oz./sq. yd. minimum, composed of fibers formed into a stable network so that fibers retain their relative position. Fabric shall be inert to biological degradation and resist naturally-encountered chemicals, alkalis, and acids.

2.8 PESTICIDES

A. General: Pesticide registered and approved by EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

B. Pre-Emergent Herbicide (Selective and Non-Selective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.

C. Post-Emergent Herbicide (Selective and Non-Selective): Effective for controlling weed growth that has already germinated.

2.9 TREE STABILIZATION MATERIALS

A. Stakes and Guys:

1. Upright and Guy Stakes: Rough-sawn, sound, new hardwood or softwood with specified wood pressure-preservative treatment, free of knots, holes, cross grain, and other defects, 2-by-2-inch nominal by length indicated, pointed at one end.
2. Chafing Guard: 2” black woven vinyl tree straps with looped or grommeted ends.
3. Guys and Tie Wires: ASTM A 641/A 641M, Class 1, galvanized-steel wire, two-strand, twisted, 0.106 inch in diameter.
4. Guy Cables: Five-strand, 3/16-inch- diameter, galvanized-steel cable, with zinc-coated turnbuckles, a minimum of 3 inches long, with two 3/8-inch galvanized eyebolts.

2.10 MISCELLANEOUS PRODUCTS

A. Root Barrier: As provided by Owner; to be installed by Contractor.

B. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions. Provide one of the following or approved equal:

1. “Wilt-Pruf” by Nursery Specialty Products
2. “D-Wax” by Plant Products
3. “Pro-tex” by Protex Industries.

C. Portable Drip Irrigation Units: Provide "Treegators" by Spectrum Products, 4200-152 Atlantic Avenue, Raleigh, NC 27604, Phone: 919-878-8911; FAX: 919-872-6173, or approved equal, in the following size:

1. Size: 20-gallon bag.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive plants for compliance with requirements and conditions affecting installation and performance.

1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.

D. Beginning of installation means acceptance of existing condition.

3.2 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.

B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

C. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations, outline areas, adjust locations when requested, and obtain Architect's acceptance of layout before excavating or planting. Make minor adjustments as required.

D. Lay out plants at locations directed by Architect. Stake locations of individual trees and shrubs and outline areas for multiple plantings.

E. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.

1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.

F. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.

3.3 PLANTING AREA ESTABLISHMENT

A. Slope all subgrades to positively drain plant beds.

B. Loosen subgrade of planting areas to a minimum depth of 6 inches . Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.

1. Apply superphosphate fertilizer directly to subgrade before loosening.
2. Thoroughly blend planting soil off-site before spreading or spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil.

    a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
    b. Mix lime with dry soil before mixing fertilizer.
    c. Prevent lime from contacting roots of acid-loving plants.

3. Spread planting soil to a depth of 8 inches but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.

a. Spread approximately one-half the thickness of planting soil over loosened subgrade. Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil.

C. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

D. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.4 EXCAVATION FOR TREES AND SHRUBS

A. Planting Pits and Trenches: Excavate circular planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are not acceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.

1. Excavate width as detailed on drawings.
2. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
3. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.
4. Maintain required angles of repose of adjacent materials as shown on the Drawings. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements.
5. Maintain supervision of excavations during working hours.
6. Keep excavations covered or otherwise protected overnight.
7. If drain tile is shown on Drawings or required under planting areas, excavate to top of porous backfill over tile.

B. Subsoil and topsoil removed from excavations may not be used as planting soil.

C. Obstructions: Notify Architect of Owner’s Rep if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.

1. Hardpan Layer: Drill 6-inch- diameter holes, 24 inches apart, into free-draining strata or to a depth of 10 feet, whichever is less, and backfill with free-draining material.

D. Drainage: Notify Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.

E. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

3.5 TREE, SHRUB, AND VINE PLANTING

A. Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.

B. Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.

C. Set container-grown stock plumb and in center of planting pit or trench with root flare above adjacent finish grades as indicated on drawings.

D. When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

3.6 TREE, SHRUB, AND VINE PRUNING

A. Remove only dead, dying, or broken branches. Do not prune for shape.

B. Prune, thin, and shape trees, shrubs, and vines according to standard professional horticultural and arboricultural practices. Unless otherwise indicated by Architect, do not cut tree leaders; remove only injured, dying, or dead branches from trees and shrubs; and prune to retain natural character.

C. Do not apply pruning paint to wounds.

3.7 TREE STABILIZATION

A. Staking and Guying: Stake and guy trees more than 14 feet in height and more than 3 inches in caliper unless otherwise indicated. Securely attach no fewer than three guys to stakes 30 inches long, driven to grade.

1. Site-Fabricated Staking-and-Guying Method:

    a. For trees more than 6 inches in caliper, anchor guys to wood deadmen buried at least 36 inches below grade. Provide turnbuckle for each guy wire and tighten securely.
    b. Support trees with strands of cable or multiple strands of tie wire, connected to the brass grommets of tree-tie webbing at contact points with tree trunk and reaching to turnbuckle. Allow enough slack to avoid rigid restraint of tree.
    c. Attach flags to each guy wire, 30 inches above finish grade.

B. Palm Bracing: Install bracing system at three or more places equally spaced around perimeter of trunk to secure each palm until established unless otherwise indicated.

1. Site-Fabricated Palm-Bracing Method:

    a. Place battens over padding and secure battens in place around trunk perimeter with at least two straps, tightened to prevent displacement. Ensure that straps do not contact trunk.
    b. Place diagonal braces and cut to length. Secure upper ends of diagonal braces with galvanized nails into battens or into nail-attached blocks on battens. Do not drive nails, screws, or other securing devices into palm trunk; do not penetrate palm trunk in any fashion. Secure lower ends of diagonal braces with stakes driven into ground to prevent outward slippage of braces.

3.8 ROOT-BARRIER INSTALLATION

A. Install root barrier where indicated on Drawings.

1. Install root barrier per manufacture’s guidelines.

3.9 GROUND COVER AND PLANT PLANTING

A. Set out and space ground cover and plants other than trees, shrubs, and vines as scheduled in even rows with triangular spacing.

B. Use planting soil for backfill.

C. Dig holes large enough to allow spreading of roots.

D. For rooted cutting plants supplied in flats, plant each in a manner that will minimally disturb the root system but to a depth not less than two nodes.

E. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.

F. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.

G. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.10 PLANTING AREA MULCHING

A. Install weed-control barriers before mulching according to manufacturer's written instructions. Completely cover area to be mulched, overlapping edges a minimum of 6 inches.

B. Mulch backfilled surfaces of planting areas and other areas indicated.

1. Trees in Turf Areas: Apply pine mulch ring of 4” average thickness, with radius dimension as indicated on detailed drawings around trunks or stems. Do not place mulch within 3 inches of trunks or stems.
2. Pine Mulch in Planting Areas: Apply 4” average thickness of organic mulch over whole surface of planting area] and finish level with adjacent finish grades. Do not place mulch within 3 inches of trunks or stems.

3.11 PLANT MAINTENANCE

A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings. Spray or treat as required to keep trees and shrubs free of insects and disease.

B. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.

C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated past management practices whenever possible to minimize the use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

D. Refill portable drip irrigation units (“Treegators”) as required.

3.12 PESTICIDE APPLICATION

A. Apply pesticides and other chemical products and biological control agents in accordance with authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.

B. Pre-Emergent Herbicides (Selective and Non-Selective): Apply to tree, shrub, and ground-cover areas in accordance with manufacturer's written recommendations. Do not apply to seeded areas.

C. Post-Emergent Herbicides (Selective and Non-Selective): Apply only as necessary to treat already-germinated weeds and in accordance with manufacturer's written recommendations.

3.13 CLEANUP AND PROTECTION

A. During planting, keep adjacent paving and construction clean and work area in an orderly condition.

B. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.

C. After installation and before Substantial Completion, remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.

3.14 DISPOSAL

A. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.

3.15 INSPECTION AND ACCEPTANCE

A. When landscape work is substantially complete, Architect and Owner’s Rep will make and inspection to determine acceptability.

1. Landscape work may be inspected for acceptance in portions as agreeable to Architect and Owner’s Rep, provided each portion of work offered for Inspection is complete, including maintenance.
2. When work does not comply with requirements, replace rejected work and continue specified maintenance until reinspected by Architect and Owner’s Rep and found to be acceptable. Remove materials promptly from project site.
3. Following Architect’s and Owner’s Rep’s inspection of installed material, remove all flags, labels, tags, or other non-biodegradable materials from trees and shrubs.

END OF SECTION 329300

SECTION 042000 - UNIT MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes unit masonry assemblies consisting of the following:

1. Concrete masonry units (CMUs).
2. Face brick.
3. Mortar and grout.
4. Reinforcing steel.
5. Masonry joint reinforcement.
6. Ties and anchors.
7. Embedded flashing.
8. Miscellaneous masonry accessories.

1.3 DEFINITIONS

A. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.4 PERFORMANCE REQUIREMENTS

A. Provide structural unit masonry that develops indicated net-area compressive strengths (f'_m) at 28 days.

B. Determine net-area compressive strength (f'_m) of masonry by testing masonry prisms according to ASTM C 1314.

1.5 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For the following:

1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.
2. Reinforcing Steel: Detail bending and placement of unit masonry reinforcing bars. Comply with ACI 315, "Details and Detailing of Concrete Reinforcement." Show elevations of reinforced walls.

C. Samples for Verification: For each type and color of the following:

1. Face brick, in the form of straps of five or more bricks.
2. Special brick shapes.
3. Accessories embedded in masonry.

D. Material Certificates: Include statements of material properties indicating compliance with requirements including compliance with standards and type designations within standards. Provide for each type and size of the following:

1. Masonry units.
2. Cementitious materials. Include brand, type, and name of manufacturer.
3. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
4. Grout mixes. Include description of type and proportions of ingredients.
5. Reinforcing bars.
6. Joint reinforcement.
7. Anchors, ties, and metal accessories.

E. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.

1. Include test reports, per ASTM C 780, for mortar mixes required to comply with property specification.
2. Include test reports, per ASTM C 1019, for grout mixes required to comply with compressive strength requirement.

F. Cold-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with cold-weather requirements.

1.6 QUALITY ASSURANCE

A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, through one source from a single manufacturer for each product required.

B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from a single manufacturer for each cementitious component and from one source or producer for each aggregate.

C. Exterior Wall Mockup: Prior to starting exterior wall construction, build exterior wall mockup as directed by Architect. Mockup will verify selections made under sample Submittals and demonstrate aesthetic effects and qualities of materials and execution. Build mockups to comply with the following requirements, using materials indicated for the completed Work:

1. Locate mockup in the location as directed by Architect.
2. Build mockup of typical wall area as shown in the documents, including masonry veneer face with CMU backup and accessories. Include each type and color of exposed unit masonry and other exterior wall materials.
3. Clean exposed faces of mockups with masonry cleaner as indicated.
4. Notify Architect seven days in advance of dates and times when mockups will be constructed.
5. Protect accepted mockups from the elements with weather-resistant membrane.
6. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
7. Approval of mockups is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; and aesthetic qualities of workmanship.
8. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.

B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.

C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

D. Deliver preblended, dry mortar mix in moisture-resistant containers designed for lifting and emptying into dispensing silo. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in a metal dispensing silo with weatherproof cover.

E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.8 PROJECT CONDITIONS

A. Protection of Masonry: During construction, cover tops of walls with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.

B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.

1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.

C. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ ASCE 6/TMS 602.

1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until masonry has dried, but not less than 7 days after completing cleaning.

D. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 MASONRY UNITS, GENERAL

A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects will be exposed in the completed Work.

2.2 CONCRETE MASONRY UNITS

A. Shapes: Provide shapes indicated and as follows:

1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.

B. Concrete Masonry Units: ASTM C 90.

1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 1900 psi.
2. Density Classification: Lightweight, unless otherwise indicated.
    a. Provide lightweight units free of organic impurities that will cause rusting, staining and pop outs, and free of combustible matter. The use of coal cinder aggregate/bottom ash, or similar waste products will not be allowed.
    b. For lightweight units, use expanded shale, clay or slate aggregate, produced by the rotary kiln process, conforming to ASTM C 331 and graded to ensure constant texture.
3. Size (Width): Manufactured to dimensions 3/8 inch less than nominal dimensions.
4. Exposed Faces: Provide color and texture matching the range represented by Architect's sample.

2.3 BRICK

A. General: Provide shapes indicated and as follows:

1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
2. Provide special shapes for applications where stretcher units cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes, and lintels.
3. Provide special shapes for applications requiring brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.
4. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.

B. Face Brick: ASTM C 216, Grade SW, Type FBS.

1. Initial Rate of Absorption: Less than 20 g/30 sq. in. per minute when tested per ASTM C 67.
2. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."
3. Size (Standard Paver): 4 inches wide by 2-1/4 inches high by 8 inches long.
4. Basis-of-Design Product: “Georgetowne” by Old Carolina Brick Company, 475 Majolica Road, Salisbury, NC 28147, (704) 636-8850.

2.4 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction.

B. Hydrated Lime: ASTM C 207, Type S.

C. Portland Cement-Lime Mix: Packaged blend of portland cement complying with ASTM C 150, Type I or Type III, and hydrated lime complying with ASTM C 207, Type S.

D. Mortar Cement: ASTM C 1329.

E. Aggregate for Mortar: ASTM C 144.

F. Aggregate for Grout: ASTM C 404.

G. Water: Potable.

2.5 REINFORCEMENT

A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M or ASTM A 996/A 996M, Grade 60.

B. Masonry Joint Reinforcement, General: ASTM A 951/A 951M.

1. Interior Walls: Hot-dip galvanized, carbon steel.
2. Exterior Walls: Hot-dip galvanized, carbon steel.
3. Wire Size for Side Rods: W1.7 or 0.148-inch diameter.
4. Wire Size for Cross Rods: W1.7 or 0.148-inch diameter.
5. Provide in lengths of not less than 10 feet, with prefabricated corner and tee units where indicated.
6. Shall meet the Seismic Performing Requirements for seismic design Category "D" per ACI 530 latest addition.

C. Masonry Joint Reinforcement for Single-Wythe Masonry: Ladder type with single pair of side rods.

D. Masonry Joint Reinforcement for Multiwythe Masonry:

1. Ladder type with 1 side rod at each face shell of hollow masonry units more than 4 inches wide, plus 2 side rods at each wythe of masonry 4 inches wide or less.

2.6 TIES AND ANCHORS, GENERAL

A. General: Provide ties and anchors, specified in subsequent articles, made from materials that comply with this Article, unless otherwise indicated.

B. Hot-Dip Galvanized Carbon-Steel Wire: ASTM A 82; with ASTM A 153, Class B-2 coating.

C. Galvanized Steel Sheet: ASTM A 653/A 653M, G60, commercial-quality, steel sheet zinc coated by hot-dip process on continuous lines before fabrication.

D. Steel Sheet, Galvanized after Fabrication: ASTM A 366/A 366M cold-rolled, carbon-steel sheet hot-dip galvanized after fabrication to comply with ASTM A 153.

E. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

2.7 EMBEDDED FLASHING MATERIALS

A. Metal Flashing: Provide metal flashing complying with SMACNA's "Architectural Sheet Metal Manual" and as follows:

1. Stainless Steel: ASTM A 240/A 240M, Type 304, 0.016 inch thick.

B. Flashing Termination Bars: Stainless steel, 22 ga., with mounting holes spaced 16 inches o.c.

C. Adhesives, Primers, and Tapes for Flashings: Flashing manufacturer's standard products or products recommended by the flashing manufacturer for bonding flashing sheets to each other and to substrates.

2.8 MISCELLANEOUS MASONRY ACCESSORIES

A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene, urethane or PVC.

B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805 or PVC, complying with ASTM D 2287, Type PVC-65406 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.

C. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15 asphalt felt).

D. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells and hold reinforcing bars in center of cells. Units are formed from 0.148-inch steel wire, hot-dip galvanized after fabrication. Provide units designed for number of bars indicated.

1. Products: Subject to compliance with requirements, provide one of the following:

a. Dayton Superior Corporation, Dur-O-Wal Division; D/A 810, D/A 812 or D/A 817.
b. Heckmann Building Products Inc.; No. 376 Rebar Positioner.
c. Hohmann & Barnard, Inc.; #RB or #RB-Twin Rebar Positioner.
d. Wire-Bond; O-Ring or Double O-Ring Rebar Positioner.

E. Weep/Cavity Vent Products: Use the following unless otherwise indicated:

1. Mesh Weep/Vent: Free-draining mesh; made from polyethylene strands, full height and width of head joint and depth 1/8 inch less than depth of outer wythe; in color selected from manufacturer's standard.

a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1) Advanced Building Products Inc.
2) CavClear/Archovations, Inc.
3) Mortar Net Solutions.

2.9 MASONRY CLEANERS

A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned. Masonry cleaners must be **approved in writing** by both the brick and mortar manufacturers prior to cleaning.

1. Manufacturers: Subject to compliance with requirements, provide appropriate products by one of the following:

    a. Diedrich Technologies, Inc.
    b. ProSoCo., Inc.
    c. EaCo Chem, Inc.

2.10 MORTAR AND GROUT MIXES

A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.

1. Do not use calcium chloride in mortar or grout.
2. Use portland cement-lime or mortar cement mortar unless otherwise indicated.
3. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.

B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.

C. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification. Provide the following types of mortar for applications stated unless another type is indicated or needed to provide required compressive strength of masonry.

1. For masonry below grade, in contact with earth, and where indicated, use Type M.
2. For exterior, above-grade walls; use Type S.
3. For masonry veneer; use Type N.

D. Grout for Unit Masonry: Comply with ASTM C 476.

1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 5 of ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
2. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C 143.
3. All reinforced cells shall be filled with 3,000 psi grout, at a minimum.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.
2. Verify that foundations are within tolerances specified.
3. Verify that reinforcing dowels are properly placed.

B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. Thickness: Build cavity walls and other masonry construction to full thickness shown. Build single-wythe walls to actual widths of masonry units, using units of widths indicated.

B. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.

C. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.

1. Mix units from several pallets or cubes as they are placed.

D. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested per ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.

3.3 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation do not vary by more than plus 1/2 inch or minus 1/4 inch.
2. For location of elements in plan do not vary from that indicated by more than plus or minus 1/2 inch.
3. For location of elements in elevation do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls do not vary from level by more than 1/4 inch in 10 feet, or 1/2 inch maximum.
2. For conspicuous horizontal lines, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
3. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2 inch maximum.
4. For conspicuous vertical lines, such as external corners, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
5. For lines and surfaces do not vary from straight by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2 inch maximum.
6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet, or 1/2 inch maximum.
7. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch except due to warpage of masonry units within tolerances specified for warpage of units.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch.
2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.
3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch or minus 1/4 inch.
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch. Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch.

3.4 LAYING MASONRY WALLS

A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.

B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.

C. Lay concealed masonry with all units in a wythe in running bond. Bond and interlock each course of each wythe at corners. Do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.

D. Stopping and Resuming Work: Stop work by racking back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.

E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

3.5 MORTAR BEDDING AND JOINTING

A. Lay hollow CMUs as follows:

1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
2. With webs fully bedded in mortar in all courses of piers, columns, and pilasters.
3. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
4. With entire units, including areas under cells, fully bedded in mortar at starting course on footings where cells are not grouted.

B. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

C. Tool exposed joints when thumbprint hard, in pattern indicated on Drawings.

3.6 MASONRY JOINT REINFORCEMENT

A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.

1. Space reinforcement not more than 16 inches o.c.
2. Space reinforcement not more than 8 inches o.c. in foundation walls and parapet walls.
3. Provide reinforcement not more than 8 inches above and below wall openings and extending 12 inches beyond openings in addition to continuous reinforcement.

B. Interrupt joint reinforcement at control and expansion joints unless otherwise indicated.

3.7 CONTROL AND EXPANSION JOINTS

A. General: Install control and expansion joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.

B. Form control joints in concrete masonry using one of the following methods:

1. Fit bond-breaker strips into hollow contour in ends of CMUs on one side of control joint. Fill resultant core with grout and rake out joints in exposed faces for application of sealant.
2. Install preformed control-joint gaskets designed to fit standard sash block.
3. Install interlocking units designed for control joints. Install bond-breaker strips at joint. Keep head joints free and clear of mortar or rake out joint for application of sealant.
4. Install temporary foam-plastic filler in head joints and remove filler when unit masonry is complete for application of sealant.

C. Form expansion joints in brick as follows:

1. Build flanges of metal expansion strips into masonry. Lap each joint 4 inches in direction of water flow. Seal joints below grade and at junctures with horizontal expansion joints if any.
2. Build flanges of factory-fabricated, expansion-joint units into masonry.
3. Build in compressible joint fillers where indicated.
4. Form open joint full depth of brick wythe and of width indicated, but not less than 3/8 inch for installation of sealant and backer rod specified in Division 07 Section "Joint Sealants."

3.8 FLASHING

A. General: Install embedded flashing in masonry obstructions to downward flow of water in wall, and where indicated.

B. Install flashing as follows unless otherwise indicated:

1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.

C. Install weep holes in veneers in head joints of first course of masonry immediately above embedded flashing.

1. Use specified weep/cavity vent products to form weep holes.
2. Space weep holes 24 inches o.c. unless otherwise indicated.

3.9 REINFORCED UNIT MASONRY INSTALLATION

A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.

1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other loads that may be placed on them during construction.

B. Placing Reinforcement: Comply with requirements in ACI 530.1/ASCE 6/TMS 602.

C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.

1. Comply with requirements in ACI 530.1/ASCE 6/TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
2. Limit height of vertical grout pours to not more than 60 inches.

3.10 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas, as needed to perform tests and inspections. Retesting of materials that fail to comply with specified requirements shall be done at Contractor's expense.

B. Testing Prior to Construction: One set of tests.

C. Testing Frequency: One set of tests for each 5000 sq. ft. of wall area or portion thereof.

D. Mortar Aggregate Ratio Test (Proportion Specification): For each mix provided, according to ASTM C 780.

E. Grout Test (Compressive Strength): For each mix provided, according to ASTM C 1019.

3.11 REPAIRING AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.

B. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

C. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.

3. Protect adjacent nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
5. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
6. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.

3.12 MASONRY WASTE DISPOSAL

A. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042000

J. SPECIAL PROVISIONS – UTILITY CONSTRUCTION (WATER)

(Begins Next Page)

Section 02665 – POTABLE WATER MAINS

PART 1 GENERAL

1.1. SECTION INCLUDES

A. Furnishing of all plant, labor, equipment, appliances and materials, and in performing all operations in connection with the construction of the water mains, including valves, hydrants, and appurtenant structures, complete and in strict accordance with the specifications and drawings.

B. Setting of line stakes for all water mains, as required. Layout work to utilize points previously established by the City of Walterboro as shown on the Drawings. Consult with the City of Walterboro on any problems encountered.

1.2. RELATED SECTIONS

A. Section 02670 – Water Main Testing and Acceptance

B. Section 02675 – Disinfection of Potable Water Mains

PART 2 PRODUCTS

2.1. GENERAL

A. Materials used in the work to conform to the current specifications of the American Society for Testing Materials (ASTM), Section C of the American Water Works Association (AWWA) Standards, the American National Standard Institute (ANSI), and Commercial Standards (CS).

B. Only new materials shall be used in the construction of potable water mains and their associated appurtenances.

C. All water distribution pipe materials are to be lead free. The term “lead free” means (1) not containing more than 0.2% lead when used with respect to solder and flux; and (2) not more than a weighted average of 0.25% lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures.

D. All chemicals and products added to the public water supply must be third party certified as meeting the specifications of ANSI/NSF Standard 60.

E. All materials and products that contact potable water must be third party certified as meeting the specifications of ANSI/NSF Standard 61.

F. Do not use lubricants that may support microbiological growth for slip-on joints. Do not use vegetable shortening to lubricate joints.

G. Do not use natural rubber or other material which may support microbiological growth for any gaskets, O-rings, or other products used for jointing pipes, setting meters or valves, or other appurtenances that may provide exposure to potable water.

H. The use of asbestos cement pipe is prohibited in the construction of potable water systems.

I. The use of butterfly valves less than 16” in size is not permitted without specific approval from the City of Walterboro on a case by case basis. Butterfly valves shall meet the requirements of AWWA C504.

2.2. DUCTILE IRON WATER PIPE AND FITTINGS

A. Conform to AWWA C150 (ANSI A21.50), pressure class 350 for 4" to 12" diameter and pressure class 250 for 14" to 20" diameter, except as otherwise noted; and AWWA C151 (ANSI A21.51).

B. Concrete Lining: In accordance with manufactures' specifications.

C. Exterior Coating: Coal tar pitch applied in accordance with Sec. 51-8 of AWWA C151 (ANSI A21.51). All standards, latest revision.

D. Pipe Joints:

1. Provide mechanical joints where indicated, with necessary accessories, conforming to AWWA C111 (ANSI A21.11). Provide gasket composition suitable for exposure to potable water.

2. Provide push-on joints where the joint type is not indicated, with necessary accessories, conforming to AWWA C111 (ANSI A21.11). Provide gasket composition suitable for exposure to potable water.

E. Fittings: Ductile iron, manufactured in accordance with AWWA C110 Class 350; or compact ductile iron, manufactured in accordance with AWWA C153 Class 350; provide with concrete lining in accordance with manufactures' specifications.

F. Fittings to be bituminous coated and designed to accommodate the type of pipe used.

G. Pipe Markings: Pressure rating, net weight of pipe without lining, length of pipe, and name of manufacturer clearly marked on each length of pipe.

H. Polyethylene Encasement: Provide encasement for all ductile iron piping using flowable fill (roadway open cuts) and any other areas where corrosive soil exists when ductile iron piping is used.

2.3. POLYVINYL CHLORIDE (PVC) WATER PIPE

A. 4" to 12" Diameter: Conform to AWWA C900 Standard for PVC pipe, with cast iron pipe equivalent outside diameters, Class 235 (DR18).

B. Smaller Than Four Inch Diameter: Conform to ASTM D1784 and D2241. Schedule 80 PVC.

C. Joints: Join by means of a push on bell joint which is to be an integral part of the barrel in conformance with AWWA C900. Provide gasket composition suitable for exposure to potable water.

D. Fittings For PVC Pipe Less Than Four Inch Diameter: PVC conforming to the material requirements for PVC pipe described herein.

E. Fittings For PVC Pipe Four Inch Diameter and Larger: Mechanical joint conforming to paragraph 2.2(E) of this Section. Provide gasket composition suitable for exposure to potable water.

F. Pipe to bear the National Sanitation Foundation seal of approval. Comply with the requirements of Type I, Grade I of the ASTM resin specification D-1784. Certificates of conformance with the foregoing specifications to be furnished with each lot of pipe supplied.

G. PVC water mains shall be blue in color.

2.4. POLYETHYLENE WATER SERVICE TUBING

A. Service Tubing shall be 1” copper tubing size (CTS) polyethylene plastic tubing (PET) suitable for underground water services, in conformance with ASTM D2737 (PE 3406), with a rated working pressure of 160 psi. For dual service installation use 1” CTS tubing between service tee and meter box.

B. Fittings shall be in conformance with AWWA C901.

2.5. GATE VALVES (TWO INCH AND LARGER SIZE)

A. Minimum design working pressure of not less than 200 p.s.i. and a test pressure of not less than 400 p.s.i.

B. Valve body, bonnet, stuffing box, and disc castings to be manufactured of ASTM A 126 Class B gray iron, with resilient seated design conforming to AWWA C509, interior coating conforming to AWWA C550, and non-rising stems. Provide "O" ring seals.

C. End Connections: Provide mechanical joint end connections for buried applications.

D. Valve Manufacturer and Type:

1. Mueller A-2360
2. US Pipe A-USPO-23
3. American Flow Control 2500 series

E. Furnish one two-inch square wrench nut with each valve.

F. Operation: Valves to open with counterclockwise turns.

G. Provide a concrete protector ring for each valve box location.

H. Valve Boxes:

1. Two piece telescopic type with cast iron frames and covers as shown on the drawings.
2. Valve boxes to have a suitable base that does not damage the pipe, and shaft extension sections to cover and protect the valve, and to permit easy access and operation.
3. Valve boxes to be of suitable length for the bury depth and to provide a cover of not less than 3 1/2 feet over the pipe. The minimum thickness of metal of the valve box at any point shall not be less than 3/16 inch.
4. Manufacturer and Type:
    a. Tyler/Union 6850 series
    b. Tyler/Union 7000 series
    c. Tyler/Union 7100 series
    d. EJIW USA 8550 1922
    e. EJIW USA 6800

I. Provide a concrete valve marker post for each location of mainline valve boxes in rural areas.

J. Install a gate valve on a 2” service line in lieu of a corporation stop.

K. Any valve installed at a depth of 6’ or greater will require at least a 2’ valve extension to be installed and locked on during installation of valve.

2.6. CASING PIPE

A. Steel casing for water distribution mains installed under highways and railroads shall conform to AWWA C200 and SCDOT Utility Accommodations Policy, latest revision. Exterior of the pipe shall be coated with coal tar epoxy coating or bituminous coating.

B. All joints shall be butt welded unless otherwise shown on the Drawings.

C. Casing Spacers:

1. Provide stainless steel band casing spacers.

2. Pipe dunnage will not be used.

D. End Seals:

1. Provide flexible end seals with stainless steel bands, or

2. Use brick and mortar to seal the ends.

E. Minimum wall thickness for steel casing pipe shall be as follows:

Carrier Pipe (Restrained Joint) Nominal Diameter (Inches)	Coated Casing Pipe (Welded Steel) Nominal Diameter (Inches)	Coated Casing Pipe (Welded Steel) Nominal Thickness (Inches)
2	12	0.188
6	16	0.219
8	18	0.250

2.7. FIRE HYDRANTS

A. Conform to AWWA C502.

B. General:

1. Bonnet assembly shall provide an oil reservoir and lubrication system that automatically circulates lubricant to all stem threads and bearing surfaces each time the hydrant is operated.

2. 6-inch minimum ID upper barrel with 5-1/4” valve opening.

3. Main valve seat shall be made of rubber ONLY, and have a cross section not less than 1” diameter. Plastic (polyurethane) main valves are unacceptable.

4. Two 2-1/2” hose connections, one 4-1/2” steamer connection with heavy gauge steel chains on all connections. Nozzles shall be threaded into the hydrant body for enhanced safety. Nozzles shall be Type A in design to ensure maximum flow.

5. National Standard Threads shall be provided on outlet nozzles.

6. Shoe connection shall be 6-inch mechanical joint.

7. Lower barrel shall be an integrally cast unit. The use of threaded on or mechanically attached flanges is unacceptable. The hydrant bury depth shall be cast in to the hydrant lower barrel.
8. The upper valve plate, seat ring, and drain ring must be ASTM B-584 bronze and work in conjunction to form an all bronze drain way. A minimum of two (2) internal and two (2) external drain openings are required.
9. Hydrants shall be a "traffic-model" having upper and lower barrels joined at the ground line by a separate and breakable "swivel" flange providing 360-degree rotation of upper barrel for proper nozzle facing. This flange shall employ not less than eight bolts. The upper and lower stems are to be joined by a sleek breakable stainless steel coupling to minimize flow loss.
10. Hydrant operation: Hydrants to open by turning **counterclockwise**.
11. Hydrant to be of a dry barrel, dry top design.
12. Hydrant shoe to have a protective, thermosetting epoxy coating applied inside the assembly.
13. Provide restrained joint assembly as indicated on the Drawings.

C. Manufacturer and Type: Mueller Centurion

Notwithstanding the features provided by any named manufacturer or any Engineer-approved equal, Fire Hydrants and all components thereof shall comply in their entirety with this Technical Specification Section 02665-Potable Water Mains.

D. Hydrants to be marked with the name of the manufacturer, size of the valve opening, and the year of manufacture, all in accordance with AWWA C502.

E. Interior Factory Coating: Electrostatically-applied, fusion-bonded, epoxy coating in accordance with AWWA C550.

F. Exterior Factory Coating:

1. General: Electrostatically-applied, fusion-bonded, epoxy coating in accordance with AWWA C550.
2. Base factory color:

Standard Yellow = hydrants in the County

Standard Red = hydrants within City limits

G. Furnish one hydrant wrench for each 10 hydrants or portion thereof.

H. Roadway Reflector: Provide and install blue fire hydrant reflector for paved roadways where fire hydrants have been installed adjacent to roadways.

2.8. SERVICE CONNECTIONS

A. Provide in accordance with the detail on the Drawings.

B. Service Saddle: Provide in accordance with the detail on the Drawings. Service Saddles shall be tapped with C.C. (AWWA) Threads and subject to the following criteria:

1. A single strap steel saddle shall be used in water mains 4 inches and smaller.
2. Use a double strap steel saddle in water mains 6 inch and larger.
3. Saddle Manufacturer and Type
    a. JCM 402
    b. Romac 202NS
    c. Mueller DR2S

C. Corporation Stop:

1. Mueller H15005 1” Ground Key Corporation Valve with AWWA Tapered Thread (CC) inlet and Insta-Tite connection for IPS P.E. plastic tubing outlet.
2. Engineer approved equal.

D. Curb Stops:

1. Mueller 300 Ball Meter Valve F.I.P. x F.I.P. (B-20200) of proper size for service with locking wing, conform to ADSI/ASME BI 20.1
2. Engineer approved equal

E. Radio-Read Meters:

1. Ford Meter Yoke

F. Meter Boxes:

1. Mueller Cast Iron “Stretch” Meter Box Model H-1461-3MN, 1” IPS inlet size.
2. Engineer approved equal.

G. Polyethylene Wrap: Provide encasement around all couplings and corporation stop prior to placement of flowable fill in trench.

2.9. PIPE ACCESSORIES

A. Identification Tape: 3” wide clear brightly colored plastic covering; imprinting to read CAUTION – BURIED WATER MAIN BELOW, or other similar wording approved by the Engineer, in large capital letters.

B. Copper Tracer Wire: Place blue 14-gauge solid copper tracer wire over all water mains and branch lines (including ductile iron). Wire shall be attached to the pipe at least once every joint utilizing tape, plastic straps, or by wrapping wire around the pipe.

C. Restrained Joints: All associated MJDI plugs, valves, tees, branches, and bends utilized in conjunction with PVC or Ductile Iron water mains are to be braced to the development lengths specified, with mechanical joint restraint glands (Mega-Lugs), Romac ALPHA restrained joints by American Flow Control or approved equal. Contractor shall reference Thrust Restraint Table on

Details Sheet of drawings to determine minimum restrained pipe length according to pipe size and degree of bend.

2.10. BACKFLOW PREVENTION

A. All meters 1" or greater shall have a backflow assembly installed. The type of assembly will be determined at the time the customer submits the application. The type of assembly is based on the type of hazard present at that particular service connection. This will be evaluated by the City of Walterboro and the information provided by the customer.

B. All backflow assemblies regardless of size shall be installed above ground.

C. All backflow assemblies shall meet SCDHEC specifications for the applicable application.

D. Only a Reduced-Pressure Principle Assembly or a Pressure Vacuum Breaker Assembly shall be allowed on lawn irrigation system (both residential and commercial).

E. Fire sprinkler lines will need to be evaluated at the time the construction prints are reviewed. A determination of the type of assembly being installed shall be made at that time and be included on the construction prints.

2.11. TAPPING SLEEVE

A. JCM 432 All Stainless Steel.

B. Ford Meter Box, Inc. FTSS Tapping Sleeve with Removal Bolts

C. Romac Industries SST-H

D. Engineer approved equal.

2.12. TAPPING VALVE

A. Mueller / USP TUSP1-19 opt. E347 / T2361-19 opt. E347

B. American Flow Control 2500 series

C. Engineer approved equal.

2.13. CUT-IN SLEEVE AND VALVE

A. TEAM InsertValve

B. Engineer approved equal.

PART 3 EXECUTION

3.1. GENERAL

A. Perform all excavation of every description and of whatever substances encountered, to the depths indicated on the drawings or as otherwise specified. During excavation, pile material suitable for backfilling in an orderly manner a sufficient distance from the banks of the trench, or other excavation, to avoid overloading and to prevent slides or cave-ins. Remove all excavated materials not required or suitable for backfill and deposit where, and as, directed by the City of Walterboro.

B. Grade work area as needed to prevent surface water from flowing into trenches or other excavations. Remove any accumulated water by pumping or by other approved method. Install sheeting and shoring as necessary for the protection of the work and for the safety of personnel. Where, in the opinion of the City of Walterboro, damage is liable to result from withdrawing of the sheeting, it is to be left in place and the Contractor will be so notified in writing.

C. Comply with all pertinent provisions of the "Manual of Accident Prevention in Construction" issued by Associated General Contractors of America, Inc.

3.2. EXISTING UNDERGROUND UTILITIES AND OBSTRUCTIONS

A. The drawings indicate utilities or obstructions that are known to exist according to the best information available to the City of Walterboro. Conflicts must be disclosed to the City of Walterboro as soon as encountered.

B. Call SC811 (1-888-721-7877) and all utilities or agencies potentially having underground utilities within the work vicinity at least three business days (72 hours) prior to construction.

C. Horizontal Conflict: When the actual horizontal separation between an existing utility and a proposed utility piping does not permit safe installation of the proposed utility by the use of sheeting, shoring, tying back, or temporarily suspending the service, the proposed alignment of the piping may be altered provided that the new alignment remains within the available right-of-way or easement, complies with regulatory agency requirements and permits, and written approval is issued by the owner of the existing utility and the City of Walterboro.

D. Vertical Conflict: When the actual vertical separation between an existing utility and a proposed utility piping does not permit the crossing without damage to the proposed or existing utility, the proposed grade of the piping may be altered provided that the new maintains adequate cover and grade, complies with regulatory agency requirements and permits, and written approval is issued by the owner of the existing utility and the City of Walterboro.

E. Water Crossings:

1. In above-water crossings, pipes should be supported and anchored adequately, protected from damage caused by freezing or other means, and accessible for repairs or replacement.

2. In under-water crossings a minimum of two (2) feet of cover shall be provided over the top of the pipe. Crossings over water bodies that are greater than 15 feet wide shall have:

    a. The pipe material and joints designed appropriately.

    b. Valves that are located so the under-water section can be isolated should testing or repair be necessary. The valves should also be easily accessible and not be subject to flooding.

    c. A blow-off device provided on the opposite side of the crossing from the supply service sized appropriately. Blow-off discharge should be directed away from the water body.

    d. DIP with mechanical joints used for lines being installed in rock.

F. Water Main and Storm Drain Separation:

1. In open drainage crossing, a minimum of three (3) feet of cover shall be provided. Ductile iron pipe shall be used for all open drainage crossings. In piped drainage crossing, a minimum of three (3) feet horizontal separation or two (2) feet vertical separation shall be maintained. Ductile iron pipe shall be used when the above criteria cannot be met.
2. Where ductile iron pipe is required, center a full joint of ductile iron pipe over/under the drainage pipe. Space the water pipe joint to maximize horizontal separation.
3. No water main shall pass through, or come into contact with, any part of a storm drain manhole or junction box.

G. Water Main and Wastewater System Separation:

1. Construct new water mains more than 25 feet (measured horizontally at any point along the main) from a wastewater tile field and/or a wastewater spray field.
2. Construct new water mains a minimum of 18 inches above or below a sewer line, preferably constructing the water main above the sewer line. Where new water mains cross under sewer lines, adequate structural support will be provided for the sewer line to prevent damage to the water main. In instances where a new water main crosses a new sewer main, a full length of pipe will be used for both mains with the lengths situated such that the joints of each line are as far from the point of crossing and each other as possible. In cases where the sewer main is existing, one full length of water main shall be located such that both joints are as far from the sewer line as possible. Reference Section R.6158.4(D)(12) of the State Primary Drinking Water Regulations.
3. Construct new water mains at least 10 feet horizontally, measured from edge to edge, from any existing or proposed sewer.
4. Construct new water mains at least 10 feet horizontally from sanitary sewer force mains. In crossing situations, there will be a minimum of 18 inches of vertical separation at the crossing as required in 3.2.G.2 above.
5. As conditions occur that make the distances listed above in 3.2.G(1-4) impractical, SCDHEC may allow alternates on a case by-case basis, so long as it is supported by data from the design engineer. An alternative design shall:
    a. maximize the distances between the water main and sewer line and the joints of each;
    b. use materials which meet the requirements of SCDHEC's State Primary Drinking Water Regulations, section R.61-58.4(D)(1) for the sewer line; and,
    c. allow enough distance to make repairs to one of the lines without damaging the other.
6. No water pipe shall pass through or come in contact with any part of a sewer manhole.

3.3. RIGHT-OF-WAY

A. The necessary rights-of-way and easements for water main construction will be secured by the Developer. Street widths and rights-of-way may in some cases be smaller than the Contractor would normally require when using standard construction methods.

B. Restore rights-of-way and easements to pre-construction conditions or better. Reference Section 02200 – Earthwork.

3.4. PROTECTION OF PROPERTY AND EXISTING STRUCTURES

A. Use every reasonable precaution to avoid damage to surrounding property and finished work of others. If it becomes necessary to remove fences, posts, or any valuable property, they are to be replaced in a “like or better” condition.

B. Particular attention should be paid to storm drains and temporary sediment and erosion control measures. Any drainage feature, either temporary or permanent, which is filled, is to be opened as soon as the progress of the work will allow.

3.5. PREPARATION

A. Perform all survey work required for construction, including the establishment of base lines and any detailed surveys and bench marks adjacent to the work. A base line is defined as “the line to which the location of the work is referenced, i.e. edge of pavement, road centerline, property line, right-of-way or survey line.” If required, stake permanent and temporary easements to ensure that the work does not deviate from the designated easements. Establish bench marks such that they will not be destroyed during construction.

B. Provide a level of survey detail as required for establishing the correct locations of all water mains, valves, hydrants, and accessories as shown on the Drawings.

C. Reference Points: Install construction reference points as necessary. Preserve and protect all reference points, base lines, permanent property staking, and benchmarks.

3.6. CLEARING AND GRUBBING

A. Clearing and grubbing is the responsibility of the Contractor, if required.

3.7. EXCAVATION

A. All excavation is unclassified regardless of nature of the material encountered.

B. Perform all excavations by open cut from the surface for the water main locations and depths shown on the Drawings. Exercise care to avoid cutting tree roots.

C. Excavate trenches to provide ample room for handling pipe and making joints. Minimum trench width no less than 12 inches greater than the external diameter of the pipe.

D. Accurately grade trench bottom to provide uniform bearing and support for each section of the pipe on undisturbed soil at every point along its entire length, except for the portions of the pipe sections where it is necessary to excavate for bell holes and for the proper sealing of pipe joints.

E. Dig bell holes and depressions for joints after the trench bottom has been graded and, in order that the pipe rest upon the prepared bottom for as nearly its full length as practicable, only of such length and width as required for properly making the particular type of joint.

F. Whenever the bottom of the trench is unstable and does not afford a good foundation, remove such part as may be necessary and replace with select fill material. Except for crushed bedding, stones shall not come in contact with the pipe or be within six inches of the pipe.

G. Install all water mains, unless otherwise indicated on the Drawings, to provide a depth of cover between the top of the pipe barrel and the original ground surface or finished grade of not less than 36" for pipelines up to 12" in diameter and not less than 48" for pipelines greater than 12" in diameter. Should conditions arise which prevent the depth of cover outlined above, the pipe material shall be DIP, and if exposed will be insulated to prevent freezing. Thermoplastic pipe shall not be used above grade.

3.8. PIPE LAYING

A. General:

1. Materials used for piping as specified herein. Pipe and accessories to be new and unused materials. Rest the full length of each section of the pipe solidly upon the pipe bed of undisturbed earth, with the recesses only to accommodate pipe bells and joints. Take up and relay any pipe that has its alignment, grade or joints disturbed after laying.

2. Thoroughly clean the pipe interior of all foreign matter before being lowered into the trench. Keep pipe interior clean during the laying operations by means of plugs or other approved methods. Do not lay pipe in standing water, or when the trench or weather conditions are unsuitable for the work. Keep water out of the trench until the jointing of the pipe is completed. When the work is not in progress, securely close the open pipe ends so that no trench water, earth or other foreign substance can enter the line. Replace any section of pipe found to be defective, either before or after laying, with new pipe at no additional expense to the City of Walterboro.

3. Lay ductile iron pipe in accordance with AWWA C600.

4. Lay PVC pipe and make connections in strict accordance with AWWA C605.

B. Handling of Pipe and Accessories: In such a manner as to insure delivery to the site and installation in the trench in a sound, undamaged condition. Take particular care not to damage any ductile iron pipe coating, either interior or exterior.

C. Cutting and Trimming of the Pipe: Perform in a neat and workmanlike manner without damage to the pipe or its coating. Cut pipe utilizing a mechanical cutter with sharp blade approved for the material being cut or trimmed.

D. Placing and Laying of the Pipe:

1. Examine the pipe for defects and tap with a light hammer to detect cracks while suspended in the sling before lowering into the trench. Reject all damaged, defective or unsound pipe and remove from the site of the work.

2. Deflection from a straight line and grade, as may be required by vertical or horizontal curves and offsets, not to exceed the normal manufacturer's recommended allowance for the type of joint employed. If alignment requires deflections in excess of the above limitations, provide special bends or a sufficient number of shorter lengths of pipe to provide angular deflections within the limits set forth.

3. Place pipe in the trench and bed as specified in Section 3.8(A).

E. Tracer Wire: Install a continuous 12 gauge insulated tracing wire along all non-metallic pressure pipelines (Refer to Water Panel 10). The wire shall be secured to the pipeline by a minimum of one tie per joint or wrapped around the pipe one time per joint. Access to the wire shall be provided at every mainline and hydrant valve box. Color of wire insulation shall be blue. Maximum tracing wire length shall be 1000' without terminating in a valve box or intermediate detector site (dummy valve box). Intermediate detector sites shall not be located in pavement areas. Place precastcircular concrete collar over dummy valve box (Ref. Water Panel 10). Splices shall be kept to a minimum, but if required, shall be made with a water tight connector rated for direct burial service. Should the type of pipe material transition to iron pipe, the tracing wire shall continue over material change and be terminated at an intermediate detector site or at next in-line valve box. All water mains shall be detectable within three (3) feet with electronic locating equipment. Water mains that are installed by a trenchless method (i.e. directional drill), four #14 wires shall be installed with the pipe and connected to the tracer wire at both ends or cad welded to the existing iron pipe at both ends. Prior to scheduling a final inspection with the City of Walterboro, the Contractor shall demonstrate that the locator wire functions properly by providing the City of Walterboro with a certificate of continuity test from a third party.

F. Warning Tape: Place continuous 6" wide brightly colored warning tape, imprinted to read in large capital letters "CAUTION - BURIED WATER MAIN BELOW", or other similar wording approved by the City of Walterboro, over all new piping, 24" below grade.

G. Line Marker: Install Pipeline Marker every 1,000' along water mains and above fittings where alignment changes, and/or as directed by the City of Walterboro.

3.9. BACKFILLING

A. General:

1. Backfill to a point 2 feet above the top of the pipe with material free of roots, stones, clods, or other unsuitable material. Thoroughly tamp material in 6 inch layers by means of a mechanical tamper, tamping iron or similar tool. Perform tamping with care so as not to disturb the pipe. Place and tamp backfill under the haunches of the pipe with special care.

2. Perform the remainder of backfilling with machinery. Place excess dirt over the ditch and keep in neat order at all times until the system is completed. Fill any holes or depressions that develop. At the completion of the work, level backfill material and leave in good condition.

3. Place flowable fill as backfill material for utility trenches at street intersections and at street crossings. Reference Section 02511 – Flowable Fill.

B. The backfilling, up to the level of 2 feet above top of pipe, will not be permitted with water standing in the trench. If water is present, the trench must be dewatered and kept dewatered during the placing and tamping of the initial backfilling layer.

3.10. JOINTING

A. Install mechanical joints and restrained joints in accordance with Section 3.4 of AWWA C600.

B. Install rubber gasket joints for PVC pressure pipe in accordance with Section 5.5 of AWWA C605.

3.11. SETTING FIRE HYDRANTS

A. Set hydrants on a suitable base of concrete or crushed stone. Plumb all hydrant stems. Before installing any hydrant, take care to ensure that all foreign material is removed from the interior of the barrel. Open and close the hydrant to ensure that all parts are in proper working condition. After hydrant has been set and secured in place and reaction blocking concrete placed and cured, place clean crushed stone around base of each hydrant and about the supporting base to a height of 12" above the connecting pipe. Extend stone fill at least 18" away from the barrel in all directions. Thoroughly compact all backfill around hydrants to the surface of the ground or to grade for surfaced areas.

B. Set hydrants plumb in all directions and with pumper nozzle perpendicular to and facing the roadway.

C. Set hydrants to grade, with breaking flange two inches above ground. Gradelok assembly or equal required. No extensions allowed unless specified and approved by the City of Walterboro.

D. Provide a drainage pit for the hydrant weep holes. Encase elbow of hydrant in gravel to 6 inches (150 mm) above drain opening. Hydrant drains shall not be connected to or located within 10 feet of sewer systems.

E. Provide joint restraint as indicated on the Drawings.

3.12. SETTING VALVES AND VALVE BOXES

A. Install valves and valve boxes as shown on the drawings or as directed by the City of Walterboro. Clean valve interiors of all foreign matter before installation. Inspect valve in both opened and closed positions to ensure that all parts are in proper working condition.

B. Set valves on solid bearing.

C. Center and plumb valve box over valve. Set box cover flush with finished grade or as directed by the City of Walterboro.

D. Valve Marker: Place valve marker at all water distribution system valve locations or as directed by the City of Walterboro.

3.13. SETTING AIR RELEASE VALVES AND MANHOLES

A. Automatic air release valves (ARV) shall be placed at high points in the water main to prevent air locking.

B. Install air release valves in precast flat top manholes with frames and covers. Above ground installation of ARVs using pedestal covers will be determination by the City of Walterboro on a case-by-case basis. ARVs must have a concrete valve marker post for each valve location.

C. Install valves and manholes as shown on the Drawings or as directed by the Engineer. Clean valve interiors of all foreign matter before installation. Inspect valve in both the opened and closed positions to ensure that all parts are in proper working condition.

D. Provide thrust restraint as specified in paragraph 3.14 of this Section.

3.14. THRUST RESTRAINT

A. All sections of water main identified as “PVC” or “DI” on the drawings are to be constructed of standard pipe and ductile iron fittings as specified in this Section. All associated plugs, caps, valves, tees, branches, and bends utilized in conjunction with PVC or DI water mains are to be restrained.

B. All sections of water main that are to be restrained in accordance with the City of Walterboro standards are to be clearly identified on both the construction and record drawings.

C. Provide additional thrust restraint at any other points where, in the opinion of the City of Walterboro, hydraulic thrust may develop.

3.15. CONNECTIONS TO EXISTING SYSTEM

Connection to the existing system will be made by, and at the expense of, the Contractor. The Contractor will provide and install appurtenances as required and shown on the Drawings. Coordinate connections to existing system with the City of Walterboro.

3.16. INSPECTION AND TESTING

A. Perform pressure and leakage testing in accordance with the requirements of Section 02670 - Water Main Testing and Acceptance.

B. Pressure and leakage testing must be completed prior to disinfection.

3.17. DISINFECTION

A. Flush and disinfect system in accordance with Section 02675 - Disinfection of Potable Water Mains.

B. The lab report for analytical testing must provide the chlorine residual at each sample point as well as the bacteriological test result for each sample point. The Contractor is responsible for coordinating and providing these services.

C. Minimize the potentially adverse environmental impact of heavily chlorinated disinfecting water as specified in Section 02675. If any adverse impact occurs, promptly notify the SCDHEC and institute mitigating measures accordingly.

3.18. SETTING METER BOXES

All meter boxes will be installed as shown in the plans. Care of the box will be the Contractors and the Developers responsibility until final landscaping is complete and the meter has been installed.

3.19. BACKFLOW PREVENTOR ASSEMBLIES

A. A Reduced-Pressure Principle Assembly shall be installed 12” (from the bottom of the assembly) above the finished elevation.

B. A Pressure Vacuum Breaker shall be installed 12” above the highest irrigation head in the system.

C. A Double Check Valve Assembly shall be installed 12” (From the bottom of the assembly) above finished elevation.

D. All backflow assemblies shall be installed within 3 feet of the meter. Exceptions to this will be evaluated on a case by case basis.

END OF SECTION

Section 02670 – WATER MAIN TESTING AND ACCEPTANCE

PART 1 GENERAL

1.1. SECTION INCLUDES

A. Hydrostatic testing of potable water mains.

1.2. RELATED SECTIONS

A. Section 02665 – Potable Water Mains

B. Section 02675 – Disinfection of Potable Water Mains

C. Section 02676 – New Construction Water Usage

PART 2 PRODUCTS

2.1. TEST MATERIALS

A. Furnish all equipment, necessary piping, pipe access taps, pumps, meters, gauges, and required labor for use in testing.

2.2. WATER USAGE

A. Once the new water mains are connected to the City of Walterboro water system, the Contractor shall coordinate filling, pressure testing, disinfection, and flushing of the new mains.

B. Any use of City of Walterboro water must be coordinated with the City of Walterboro (843-782-1065) in accordance with Section 02676 – New Construction Water Usage. The City of Walterboro will set water flow rates and volumes as well as the time and duration of availability.

PART 3 EXECUTION

3.1. GENERAL

A. Field test the entire length of all new potable water mains and appurtenant structures and devices for tightness as described in this Section. Devices include, but are not limited to, hydrants, curb stops on services without meter boxes, and water services that will be connected to meter boxes without the use of curb stop.

B. Schedule timing and sequence of testing, subject to the approval of the City of Walterboro. Provide the City of Walterboro with a minimum of 72 hours notice prior to the start of any test. The Engineer and the City of Walterboro representative must observe all tests. The Contractor shall successfully pre-test the system prior to scheduling testing with the City of Walterboro.

C. Repair any leaks discovered during the initial filling of the water mains and during the testing sequence. Repair all known and visible leaks, whether or not the leakage rate is within allowable limits.

D. Note presence of leaks and repair activities on the test report form for any affected section of water main and provide a copy to the Engineer and the City of Walterboro.

3.2. WATER MAIN FLUSHING PROCEDURE

A. Flush water main section thoroughly at flow velocities greater than 2.5 feet per second, adequate to remove debris from pipe and valve seats.

B. Exercise valves and hydrants during line flushing to clean out seats. Provide blow-off points, as shown on the drawings, to achieve flushing velocities.

3.3. WATER MAIN PRESSURE TESTING PROCEDURE

A. Pressure test all sections of the water main and appurtenances subject to internal pressure in accordance with AWWA C600. A section of the water main will be considered ready for testing after completion of all thrust restraint and backfilling.

B. Provide temporary blocking, bulkheads, flanges and plugs as necessary to assure all new pipe, valves and appurtenances will be pressure tested.

C. Before applying test pressure, completely expel air from the water mains and all appurtenances. Utilize blow-off points, as shown on the drawings, to expel air as line is filled with water.

D. Notify the City of Walterboro in accordance with paragraph 2.2 of this Section. Fill pipeline slowly with water from the City of Walterboro system. Utilize an accurate water meter and pump arrangement to pump the line to the specified test pressure.

E. If water main is tested in sections, ensure that the differential pressure at valves and hydrants does not exceed the manufacturer's pressure rating. Where necessary, provide temporary backpressure to meet any differential pressure restrictions. Do not operate valves and hydrants in either the opening or closing direction at differential pressures above their rated pressure.

F. Measure test pressure at the lowest point in the test segment. Maintain test pressure for a minimum of two hours. Provide a test pressure of 150 psi or 1.5 times the working pressure in the finished water main, whichever is greater.

G. Do not allow a variance in the test pressure of more than 5 psi for the test duration. If the pressure drops more than 5 psi at any time during the test period, restore the pressure to the specified test pressure. Provide an accurate pressure gauge, four inches in diameter, with a range of pressure large enough to allow the specific test pressure to fall in the middle of the range (i.e. for 150 psi test pressure need 300 psi range on gage). Face gradations shall be at 20 psi intervals with tick marks every one psi, or equal approved by the City of Walterboro.

H. Definition of Leakage: The quantity of water that is pumped and metered into the test section to maintain test pressure within 5 psi of the specified test pressure for the test duration, plus the quantity of water required to return line to test pressure at the end of the test.

I. Test Results: Reject test section if the leakage exceeds the limits determined by the AWWA allowable leakage rate as stated in Section C605 and C600 as follows:

Ductile Iron	PVC
$L = \frac{SD(P)^{0.5}}{148{,}000}$	$L = \frac{ND(P)^{0.5}}{8{,}223}$

For the ductile iron pipe equation, "L" is the allowable leakage in gallons per hour, "S" is the length of water main tested in feet, "D" is the nominal diameter of the water main in inches, and "P" is the test pressure in pounds per square inch (psi).

For the PVC pipe equation, “L” is the allowable leakage in gallons per hour, “N” is the number of joints in the length of water main tested, “D” is the nominal diameter of the water main in inches, and “P” is the test pressure in pounds per square inch (psi).

J. If the leakage test result is unacceptable, locate and repair the cause of the failed test, and then retest the affected portion of the water main. Repair leaks in accordance with paragraph 3.1 of this Section.

3.4. FINAL ACCEPTANCE

A. No pipeline installation will be accepted until all known and visible leaks have been repaired in accordance with paragraph 3.1 of this Section.

B. Certify that all required flushing and pressure testing has been successfully completed before final acceptance of the City of Walterboro.

END OF SECTION

Section 02675 – DISINFECTION OF POTABLE WATER MAINS

PART 1 GENERAL

1.1. SECTION INCLUDES

A. Disinfection of potable finished water transmission main and water distribution system mains and any surfaces that will be in contact with potable water.

B. Testing and reporting results.

1.2. RELATED SECTIONS

A. Section 02665 – Potable Water Mains

B. Section 02670 – Water Main Testing and Acceptance

C. Section 02676 – New Construction Water Usage

1.3. REFERENCES (LATEST EDITION)

A. AWWA B300 – Standard for Hypochlorites.

B. AWWA B301 – Standard for Liquid Chlorine.

C. AWWA B303 – Standard for Sodium Chlorite.

D. AWWA C605 – Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water (Reference Section 7.4 - Disinfecting).

E. AWWA C651 – Standard for Disinfecting Water Mains.

F. South Carolina State Primary Drinking Water Regulations: R.61-58 (Reference paragraph R.61-58.4(D)(f)).

1.4. SUBMITTALS FOR INFORMATION

A. Test Reports: Include results comparative to specified requirements.

B. Certificate: Certify that cleanliness of water distribution system meets or exceeds specified requirements.

1.5. PROJECT RECORD DOCUMENTS

A. Disinfection report:

1. Type and form of disinfectant used.
2. Date and time of disinfectant injection start and time of completion.
3. Test locations.
4. Initial and 24 hour disinfectant residuals (quantity in treated water) in ppm for each outlet tested.
5. Date and time of flushing start and completion.
6. Disinfectant residual after flushing in ppm for each outlet tested.

B. Bacteriological report:

1. Date issued, project name, and testing laboratory name, address, and telephone number.
2. Time and date of water sample collection.
3. Name of person collecting samples.
4. Test locations.
5. Initial and 24 hour disinfectant residuals in ppm for each outlet tested.
6. Coliform bacteria test results for each outlet tested.
7. Certification that water conforms, or fails to conform, to bacterial standards of zero coliform and <80 non-coliform bacterial colonies per 100 ml.

1.6. QUALITY ASSURANCE

A. Perform Work in accordance with AWWA C651.

B. Testing Firm: Laboratory contracted to analyze samples shall be certified by the SCDHEC for coliform and non-coliform bacteria testing.

PART 2 PRODUCTS

2.1. DISINFECTION CHEMICALS

A. Chemicals: AWWA B300, Hypochlorite, AWWA B301, Liquid Chlorine, and AWWA B303, Sodium Chlorite.

2.2. WATER

A. Once the new water mains are connected to the City of Walterboro water system, the Contractor shall coordinate the delivery of water for the purpose of filling, pressure testing, disinfection, and flushing of the new mains with the City of Walterboro.

B. Any use of the City of Walterboro water must be coordinated with the City of Walterboro (843-782-1065) in accordance with Section 02676 – New Construction Water Usage. The City of Walterboro will set water flow rates and volumes as well as the time and duration of availability.

PART 3 EXECUTION

3.1. EXAMINATION

A. Verify that piping system has been cleaned, flushed, and pressure tested.

B. Perform scheduling and disinfecting activity with start-up, testing, adjusting and balancing, demonstration procedures, including coordination with related systems.

C. Engineer's representative shall verify chlorine residual levels to confirm that it is within the range of the existing distribution system, preferably using the Hach Pocket Colorimeter Model 46700-00 on the Low-End Levels.

3.2. EXECUTION

A. Perform disinfection of new water mains in accordance with AWWA Standard for Disinfecting Water Mains, C651. Use one of three methods of chlorination: Tablet Method, Continuous-Feed Method, or Slug Method.

B. Exercise all valves and hydrants contained within the section of main being tested. Maintain isolation of water mains to be disinfected and tested.

C. Dependent upon chlorination method used, achieve required chlorine concentrations and maintain disinfectant in system for the prescribed periods. At the end of the test period, check for the presence of the required free chlorine residual. Flush the tested section until free chlorine residual is no higher than that generally prevailing in the existing distribution system or is acceptable for domestic use. Include the chlorine residual reading on the Chain of Custody form.

D. Flush heavily chlorinated water in such a manner as not to damage the environment. Use neutralizing chemicals as may be required.

E. Two consecutive satisfactory bacteriological tests, taken at least 24 hours apart, are required at each sample site. The number of sample sites varies depending on the amount of new construction, but must be representative of the water in the newly constructed mains. Samples will be taken at each dead end and at a minimum of every 1,200 linear feet of new water main. Include a schedule of how to determine the number of samples to be taken.

F. Upon completion of the disinfection procedure, reduce the chlorine residual to levels required for discharge to the environment. Treat disposed water with sulfur dioxide or other reducing agent to neutralize chlorine residual.

G. The lab report for analytical testing must provide the chlorine residual at each sample point as well as the bacteriological test result for each sample point. If the membrane filter analysis method is used for bacteriological testing, non-coliform growth must also be provided. If the non-coliform growth is greater than 80 colonies per 100 milliliters, the sample result is invalid and must be repeated. All samples analyzed must show the water line to be absent of total coliform bacteria. The Contractor is responsible for coordinating and providing these services.

3.3. FIELD QUALITY CONTROL

A. Representative of the City of Walterboro may be present during sample collection but is not required. It is the contractor's responsibility along with the Design Engineer to ensure new water main has been disinfected, flushed and sampled according to AWWA specifications and SCDHEC regulations.

B. Collect and transport samples in accordance with the quality control procedures of the contract laboratory.

END OF SECTION

Section 02676 – NEW CONSTRUCTION WATER USAGE

PART 1 GENERAL

1.1. SECTION INCLUDES

A. Procedures for coordinating and reporting water usage for filling, pressure testing, disinfection and flushing.

1.2. RELATED SECTIONS

A. Section 02665 – Potable Water Mains

B. Section 02670 – Water Main Testing and Acceptance

C. Section 02675 – Disinfection of Potable Water Mains

PART 2 EXECUTION

2.1. BACKFLOW PREVENTION AND METERING DURING CONSTRUCTION

A. Any extension to the City of Walterboro water system must be constructed in a manner that eliminates the possibility of back-flow of water from the non-approved system into the active City of Walterboro system and provides the ability to meter water use. To achieve this, the following method shall be used:

1. At the beginning of construction, a temporary backflow preventer and meter (both approved by the City of Walterboro) shall be supplied and installed by the Contractor in-line between the tapping valve, or stub-out, and the water extension. The backflow preventer shall be tested and certified by a SCDHEC licensed tester and the test results provided to the City of Walterboro prior to being placed into operation. The engineer shall determine the size backflow preventer necessary to achieve 2.5 feet/sec flushing velocity for a given size pipe.

2. Once the SCDHEC permit to operate has been issued for the new section, the backflow assembly shall be removed by the Contractor and replaced with a spool piece and MJ sleeve(s). Any other connection points to the City of Walterboro system shall be provided with an air gap of three (3) feet between the new pipe and the existing stub out or wet tap. All temporary backflow installations shall be inspected and approved by a City of Walterboro Inspector before being placed into operation.

B. In the case of a water project that has multiple connection points with the City of Walterboro system, the City of Walterboro Water Department will determine the optimum location for a single water-supply connection. Final tie-in to all other connection points shall only be made after the Permit to Operate has been issued by SCDHEC.

2.2. FILLING

A. After a new line is installed and prior to filling, the Engineer will calculate the volume of water needed to fill the line. This information will be forwarded to the City of Walterboro Water Department along with a request to fill the line. This information will be required 7 days in advance of filling any new lines.

2.3. FLUSHING

A. Once the Contractor is ready to flush in preparation for bacteriological testing, the Contractor will coordinate with the City of Walterboro Water Department, providing a 72 hour minimum notice in advance. Flushing will not be scheduled before the release of the legal transfer package to the owner/developer. Design Engineer is responsible for providing the City of Walterboro flushing calculations and sample point information when requesting to flush a project.

END OF SECTION

BID SUMMARY

BID FORM	
BID NUMBER:	**CPST-14.1 I-95 Loop Project Streetscape Phases 2 & 10**
OPENING DATE & TIME:	**Wednesday June 2, 2021 at 11:00am**
OPENING LOCATION:	**CITY OF WALTERBORO 242 HAMPTON STREET WALTERBORO, SC 29488**

CONTRACTOR: _____

SIGNATURE: _____ TITLE: _____

PRINT NAME: _____ DATE: _____

By signing this Bid form, the Contractor acknowledges that he/she has read this document and understands the provisions, agrees to be bound by its items and conditions, will adhere to scheduling requirements stated herein and is capable of providing all required products and/or services. The following Detailed Bid Forms for both Phase 2 and Phase 10 must also be submitted.

BID DETAIL

Walterboro®
The Front Porch of the Lowcountry

City of Walterboro

CPST-14.1 I-95 Loop Project Streetscape Phases 2 & 10

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1031000	MOBILIZATION	LS	1.00		
1031100	MOBILIZATION – SUBCONTRACTOR	LS	1.00		
1032010	BONDS AND INSURANCE	LS	1.00		
1050800	CONSTRUCTION STAKES, LINES & GRADES	EA	1.00		
1052000	UTILITY CONSTRUCTION (WATER)	EA	1.00		
1071000	TRAFFIC CONTROL	LS	1.00		
2012000	CLEARING & GRUBBING WITHIN ROADWAY	LS	1.00		
2025000	REMOVAL & DISPOSAL OF EXISTING ASPHALT PAVEMENT	SY	6,555.00		
2027000	REMOVAL & DISPOSAL OF EXISTING CONCRETE	CY	15.00		
2031200	SITE EXCAVATION	LS	1.00		
2103000	FLOWABLE FILL	CY	330.00		
3050108	GRADED AGGREGATE BASE COURSE (8” UNIFORM)	SY	30.00		
3069900	MAINTENANCE STONE	TON	135.00		
3100320	HOT MIX ASPHALT BASE COURSE - TYPE B	TON	130.00		
4011004	LIQUID ASPHALT BINDER PG64-22	TON	80.00		
4013990	MILLING EXISTING ASPHALT PAVEMENT (VARIABLE)	SY	11,160.00		
4020330	HOT MIX ASPHALT INTERMEDIATE COURSE TYPE C	TON	50.00		
4030320	HOT MIX ASPHALT SURFACE COURSE TYPE B	TON	1,510.00		
4039000	ASPHALT PAVEMENT TEXTURING - CUSTOM	SY	300.00		
4010005	PRIME COAT	GAL	10.00		
6051120	PERMANENT CONSTRUCTION SIGNS (GROUND MOUNTED)	SF	832.00		
609105A	PAVEMENT MARKINGS (TEMP-PAINT) 4" WHITE BROKEN LINES	LF	3,650.00		
609115A	PAVEMENT MARKINGS (TEMPORARY-PAINT)-4" WHITE SOLID LINES	LF	3,830.00		
609115B	PAVEMENT MARKINGS (TEMPORARY-PAINT)-4" YELLOW SOLID LINES	LF	5,880.00		
609125A	PAVEMENT MARKINGS (TEMPORARY-PAINT)-8" WHITE SOLID LINES	LF	4,800.00		
609135A	PAVEMENT MARKINGS (TEMPORARY-PAINT)-24"WHITE SOLID LINES	LF	720.00		
609160A	PAVEMENT MARKINGS (TEMPORARY-PAINT)-WHITE SINGLE ARROW	EA	68.00		
609180A	PAVEMENT MARKINGS (TEMPORARY-PAINT)-WHITE WORD 'ONLY'	EA	34.00		
6271005	4" WHITE BROKEN LINES (GAPS EXCL.)THERMOPLASTIC- 90 MIL.	LF	1,825.00		
6271010	4" WHITE SOLID LINES (PVT. EDGE LINES) THERMO. - 90 MIL.	LF	1,915.00		

6271015	8" WHITE SOLID LINES THERMOPLASTIC - 125 MIL.	LF	2,400.00		
6271025	24" WHITE SOLID LINES (STOP/DIAG LINES)-THERMO.-125 MIL	LF	360.00		
6271030	WHITE SINGLE ARROWS (LT, STRGHT, RT) THERMO.-125 MIL.	EA	34.00		
6271035	WHITE WORD MESSAGE "ONLY" -THERMOPLASTIC - 125 MIL.	EA	17.00		
6271040	WHITE COMBINATION ARROWS (STR&RT. OR STR&LT) THERMO-125 MIL.	EA	2.00		
6271042	WHITE U-TURN ARROW THERMO-125MIL	EA	2.00		
6271064	4" YELLOW BROKEN LINES (GAPS EXC) THERMOPLASTIC - 90 MIL.	LF	140.00		
6271074	4" YELLOW SOLID LINES (PVT.EDGE LINES) THERMO-90 MIL.	LF	2,940.00		
6300005	PERMANENT CLEAR PAVEMENT MARKERS- MONO-DIR.- 4"X4"	EA	58.00		
6301100	PERMANENT YELLOW PAVEMENT MARKERS BI-DIR.- 4"X4"	EA	15.00		
6319505	REMOVAL OF PAVEMENT MARKINGS	LF	15,000.00		
6510105	FLAT SHEET, TYPE III, FIXED SZ. & MSG. SIGN	SF	171.00		
6510108	FLAT SHEET, TYPE VIII OR IX, SIZE DETERMINTED BY MSG. - OVERHEAD	SF	97.50		
6513020	F&I MOUNTING ASSEMBLY FOR F.S. SIGN ERCTD ON MAST ARM	EA	13.00		
6531210	U-SECTION POST FOR SIGN SUPPORTS - 3P	LF	306.00		
6750275	FURNISH & INSTALL 1.0" SCHEDULE 80 PVC CONDUIT	LF	483.00		
6750278	FURNISH & INSTALL 2.0" SCHEDULE 80 PVC CONDUIT	LF	1,211.00		
675027C	FURNISH & INSTALL 3.0" SCHEDULE 80 PVC CONDUIT	LF	130.00		
675027Z	FURNISH ADDITIONAL CONDUIT WITHIN DIRECTIONAL BORE	LF	1,865.00		
6760060	FURNISH & INSTALL 2" SCHEDULE 80 HDPE CONDUIT (TRENCHLESS)	LF	986.00		
6770388	FURNISH & INSTALL NO. 14 COPPER WIRE, 4 CONDUCTOR - BLACK	LF	1,460.00		
6770389	FURNISH & INSTALL NO. 14 COPPER WIRE, 4 CONDUCTOR - GRAY	LF	1,900.00		
6770393	FURNISH & INSTALL NO. 14 COPPER WIRE, 8 CONDUCTOR (BLACK)	LF	2,900.00		
6770394	FURNISH & INSTALL NO. 14 COPPER WIRE, 8 CONDUCTOR (GRAY)	LF	2,470.00		
6770395	FURNISH & INSTALL NO. 14 COPPER WIRE, 12 CONDUCTOR (BLACK)	LF	1,090.00		
6770413	FURNISH AND INSTALL NO. 14 COPPER WIRE, 1-CONDUCTOR FOR LOOP WIRE	LF	7,820.00		
6780495	SAWCUT FOR LOOP DETECTOR	LF	3,326.00		
6800499	F&I ELECTRICAL SERVICE FOR TRAFFIC SIGNAL (COMPLETE WITH RISER, METER, AND DI	EA	3.00		
6800518	FURNISH AND INSTALL 13"X24"X18"D.ELEC.FLUSH UNDGRD.ENCLOSURE-(STR.POLY.CON	EA	26.00		
680052C	FURNISH AND INSTALL 17"X30"X26"D.ELEC.FLUSH UNDGRD.ENCLOSURE-(STR.POLY.CON	EA	3.00		

6825484	FURNISH & INSTALL 10' BREAK-AWAY ALUM PEDESTAL POLE AND BASE	EA	9.00		
6845511	FURNISH AND INSTALL CONTROLLER AND 332/336 CABINET ASSEMBLY - BASE MOUNTE	EA	3.00		
6865710	FURNISH AND INSTALL 12" 1-WAY-5 SECTION(R.Y.YA.G.GA)VEHICLE TRAFFIC SIGNAL	EA	3.00		
6865720	FURNISH AND INSTALL 12" 1-WAY-4 SECTION(RA+RA/YA.GA)VEHICHLE TRAFFIC SIGNAL	EA	2.00		
6865723	F&I - 12" 1-WAY-3 SECTION(RA.YA.YAF)VEH TRAFFIC SIGNAL	EA	24.00		
6865781	F&I COUNTDOWN PEDESTRIAN SIGNAL HEAD	EA	18.00		
6865797	F&I PEDESTRIAN PUSH BUTTON SOLID STATE WITH LIGHT AND TONE STATION ASSEMBLY	EA	18.00		
6865831	F&I VEHICLE TRAFFIC SINGAL HEAD MOUNTING ASSEMBLY FOR MAST ARM	EA	29.00		
6865834	BACKPLATE W/ RETROREFL.BORDERS FOR TRAFF. SIG.	EA	29.00		
6885990	REMOVAL, SALVAGE, & DISP.OF EXISTING TRAF. SIGNAL EQUIPMENT	LS	1.00		
6885992	TEMPORARY ADJUSTMENT OF TRAFFIC SIGNAL EQUIPMENT	LS	1.00		
6887951	FURNISH & INSTALL CONCRETE CABINET FOUNDATION	EA	3.00		
6888177	DESIGN, FURNISH & INSTALL STEEL POLE WITH TWIN MAST ARMS INCLUDING FOUNDATION	EA	1.00		
6888179	DESIGN, FURNISH & INSTALL STEEL POLE WITH MAST ARM INCLUDING FOUNDATION	EA	9.00		
7143615	15" SMOOTH WALL PIPE	LF	30.00		
7143618	18" SMOOTH WALL PIPE	LF	1,941.00		
7191605	CATCH BASIN -TYPE 16	EA	2.00		
7191625	CATCH BASIN -TYPE 17	EA	11.00		
7192020	DROP INLET (24" X 36")	EA	10.00		
7192107	MANHOLE WITH STANDARD 4' X 4' BOX	EA	6.00		
7192260	48" X 48" JUNCTION BOX	EA	4.00		
7192275	60" X 60" JUNCTION BOX	EA	1.00		
7197130	ADJUST DROP INLET	EA	3.00		
7203130	CONCRETE CURB AND GUTTER(1'-6") OGEE	LF	1,644.00		
7203110	CONCRETE CURB AND GUTTER(1'-6") VERTICAL FACE	LF	484.00		
7203210	CONCRETE CURB AND GUTTER(2'-0") VERTICAL FACE	LF	8,358.00		
7204100	CONCRETE SIDEWALK(4" UNIFORM)	SY	970.00		
7204600	CONCRETE SIDEWALK(6" UNIFORM)	SY	915.00		
7204900	DETECTABLE WARNING SURFACE	SF	242.00		
7205000	CONCRETE DRIVEWAY(6" UNIFORM)	SY	540.00		
7206000	CONCRETE MEDIAN	SY	900.00		
7209000	PEDESTRIAN RAMP CONSTRUCTION	SY	162.00		
7209100	SURFACE APPLIED DETECTABLE WARNING	SF	20.00		
8021106	6" PIPE UNDERDRAIN	LF	7,058.00		
8081000	MOVING ITEM NO. 1	LS	1.00		
8091010	RIGHT OF WAY MARKER(REBAR & CAP)	EA	16.00		

8091050	RIGHT OF WAY PLAT	LS	1.00		
8100100	PERMANENT COVER	ACRE	0.50		
8100200	TEMPORARY COVER	ACRE	1.00		
8101110	STRAW OR HAY MULCH WITH TACKIFIER	ACRE	1.50		
8104005	FERTILIZER (NITROGEN)	LB	50.00		
8104010	FERTILIZER (PHOSPHORIC ACID)	LB	50.00		
8104015	FERTILIZER (POTASH)	LB	50.00		
8105005	AGRICULTURAL GRANULAR LIME	LB	1,000.00		
8109050	SELECTIVE WATERING	GAL	54,300.00		
8109901	MOWING	ACRE	3.00		
8152004	INLET STRUCTURE FILTER - TYPE F (WEIGHTED)	LF	876.00		
8153000	SILT FENCE	LF	4,750.00		
8153090	REPLACE/REPAIR SILT FENCE	LF	475.00		
8154050	REMOVAL OF SILT RETAINED BY SILT FENCE	LF	1,188.00		
8156219	INLET STRUCTURE FILTER - TYPE A	LF	680.00		
S000001	SIDEWALK & RAILING BRICK VENEER	LS	1.00		
6020005-1	GATEWAY SIGN: SIGN WALL, GRAPHIC PANEL, TRELLIS, FOUNDATION AND UPLIGHTING.	EA	1.00		
6020005-2	WAYFINDING SIGN: POST, GRAPHIC PANEL, FOUNDATIONS	EA	3.00		
8111151	SOUTHERN MAGNOLIA, MAGNOLIA GRANDIFLORA, FG B&B, 4" CAL., 14`-16`.	EA	27.00		
8111152	DWARF SOUTHERN MAGNOLIA, MAGNOLIA GRANDIFLORA `LITTLE GEM`, FG B&B, 2" CAL., 8` MIN.	EA	4.00		
8111205	CATHEDRAL LIVE OAK, QUERCUS VIRGINIANA `CATHEDRAL`, FG B&B, 4" CAL, 14`-16`.	EA	88.00		
8111426	CITY SPRITE ZELKOVA, ZELKOVA SERRATA `CITY SPRITE`, FG B&B, 3" CAL., 12`-14`.	EA	2.00		
8111112	REDBUD, CERCIS CANADENSIS, FG B&B, 2" CAL., 10` - 12`, SINGLE LEADER.	EA	83.00		
811114D-1	MUSKOGEE CRAPE MYRTLE, LAGERSTROEMIA INDICA X FAURIEI `MUSKOGEE`, FG B&B, 2" CAL., 10`-14`, MULTI-STEM; LAVENDAR BLOOMS	EA	3.00		
811114D-2	NATCHEZ CRAPE MYRTLE, LAGERSTROEMIA INDICA X FAURIEI `NATCHEZ`, FG B&B, 2" CAL., 10`-14`, SINGLE LEADER; WHITE BLOOMS	EA	58.00		
811114D-3	TUSCARORA CRAPE MYRTLE, LAGERSTROEMIA INDICA X FAURIEI `TUSCARORA`, FG B&B, 2" CAL., 10`-14`, MULTI STEM; RED BLOOMS	EA	38.00		
811114D-4	CATAWBA CRAPE MYRTLE, LAGERSTROEMIA INDICA `CATAWBA`, FG B&B, 1.5" CAL., 7 `- 8`, MULTI-STEM; PURPLE BLOOMS	EA	10.00		
8111185-1	SABAL PALM, SABAL PALMETTO, FG B&B, , 14`, HEIGHT REPRESENTS CLEAR TRUNK	EA	51.00		
8111185-1	SABAL PALM, SABAL PALMETTO, FG B&B, , 8`, HEIGHT REPRESENTS CLEAR TRUNK	EA	10.00		
8110005-1	SOUTHERN INDIAN AZALEA, RHODODENDRON INDICUM `GEORGE TABER`, 7 GAL., , 12" - 15",	EA	179.00		

8110005-2	DOUBLE KNOCKOUT ROSE, ROSA `RADTKO`, 5 GAL., , 12"-15", RED BLOOMS	EA	7.00		
8110005-3	SAND CORDGRASS, SPARTINA BAKERI, 3 GAL, , 12" - 15",	EA	200.00		
8111141	DWARF YAUPON HOLLY, ILEX VOMITORIA `NANA`, 3 GAL., 14"-16", 12" - 15", FULL	EA	99.00		
8111445	PINK MUHLY, MUHLENBERGIA CAPILLARIS, 3 GAL., 14"-16", 12" - 15", FULL	EA	1347.00		
8110005-4	DWARF FAKAHATCHEE GRASS, TRIPSACUM FLORIDANUM, 3 GAL., 14"-16", 10"-12", FULL	EA	413.00		
8110012	ANNUALS, ANNUALS, 4" POT, CITY P&R DEPT. TO SELECT	EA	1880.00		
8111361	BLUE RUG JUNIPER, JUNIPERUS HORIZONTALIS `WILTONII`, 1 GAL, 6" - 8", 6"-12",	EA	709.00		
8111370	BIG BLUE LIRIOPE, LIRIOPE MUSCARI `BIG BLUE`, 1 GAL., 6" - 8", 12" - 15",	EA	699.00		
8111456	ASIATIC JASMINE, TRACHELOSPERMUM ASIATICUM `ASIATIC`, 1 GAL, 4" - 6", 4" - 6",	EA	1998.00		
8131000	CELEBRATION BERMUDA GRASS, CYNODON DACTYLON, SOD	SF	28334.00		
8115510	AUTOMATICE IRRIGATION SYSTEM, INCLUDING ELECTRICAL SERVICE, BACKFLOW PREVENTERS, CONTROLLERS (3 LINE VOLTAGE & 8 SOLAR POWERED), VALVE BOXES, PLUMBING, SPRAY HEADS AND DRIP LINES (FULLY FUNCTIONAL SYSTEM, METERS BY CITY)	LS	1	$202,500.00	$202,500.00
8115510	IRRIGATION SLEEVING (DIRECTION DRILLING, CUT AND PATCH)	LS	1	$88,500.00	$88,500.00
8115500	TREE WATER BAG SYSTEM (PER INDICATED TREE)	EA	64.00		
8101100	IMPORTED ORGANIC TOPSOIL (ALL NEW ROADWAY ISLAND MEDIAN AREAS - 8" DEPTH & 4" DEPTH IN AREAS NOTED)	CY	1017.00		
8101100	AMENDED EXISTING ORGANIC TOPSOIL	SF	66950.00		
8110221	PINE STRAW MULCH, 3" DEPTH, INCLUDES 4' DIAM. MULCH RING AROUND TREES NOT WITHIN PLANT BEDS	SY	4361.00		
				Total Bid Phases 2 & 10	

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR BID

REFERENCE FORM

REFERENCE FORM

(Please use this form or similar copy)

Bidder shall include a list of three references for similar work with bid response. References shall include project name, brief description and location of project, completed dollar amount of project, date completed, contact person's name, phone, fax number, and email address of a similar job completed

1.) Name of Project Owner: _____
Brief Description Including Location _____
_____
_____
_____
Completed Dollar Amount: $_____ Date Completed: _____
Contact Person's Name: _____
Contact Phone: (_____) _____ - _____ Contact Fax: (_____) _____ - _____
Contact E-mail: _____

2.) Name of Project Owner: _____
Brief Description Including Location _____
_____
_____
_____
Completed Dollar Amount: $_____ Date Completed: _____
Contact Person's Name: _____
Contact Phone: (_____) _____ - _____ Contact Fax: (_____) _____ - _____
Contact E-mail: _____

3.) Name of Project Owner: _____
Brief Description Including Location _____
_____
_____
_____
Completed Dollar Amount: $_____ Date Completed: _____
Contact Person's Name: _____
Contact Phone: (_____) _____ - _____ Contact Fax: (_____) _____ - _____
Contact E-mail: _____

4.) Name of Project Owner: _____
Brief Description Including Location _____
_____
_____
_____
Completed Dollar Amount: $_____ Date Completed: _____
Contact Person's Name: _____
Contact Phone: (_____) _____ - _____ Contact Fax: (_____) _____ - _____
Contact E-mail: _____

<u>THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR BID</u>

SUBCONTRACTOR FORM

SUBCONTRACTOR FORM

Subcontractor Name: ______________________________
Address: ______________________________
Description of Work to be Performed: ______________________________
____
____
____
Dollar Value of Subcontractor's Work: $______________ Percentage of Contract Value: ________

Subcontractor Name: ______________________________
Address: ______________________________
Description of Work to be Performed: ______________________________
____
____
____
Dollar Value of Subcontractor's Work: $______________ Percentage of Contract Value: ________

Subcontractor Name: ______________________________
Address: ______________________________
Description of Work to be Performed: ______________________________
____
____
____
Dollar Value of Subcontractor's Work: $______________ Percentage of Contract Value: ________

Subcontractor Name: ______________________________
Address: ______________________________
Description of Work to be Performed: ______________________________
____
____
____
Dollar Value of Subcontractor's Work: $______________ Percentage of Contract Value: ________

Subcontractor Name: ______________________________
Address: ______________________________
Description of Work to be Performed: ______________________________
____
____
____
Dollar Value of Subcontractor's Work: $______________ Percentage of Contract Value: ________

Subcontractor Name: ______________________________
Address: ______________________________
Description of Work to be Performed: ______________________________
____
____
____
Dollar Value of Subcontractor's Work: $______________ Percentage of Contract Value: ________

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR BID

City of Walterboro

CPST-14.1 I-95 Loop Project Streetscape Phases 2 & 10

CERTIFICATE OF FAMILIARITY

The undersigned, having fully familiarized him/her with the information contained within this entire solicitation and applicable amendments, submits the attached response, and other applicable information to the City, which I verify to be true and correct to the best of my knowledge. I further certify that this response is made without prior understanding, agreement, or connection with any corporation, contractor or person submitting a response for the same materials, supplies or equipment, and is in all respects, fair and without collusion or fraud. I agree to abide by all conditions outlined in this solicitation and certify that I have signature authority to bind the company listed herein.

MINORITY BUSINESS: Are you a minority business?

►***Yes*** ____ (_____*Women-owner/* _____*Disadvantaged) if yes, please submit a copy of your certificate with your response.*

► ***No*** ____

DEBARMENT

The Contractor is certifying that they are not currently debarred from responding to any request for bids by any agency or subdivision of the State of South Carolina or the United States Federal Government, nor are they an agent of any person or entity that is currently debarred from submitting bids on contracts by any agency or subdivision of the State of South Carolina or the United States Federal Government.

A Registered Contractor with SAM's ☐ yes ☐ no

Cage Code. _____

DUN's No. _____

Contractor: _____

Authorized Representative Name and Title: _____

Signature of Authorized Representative: _____

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR BID

City of Walterboro
CPST-14.1 I-95 Loop Project Streetscape Phases 2 & 10
ADDENDA ACKNOWLEDGEMENT

The contractor has examined and carefully studied the Request for Bid and the following Addenda, receipt of all of which is hereby acknowledged:

Amendment No.	*Issue Date*

The Contractor must acknowledge any issued addenda. Bids that fail to acknowledge the contractor's receipt of any addendum will result in the rejection of the offer if the addendum contained information that substantively changes the Owner's requirements or pricing.

INDEMNIFICATION

The contractor will indemnify and hold harmless the Owner, City of Walterboro 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 are attributable to bodily injury, sickness, disease or death, injury to or destruction of tangible property, including the loss of use resulting therefrom, and is caused by any negligent or willful act or omission of the Firm, and anyone directly or indirectly employed by him/her or anyone for whose acts any of them may be liable.

In any claims against the Owner, City of Walterboro or any of their agents and/or employees by an employee of the Contractor, 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 Contractor under the Worker's Compensation Acts, Disability Benefit Acts, or other employee benefit acts.

The obligation of the Firm under this paragraph shall not extend to the liability of the City of Walterboro or its agents and/or employees arising out of the reports, surveys, Change Orders, designs or Technical Specifications.

Contractor: _____

Authorized Representative Name and Title: _____

Signature of Authorized Representative: _____

THIS PAGE MUST BE COMPLETED AND SUBMITTED AS A PART OF YOUR BID

SHEET NO.	TOTAL SHEETS
1	204

CITY OF WALTERBORO

PROPOSED PLANS FOR COLLETON COUNTY

I-95 BUSINESS LOOP PROJECT - PHASE 2
STREETSCAPE IMPROVEMENTS

INDEX OF SHEETS		
SHEET NO.	DESCRIPTION	SHEET SUBTOTALS
1	TITLE SHEET	1
IL1	PLAN SHEET INDEX	1
3 - 3A	TYPICAL SECTIONS	2
4 - 4E	R/W DATA SHEET	6
4F - 4J	PROPERTY STRIP MAP	5
5A - 5E	SURVEY CONTROL & REFERENCE DATA SHEET	5
5F	CONSTRUCTION DETAILS	1
6 - 28	PLAN SHEETS	23
29 - 41	PROFILE SHEETS	13
TC1 - TC7	TRAFFIC CONTROL PLAN	7
PM1 - PM7	PAVEMENT MARKING & SIGNING PLAN	7
TS1 - TS3	TRAFFIC SIGNAL PLANS	3
S1	STRUCTURE PLAN	1
EC1 - EC9	EROSION CONTROL PLANS	9
U1 - U27	UTILITY SHEETS	27
X1 - X38	CROSS SECTIONS	38
HS00-1 - HS01	HARDSCAPE PLANS	3
SN00-1 - SN05	GATEWAY & WAYFINDING SIGNAGE	6
L00-1 - L23	LANDSCAPING PLANS	24
I-1 - I-22	IRRIGATION PLANS	22
TOTAL		204

US 15 (NORTH JEFFERIES BOULEVARD)
END CONSTRUCTION STA. 245+71.03

BEGIN EXCEPTION STA. 230+46.00
END EXCEPTION STA. 244+61.55

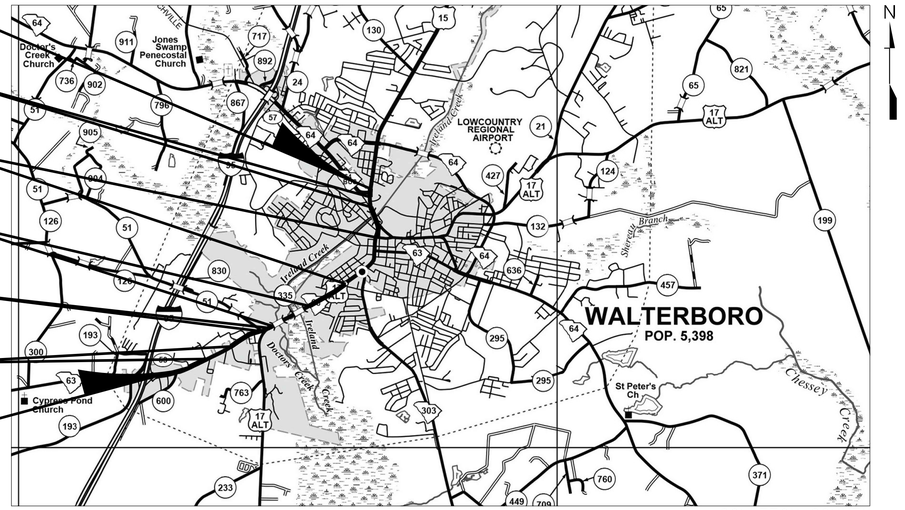
BEGIN EXCEPTION STA. 175+80.00
END EXCEPTION STA. 214+64.58

BEGIN EXCEPTION STA. 120+29.00
END EXCEPTION STA. 145+46.00

BEGIN EXCEPTION STA. 111+61.50
END EXCEPTION STA. 115+08.50

BEGIN EXCEPTION STA. 70+92.56
END EXCEPTION STA. 89+00.00

SC 63 (SNIDERS HIGHWAY)
BEGIN CONSTRUCTION STA. 58+64.80



LAYOUT

SCALE 1 INCH = N.T.S. FEET

Hydraulic Design Reference for these plans is the:

2009

Edition of SCDOT's "Requirements for Hydraulic Design Studies"

Design Reference for these plans is the:

2017

SCDOT Roadway Design Manual

NPDES PERMIT INFORMATION

Disturbed Area = 0.4 Acre(s)

Project Area = 2.4 Acre(s)

Approximate Location of Roadway is

Begin
Latitude 32°52'52"
Longitude 80°42'26"

End
Latitude 32°54'46"
Longitude 80°40'04"

Hydraulic and NPDES Design provided by:

Stantec Consulting

Designs may be obtained from the SCDOT Regional Production Group

3 DAYS BEFORE DIGGING IN SOUTH CAROLINA

CALL 811

SOUTH CAROLINA 811 (SC811)
www.SC811.COM
ALL UTILITIES MAY NOT BE A MEMBER OF SC811

RAILROAD INVOLVEMENT?
YES / (NO)

TRAFFIC DATA SC 63 / US 17A

2020 ADT 15,000

2040 ADT 18,300

TRUCKS 5 %

TRAFFIC DATA SC 63

2020 ADT 9,000

2040 ADT 11,000

TRUCKS 5 %

TRAFFIC DATA US 15

2020 ADT 15,800

2040 ADT 19,300

TRUCKS 5 %

	SC 63 / US 17A / US 15	TOTAL
NET LENGTH OF ROADWAY	3.543	3.543 MILES
NET LENGTH OF BRIDGES	0.000	0.000 MILES
NET LENGTH OF PROJECT	3.543	3.543 MILES
LENGTH OF EXCEPTIONS	1.889	1.889 MILES
GROSS LENGTH OF PROJECT	1.654	1.654 MILES

EQUALITIES IN STATIONING

NONE

NOTE: EXCEPT AS MAY OTHERWISE BE SPECIFIED ON THE PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIALS AND WORKMANSHIP ON THIS PROJECT SHALL CONFORM TO THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2007 EDITION) AND THE STANDARD DRAWINGS FOR ROAD CONSTRUCTION IN EFFECT AT THE TIME OF LETTING.

CONSULTING ENGINEERING FIRM

Stantec
Stantec Consulting Services
4969 Centre Pointe Drive, Suite 200
North Charleston, SC 29418
Tel: 843.740.7700
Fax: 843.740.7707
www.stantec.com

ENGINEER OF RECORD

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

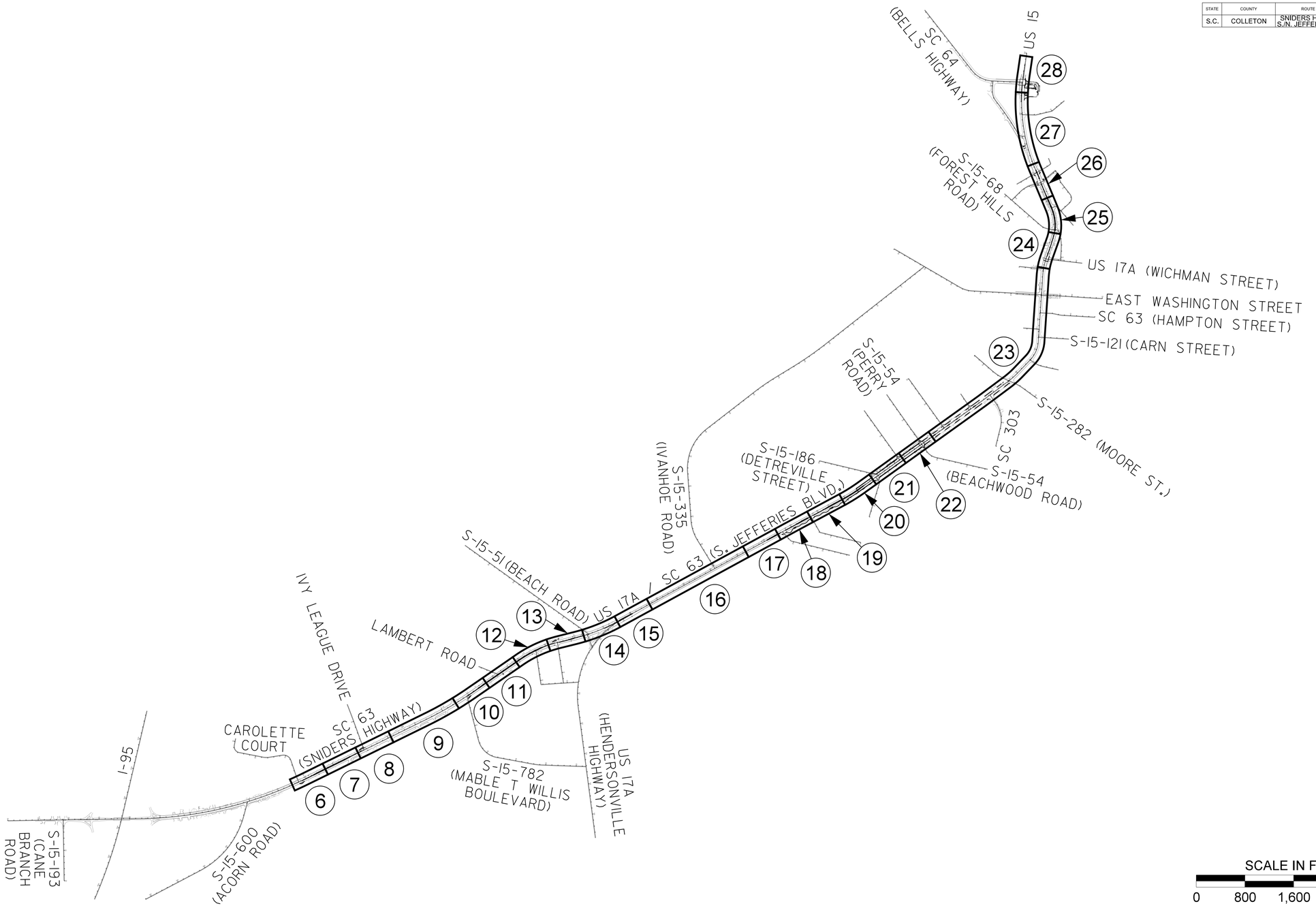
SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 27825 JUSTIN KENNETH TYE

FOR CONSTRUCTION : Justin Tye 4/21/21 DATE

User: jtye
U:\T\002304\transportation\roadway\drawings\plan_sheets\02304_01_tsh.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.US17A/US15	SC 63/	IL1

N



SCALE IN FEET

0 800 1,600 3,200

PLANS PREPARED BY:

Stantec

Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 27825 JUSTIN KENNETH TYE 4/21/21

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

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

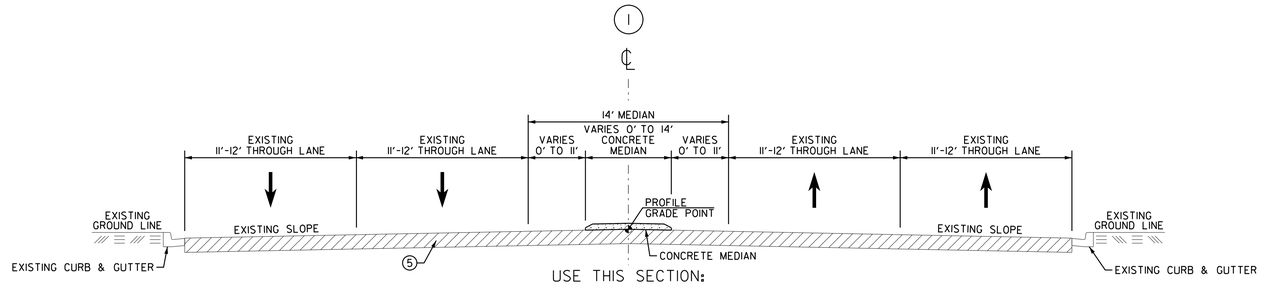
COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET INDEX

SCALE: 1" = 800' RTE. SC63/US17A/US15

User: jtye
U:\T\100230\4\transportation\roadway\drawings\plan_sheets\02304_01b_index.dgn
4/21/2021

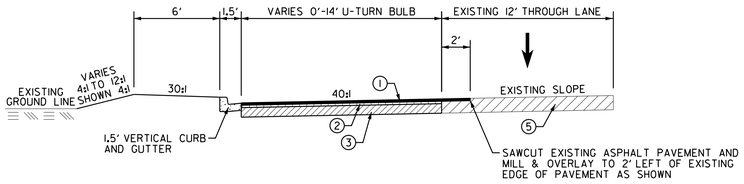
STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63/ US17A/US15	3

TYPICAL SECTION OF IMPROVEMENT

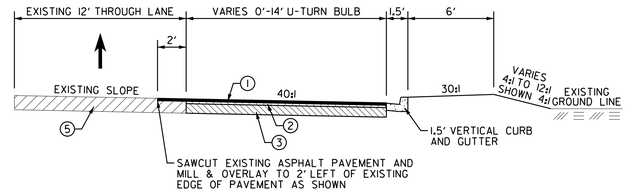


USE THIS SECTION:

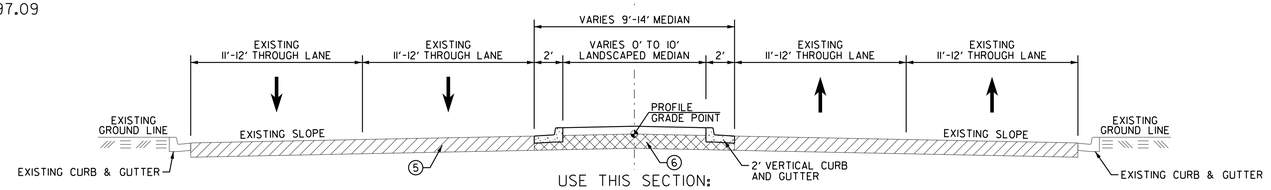
SC 63 (SNIDERS HIGHWAY)	US 17A / SC 63 (S. JEFFERIES BLVD.)	US 15 (N. JEFFERIES BLVD.)
STA. 58+64.80 TO 61+30.00	STA. 115+08.50 TO 117+20.00	STA. 214+64.58 TO 219+86.61
STA. 68+10.00 TO 70+92.56	STA. 147+83.28 TO 151+00.00	STA. 225+89.00 TO 230+46.00
STA. 89+00.00 TO 91+90.00	STA. 153+18.28 TO 156+20.00	STA. 244+61.55 TO 245+71.03
STA. 104+50.00 TO 109+10.57	STA. 162+43.00 TO 162+48.00	
STA. 110+09.50 TO 111+61.50	STA. 163+65.00 TO 166+60.00	



SC 63 SECTION LEFT:
STA. 69+82.93 TO 70+82.52
STA. 106+23.38 TO 106+97.09

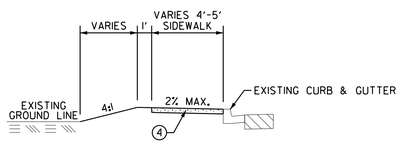


SC 63 SECTION RIGHT:
STA. 58+64.80 TO 59+56.07
STA. 89+65.20 TO 90+30.13

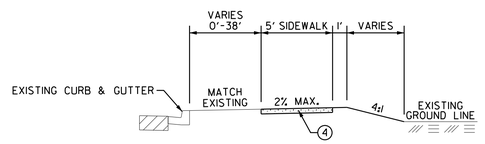


USE THIS SECTION:

SC 63 (SNIDERS HIGHWAY)	US 17A / SC 63 (S. JEFFERIES BLVD.)	US 15 (N. JEFFERIES BLVD.)
STA. 61+30.00 TO 68+10.00	STA. 117+20.00 TO 120+29.00	STA. 219+86.61 TO 225+89.00
STA. 91+90.00 TO 104+50.00	STA. 145+46.00 TO 147+83.28	
STA. 109+10.57 TO 110+09.50	STA. 151+00.00 TO 153+18.28	
	STA. 156+20.00 TO 162+43.00	
	STA. 162+48.00 TO 163+65.00	



US 17A / SC 63 SECTION LEFT:
STA. 163+75.00 TO 165+64.16
(4' SIDEWALK BETWEEN STA. 165+00 AND 165+10)



US 17A / SC 63 SECTION RIGHT:
STA. 148+76.17 TO 165+77.40

EXCEPTIONS:

SC 63 (SNIDERS HIGHWAY)	US 17A / SC 63 (S. JEFFERIES BLVD.)	US 15 (N. JEFFERIES BLVD.)
STA. 70+92.56 TO 89+00.00	STA. 120+29.00 TO 145+46.00	STA. 230+46.00 TO 244+61.55
STA. 111+61.50 TO 115+08.50	STA. 175+80.00 TO 214+64.58	

LEGEND

1. HOT MIX ASPHALT SURFACE COURSE, TYPE "B" (175 lbs/sy)
2. HOT MIX ASPHALT INTERMEDIATE COURSE, TYPE "C" (225 lbs/sy)
3. HOT MIX ASPHALT BASE COURSE, TYPE "B" (600 lbs/sy)
4. 4" CONCRETE SIDEWALK
5. EXISTING PAVEMENT (RETAIN)
6. EXISTING PAVEMENT (REMOVE & DISPOSE)

FUNCTIONAL CLASSIFICATION	
ROUTE	CLASSIFICATION
SC 63	URBAN MINOR ARTERIAL
US 17A	URBAN MINOR ARTERIAL
US 15	URBAN MINOR ARTERIAL

DESIGN SPEED	
ROUTE	MPH
SC 63 / US 17A / US 15	
STA. 35+00 TO 156+00	45
STA. 156+00 TO 197+25	35
STA. 197+25 TO 219+50	25
STA. 219+50 TO 246+00	35
EXCEPTIONS TO DESIGN SPEED	

NOTES:
1. REFER TO SCDOT STANDARD DRAWING 720-105-03 FOR DETAIL OF CONCRETE MEDIAN.
2. REFER TO SCDOT STANDARD DRAWING 720-105-01 FOR DETAIL OF CURB AND GUTTER.
3. CURB RAMPS AND DETECTABLE WARNING SURFACES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE SCDOT STANDARD DRAWINGS. SEE PLANS FOR LOCATIONS OF SIDEWALK CURB RAMPS AND DETECTABLE WARNING SURFACES.

PLANS PREPARED BY:
Stantec
Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA — STANTEC CONSULTING SERVICES, INC. No. C02310 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER — No. 27825 — 4/21/21 — JUSTIN KENNETH TYE

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

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
TYPICAL SECTIONS

SCALE: N.T.S. RTE. SC63/US17A/US15

User: jtye
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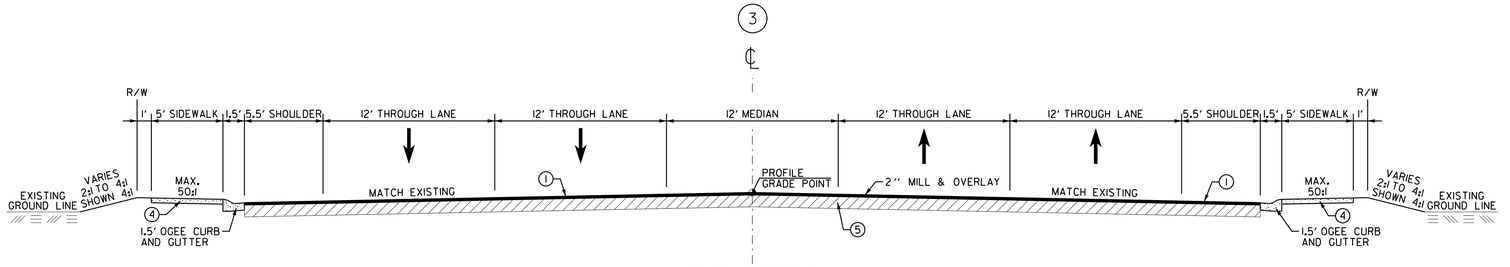
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63/ US17A/US15	3A

TYPICAL SECTION OF IMPROVEMENT



USE THIS SECTION:
US 17A / SC 63 (SOUTH JEFFERIES BOULEVARD)
STA. 166+60.00 TO 175+80.00

LEGEND

1. HOT MIX ASPHALT SURFACE COURSE, TYPE "B" (175 lbs/sy)
2. HOT MIX ASPHALT INTERMEDIATE COURSE, TYPE "C" (225 lbs/sy)
3. HOT MIX ASPHALT BASE COURSE, TYPE "B" (600 lbs/sy)
4. 6" CONCRETE SIDEWALK
5. EXISTING PAVEMENT (RETAIN)
6. EXISTING PAVEMENT (REMOVE & DISPOSE)

FUNCTIONAL CLASSIFICATION	
ROUTE	CLASSIFICATION
SC 63	URBAN MINOR ARTERIAL
US 17A	URBAN MINOR ARTERIAL
US 15	URBAN MINOR ARTERIAL

DESIGN SPEED	
ROUTE	MPH
SC 63 / US 17A / US 15	
STA. 35+00 TO 156+00	45
STA. 156+00 TO 197+25	35
STA. 197+25 TO 219+50	25
STA. 219+50 TO 246+00	35
EXCEPTIONS TO DESIGN SPEED	

NOTES:
1. REFER TO SCDOT STANDARD DRAWING 720-105-01 FOR DETAIL OF CURB AND GUTTER.
2. CURB RAMPS AND DETECTABLE WARNING SURFACES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE SCDOT STANDARD DRAWINGS. SEE PLANS FOR LOCATIONS OF SIDEWALK CURB RAMPS AND DETECTABLE WARNING SURFACES.

PLANS PREPARED BY:
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North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH TYE

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

TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
TYPICAL SECTIONS

SCALE: N.T.S. RTE. SC63/US17A/US15

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63/ US17A/US15	4

CITY OF WALTERBORO
RIGHT-OF-WAY DATA SHEET

TRACT NO.	PROPERTY OWNER	TAX MAP REFERENCE	TOTAL TRACT ACRES	OBTAIN[A]				REMAINDER LEFT[B]	REMAINDER RIGHT[B]	DATE ACQUIRED	TYPE OF INSTRUMENT	OUTFALL DITCH PERMISSION (YES)	SLOPE PERMISSION (YES)	DRAINAGE STRUCTURE PERMISSION (YES)	EROSION CONTROL PERMISSION (YES)	ENTRANCE CONSTRUCTION PERMISSION (YES)	REMARKS
				OUTFALL DITCH ACRES	LEFT	RIGHT	TOTAL	ACRES	ACRES								
6	RUBY TUESDAY, INC.	178-00-00-187	1.20														
7	WALTERBORO LAND HOLDINGS, INC.	178-00-00-244	34.90														
8	SELF SERVE, INC.	178-00-00-074	1.20														
9	LONG WILLARD LIFE ESTATE, SONYA L HER	178-00-00-075	0.80														
10	WAFFLE HOUSE INCATTIN: TAX DEPARTMENT	178-00-00-076	0.70														
11	CROSBY BARRY G	178-00-00-192	0.20														
12	WALTERBORO HOSPITATLITY, LLC	178-00-00-073	3.00														
13	BALAJI HOSPITATLITY, LLC	178-00-00-192	2.20														
14	COOK WILLIAM W SRDBA PASCAL	178-00-00-185	0.80														
15	LAND TODD	178-00-00-079	5.70														
16	BUDGET, INC A SOUTH CAROLINA	178-00-00-010	0.60														
17	OM SIDDHIVINAYAK, LLC A SOUTH CAROLINA	178-00-00-170	0.80														
18	SELF-SERVE, INC	178-00-00-078	1.30														
19	NGC CONSULTANTS	178-00-00-080	8.90														
20	PINCKNEY THOMAS LEE	178-00-00-161	0.80														
21	PINCKNEY THOMAS LEE	178-00-00-081	4.20														
22	MURDAUGH JESSIE MAE & CHARLIE LIFE E	178-00-00-082	2.20														
23	MURDAUGH QUEEN ESTHER LIFE ESTARNOLD	178-00-00-083	1.50														
24	MITCHELL JAMES & LORETTA LIFE ESTATE	178-00-00-095	1.00														
25	TAYLOR LEE	178-00-00-096	2.10														
26	TAYLOR WILLARD	178-00-00-097	1.70														
27	XEMPER, LLC A SOUTH CAROLINA LIMITED	178-00-00-179	2.00		1,312 SF (0.03 AC)		1,312 SF (0.03 AC)	1.97									
28	THE DYCHES LIVING TRUST	178-00-00-086	3.50		613 SF (0.01 AC)		613 SF (0.01 AC)	3.49									
29	FERRELLGAS, INC	178-00-00-165	2.10														
30	HARLEY BUCCIE & BETTY S	178-00-00-182	2.00														
31	ROGERS BILLY L JR.	178-00-00-227	2.00														
32	HIOTT SAMUEL EDWARD	178-00-00-118	2.00														
33	HIOTT SAMUEL EDWARD	178-00-00-219	1.00														
34	WIGGINS ALFORD & BETTY B	178-00-00-119	11.40														
35	HILLCRIST SC, LLC A SOUTH CAROLINA LI	178-00-00-171	3.20														
36	WIGGINS ALFORD & BETTY B	178-00-00-119	11.40														
37	WIGGINS DANIEL L	178-08-00-047	0.60														
38	WIGGINS DANIEL L	178-08-00-046	0.77														
39	MCBE, LLC	178-08-00-045	0.76														
40	LAKE DONALD WAYNE JR.	178-08-00-044	0.63[C]														

NOTES:

[A] TOTAL OBTAIN INCLUDES HIGHLAND, MARSH AND OUTFALL DITCHES. OBTAINS WILL BE SHOWN IN SQUARE FEET AND ACRES. ACRES WILL BE SHOWN IN PARENTHESES UNDER SQUARE FEET. IN RURAL AREAS OBTAINS MAY BE SHOWN IN ACRES ONLY. OUTFALL DITCHES WILL BE SHOWN IN ACRES ONLY.

[B] SHOW REMAINDER IN SQUARE FEET WHEN LESS THAN 0.25 ACRE.

[C] CALCULATED.

PLANS PREPARED BY:

Stantec

Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH LOWE

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

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
R/W DATA SHEET

SCALE: N/A RTE. SC63/US17A/US15

User: jtye
U:\171002304 transportation\roadway\drawings\plan_sheets\02304_04_rw_data.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63/ US17A/US15	4A

CITY OF WALTERBORO
RIGHT-OF-WAY DATA SHEET

TRACT NO.	PROPERTY OWNER	TAX MAP REFERENCE	TOTAL TRACT ACRES	OBTAIN[A]				REMAINDER LEFT[B]	REMAINDER RIGHT[B]	DATE ACQUIRED	TYPE OF INSTRUMENT	OUTFALL DITCH PERMISSION (YES)	SLOPE PERMISSION (YES)	DRAINAGE STRUCTURE PERMISSION (YES)	EROSION CONTROL PERMISSION (YES)	ENTRANCE CONSTRUCTION PERMISSION (YES)	REMARKS
				OUTFALL DITCH ACRES	LEFT	RIGHT	TOTAL	ACRES	ACRES								
41	DELOACH C J JR.	178-08-00-043	3.90														
42	BENTON J D	178-08-00-042	2.30														
43	SMOAK RALPH A	178-08-00-041	1.80														
44	CHG-DRUID HILLS, LLC	178-08-00-032	6.30		831 SF (0.02 AC)		831 SF (0.02 AC)	6.28									
45	CROSBY ELOISE BAILEY	178-08-00-034	0.40														
46	PALMETTO RURAL TELEPHONE COOPERATIVE	178-08-00-035	0.10														
47	LEMACKS MELVIN M	178-08-00-036	0.50														
48	CITY OF WALTERBORO	179-00-00-063	9.10														
49	CITY OF WALTERBORO	163-00-00-002	51.50														
50	CITY OF WALTERBORO	163-00-00-020	1.90														
51	CITY OF WALTERBORO	163-00-00-018	18.30														
52	CITY OF WALTERBORO A SOUTH CAROLINA	163-00-00-021	1.50														
53	LIVE OAK CEMETERY ALBERT J LUCAS ET	179-00-00-036	36.50										YES		YES		
54	HUGHES SHERRY MARVIN	163-14-00-013	1.04[C]														
55	POLK HARRY H	163-14-00-012	0.64[C]										YES		YES	YES	
56	JEFFERIES BLVD, LLC	163-14-00-011	0.98[C]										YES		YES	YES	
57	COPELAND JAMES H III	163-14-00-010	0.34[C]										YES		YES	YES	
58	BETTY BEACH REVOCABLE LIVING TRUST	163-14-00-009	0.33[C]										YES		YES	YES	
59	ACCESS WAREHOUSES, LLC	163-14-00-008	0.64[C]										YES		YES	YES	
60	McCLURE ENTERPRISES, INC	163-14-00-006	0.34[C]														
61	WALNUT RIDGE ENTERPRISES, LLC	163-14-00-005	0.34[C]														
62	STONEWALL DEVELOPMENT, LLC A SOUTH CAROLINA	163-14-00-004	0.65[C]														
63	GOOD SHEPHERD EVANGELICALLUTHERAN CH	163-14-00-003	0.35[C]														
64	RAPUE THOMAS A II	163-14-00-002	0.35[C]														
65	J A R OF WALTERBORO, LLC	163-14-00-001	1.36[C]														
66	PADGETT WILLIAM K & WAILMA REE G	163-15-00-003	1.61[C]														
67	JACKSON HUGHES PROPERTIES, LLC	163-15-00-002	0.33[C]														
68	DAIRYLAND OF WALTERBORO, LLC	163-15-00-001	0.28[C]														
69	BEACH ELECTRIC SERVICE, INC.	163-15-00-079	0.44[C]														
70	WONG TONY C T & ROSEMARY W K	163-15-00-056	0.36[C]														
71	T. LAND HOLDINGS V, LLC	163-11-00-169	1.34[C]														
72	BEACH JACK H	163-11-00-168	2.01[C]														
73	NOLTE JAMES & LORI S	163-11-00-251	0.37[C]														
74	GUTIERREZ DAVID	163-11-00-209	1.04														
75	NEWINGTON PROPERITES, LLC	163-11-00-210	0.60[C]														

NOTES:

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[B] SHOW REMAINDER IN SQUARE FEET WHEN LESS THAN 0.25 ACRE.

[C] CALCULATED.

PLANS PREPARED BY:

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH LOVE

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
R/W DATA SHEET

SCALE: N/A RTE. SC63/US17A/US15

User: jtye
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STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63/ US17A/US15	4B

CITY OF WALTERBORO
RIGHT-OF-WAY DATA SHEET

TRACT NO.	PROPERTY OWNER	TAX MAP REFERENCE	TOTAL TRACT ACRES	OBTAIN[A]				REMAINDER LEFT[B]	REMAINDER RIGHT[B]	DATE ACQUIRED	TYPE OF INSTRUMENT	OUTFALL DITCH PERMISSION (YES)	SLOPE PERMISSION (YES)	DRAINAGE STRUCTURE PERMISSION (YES)	EROSION CONTROL PERMISSION (YES)	ENTRANCE CONSTRUCTION PERMISSION (YES)	REMARKS
				OUTFALL DITCH ACRES	LEFT	RIGHT	TOTAL	ACRES	ACRES								
76	CUMMINGS LEWIS B	163-11-00-212	0.22[C]														
77	COLLETON COUNTY SCHOOLS	163-11-00-219	0.22[C]														
78	GERDNER FAMILY, LLC	163-11-00-218	0.11[C]														
79	BENNETT DIANA C	163-11-00-217	0.16[C]														
80	THE OAKS OF COLLETON, LLC	163-11-00-221	1.32[C]														
81	CITY OF WALTERBORO A SOUTH CAROLINA	163-11-00-223	1.38[C]														
82	CITY OF WALTERBORO A MUNICIPAL CORPO.	163-11-00-226	2.00														
83	COLLETON COUNTY	163-11-00-227	3.47[C]														
84	CCEDC ONE INC A SOUTH CAROLINA ELEEM	163-11-00-229	0.52[C]														
85	CCEDC ONE INC A SOUTH CAROLINA ELEEM	163-11-00-230	4.00														
86	CCEDC ONE INC A SOUTH CAROLINA ELEEM	163-11-00-228	0.29[C]														
87	TUNG WING M & YIM FONG WONG	163-11-00-243	1.53[C]														
88	JEM PIZZA REALTY GROUP, LLC	163-07-00-062	0.55[C]														
89	RIZER D SCOTT	163-07-00-053	7.00														
90	BANK OF THE LOWCOUNTRY	163-07-00-059	1.94[C]														
91	GIRARDEAU LIVING TRUSTSHELDON GIRARD	163-07-00-058	0.40[C]														
92	FISHBURNE FAMILY PARTNERSHIPETAL	163-07-00-057	0.81[C]														
93	WIMBERLEY LEONCE BRUCE ETAL	163-07-00-055	0.46[C]														
94	CITY OF WALTERBORO	163-11-00-242	2.90														
95	ALC INVESTMENTS, LLC	163-07-00-049	4.10														
96	ALC INVESTMENTS, LLC	163-07-00-087	0.52[C]														
97	LLAMAS RAUL	163-07-00-048	1.12[C]														
98	MONEYLINE PROPERTIES, LLC	163-03-00-082	0.08[C]														
99	MCDONALD'S CORPORATIONSTATE SITE #39	163-03-00-083	1.16[C]														
100	PADGETT MICHAEL A SR	163-03-00-081	0.14[C]														
101	WACHOVIA BANK OF SC NA	163-03-00-084	0.89[C]														
102	JONES RUSSELL W	163-03-00-079	0.82[C]														
103	C-3 INVESTMENTS OF WALTERBORO, LLC	163-03-00-023	0.69[C]														
104	OSWALD EDWARD G ETAL	163-03-00-078	1.00[C]														
109	JAI-AMBE, LLC	178-00-00-151	18.10														
110	LONGHORN INVESTMENTS, LLC	178-00-00-150	5.40														
111	SELF-SERVE, INC.	178-10-00-004	0.47[C]														
112	SELF-SERVE, INC.	178-10-00-005	0.47[C]														
113	THE FISHBURNE FAMILY PARTNERSHIP	178-10-00-007	0.53[C]														
114	FISHBURNE FAMILY PARTNERSHIP	178-00-00-166	0.90														

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STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63/ US17A/US15	4C

CITY OF WALTERBORO
RIGHT-OF-WAY DATA SHEET

TRACT NO.	PROPERTY OWNER	TAX MAP REFERENCE	TOTAL TRACT ACRES	OBTAIN[A]				REMAINDER LEFT[B]	REMAINDER RIGHT[B]	DATE ACQUIRED	TYPE OF INSTRUMENT	OUTFALL DITCH PERMISSION (YES)	SLOPE PERMISSION (YES)	DRAINAGE STRUCTURE PERMISSION (YES)	EROSION CONTROL PERMISSION (YES)	ENTRANCE CONSTRUCTION PERMISSION (YES)	REMARKS
				OUTFALL DITCH ACRES	LEFT	RIGHT	TOTAL	ACRES	ACRES								
115	FHL, INC.	178-00-00-177	3.50														
116	NEELTEC ENTERPRISES	178-10-00-108	0.62[C]														
117	CITY OF WALTERBORO	178-11-00-002	0.29[C]														
118	OM RAMUJI, LLC	178-11-00-003	4.20														
119	MICROPROPERTIES SEVEN, LLC	178-11-00-004	1.00														
120	KATHLEEN L HIGGINS, LLC D/B/A PALMS M	178-11-00-005	1.10														
121	PETRO LEASING, LLC	178-11-00-019	0.90														
122	PETRO LEASING, LLC	178-11-00-006	3.10														
123	HIERS CONSTANCE POTTER	178-11-00-007	2.10														
124	JOHNSON THOMAS J	178-00-00-146	30.60			1,676 SF (0.04 AC)	1,676 SF (0.04 AC)		30.56								
125	PLANTATION OAKS APTS I, LLC A SOUTH C	178-11-00-012	10.70														
126	PLANTATION OAKS APTS I, LLC A SOUTH C	178-11-00-013	0.90														
127	JAMISON MANUEL (ESTATE)	178-11-00-014	0.10C														
128	SHERRILL MARIE	178-11-00-015	0.20														
129	S & S SUPERLUBE & WILLIAM SHERRILL	178-11-00-016	0.30														
130	S & S SUPER LUBE	178-11-00-017	0.40														
131	MCCLELLAN FRANK (ESTATE)	178-00-00-037	23.20														
132	NOAKES PEARL M	178-11-00-018	1.00														
133	SC DEPARTMENT OF HIGHWAYS & PUBLIC T	178-00-00-143	13.40														
134	SC DEPARTMENT OF HIGHWAYS & PUBLIC T	178-00-00-143	13.40														
135	COLLETON COUNTY SOUTH CAROLINA	178-00-00-183	2.00			658 SF (0.02 AC)	658 SF (0.02 AC)		1.98								
136	T. LAND HOLDINGS I, LLC	178-00-00-141	2.50														
137	T. LAND HOLDINGS V, LLC	178-00-00-173	2.20														
138	BARNES OLIVER L SR (ESTATE) & MARGAR	178-08-00-039	6.00														
139	SWEAT ELBERT W	178-08-00-049	0.27[C]														
140	T. LAND HOLDINGS III, LLC	178-08-00-030	0.33[C]														
141	T. LAND HOLDINGS I, LLC	178-08-00-031	0.38[C]														
142	WATTS JACOB G	178-08-00-018	0.29[C]														
143	UNGER RICHARD M	178-08-00-017	0.50														
144	WALKER PAUL	178-08-00-007	0.90														
145	FAITH BAPTIST CHURCH	178-08-00-006	2.30														
146	FAITH BAPTIST CHURCH	179-00-00-019	2.20														
147	FAITH BAPTIST CHURCH	179-00-00-019	37.00														
148	CITY OF WALTERBORO	179-00-00-063	9.10														
149	BEASLEY TIMBER MANAGEMENT, LLC A GEOR	179-00-00-033	118.00														

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STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
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CITY OF WALTERBORO
RIGHT-OF-WAY DATA SHEET

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				OUTFALL DITCH ACRES	LEFT	RIGHT	TOTAL	ACRES	ACRES								
150	US LAND & TIMBER, INC.	179-00-00-124	24.40														
151	THE FISHBURNE FAMILY PARTNERSHIP ETAL	179-02-00-016	0.08[C]														
152	BISHOP WENDELL ALLEN	179-02-00-018	0.54[C]														
153	BISHOP ALLEN	179-02-00-019	0.59[C]														
154	ZIPPERER EMMA K	179-02-00-043	4.70														
155	CARTER OTIS C III	179-02-00-040	1.50														
156	RHODES PROPERTIES OFWALTERBORO LP	179-00-00-041	0.57[C]														
157	CAULDER CAROLYN D PASCHALL	179-02-00-042	0.05[C]														
158	ST. ANTHONYS CATHOLIC CHURCH	179-00-00-035	9.00			1,205 SF (0.03 AC)	1,205 SF (0.03 AC)		8.97								
159	MOORER DANA CONE	163-14-00-110	0.28[C]			541 SF (0.01 AC)	541 SF (0.01 AC)		0.27								
160	BLACK PATRICIA T	163-14-00-108	0.27[C]			547 SF (0.01 AC)	547 SF (0.01 AC)		0.26								
161	BLACK PATRICIA T	163-14-00-104	4.40			1,088 SF (0.03 AC)	1,088 SF (0.03 AC)		4.37								
162	BLACK PATRICIA T	163-14-00-102	0.19[C]			291 SF (0.01 AC)	291 SF (0.01 AC)		0.18								
163	BLACK PATRICIA T	163-14-00-103	0.08[C]			112 SF (0.003)	112 SF (0.003)		0.08								
164	ARABIS DEANA B	163-15-00-037	0.20[C]														
165	WALKER THELMA T (Estate)	163-15-00-038	0.26[C]														
166	MOORER DANA CONE	163-15-00-039	0.62[C]														
167	CITY ELECTRIC SUPPLY COMPANY A FLORI	163-15-00-216	0.44[C]														
168	PALMETTO HOME CENTER, LLC	163-15-00-040	0.50[C]														
169	PALMETTO HOME CENTER, LLC	163-15-00-190	0.55[C]														
170	T. LAND HOLDINGS V, LLC	163-15-00-194	0.55[C]														
171	LAND TODD & ROBIN	163-15-00-042	0.11[C]														
172	GRAYS BAY, LLC	163-15-00-213	0.87[C]														
173	RAZZOO, LLC	163-15-00-043	0.98[C]														
174	OWENS JACK et al	163-15-00-044	1.06[C]														
175	STRATOS JOHN	163-15-00-045	0.47[C]														
176	NATIONAL WELDERS SUPPLY COMPANY, INC.	163-15-00-046	0.55[C]														
177	MOCK CHARLES R	163-15-00-047	0.65[C]														
178	WALTERBORO REAL ESTATE HOLDINGS, LLC	163-15-00-048	0.22[C]														
179	PRICE JEANINE MARVIN	163-15-00-049	0.67[C]														
180	VEER2012, LLC	163-15-00-050	0.20[C]														
181	VEER2012, LLC	163-15-00-222	1.00														
182	BLOCKER TOMMIE H	163-15-00-077	0.44[C]														
183	NISARG, INC. A SOUTH CAROLINA CORPORATION	163-15-00-078	1.12[C]														
184	COLLETON COUNTY RAILROAD COMPANY, INC.	163-00-00-027	4.10														

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				OUTFALL DITCH ACRES	LEFT	RIGHT	TOTAL	ACRES	ACRES								
185	PACIFIC CONTRACTORS, LLC	163-11-00-033	0.87[C]														
186	FISHBURNE JOHN BARNWELL	163-11-00-276	0.02[C]														
187	LOWCOUNTRY COMMUNITY ACTION AGENCY	163-11-00-032	0.20[C]														
188	AAO STORES, LLC A FLORIDA LIMITED LIABILITY COMPANY	163-11-00-031	0.48[C]														
189	T. LAND HOLDINGS V, LLC	163-11-00-009	0.34[C]														
190	KNIGHT JOHN GREGORY	163-11-00-007	0.14[C]														
191	SAPP BENJAMIN CP	163-11-00-006	0.14[C]														
192	REARDEN GAIL	163-11-00-005	0.11[C]														
193	COLLETON COUNTY	163-11-00-001	1.09[C]														
194	MCLEOD PEDEN B	163-11-00-254	0.13[C]														
195	MCLEOD PEDEN B	163-11-00-077	0.08[C]														
196	MCLEOD PEDEN B	163-11-00-162	0.29[C]														
197	MCLEOD PEDEN B	163-11-00-077	0.15[C]														
198	DOWNEY JOHN PAUL	163-11-00-166	0.27[C]														
199	SHARPE WYMAN H	163-11-00-279	0.60														
200	AKSHAR PURUSHOTTAM, LLC	163-07-00-064	0.51[C]														
201	PAK PUI CHI & YUEN TING W	163-07-00-082	0.33[C]														
202	TYLER GARY A JR & MICHELE A	163-07-00-063	0.16[C]														
203	RIDDHI SIDDHI CORPORATION, LLC	163-07-00-066	1.00[C]														
204	GARRISON FRANCIS MCTEER & MARY ANN BU	163-07-00-085	0.54[C]														
205	FIRST NATIONAL BANK	163-07-00-006	2.10														
206	CITY OF WALTERBORO	163-11-00-242	2.90														
207	CRG SOUTHEAST PROPERTIES, LLC A NORTH	163-07-00-083	0.56[C]														
208	BUSINESS BANK OF TEXAS NA	163-07-00-084	0.62[C]														
209	SWEAT CHARLES H JR.	163-07-00-004	0.98[C]														
210	SWEAT CHARLES HARRIS JR.	163-07-00-003	0.11[C]														
211	SWEAT CHARLES HARRIS JR.	163-07-00-002	2.00[C]														
212	WILLCO PROPERTIES, LLC	163-07-00-001	0.62[C]														
213	ERICKSON TILLENE H	163-03-00-067	0.43[C]														
214	WALKER PAUL	163-03-00-068	0.51[C]														
215	DRAYTON-PARKER COMPANIES, LLC A GEORGIA LIMITED LIABILITY COMPANY	163-03-00-070	2.80														
216	DRAYTON-PARKER COMPANIES, LLC A GEORGIA LIMITED LIABILITY COMPANY	163-03-00-070	2.80														
217	DRAYTON-PARKER COMPANIES, LLC A GEORGIA LIMITED LIABILITY COMPANY	163-03-00-070	2.80														
218	DRAYTON-PARKER COMPANIES, LLC A GEORGIA LIMITED LIABILITY COMPANY	163-03-00-070	2.80														
219	MILES CHARLES S JR.	163-03-00-063	10.00														

NOTES:

[A] TOTAL OBTAIN INCLUDES HIGHLAND, MARSH AND OUTFALL DITCHES. OBTAINS WILL BE SHOWN IN SQUARE FEET AND ACRES. ACRES WILL BE SHOWN IN PARENTHESES UNDER SQUARE FEET. IN RURAL AREAS OBTAINS MAY BE SHOWN IN ACRES ONLY. OUTFALL DITCHES WILL BE SHOWN IN ACRES ONLY.

[B] SHOW REMAINDER IN SQUARE FEET WHEN LESS THAN 0.25 ACRE.

[C] CALCULATED.

PLANS PREPARED BY:

Stantec

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4969 Centre Pointe Drive Suite 200
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www.stantec.com

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH TYE

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

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
R/W DATA SHEET

SCALE: N/A RTE. SC63/US17A/US15

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	4F

N

SC 63 (SNIDERS HIGHWAY)

SC 63 (SNIDERS HIGHWAY)

S-15-600 (ACORN ROAD)

CAROLETTE COURT

PRESENT 37.5' R/W
556-A REOP J.K.T.

DEDICATED 25' R/W
PER PB 658 P.J.K.T.

PRESENT 33' R/W
15.312 J.K.T.

PRESENT TRANS.R/W
15.427 J.K.T.

END NEW R/W
59+45.00
37.50' RT

59+45.00
60.00' RT

NEW 60' R/W

BEGIN NEW R/W
58+63.43
60.00' RT

MATCHLINE
SC 63
STA. 63+50
SEE SHEET 4G

SCALE IN FEET
0 100 200 400

PLANS PREPARED BY:

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STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
JOSEPH KENNETH LEE

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

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROPERTY STRIP MAP

SCALE: 1" = 100' RTE. SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	4G

MATCHLINE SC 63 STA. 63+50 SEE SHEET 4F

MATCHLINE SC 63 STA. 93+50 SEE BELOW

SC 63 (SNIDERS HIGHWAY)

IVY LEAGUE DRIVE

NEW 55' R/W
69+90.00
55.00' LT

BEGIN NEW R/W
69+90.00
37.50' LT

71+00.00
55.00' LT

END NEW R/W
71+00.00
37.50' LT

PRESENT 37.5' R/W
556-A REOP J.K.T.

JEREMIAH LANE

S-15-782 (MABLE T WILLIS BLVD.)

PRESENT 30' R/W
15.522 J.K.T.

END NEW R/W
90+20.00
37.50' RT

90+20.00
55.00' RT

NEW 55' R/W

BEGIN NEW R/W
89+79.69
55.00' RT

MATCHLINE SC 63 STA. 93+50 SEE ABOVE

DEDICATED 25' R/W PER PB 10 P.84 J.K.T.

LAMBERT ROAD

NEW 50' R/W

106+35.00
50.00' LT

107+00.00
50.00' LT

BEGIN NEW R/W
106+35.00
37.50' LT

END NEW R/W
107+00.00
37.50' LT

S-15-51 (BEACH ROAD)

PRESENT 33' R/W
15.292 J.K.T.

PRESENT 37.5' R/W
208-A&B REOP J.K.T.

US 17A / SC 63

PRESENT 55' R/W
15.427 J.K.T.

S-15-307 (BISHOP STREET)

S-15-308 (KISER STREET)

PRESENT 45' R/W
15.339 J.K.T.

PRESENT 25' R/W
15.339 J.K.T.

PRESENT 33' R/W
15.427 J.K.T.

BEACH ROAD

US 17A

MATCHLINE US 17A / SC 63 STA. 93+50 SEE SHEET 4H

N

SCALE IN FEET
0 100 200 400

PLANS PREPARED BY:

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/1/21 No. 27825 JUSTIN KENNETH TYE

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

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

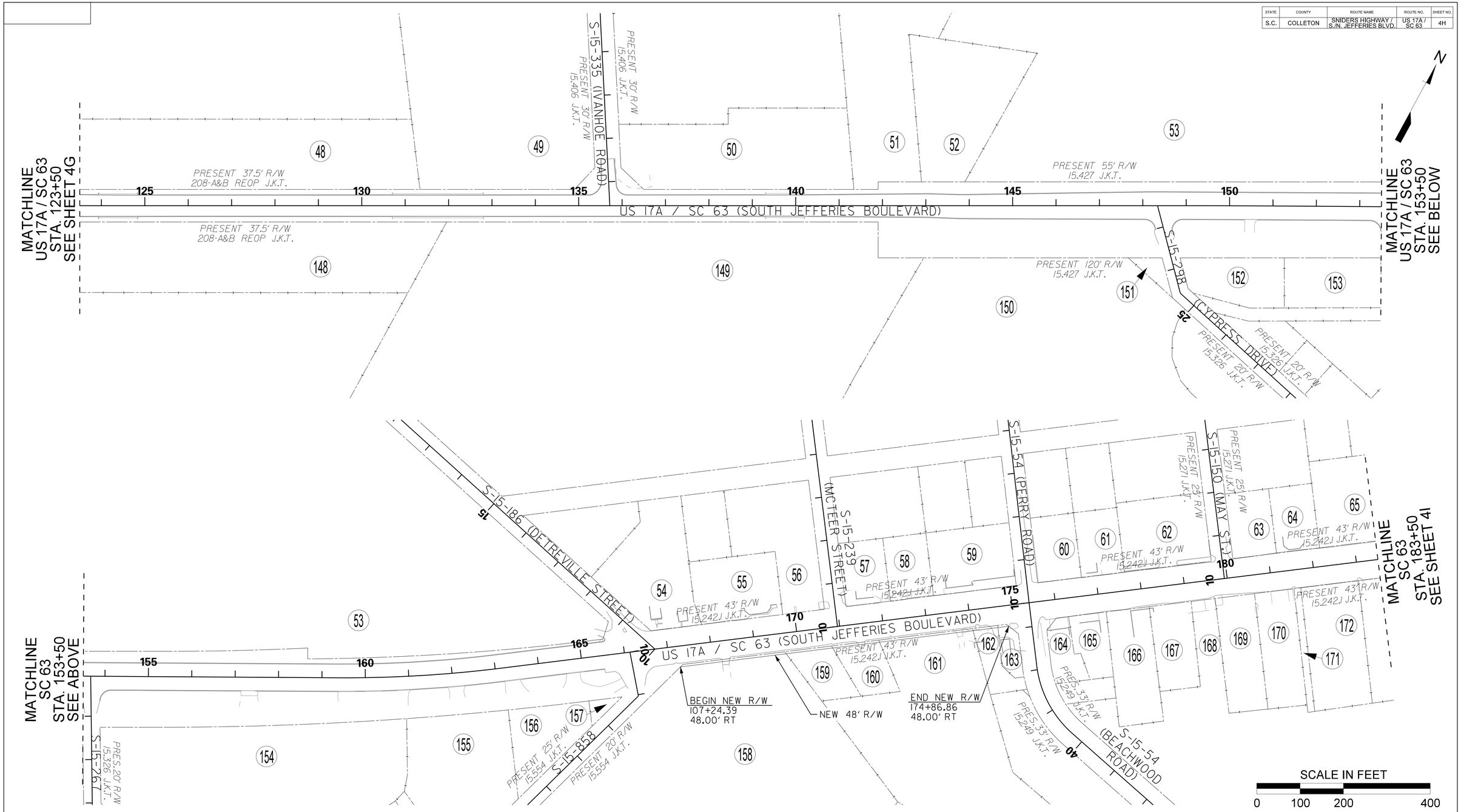
CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROPERTY STRIP MAP

SCALE: 1" = 100' RTE. US 17A / SC 63

User: jtye
U:\71002304\transportation\roadway\drawings\plan_sheets\02304_04g_prop_strip_map.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	4H



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CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
4/21/21
No. 27825
JUSTIN KENNETH JAYE

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

TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROPERTY STRIP MAP

SCALE: 1" = 100' RTE. US 17A / SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	41

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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 27825 JUSTIN KENNETH TYE 4/21/21

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

TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROPERTY STRIP MAP

SCALE: 1" = 100' RTE. US 17A / SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15 / US 17A	4J

PLANS PREPARED BY:

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SOUTH CAROLINA — STANTEC CONSULTING SERVICES, INC. No. C02310 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — 4/21/21 — No. 27825 — JUSTIN KENNETH TYE

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

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROPERTY STRIP MAP

SCALE: 1" = 100' RTE. US 15 / US 17A

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	5A

BENCHMARK DATA

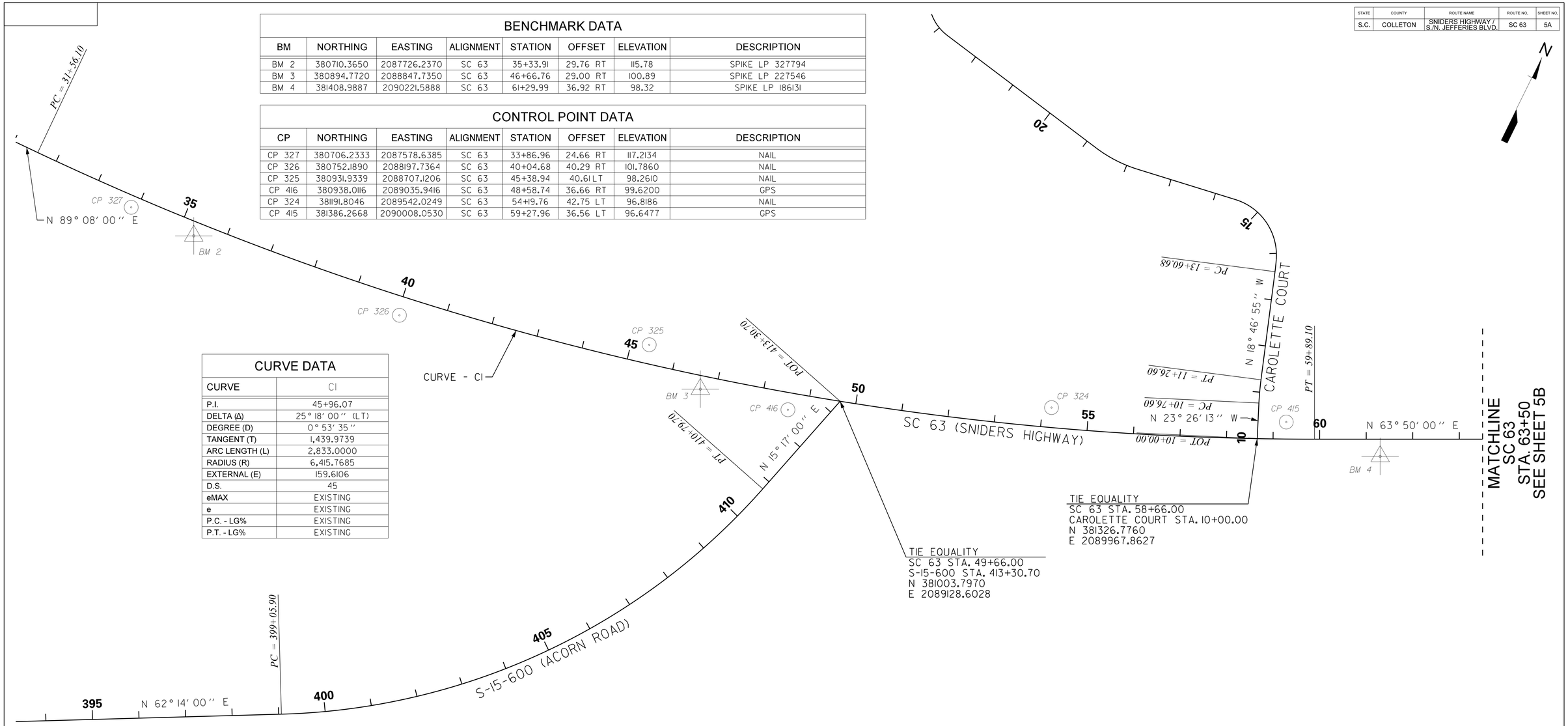
BM	NORTHING	EASTING	ALIGNMENT	STATION	OFFSET	ELEVATION	DESCRIPTION
BM 2	380710.3650	2087726.2370	SC 63	35+33.91	29.76 RT	115.78	SPIKE LP 327794
BM 3	380894.7720	2088847.7350	SC 63	46+66.76	29.00 RT	100.89	SPIKE LP 227546
BM 4	381408.9887	2090221.5888	SC 63	61+29.99	36.92 RT	98.32	SPIKE LP 186131

CONTROL POINT DATA

CP	NORTHING	EASTING	ALIGNMENT	STATION	OFFSET	ELEVATION	DESCRIPTION
CP 327	380706.2333	2087578.6385	SC 63	33+86.96	24.66 RT	117.2134	NAIL
CP 326	380752.1890	2088197.7364	SC 63	40+04.68	40.29 RT	101.7860	NAIL
CP 325	380931.9339	2088707.1206	SC 63	45+38.94	40.61 LT	98.2610	NAIL
CP 416	380938.0116	2089035.9416	SC 63	48+58.74	36.66 RT	99.6200	GPS
CP 324	381191.8046	2089542.0249	SC 63	54+19.76	42.75 LT	96.8186	NAIL
CP 415	381386.2668	2090008.0530	SC 63	59+27.96	36.56 LT	96.6477	GPS

CURVE DATA

CURVE	CI
P.I.	45+96.07
DELTA (Δ)	25° 18′ 00″ (LT)
DEGREE (D)	0° 53′ 35″
TANGENT (T)	1,439.9739
ARC LENGTH (L)	2,833.0000
RADIUS (R)	6,415.7685
EXTERNAL (E)	159.6106
D.S.	45
eMAX	EXISTING
e	EXISTING
P.C. - LG%	EXISTING
P.T. - LG%	EXISTING



DATUM INFORMATION

VERTICAL CONTROL	NORTH AMERICAN VERTICAL DATUM 1988 - NAVD 88
HORIZONTAL CONTROL	NORTH AMERICAN DATUM 1983 (SCVRS 2011 ADJUSTMENT)
COORDINATES	SOUTH CAROLINA STATE PLANE COORDINATE SYSTEM
NORTH ORIENTATION	GRID
COMBINED SCALE FACTOR	1.00000000

SCALE IN FEET
0 100 200 400

NOTES:
1. SURVEY AND CONTROL PROVIDED BY DAVIS AND FLOYD.

PLANS PREPARED BY:
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2			
1			

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DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO
COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
SURVEY CONTROL & REFERENCE DATA SHEET
SCALE: 1" = 100' RTE. SC 63

User: jtye
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4/21/2021

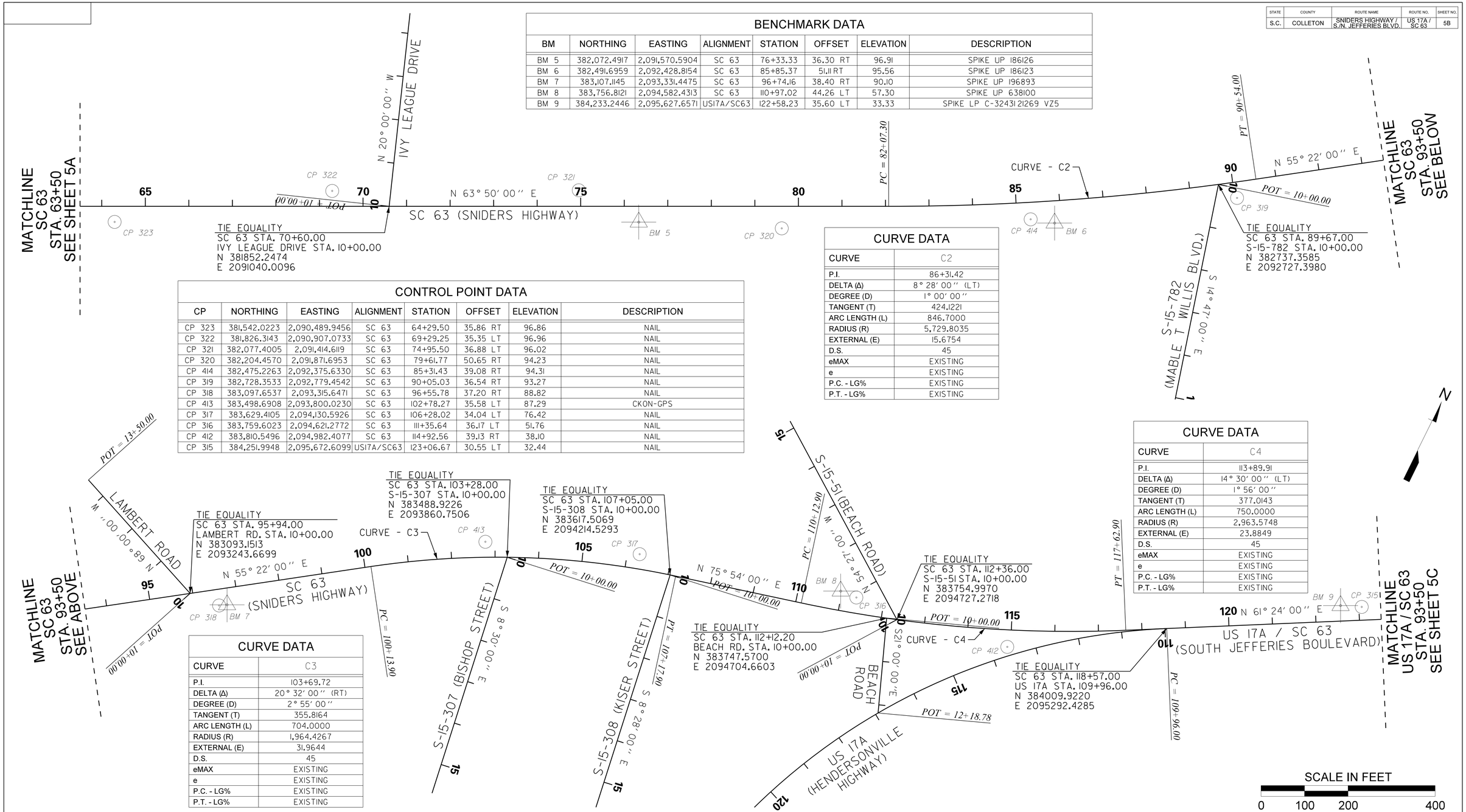
STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	5B

BENCHMARK DATA

BM	NORTHING	EASTING	ALIGNMENT	STATION	OFFSET	ELEVATION	DESCRIPTION
BM 5	382,072.4917	2,091,570.5904	SC 63	76+33.33	36.30 RT	96.91	SPIKE UP 186126
BM 6	382,491.6959	2,092,428.8154	SC 63	85+85.37	51.11 RT	95.56	SPIKE UP 186123
BM 7	383,107.1145	2,093,331.4475	SC 63	96+74.16	38.40 RT	90.10	SPIKE UP 196893
BM 8	383,756.8121	2,094,582.4313	SC 63	110+97.02	44.26 LT	57.30	SPIKE UP 638100
BM 9	384,233.2446	2,095,627.6571	US17A/SC63	122+58.23	35.60 LT	33.33	SPIKE LP C-32431 21269 VZ5

CONTROL POINT DATA

CP	NORTHING	EASTING	ALIGNMENT	STATION	OFFSET	ELEVATION	DESCRIPTION
CP 323	381,542.0223	2,090,489.9456	SC 63	64+29.50	35.86 RT	96.86	NAIL
CP 322	381,826.3143	2,090,907.0733	SC 63	69+29.25	35.35 LT	96.96	NAIL
CP 321	382,077.4005	2,091,414.6119	SC 63	74+95.50	36.88 LT	96.02	NAIL
CP 320	382,204.4570	2,091,871.6953	SC 63	79+61.77	50.65 RT	94.23	NAIL
CP 414	382,475.2263	2,092,375.6330	SC 63	85+31.43	39.08 RT	94.31	NAIL
CP 319	382,728.3533	2,092,779.4542	SC 63	90+05.03	36.54 RT	93.27	NAIL
CP 318	383,097.6537	2,093,315.6471	SC 63	96+55.78	37.20 RT	88.82	NAIL
CP 413	383,498.6908	2,093,800.0230	SC 63	102+78.27	35.58 LT	87.29	CKON-GPS
CP 317	383,629.4105	2,094,130.5926	SC 63	106+28.02	34.04 LT	76.42	NAIL
CP 316	383,759.6023	2,094,621.2772	SC 63	111+35.64	36.17 LT	51.76	NAIL
CP 412	383,810.5496	2,094,982.4077	SC 63	114+92.56	39.13 RT	38.10	NAIL
CP 315	384,251.9948	2,095,672.6099	US17A/SC63	123+06.67	30.55 LT	32.44	NAIL



CURVE DATA

CURVE	C2
P.I.	86+31.42
DELTA (Δ)	8° 28′ 00″ (LT)
DEGREE (D)	1° 00′ 00″
TANGENT (T)	424.1221
ARC LENGTH (L)	846.7000
RADIUS (R)	5,729.8035
EXTERNAL (E)	15.6754
D.S.	45
eMAX	EXISTING
e	EXISTING
P.C. - LG%	EXISTING
P.T. - LG%	EXISTING

CURVE DATA

CURVE	C3
P.I.	103+69.72
DELTA (Δ)	20° 32′ 00″ (RT)
DEGREE (D)	2° 55′ 00″
TANGENT (T)	355.8164
ARC LENGTH (L)	704.0000
RADIUS (R)	1,964.4267
EXTERNAL (E)	31.9644
D.S.	45
eMAX	EXISTING
e	EXISTING
P.C. - LG%	EXISTING
P.T. - LG%	EXISTING

CURVE DATA

CURVE	C4
P.I.	113+89.91
DELTA (Δ)	14° 30′ 00″ (LT)
DEGREE (D)	1° 56′ 00″
TANGENT (T)	377.0143
ARC LENGTH (L)	750.0000
RADIUS (R)	2,963.5748
EXTERNAL (E)	23.8849
D.S.	45
eMAX	EXISTING
e	EXISTING
P.C. - LG%	EXISTING
P.T. - LG%	EXISTING

NOTES:
1. SURVEY AND CONTROL PROVIDED BY DAVIS AND FLOYD.

PLANS PREPARED BY:
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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JOSEPH KENNETH TYE

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

TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
SURVEY CONTROL & REFERENCE DATA SHEET

SCALE: 1" = 100' RTE. US 17A / SC 63

User: jtye
U:\T10102304\transportation\roadway\drawings\plan_sheets\02304_05b_ref_data.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	5C

BENCHMARK DATA

BM	NORTHING	EASTING	ALIGNMENT	STATION	OFFSET	ELEVATION	DESCRIPTION
BM 10	384,881.3865	2,096,816.6433	US17A/SC63	136+12.40	35.50 LT	34.05	SPIKE LP 405965/21269 1015
BM 11	385,404.8137	2,097,963.1193	US17A/SC63	148+69.54	53.75 RT	41.81	SPIKE LP 137256
BM 12	385,892.0518	2,098,834.6227	US17A/SC63	158+68.20	37.58 RT	63.24	SPIKE UP ELEC&TEL 907
BM 13	386,361.4508	2,099,546.3814	US17A/SC63	167+16.91	37.81 RT	63.68	SPIKE UP ELEC&TEL W/LIGHT
BM 14	387,093.1641	2,100,565.9395	US17A/SC63	179+71.86	37.82 RT	63.41	SPIKE UP TEL 601

MATCHLINE
US 17A / SC 63
STA. 123+50
SEE SHEET 5B

S 31° 29' 00" E
S-15-335
(IVANHOE ROAD)

CP 411
BM 10
POT = 69+55.30
CP 314
CP 313
CP 312
N 61° 24' 00" E
125 130 135 140 145 150

TIE EQUALITY
SC 63 STA. 135+71.70
S-15-335 STA. 69+55.30
N 384830.7349
E 2096797.9059

US 17A / SC 63 (SOUTH JEFFERIES BOULEVARD)

TIE EQUALITY
SC 63 STA. 148+34.00
S-15-298 STA. 27+50.70
N 385434.9877
E 2097906.1838

PC = 148+98.90
PT = 150+98.90
POT = 27+50.70
CP 410
BM 11
CURVE - C5
CP 311
N 61° 46' 00" E

MATCHLINE
US 17A / SC 63
STA. 153+50
SEE BELOW

N

CONTROL POINT DATA

CP	NORTHING	EASTING	ALIGNMENT	STATION	OFFSET	ELEVATION	DESCRIPTION
CP 314	384,507.8601	2,096,266.8928	US17A/SC63	129+50.92	29.29 RT	32.82	NAIL
CP 411	384,872.8759	2,096,809.5193	US17A/SC63	136+02.07	31.44 LT	32.69	GPS
CP 313	385,025.0301	2,097,091.6381	US17A/SC63	139+22.60	29.98 LT	32.35	NAIL
CP 312	385,197.2294	2,097,399.3125	US17A/SC63	142+75.16	33.89 LT	31.85	NAIL
CP 410	385,429.4997	2,097,970.5936	US17A/SC63	148+87.92	35.65 RT	40.67	GPS
CP 311	385,626.2093	2,098,342.9650	US17A/SC63	153+09.28	39.21 RT	51.47	NAIL
CP 310	385,839.7199	2,098,734.9404	US17A/SC63	157+55.62	36.53 RT	61.07	NAIL
CP 309	386,104.8794	2,099,184.0038	US17A/SC63	162+73.35	35.20 RT	62.96	NAIL
CP 308	386,328.9520	2,099,509.0273	US17A/SC63	166+67.62	42.43 RT	62.12	NAIL
CP 307	386,496.4071	2,099,591.8829	US17A/SC63	168+32.57	45.30 LT	61.62	NAIL
CP 306	386,590.2458	2,099,859.6734	US17A/SC63	171+04.84	34.60 RT	61.91	PK
CP 304	387,158.2866	2,100,667.7529	US17A/SC63	180+92.55	44.28 RT	61.58	PK

CURVE DATA

CURVE	C5
P.I.	149+98.90
DELTA (Δ)	0° 22' 00" (RT)
DEGREE (D)	0° 11' 00"
TANGENT (T)	100.0003
ARC LENGTH (L)	200.0000
RADIUS (R)	31,252.2434
EXTERNAL (E)	0.1600
D.S.	45
eMAX	EXISTING
e	EXISTING
P.C. - LG%	EXISTING
P.T. - LG%	EXISTING

CURVE DATA

CURVE	C6
P.I.	161+24.11
DELTA (Δ)	7° 26' 00" (LT)
DEGREE (D)	1° 59' 59"
TANGENT (T)	186.1111
ARC LENGTH (L)	371.7000
RADIUS (R)	2,865.0459
EXTERNAL (E)	6.0385
D.S.	35
eMAX	EXISTING
e	EXISTING
P.C. - LG%	EXISTING
P.T. - LG%	EXISTING

MATCHLINE
SC 63
STA. 153+50
SEE ABOVE

S-15-267
(OAKLAND DR.)
N 29° 20' 00" W

POT = 9+92.20
N 61° 46' 00" E
155 160 165 170 175 180

TIE EQUALITY
SC 63 STA. 153+67.00
S-15-267 STA. 9+92.20
N 385688.0589
E 2098375.2703

BM 12
CURVE - C6
CP 309
S 39° 30' 00" E
PI = 11+03.00
S-15-858
(OLD BEACH PLACE ROAD)
S 16° 55' 00" W

S-15-186 (DETREVILLE STREET)
N 76° 30' 00" W
PC = 159+38.00
PT = 163+09.70
POT = 10+00.00
CP 307
TIE EQUALITY
SC 63 STA. 166+71.00
S-15-186 STA. 10+00.00
N 386365.3988
E 2099487.0360

BM 13
CP 308
TIE EQUALITY
SC 63 STA. 165+13.00
S-15-858 STA. 10+00.00
N 386331.5808
E 2099439.9155

S-15-239
(MCTEER STREET)
N 35° 38' 00" W

TIE EQUALITY
SC 63 STA. 170+95.00
S-15-239 STA. 10+00.00
N 386612.6199
E 2099831.5033

US 17A / SC 63
(SOUTH JEFFERIES BOULEVARD)

CP 306
N 35° 30' 00" W

S-15-54
(PERRY ROAD)
N 35° 10' 00" W

TIE EQUALITY
SC 63 STA. 175+40.00
S-15-54N STA. 10+00.00
S-15-54S STA. 43+55.70
N 386872.0854
E 2100193.0315

PT = 42+09.70
PC = 40+28.60
S-15-54
(BEACHWOOD ROAD)

S-15-150
(MAY STREET)
N 35° 38' 00" W

CP 304
BM 14
N 54° 20' 00" E

TIE EQUALITY
SC 63 STA. 179+93.50
S-15-150 STA. 10+00.00
N 387136.5071
E 2100561.4653

MATCHLINE
SC 63
STA. 183+50
SEE SHEET 5D

SCALE IN FEET
0 100 200 400

NOTES:
1. SURVEY AND CONTROL PROVIDED BY DAVIS AND FLOYD.

PLANS PREPARED BY:
Stantec
Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
JUSTIN KENNETH TYE
4/21/21

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

TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

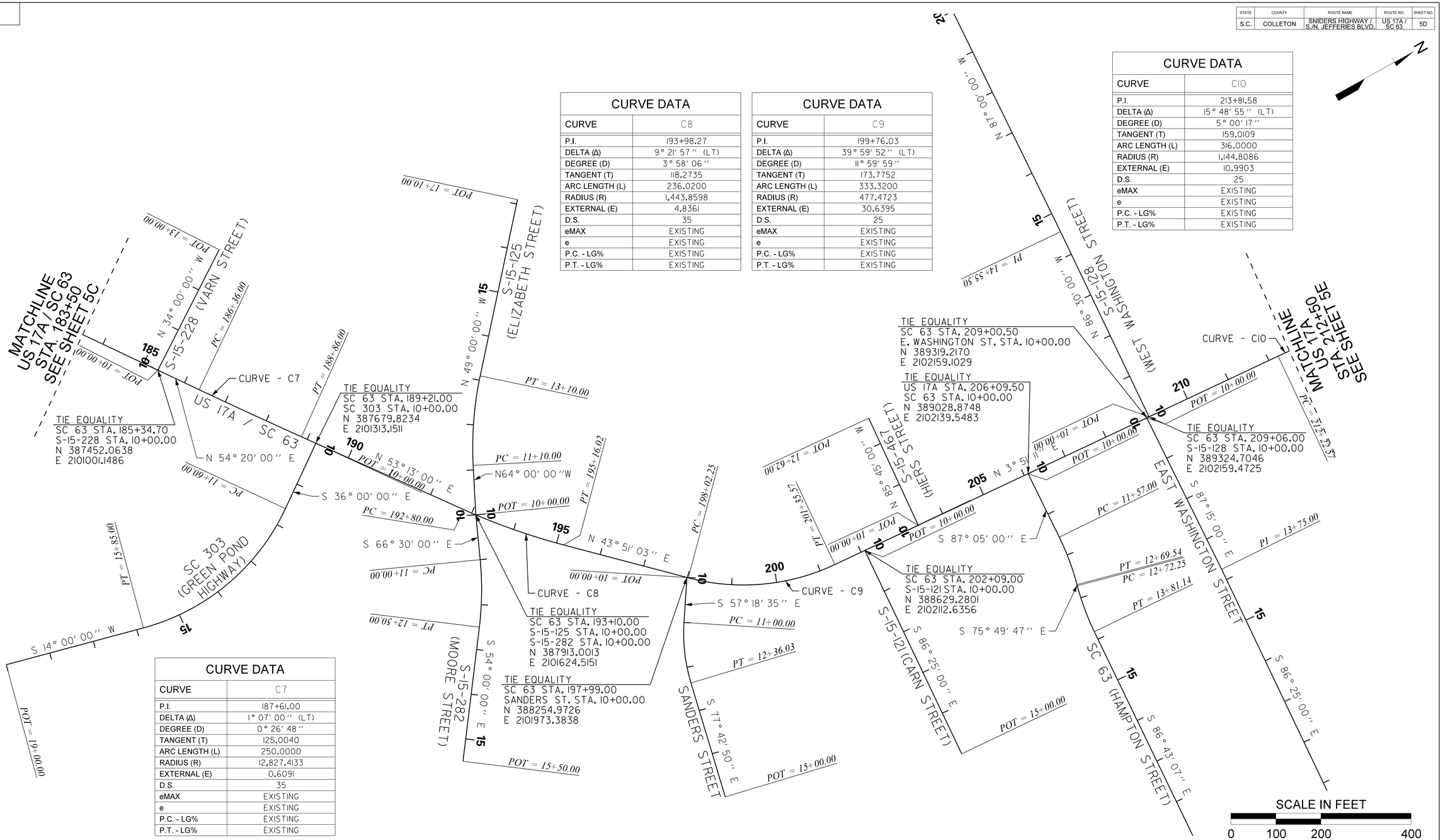
CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
SURVEY CONTROL & REFERENCE DATA SHEET

SCALE: 1" = 100' RTE. US 17A / SC 63

User: jtye
U:\TI\02304\Transportation\roadway\drawings\plan_sheets\02304_05c_ref_data.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	5D



CURVE DATA	
CURVE	C8
P.I.	193+98.27
DELTA (Δ)	9° 21' 57" (LT)
DEGREE (D)	3° 58' 06"
TANGENT (T)	118.2735
ARC LENGTH (L)	236.0200
RADIUS (R)	1,443.8598
EXTERNAL (E)	4.8361
D.S.	35
eMAX	EXISTING
e	EXISTING
P.C. - LG%	EXISTING
P.T. - LG%	EXISTING

CURVE DATA	
CURVE	C9
P.I.	199+76.03
DELTA (Δ)	39° 59' 52" (LT)
DEGREE (D)	11° 59' 59"
TANGENT (T)	173.7752
ARC LENGTH (L)	333.3200
RADIUS (R)	477.4723
EXTERNAL (E)	30.6395
D.S.	25
eMAX	EXISTING
e	EXISTING
P.C. - LG%	EXISTING
P.T. - LG%	EXISTING

CURVE DATA	
CURVE	C10
P.I.	213+81.58
DELTA (Δ)	15° 48' 55" (LT)
DEGREE (D)	5° 00' 17"
TANGENT (T)	159.0109
ARC LENGTH (L)	316.0000
RADIUS (R)	1,144.8086
EXTERNAL (E)	10.9903
D.S.	25
eMAX	EXISTING
e	EXISTING
P.C. - LG%	EXISTING
P.T. - LG%	EXISTING

CURVE DATA	
CURVE	C7
P.I.	187+61.00
DELTA (Δ)	1° 07' 00" (LT)
DEGREE (D)	0° 26' 48"
TANGENT (T)	125.0040
ARC LENGTH (L)	250.0000
RADIUS (R)	12,827.4133
EXTERNAL (E)	0.6091
D.S.	35
eMAX	EXISTING
e	EXISTING
P.C. - LG%	EXISTING
P.T. - LG%	EXISTING

NOTES:
1. SURVEY AND CONTROL PROVIDED BY DAVIS AND FLOYD.

PLANS PREPARED BY:

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SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED No. 27825 JASON KENNETH LEE 4/21/21

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

TOPO. _____ DATE _____
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R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
SURVEY CONTROL & REFERENCE DATA SHEET

SCALE: 1" = 100' RTE. US 17A / SC 63

User: jtye
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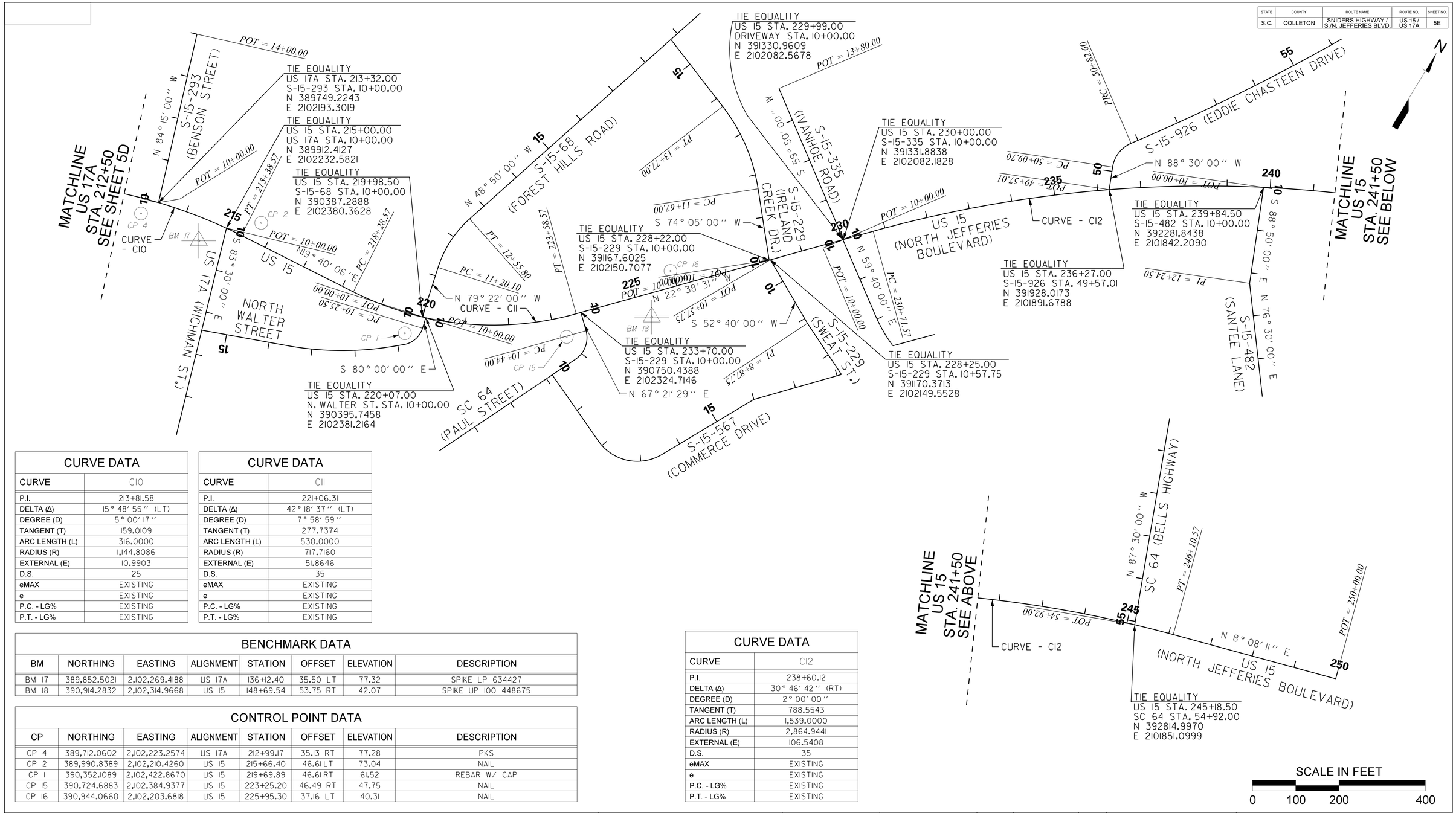
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15 / US 17A	5E



CURVE DATA	
CURVE	C10
P.I.	213+81.58
DELTA (Δ)	15° 48' 55" (LT)
DEGREE (D)	5° 00' 17"
TANGENT (T)	159.0109
ARC LENGTH (L)	316.0000
RADIUS (R)	1,144.8086
EXTERNAL (E)	10.9903
D.S.	25
eMAX	EXISTING
e	EXISTING
P.C. - LG%	EXISTING
P.T. - LG%	EXISTING

CURVE DATA	
CURVE	C11
P.I.	221+06.31
DELTA (Δ)	42° 18' 37" (LT)
DEGREE (D)	7° 58' 59"
TANGENT (T)	277.7374
ARC LENGTH (L)	530.0000
RADIUS (R)	717.7160
EXTERNAL (E)	51.8646
D.S.	35
eMAX	EXISTING
e	EXISTING
P.C. - LG%	EXISTING
P.T. - LG%	EXISTING

CURVE DATA	
CURVE	C12
P.I.	238+60.12
DELTA (Δ)	30° 46' 42" (RT)
DEGREE (D)	2° 00' 00"
TANGENT (T)	788.5543
ARC LENGTH (L)	1,539.0000
RADIUS (R)	2,864.9441
EXTERNAL (E)	106.5408
D.S.	35
eMAX	EXISTING
e	EXISTING
P.C. - LG%	EXISTING
P.T. - LG%	EXISTING

BENCHMARK DATA							
BM	NORTHING	EASTING	ALIGNMENT	STATION	OFFSET	ELEVATION	DESCRIPTION
BM 17	389,852.5021	2,102,269.4188	US 17A	136+12.40	35.50 LT	77.32	SPIKE LP 634427
BM 18	390,914.2832	2,102,314.9668	US 15	148+69.54	53.75 RT	42.07	SPIKE UP 100 448675

CONTROL POINT DATA							
CP	NORTHING	EASTING	ALIGNMENT	STATION	OFFSET	ELEVATION	DESCRIPTION
CP 4	389,712.0602	2,102,223.2574	US 17A	212+99.17	35.13 RT	77.28	PKS
CP 2	389,990.8389	2,102,210.4260	US 15	215+66.40	46.61 LT	73.04	NAIL
CP 1	390,352.1089	2,102,422.8670	US 15	219+69.89	46.61 RT	61.52	REBAR W/ CAP
CP 15	390,724.6883	2,102,384.9377	US 15	223+25.20	46.49 RT	47.75	NAIL
CP 16	390,944.0660	2,102,203.6818	US 15	225+95.30	37.16 LT	40.31	NAIL

SCALE IN FEET

0 100 200 400

NOTES:
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PLANS PREPARED BY:

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SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH TYE

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R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
SURVEY CONTROL & REFERENCE DATA SHEET

SCALE: 1" = 100' RTE. US 15 / US 17A

User: jtye
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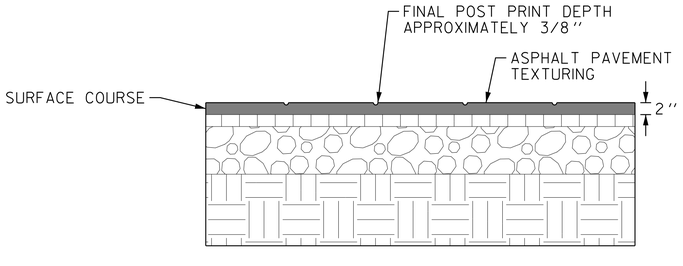
4/21/2021

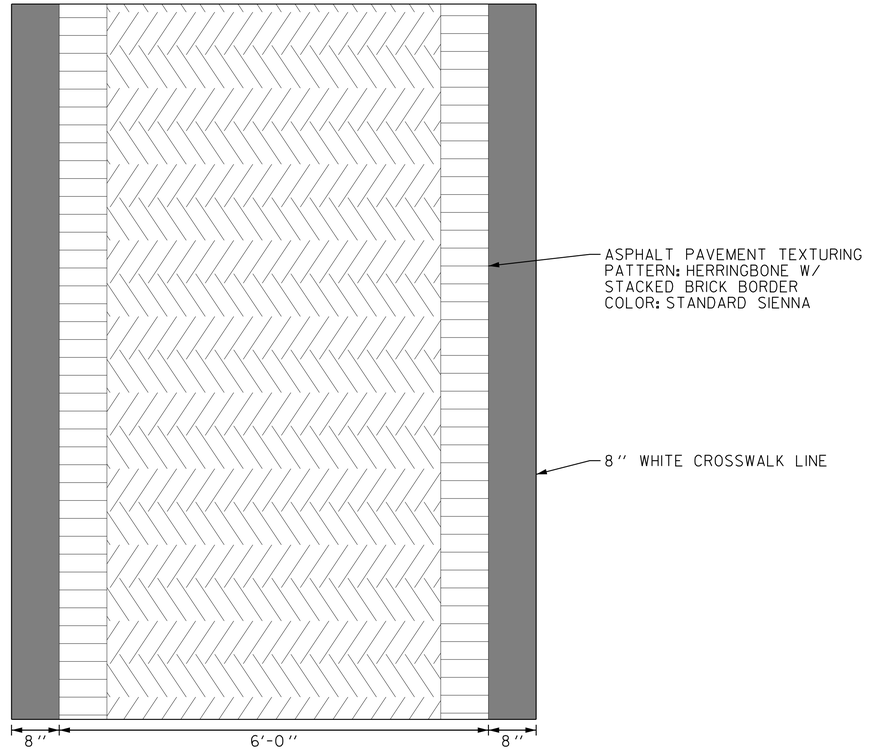
STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63/ US17A/US15	5F

CONSTRUCTION DETAIL
ASPHALT PAVEMENT TEXTURING DETAIL



PAVEMENT SECTION

NOTES:
1. BASIS OF DESIGN PRODUCT: IMPRINTED AGGREGATE REINFORCED PREFORMED THERMOPLASTIC PAVEMENT MARKING SYSTEM
2. INSTALL PER MANUFACTURER'S GUIDELINES.
3. THE STAMPED ASPHALT PRODUCT MUST MEET SCDOT REQUIREMENTS.



PLAN VIEW

PLANS PREPARED BY:

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R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
CONSTRUCTION DETAILS

SCALE: N.T.S. RTE. SC63/US17A/US15

User: jtye
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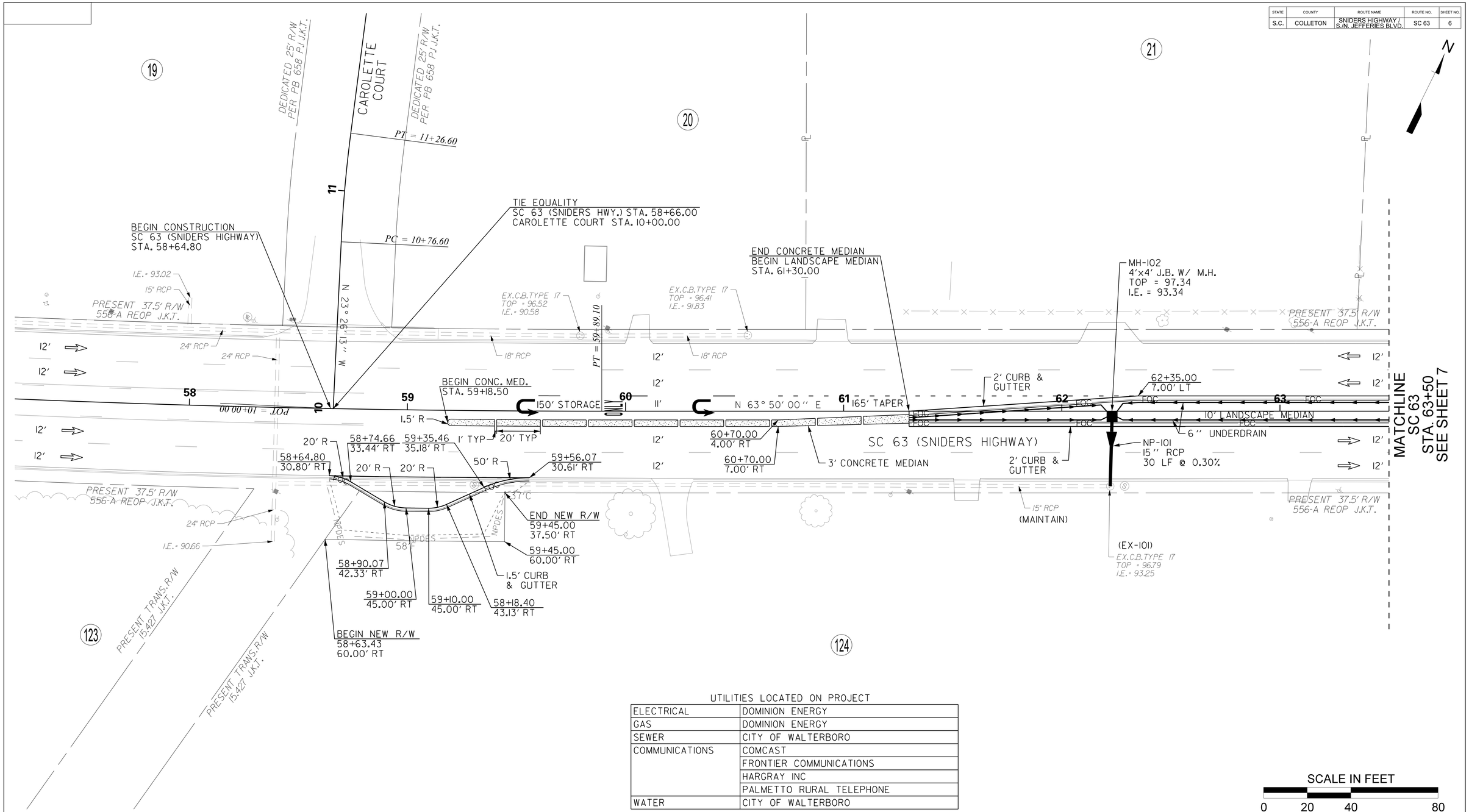
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	6



UTILITIES LOCATED ON PROJECT

ELECTRICAL	DOMINION ENERGY
GAS	DOMINION ENERGY
SEWER	CITY OF WALTERBORO
COMMUNICATIONS	COMCAST
	FRONTIER COMMUNICATIONS
	HARGRAY INC
	PALMETTO RURAL TELEPHONE
WATER	CITY OF WALTERBORO

SCALE IN FEET
0 20 40 80

NOTES
1. ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET.

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4			
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TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
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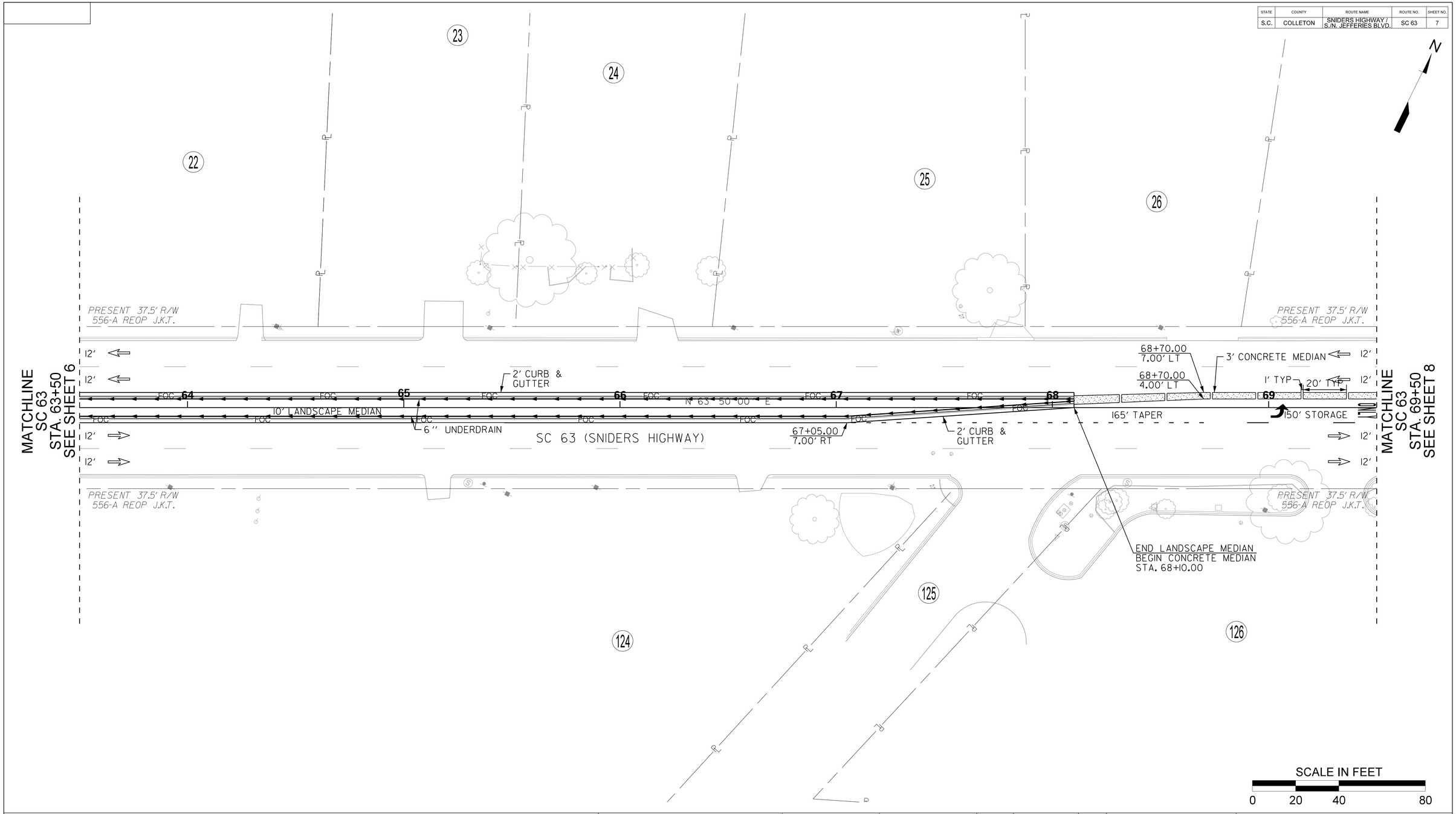
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	7



SCALE IN FEET

0 20 40 80

NOTES
1. ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET.

PLANS PREPARED BY:

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STANTEC CONSULTING SERVICES, INC.
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SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
JUSTIN KENNETH TYE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
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TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
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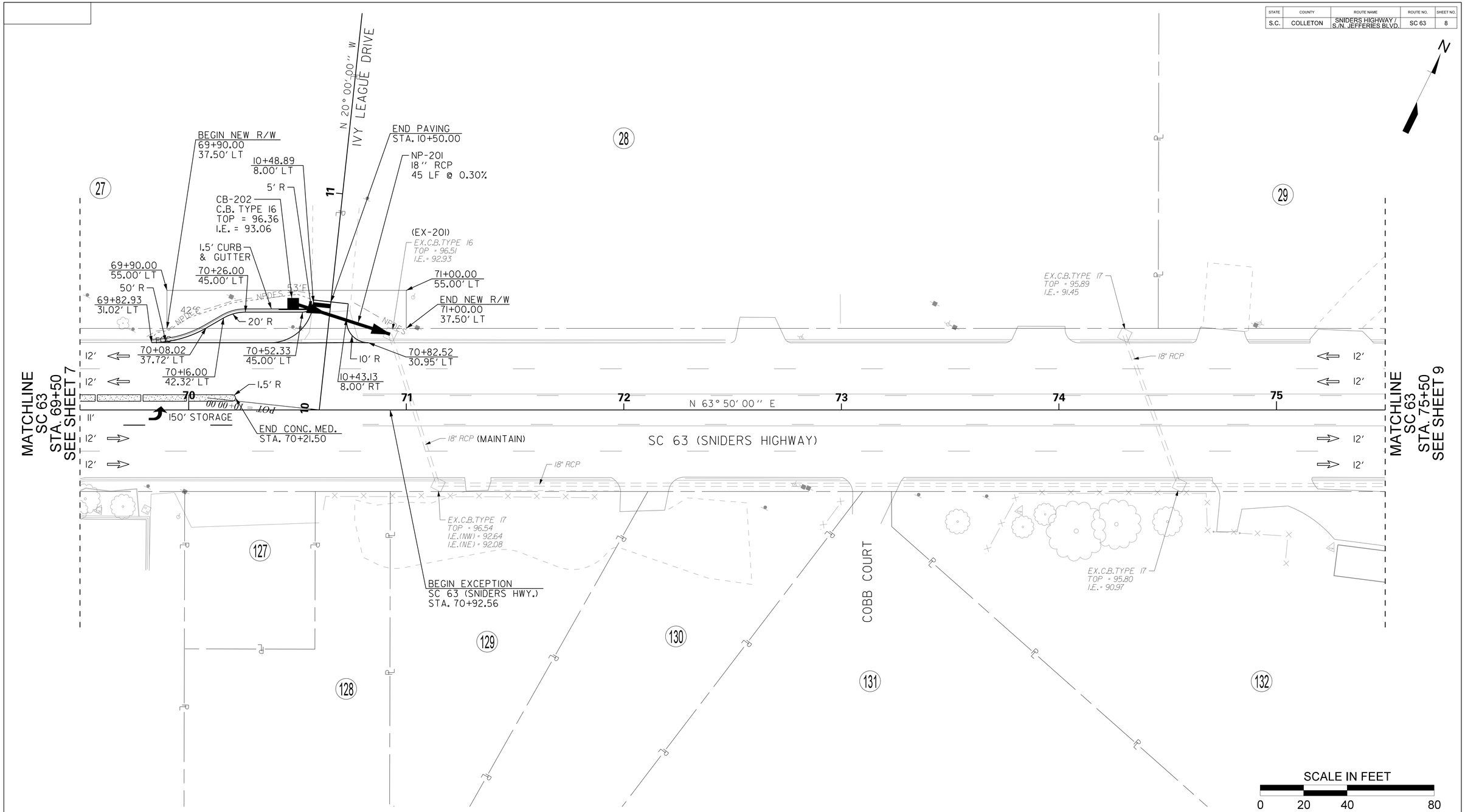
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	8



NOTES
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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH TYE

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R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
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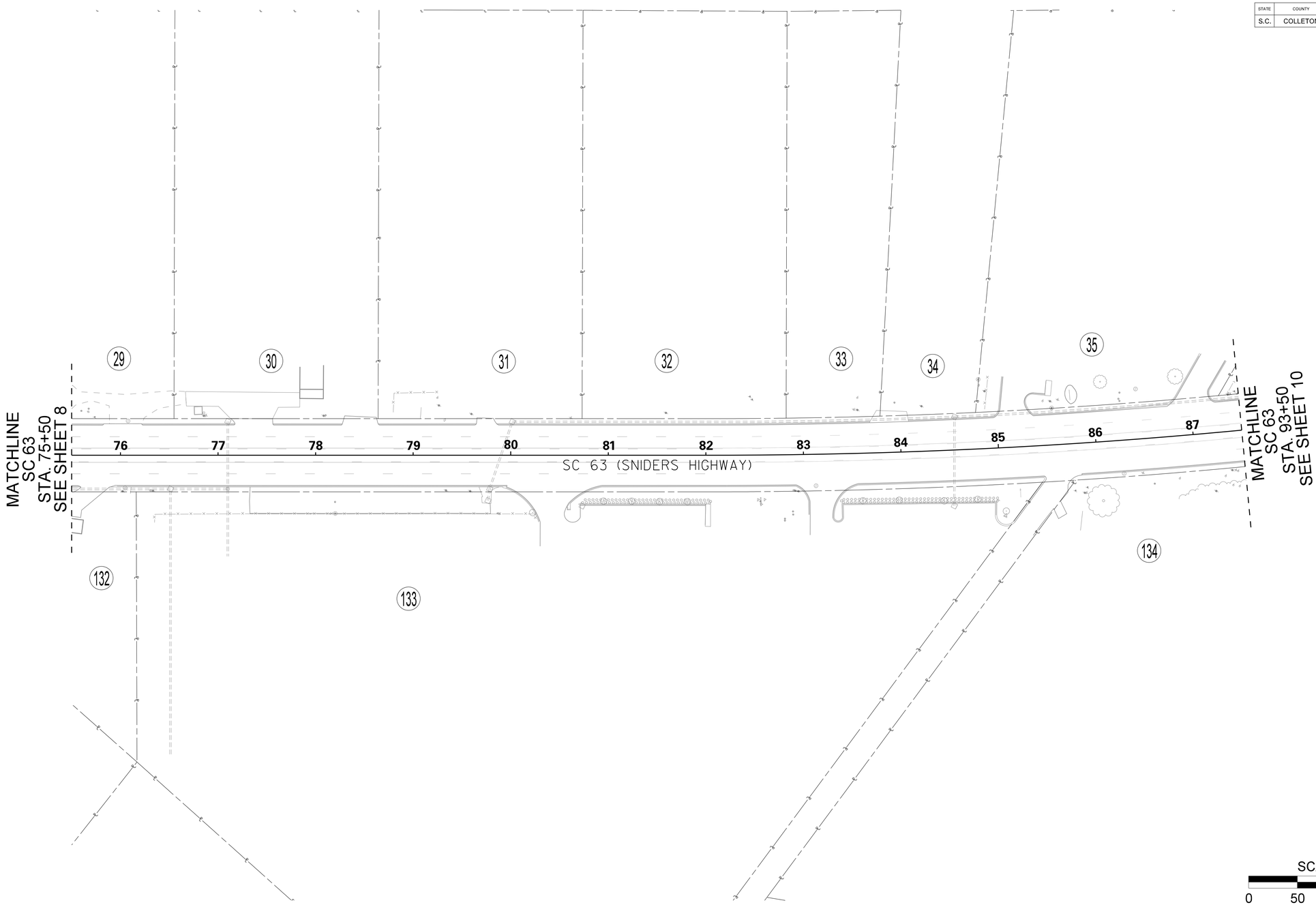
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	9



NOTES
1. ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET.
2. NO WORK THIS SHEET.

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SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
JUSTIN KENNETH TATE
4/21/21

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
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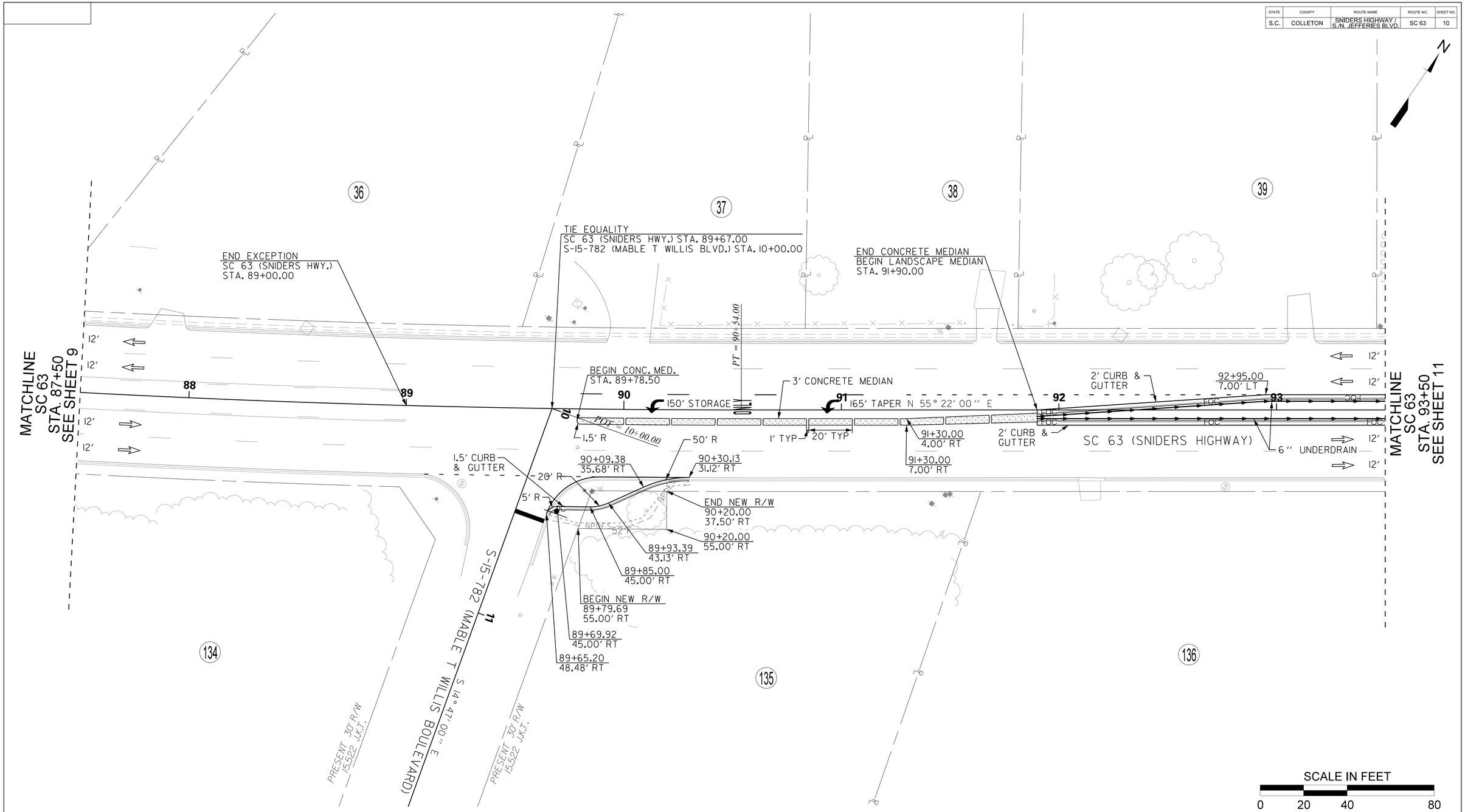
TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 50' RTE. SC 63

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	10



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GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
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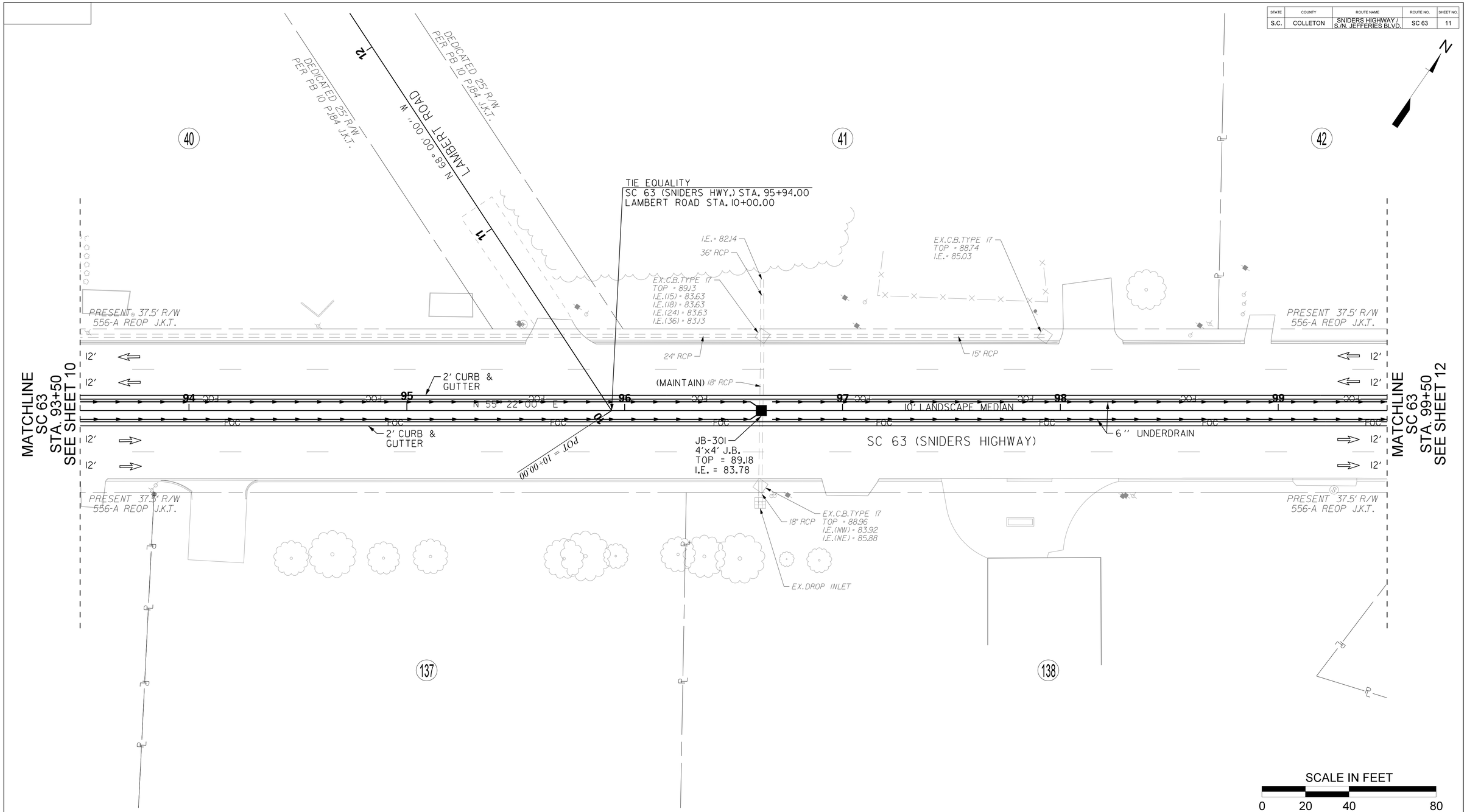
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	11



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SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — No. 27825 — JUSTIN KENNETH TYE — 4/21/21

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R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	12

N

MATCHLINE SC 63 STA. 99+50 SEE SHEET 11

MATCHLINE SC 63 STA. 105+50 SEE SHEET 13

RATTLESNAKE TRAIL

SC 63 (SNIDERS HIGHWAY)

CB-407
C.B. TYPE 17
TOP = 88.00
I.E. = 84.00

NP-405
18'' RCP
96 LF @ 1.04%

CB-406
C.B. TYPE 17
TOP = 87.48
I.E. = 83.00

NP-404
18'' RCP
96 LF @ 1.04%

CB-405
C.B. TYPE 17
TOP = 86.25
I.E. = 82.00

NP-403
18'' RCP
96 LF @ 2.08%

CB-404
C.B. TYPE 17
TOP = 84.56
I.E. = 80.00

TIE EQUALITY
SC 63 (SNIDERS HWY.) STA. 103+28.00
S-15-307 (BISHOP ST.) STA. 10+00.00

NP-402
18'' RCP
96 LF @ 2.08%

CB-403
C.B. TYPE 17
TOP = 82.08
I.E. = 78.00

NP-401
18'' RCP
34 LF @ 5.88%

MH-402
4'x4' J.B. W/ M.H.
TOP = 79.96
I.E. = 76.00

PRESENT 37.5' R/W
556-A REOP J.K.T.

2' CURB & GUTTER

10' LANDSCAPE MEDIAN

6'' UNDERDRAIN

3' CONCRETE MEDIAN

165' TAPER

105+10.00
4.00' LT

105+10.00
7.00' LT

END LANDSCAPE MEDIAN
BEGIN CONCRETE MEDIAN
STA. 104+50.00

100 101 102 103 104 105

N 55° 22' 00" E

PC = 100+13.90

18" RCP

15" RCP

EX.C.B.TYPE 17
TOP = 87.32
I.E.(15) = 84.24
I.E.(18) = 83.82

EX.C.B.TYPE 17
TOP = 84.02
I.E. = 80.44

S 8°30'00" E

S-15-307 (BISHOP STREET)

PRESENT 25' R/W
15.3.39 J.K.T.

139 140 141 142 143 42 43 44

SCALE IN FEET
0 20 40 80

NOTES
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TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
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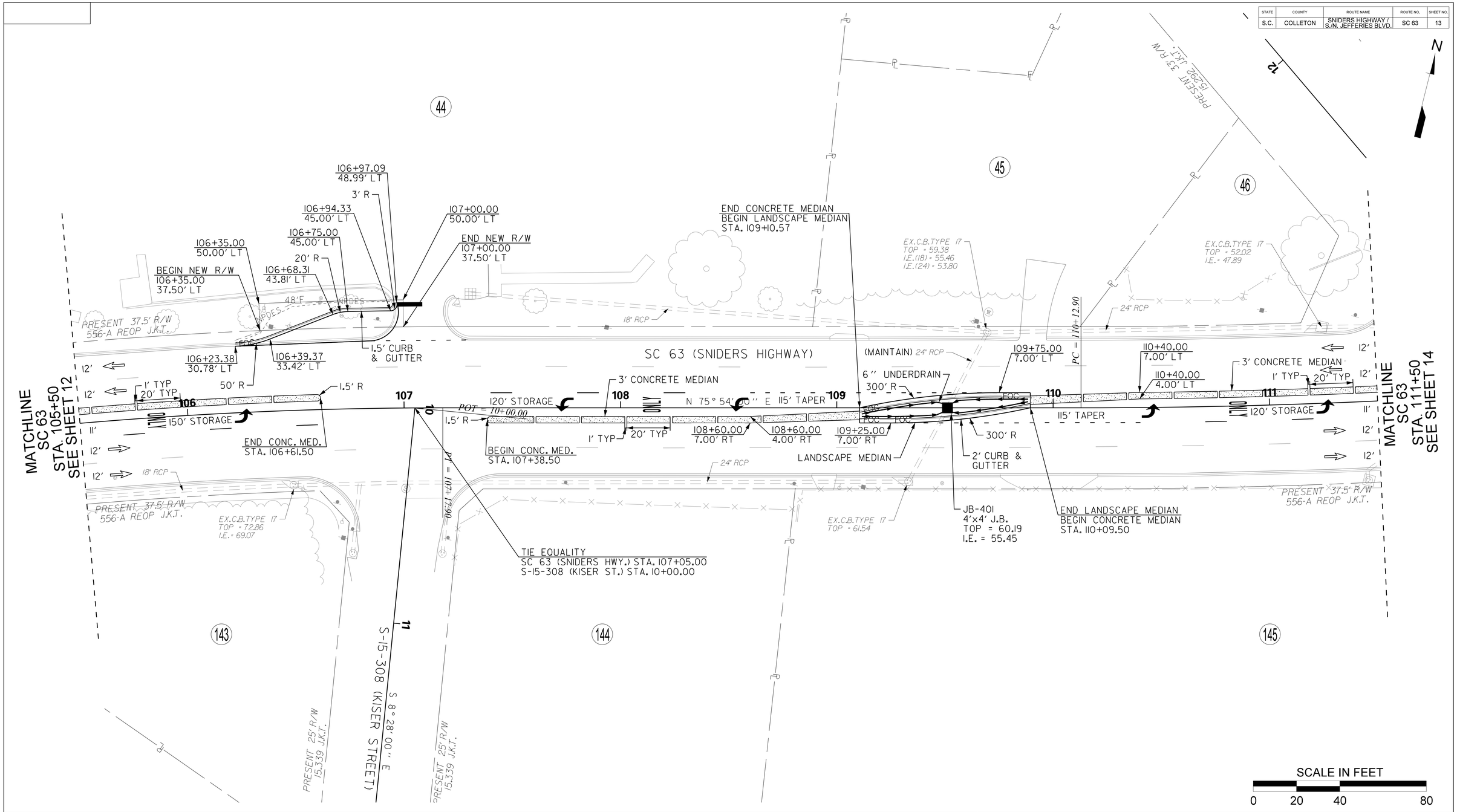
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	13



NOTES
1. ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET.

PLANS PREPARED BY:

Stantec

Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 27825 4/21/21 JUSTIN KENNETH LANE

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

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
U:\17\002304\transportation\roadway\drawings\plan_sheets\02304_13_psh.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	14

N

MATCHLINE SC 63 STA. 112+50 SEE SHEET 13

MATCHLINE SC 63 STA. 118+50 SEE SHEET 15

PRESENT 37.5' R/W 208-A&B REOP J.K.T.

PRESENT 33' R/W 15427 J.K.T.

PRESENT TRANS.R/W 15427 J.K.T.

PRESENT 33' R/W 15492 J.K.T.

TIE EQUALITY
SC 63 (SNIDERS HWY.) STA. 112+12.20
BEACH ROAD STA. 10+00.00

TIE EQUALITY
SC 63 (SNIDERS HWY.) STA. 112+36.00
S-15-51 (BEACH ROAD) STA. 10+00.00

S-15-51 (BEACH ROAD)
N 54° 27' 00" W

24" RCP

I.E.= 40.24

END CONC. MED.
BEGIN EXCEPTION
STA. 111+61.50

1.5' R

POT = 10+00.00

SC 63 (SNIDERS HIGHWAY)

END CONCRETE MEDIAN
BEGIN LANDSCAPE MEDIAN
STA. 117+20.00

116+60.00
4.00' RT

116+60.00
7.00' RT

3' CONCRETE MEDIAN

165' TAPER

150' STORAGE

1' TYP

20' TYP

END EXCEPTION
BEGIN CONC. MED.
115+08.50

CLEAR AND GRUB
IN LIMITS SHOWN

NPDES

S 21° 00' 00" E
BEACH ROAD

US 17A (HENDERSONVILLE HIGHWAY)

I.E.= 28.26
I.E.= 27.98
I.E.= 30.62
I.E.= 31.92
I.E.= 32.99
I.E.= 35.37

47 48 146 147

11 111 112 113 114 115 116 117 118

12' 11'

SCALE IN FEET
0 20 40 80

NOTES
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SOUTH CAROLINA PROFESSIONAL ENGINEER
LICENSED
No. 27825
4/21/21
JUSTIN KENNETH TYE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
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TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

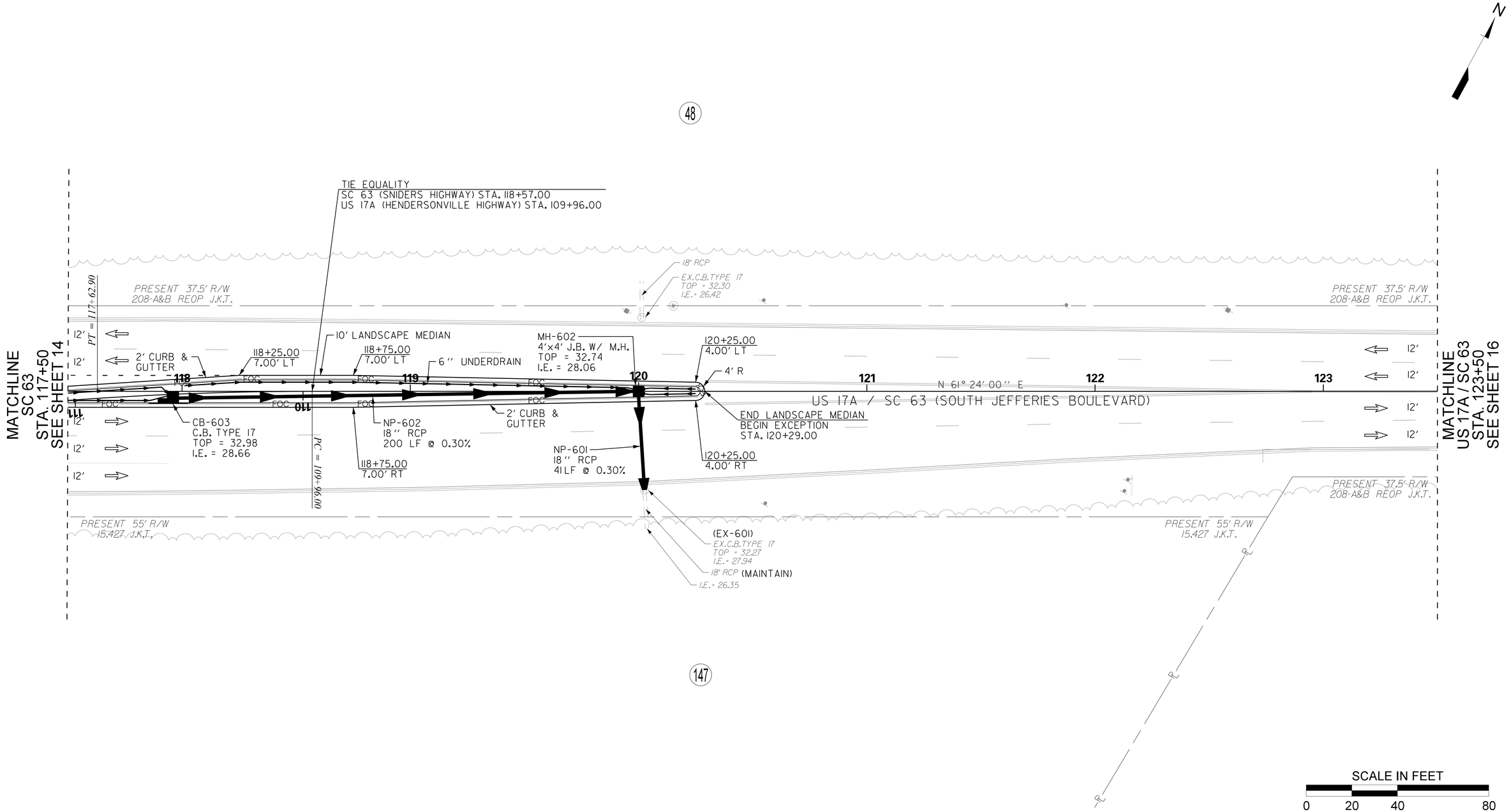
CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
U:\17\002304\transportation\roadway\drawings\plan_sheets\002304_14_psh.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	15



NOTES
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SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED 4/21/21 No. 27825 JUSTIN KENNETH TYE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
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TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

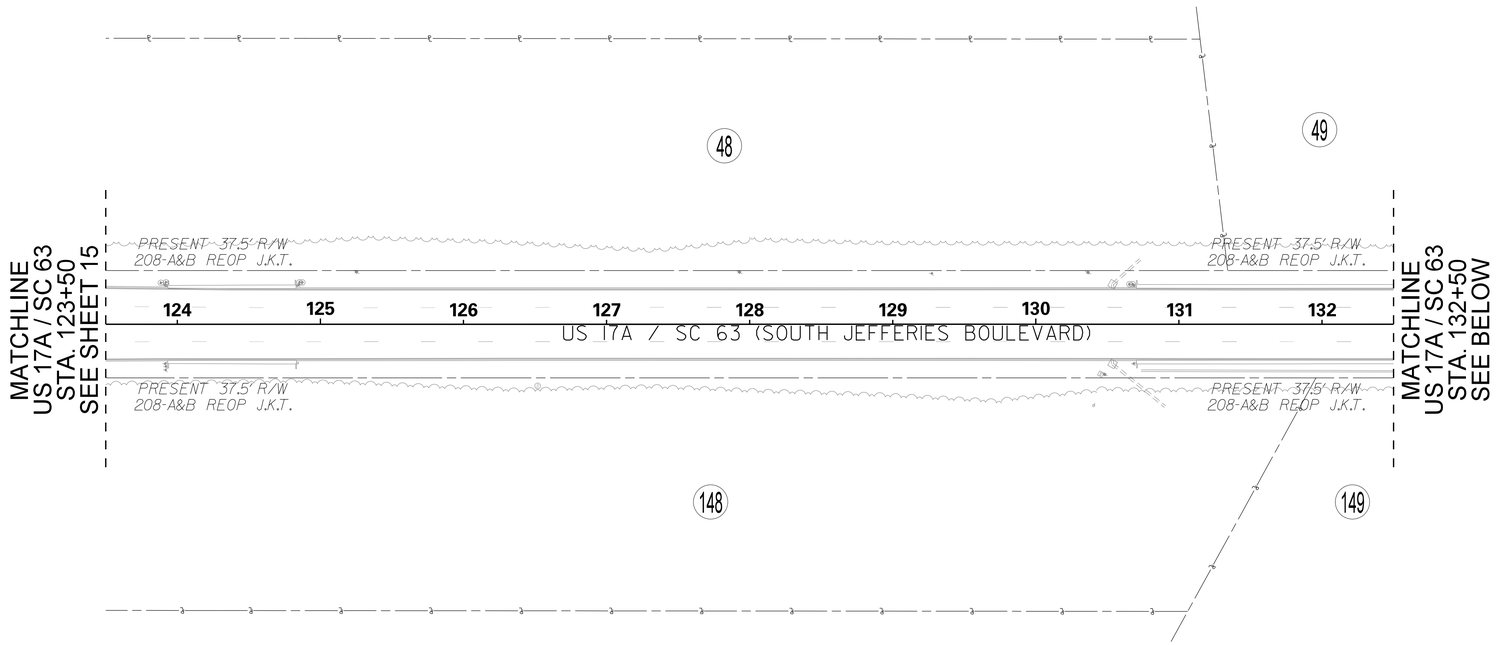
CITY OF WALTERBORO

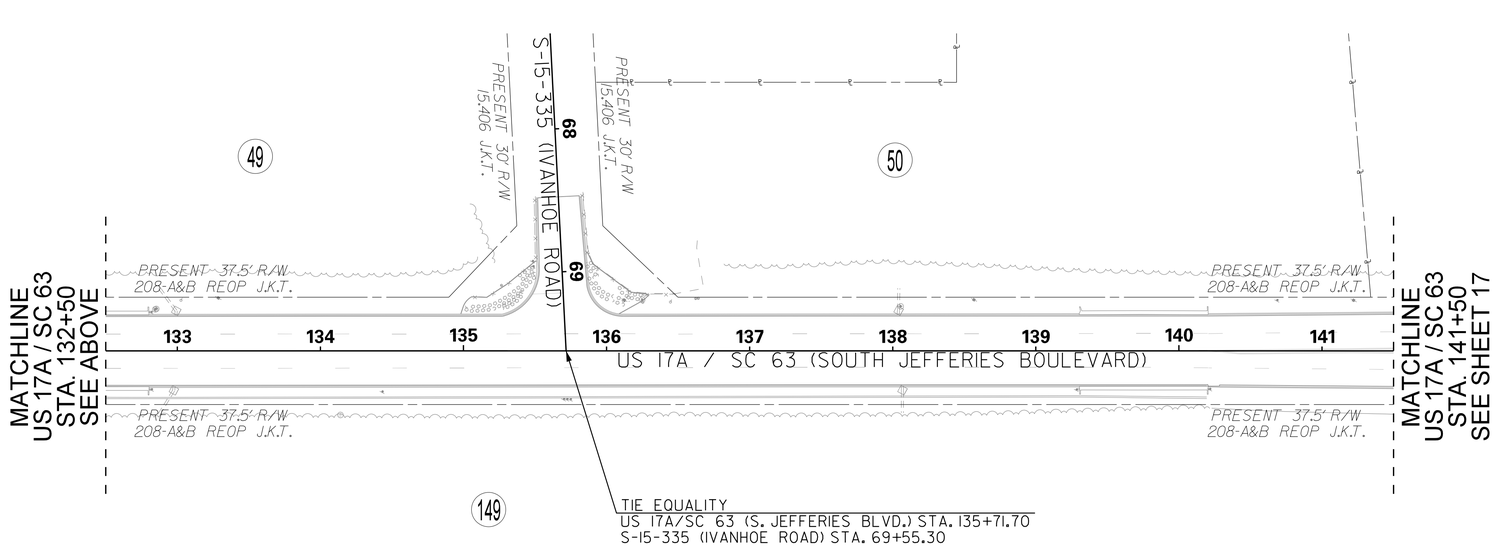
COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / SC 63

User: jtye
U:\17\002304\transportation\roadway\drawings\plan_sheets\002304_I5_psh.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	16





SCALE IN FEET

0 50 100 200

NOTES
1. ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET.
2. NO WORK THIS SHEET.

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SOUTH CAROLINA
PROFESSIONAL ENGINEER
LICENSED
No. 27825
4/21/21
JUSTIN KENNETH JYE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
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TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 50' RTE. US 17A / SC 63

User: jtye
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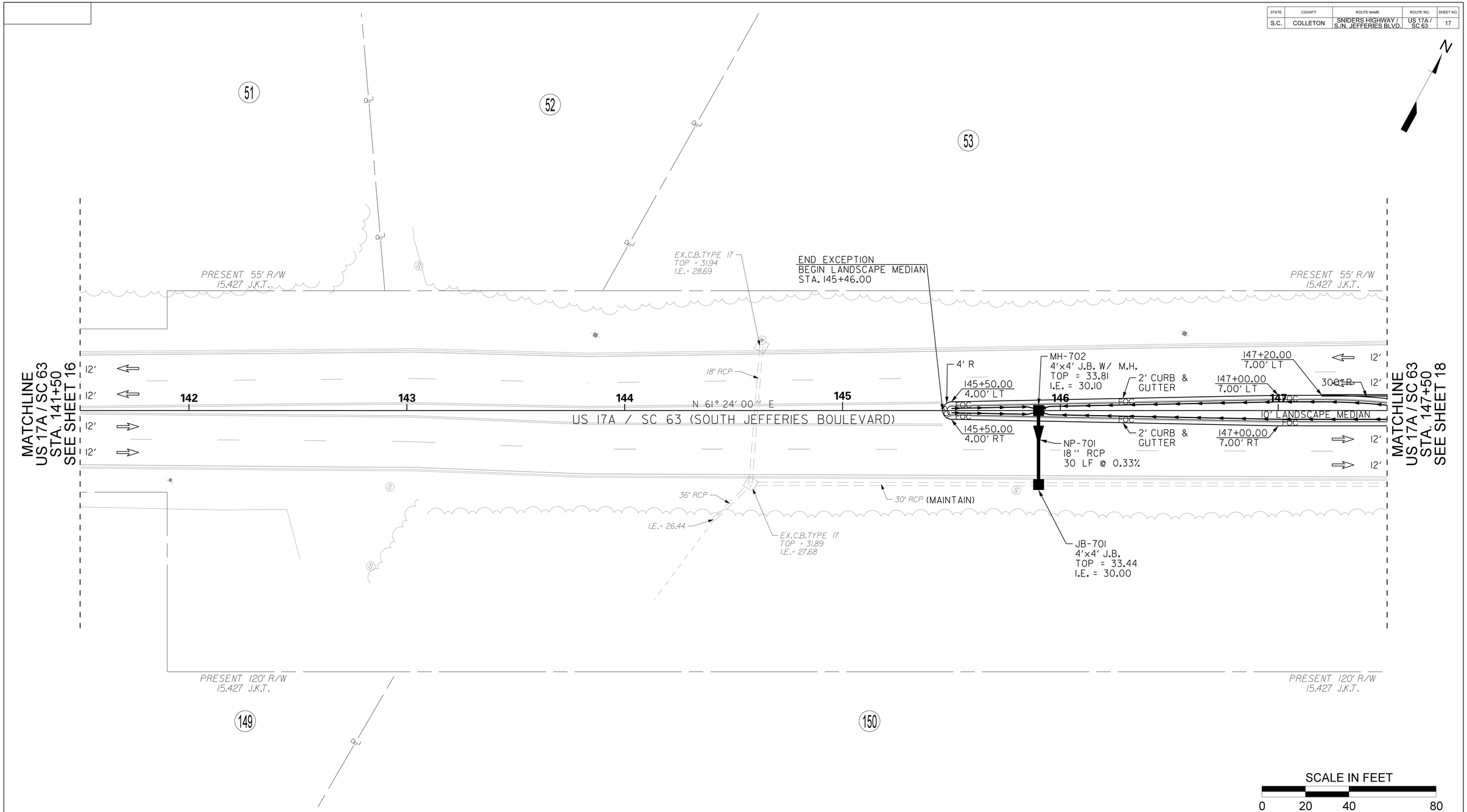
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	17



SCALE IN FEET

0 20 40 80

NOTES
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SOUTH CAROLINA
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4/21/21
No. 27825
JUSTIN KENNETH TYE

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4			
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TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / SC 63

User: jtye
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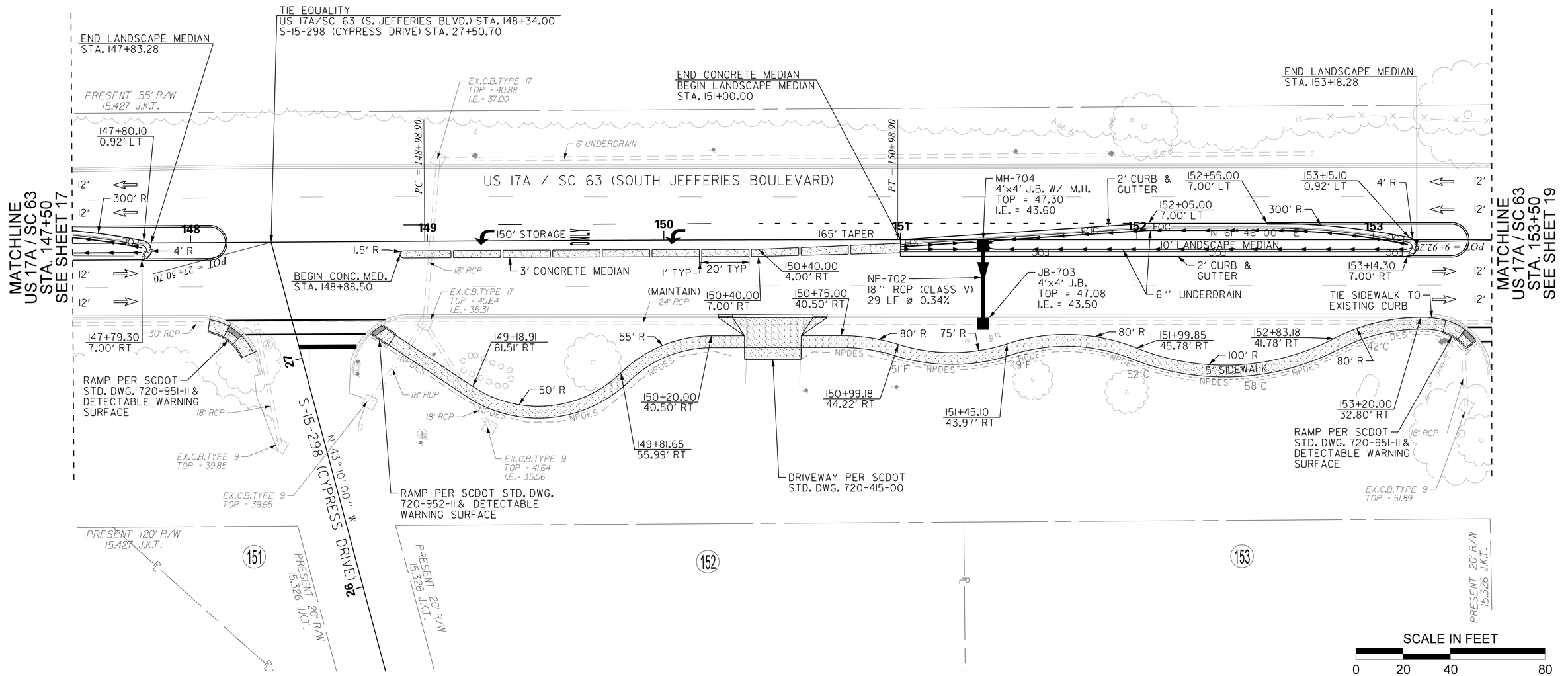
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	18



NOTES
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SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
4/21/21
No. 27825
JUSTIN KENNETH TYE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
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TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / SC 63

User: jtye
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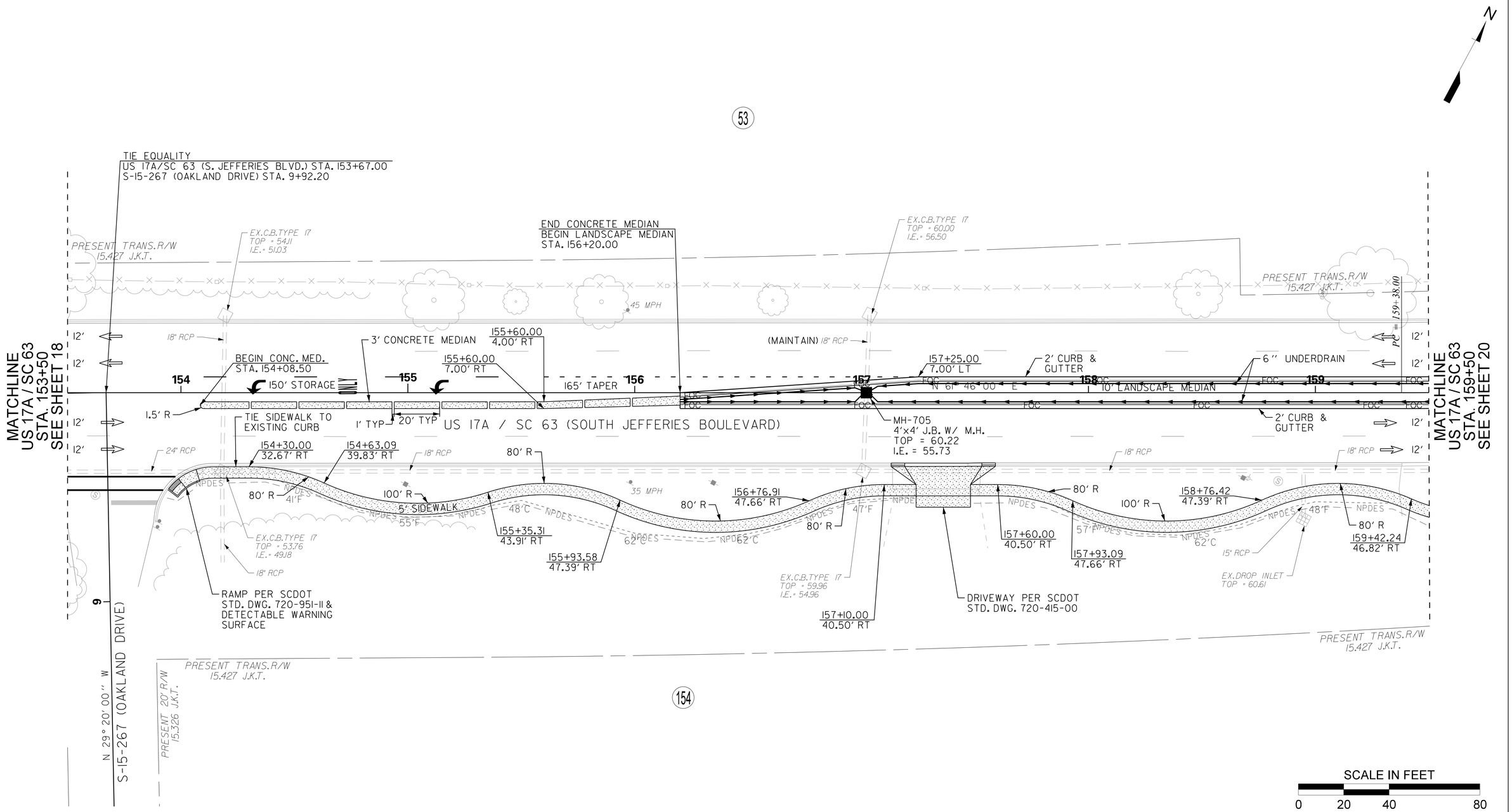
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	19



NOTES
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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH TYE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
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TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

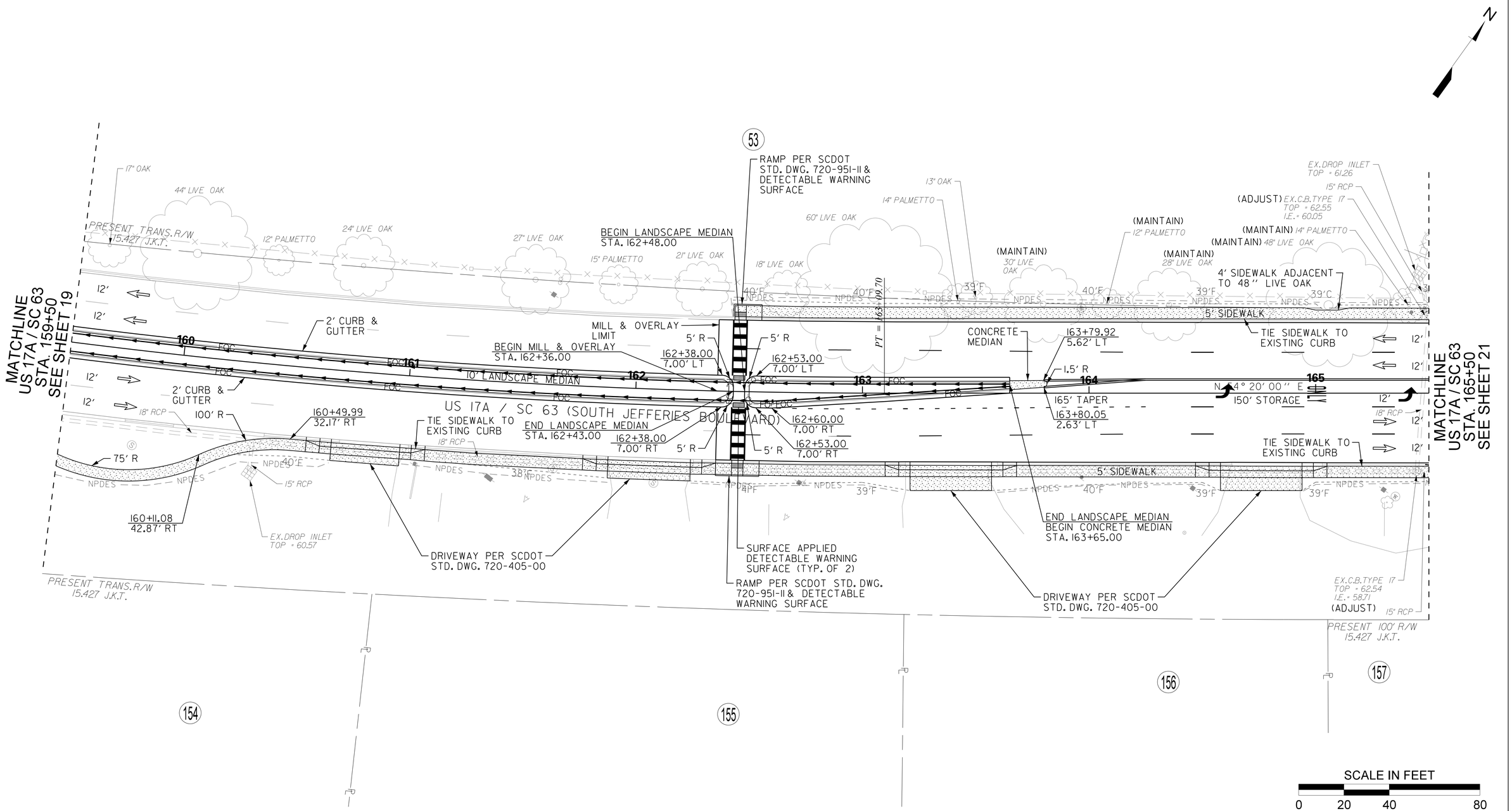
CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / SC 63

User: jtye
U:\17\002304\transportation\roadway\drawings\plan_sheets\002304_19_psh.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S/N. JEFFERIES BLVD.	US 17A / SC 63	20



SCALE IN FEET

0 20 40 80

NOTES
1. ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET.

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/6/21 No. 27825 JOSEPH KENNETH TYE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
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TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / SC 63

User: jtye
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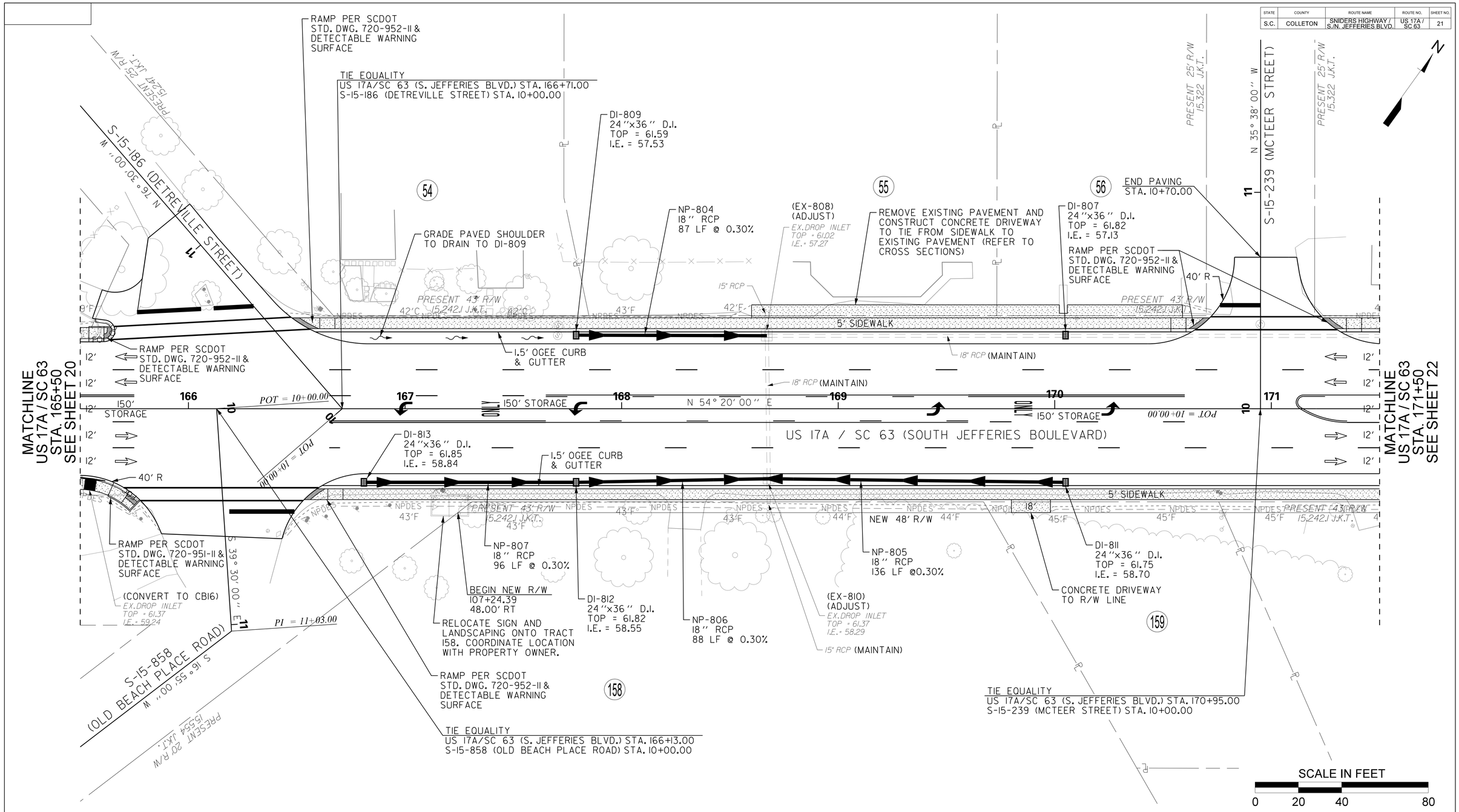
4/2/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	21



NOTES:
1. ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET.
2. RECONSTRUCT CONCRETE DRIVEWAYS ACCORDING TO SCDOT STD. DWG. 720-405-00.

PLANS PREPARED BY:

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North Charleston, SC 29418
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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 27825 4/21/21 JUSTIN KENNETH LANE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
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TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / SC 63

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	22

NOTE:
CONTRACTOR TO COORDINATE IMPROVEMENTS WITH PROPERTY OWNER OF TRACT 59 PRIOR TO CONSTRUCTION. CONTACT JAY WALLACE AT (843) 259-1660.

57 58 59 60 61 160 161 162 163 164 165

PRESENT 25' R/W 15,318 J.K.T.

PRESENT 25' R/W 15,318 J.K.T.

N 35° 10' 00" W S-15-54 (PERRY ROAD)

N 35° 30' 00" W S-15-54 (BEACHWOOD ROAD)

DI-806
24"x36" D.I.
TOP = 61.97
I.E. = 56.95

RECONSTRUCT CONCRETE DRIVEWAY

PRESENT 43' R/W 15,242.1 J.K.T.

DI-805
24"x36" D.I.
TOP = 61.63
I.E. = 56.76

RAMP PER SCDOT STD. DWG. 720-952-11 & DETECTABLE WARNING SURFACE

40' R

(ADJUST)
EX.DROP INLET
TOP = 60.87
I.E. = 56.64

END PAVING
STA. 10+70.00

TIE EQUALITY
US 17A/SC 63 (S. JEFFERIES BLVD.) STA. 175+40.00
S-15-54 (BEACHWOOD ROAD) STA. 43+55.70
S-15-54 (PERRY ROAD) STA. 10+00.00

I-95 BUSINESS LOOP PHASES IC & ID IMPROVEMENTS CONSTRUCTED IN 2016

EX.JCT.BOX
TOP = 60.86
I.E. = 55.53

PRESENT 43' R/W 15,242.1 J.K.T.

5' SIDEWALK

18" RCP (MAINTAIN)

1.5' OGEE CURB & GUTTER

END PAVING
BEGIN EXCEPTION
STA. 175+80.00

480' R

N 54° 20' 00" E

151' TAPER

150' STORAGE

POT = 10+66.00

US 17A / SC 63 (SOUTH JEFFERIES BOULEVARD)

(REMOVE)
EX.DROP INLET
TOP = 61.02
I.E. = 58.89

(REMOVE)
15" RCP

18" RCP (MAINTAIN)

MATCHLINE US 17A / SC 63 STA. 171+50 SEE SHEET 21

MATCHLINE US 17A / SC 63 STA. 177+50 SEE SHEET 23

PRESENT 43' R/W 15,242.1 J.K.T.

NEW 48' R/W

END NEW R/W
174+86.86
48.00' RT

DI-804
24"x36" D.I.
TOP = 61.91
I.E. = 58.50

NP-803
18" RCP
192 LF @ 0.52%

DI-803
24"x36" D.I.
TOP = 61.61
I.E. = 57.50

CONCRETE DRIVEWAY TO R/W LINE (TYP.)

NP-802
18" RCP
128 LF @ 0.55%

DI-802
24"x36" D.I.
TOP = 61.10
I.E. = 56.80

RAMP PER SCDOT STD. DWG. 720-952-11 & DETECTABLE WARNING SURFACE

40' R

(EX-801)
EX.DROP INLET
TOP = 60.94
I.E. = 56.44

NP-801
18" RCP
67 LF @ 0.54%

END PAVING
STA. 42+85.00

PT = 42+09.70

SCALE IN FEET
0 20 40 80

NOTES:
1. RECONSTRUCT CONCRETE DRIVEWAYS ACCORDING TO SCDOT STD. DWG. 720-405-00.
2. ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET.
3. EXISTING CENTERLINE GRADES ARE SHOWN FOR REFERENCE ONLY.

PLANS PREPARED BY:

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH TYE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
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TOPO. _____ DATE _____
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GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	23

NOTES
1. ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET.
2. NO WORK THIS SHEET.

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 100' RTE. US 17A / SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / US 15	24

N

84 85 86 87 88 89

END EXCEPTION
US 17A (N. JEFFERIES BLVD.)
STA. 214+64.58

BEGIN CONC. MED.
STA. 215+46.50

PRESENT 37.5' R/W
15.535 J.K.T.

EX.C.B.TYPE 17
TOP = 63.27
I.E. = 59.69

25 MPH

PC = 218+28.57

214 215 216 217 218 219

POT = 10+00.00

216+98.00
4.00' RT

216+98.00
7.00' RT

218+30.00
7.00' LT

218+30.00
4.00' LT

150' STORAGE

132' TAPER

N 19° 40' 06" E

1' TYP 20' TYP

1.5' R

3' CONCRETE MEDIAN

MATCHLINE
US 17A
STA. 213+50
SEE SHEET 23

MATCHLINE
US 15
STA. 219+50
SEE SHEET 25

ASPHALT PAVEMENT
TEXTURING

US 15 (NORTH JEFFERIES BOULEVARD)

PT = 218.57

TIE EQUALITY
US 17A (N. JEFFERIES BLVD.) STA. 215+00.00
US 15 (N. JEFFERIES BLVD.) STA. 215+00.00
US 17A (WICHMAN STREET) STA. 10+00.00

US 17A (WICHMAN STREET)

S 83° 30' 00" E

ASPHALT PAVEMENT
TEXTURING

PRESENT 30' R/W
15.535 J.K.T.

199 200 201 202

PT = 13+57.06

NORTH WALTER STREET

11 12 13

SCALE IN FEET
0 20 40 80

NOTES
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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / US 15

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	25

MATCHLINE US 15 STA. 219+50 SEE SHEET 24
S-15-68 (FOREST HILLS ROAD)
N 79° 22' 00" W
219+60.00
4.00' LT
1' R
3' R
219+88.17
1.32' RT
50' R
219+97.72
4.81' LT
10' R
220+03.97
7.00' LT
40' R
NORTH WALTER ST.
S 16° 43' 00" E
CB-906
C.B. TYPE 17
TOP = 60.65
I.E. = 56.00
219+89.51
7.00' RT
BEGIN LANDSCAPE MEDIAN
219+86.61
END CONCRETE MEDIAN
219+70.10
NP-905
18" RCP
96 LF @ 4.17%
CB-905
C.B. TYPE 17
TOP = 56.47
I.E. = 52.00
NP-904
18" RCP
96 LF @ 4.17%
CB-904
C.B. TYPE 17
TOP = 52.31
I.E. = 48.00
NP-903
18" RCP
96 LF @ 4.06%
CB-903
C.B. TYPE 17
TOP = 48.24
I.E. = 44.10
NP-902
18" RCP
88 LF @ 3.18%
6" UNDERDRAIN
2' CURB & GUTTER
10' LANDSCAPE MEDIAN
US 15 (NORTH JEFFERIES BOULEVARD)
EX.C.B.TYPE 16
TOP = 59.74
I.E. = 55.74
EX.C.B.TYPE 16
TOP = 56.38
I.E. = 50.88
(18" PVC IN BOX)
EX.C.B.TYPE 16
TOP = 49.32
I.E.(US) = 45.82
I.E.(DS) = 45.03
TIE EQUALITY
US 15 (N. JEFFERIES BLVD.) STA. 223+70.00
SC 64 (PAUL STREET) STA. 10+00.00
EX.C.B.TYPE 16
TOP = 42.82
I.E.(18) = 39.20
I.E.(36) = 33.95
PRESENT 37.5' R/W
15.535 J.K.T.
PT = 223+58.57
POT = 10+00.00
N 22° 38' 31" W
225+05.00
7.00' RT
MATCHLINE US 15 STA. 225+50 SEE SHEET 26
JB-901
5'x5' J.B.
TOP = 44.76
I.E. = 41.00
NP-901
18" RCP
8 LF @ 3.75%
CB-902
C.B. TYPE 17
TOP = 45.20
I.E. = 41.30
PC = 10+44.00
PT = 11+19.00
S 67° 21' 29" E
SC 64 (PAUL STREET)
S 41° 00' 00" E
S-15-567 (COMMERCE DRIVE)
N 48° 00' 00" E
TIE EQUALITY NOTES:
1. US 15 (N. JEFFERIES BLVD.) STA. 219+98.50
S-15-68 (FOREST HILLS RD.) STA. 10+00.00
2. US 15 (N. JEFFERIES BLVD.) STA. 220+07.00
NORTH WALTER STREET STA. 10+00.00
90
91
92
203
204
205
SCALE IN FEET
0 20 40 80

NOTES
1. ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET.

PLANS PREPARED BY:

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SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 27825 JUSTIN KENNETH LYE 4/21/21

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

TOPO. ______ DATE ______
DWG. ______ DATE ______
R/W ______ DATE ______
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20'   RTE. US 15

User: jtye
U:\171002304\transportation\roadway\drawings\plan_sheets\02304_25_psh.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	26

N

MATCHLINE US 15 STA. 225+50 SEE SHEET 25

MATCHLINE US 15 STA. 231+50 SEE SHEET 27

92 93 94 95 205 206 207

S-15-229 (IRELAND CREEK DRIVE)

S-15-335 (IVANHOE ROAD)

S-15-229 (SWEAT STREET)

US 15 (NORTH JEFFERIES BOULEVARD)

DRIVEWAY

PC = 11+67.00

S 74° 05' 00" W

S 69° 50' 00" W

S 52° 40' 00" W

N 22° 38' 31" W

N 59° 40' 00" E

PRESENT 37.5' R/W
15.535 J.K.T.

PRESENT 30' R/W
15.535 J.K.T.

PRESENT 60' R/W
15.535 J.K.T.

PRESENT 25' R/W
15.413 J.K.T.

36" RCP

NPDES

RAMP PER SCDOT STD. DWG. 720-95I-II, DETECTABLE WARNING SURFACE & TIE TO EXISTING SIDEWALK

TIE EQUALITY
US 15 (N. JEFFERIES BLVD.) STA. 228+22.00
S-15-229 (IRELAND CR. DR.) STA. 10+00.00

TIE SIDEWALK TO EXISTING BRIDGE

TIE EQUALITY
US 15 (N. JEFFERIES BLVD.) STA. 230+00.00
S-15-335 (IVANHOE ROAD) STA. 10+00.00

REMOVE AND RECONSTRUCT CONCRETE MEDIAN WITH TEXTURING

226+37.00
7.00' LT

226+37.00
4.00' LT

3' CONCRETE MEDIAN

END CONCRETE MEDIAN
227+88.50

1.5' R

226 227 228 229 230 231

POT = 10+00.00

132' TAPER

150' STORAGE

4' CONCRETE MEDIAN

PC = 230+71.57

END LANDSCAPE MEDIAN
BEGIN CONCRETE MEDIAN
STA. 225+89.00

TIE EQUALITY
US 15 (N. JEFFERIES BLVD.) STA. 228+25.00
S-15-229 (SWEAT STREET) STA. 10+57.75

POT = 10+57.75

PT = 8+87.75

RAMP PER SCDOT STD. DWG. 720-95I-II, DETECTABLE WARNING SURFACE & TIE TO EXISTING SIDEWALK

TIE SIDEWALK TO EXISTING BRIDGE

RAMP PER SCDOT STD. DWG. 720-95I-II, DETECTABLE WARNING SURFACE & TIE TO EXISTING SIDEWALK

RAMP PER SCDOT STD. DWG. 720-95I-II, DETECTABLE WARNING SURFACE & TIE TO EXISTING SIDEWALK

END CONCRETE MEDIAN
BEGIN EXCEPTION
US 15 (N. JEFFERIES BLVD.)
STA. 230+46.00

TIE EQUALITY
US 15 (N. JEFFERIES BLVD.) STA. 229+99.00
DRIVEWAY STA. 10+00.00

SCALE IN FEET
0 20 40 80

NOTES:
1. ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET.

CONCRETE MEDIAN NOTES:
1. CONCRETE TEXTURING PATTERN SHALL BE HERRINGBONE BRICK (SIENNA COLOR PER ASTM C 979).
2. CONTRACTOR SHALL SUBMIT COLOR AND PATTERN FOR CITY APPROVAL PRIOR TO INSTALLATION.
3. TEXTURING SHALL BE PAID FOR UNDER CONCRETE MEDIAN PAY ITEM.

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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 27825 JOSEPH KENNETH TYE 4/21/21

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TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. US 15

User: jtye
Us\Tl\002304\Transportation\roadway\drawings\plan_sheets\02304_26_psh.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	27

N

MATCHLINE US 15 STA. 231+50 SEE SHEET 26

MATCHLINE US 15 STA. 243+50 SEE SHEET 28

US 15 (NORTH JEFFERIES BOULEVARD)

S-15-926 (EDDIE CHASTEEN DRIVE)

S-15-482 (SANTEE LANE)

REMOVE & DISPOSE OF EXISTING ASPHALT PAVEMENT

TIE EQUALITY
US 15 (NORTH JEFFERIES BOULEVARD) STA. 239+84.50
S-15-482 (SANTEE LANE) STA. 10+00.00

TIE EQUALITY
US 15 (NORTH JEFFERIES BOULEVARD) STA. 236+27.00
S-15-926 (EDDIE CHASTEEN DRIVE) STA. 49+57.01

PRESENT 20' R/W 15,388 J.K.T.

PRESENT 20' R/W 15,388 J.K.T.

SCALE IN FEET
0 50 100 200

NOTES
1. ALIGNMENT CONTROL CAN BE FOUND ON REFERENCE DATA SHEET.

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R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 50' RTE. US 15

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	28

N

MATCHLINE US 15 STA. 243+50 SEE SHEET 27

PRESENT 60' R/W 15.535 J.K.T.

N 87° 30' 00" W

56 SC 64 (BELLS HIGHWAY)

PRESENT 60' R/W 15.535 J.K.T.

102 103 104

ASPHALT PAVEMENT TEXTURING

END EXCEPTION
US 15 (N. JEFFERIES BLVD.)
STA. 244+61.55

END CONSTRUCTION
US 15 (N. JEFFERIES BLVD.)
STA. 245+71.03

PRESENT TRANS.R/W 15.535 J.K.T.

PRESENT 43' R/W 15.242 J.K.T.

244 245 55 246 247 248 249

N 8° 08' 11" E

US 15 (NORTH JEFFERIES BOULEVARD)

POT = 54+92.00

ASPHALT PAVEMENT TEXTURING

PT = 246+10.57

PRESENT 50' R/W 15.535 J.K.T.

PRESENT 55' R/W 15.242 J.K.T.

ASPHALT PAVEMENT TEXTURING

TIE EQUALITY
US 15 (N. JEFFERIES BLVD.) STA. 245+18.50
SC 64 (BELLS HIGHWAY) STA. 54+92.00

PARKER'S IMPROVEMENTS CONSTRUCTED IN 2020

215 216 217 218 219

SCALE IN FEET
0 20 40 80

NOTES
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DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PLAN SHEET

SCALE: 1" = 20' RTE. US 15

User: jtye
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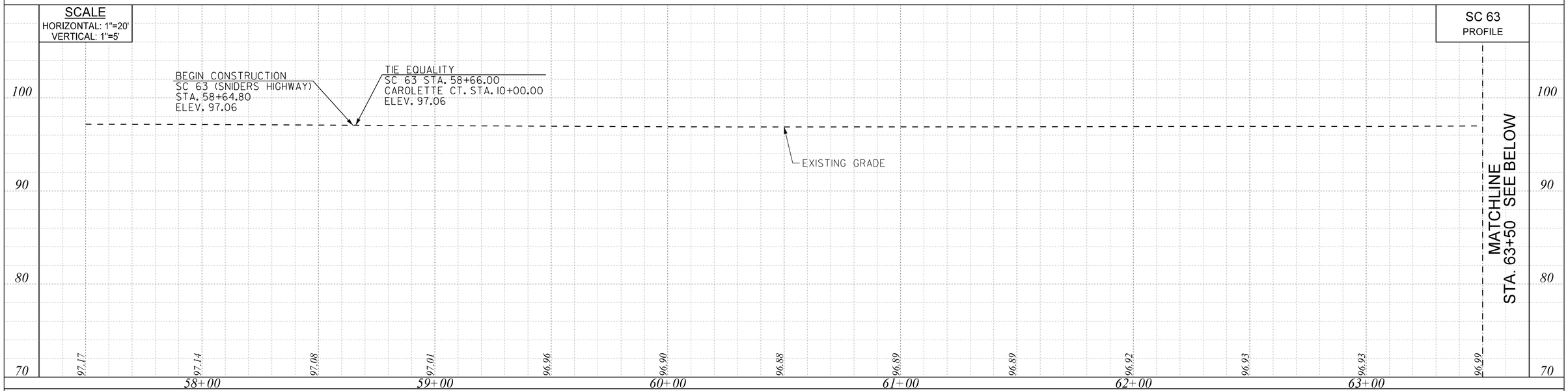
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	29

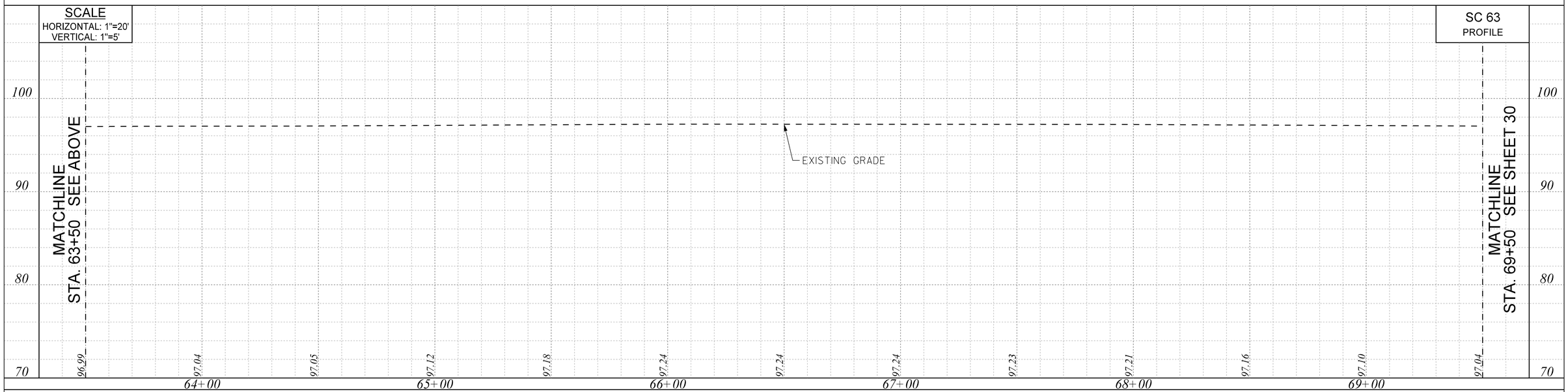
SCALE
HORIZONTAL: 1"=20'
VERTICAL: 1"=5'

SC 63
PROFILE



SCALE
HORIZONTAL: 1"=20'
VERTICAL: 1"=5'

SC 63
PROFILE



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4/21/21
No. 27825
JOSEPH KENNETH TYE

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TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROFILE SHEET

SCALE: 1" = 20' H; 1" = 5' V RTE. SC 63

User: jtye
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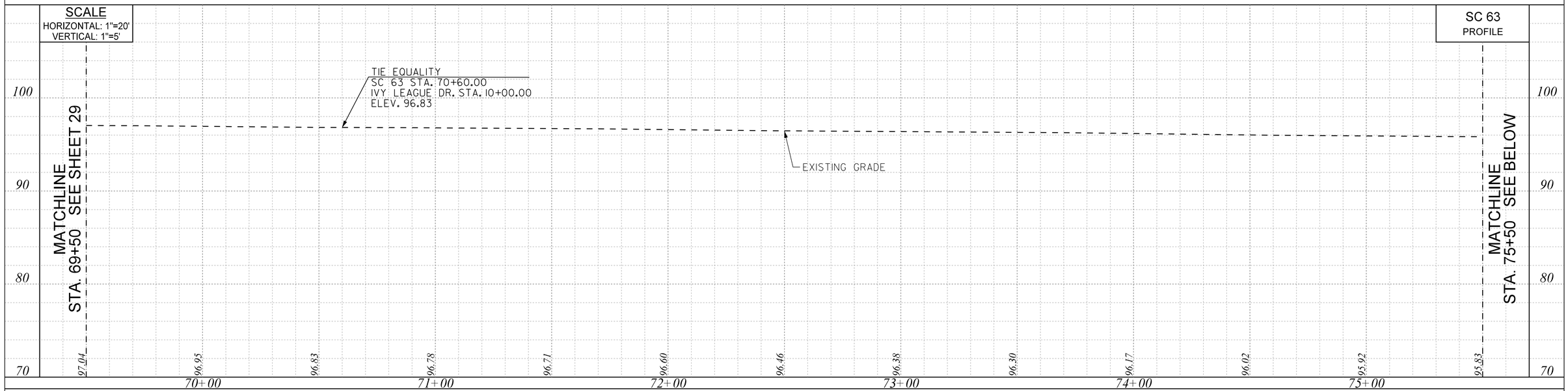
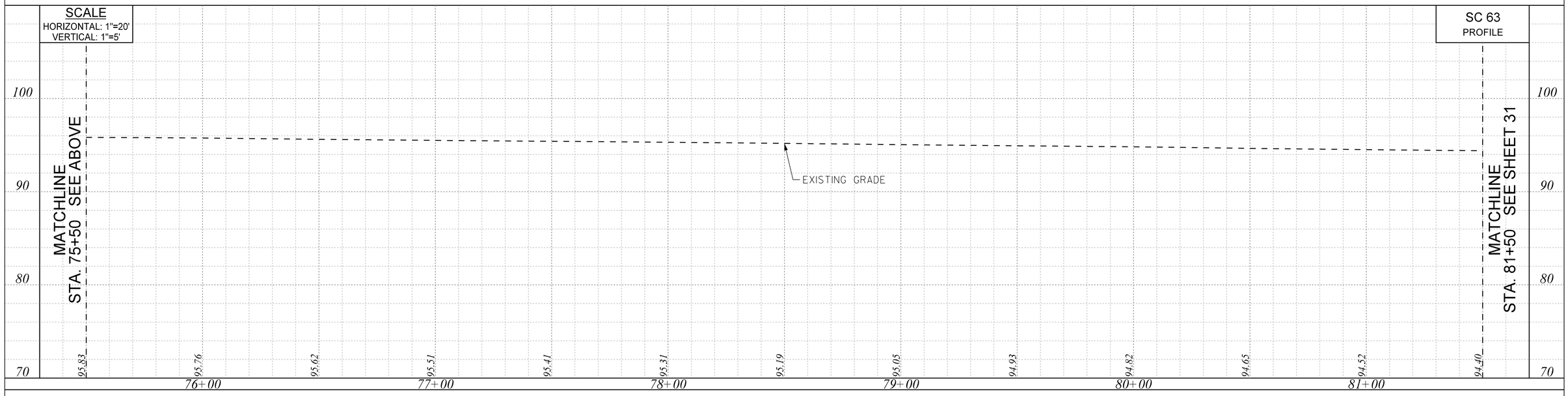
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	30





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JOSEPH KENNETH TAYLOR
4/21/21

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TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROFILE SHEET

SCALE: 1" = 20' H; 1" = 5' V RTE. SC 63

User: jtye
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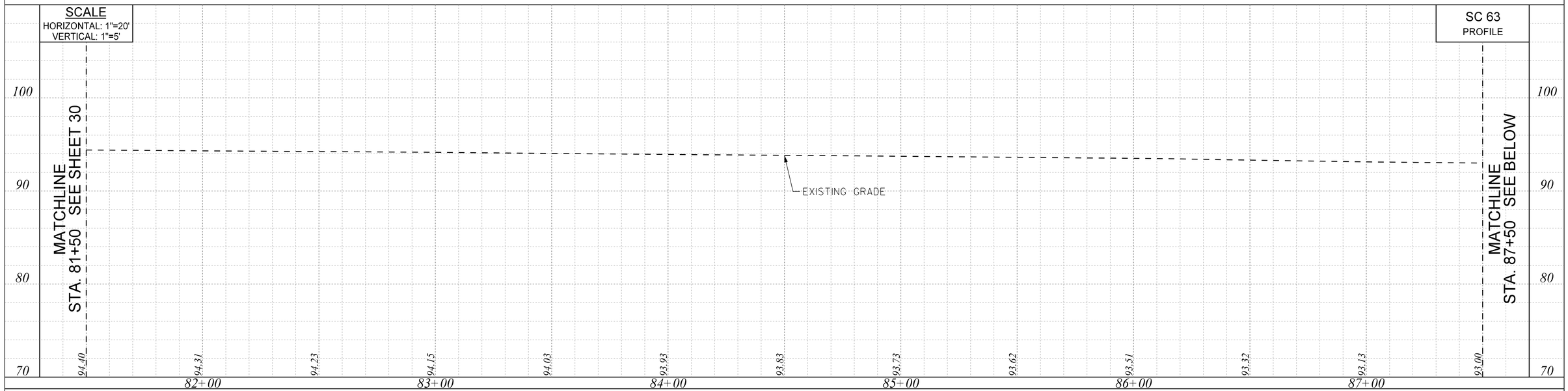
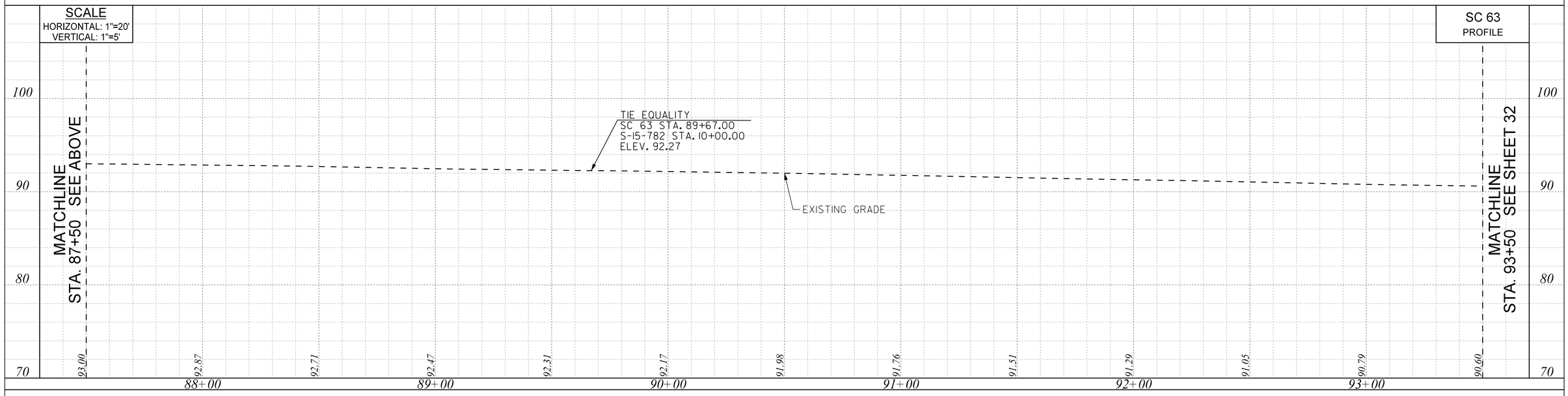
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	31





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4/21/21
No. 27825
JOSEPH KENNETH TYE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
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TOPO. _____ DATE _____
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R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROFILE SHEET

SCALE: 1" = 20' H; 1" = 5' V RTE. SC 63

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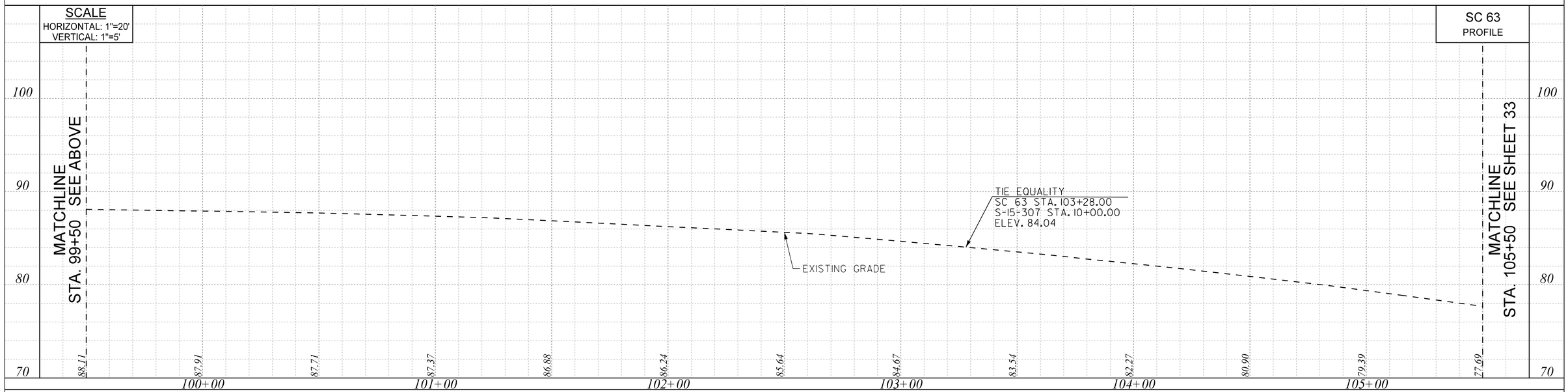
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	32



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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROFILE SHEET

SCALE: 1" = 20' H; 1" = 5' V RTE. SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	33

SCALE
HORIZONTAL: 1"=20'
VERTICAL: 1"=5'

SC 63
PROFILE

MATCHLINE
STA. 105+50 SEE SHEET 32

TIE EQUALITY
SC 63 STA. 107+05.00
S-15-308 STA. 10+00.00
ELEV. 71.30

EXISTING GRADE

MATCHLINE
STA. 111+50 SEE BELOW

80 70 60 50

77.69 75.75 73.74 71.52 69.23 66.94 64.71 62.45 60.23 58.05 55.83 53.65 51.45

106+00 107+00 108+00 109+00 110+00 111+00

SCALE
HORIZONTAL: 1"=20'
VERTICAL: 1"=5'

SC 63
PROFILE

MATCHLINE
STA. 111+50 SEE ABOVE

TIE EQUALITY
SC 63 STA. 112+12.20
S-15-57 STA. 10+00.00
ELEV. 48.47

TIE EQUALITY
SC 63 STA. 112+36.00
S-15-51 STA. 10+00.00
ELEV. 47.39

EXISTING GRADE

MATCHLINE
STA. 117+50 SEE SHEET 34

50 40 30 20

51.35 49.04 46.75 44.55 42.42 40.28 38.27 36.61 35.36 34.47 33.89 33.42 33.11

112+00 113+00 114+00 115+00 116+00 117+00

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROFILE SHEET

SCALE: 1" = 20' H; 1" = 5' V RTE. SC 63

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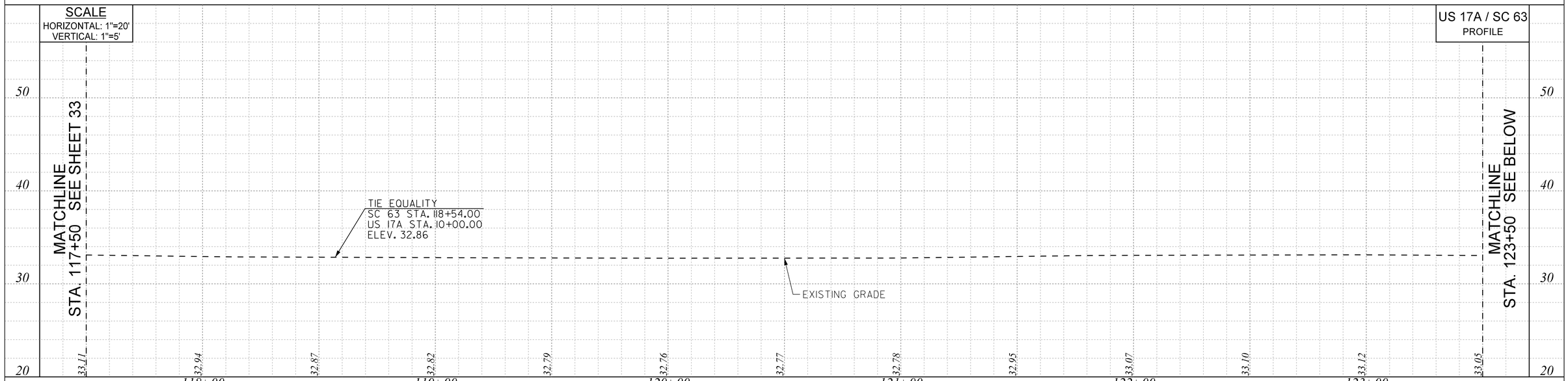
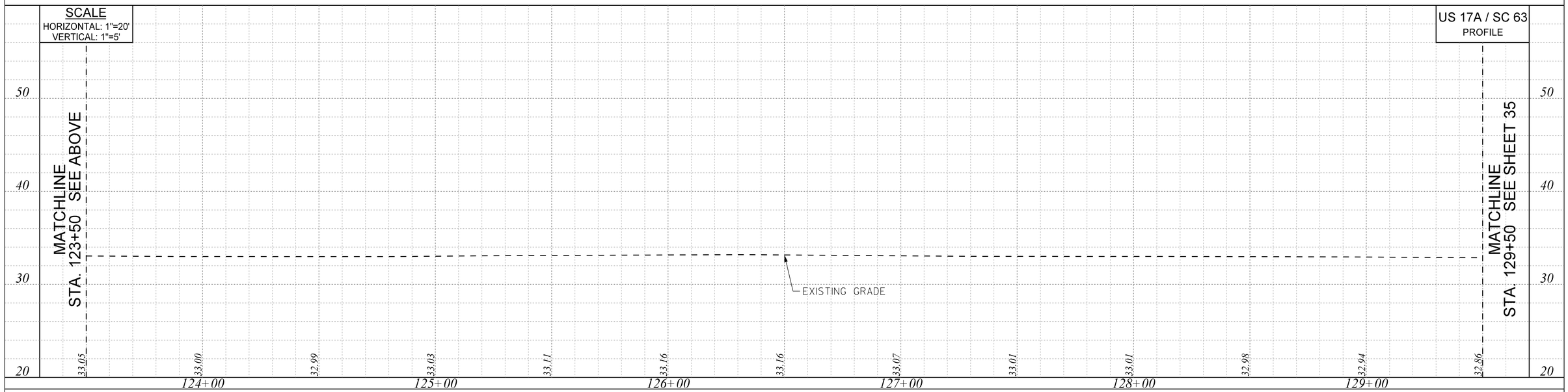
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	34





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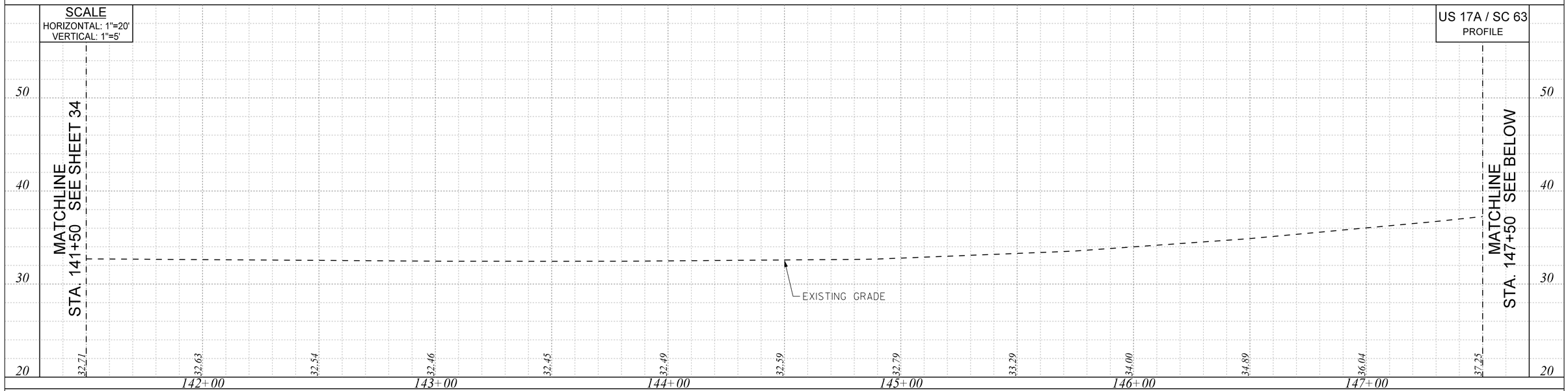
CITY OF WALTERBORO

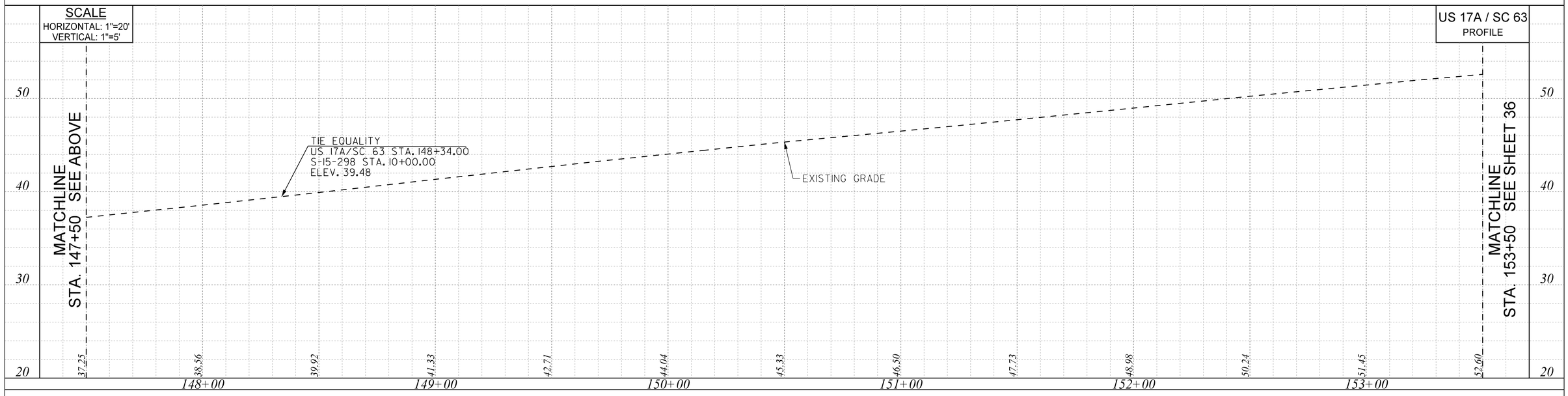
COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROFILE SHEET

SCALE: 1" = 20' H; 1" = 5' V RTE. US 17A / SC 63

User: jtye
U:\TI\002304\transportation\roadway\drawings\plan_sheets\02304_34_prof.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	35





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COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROFILE SHEET

SCALE: 1" = 20' H; 1" = 5' V RTE. US 17A / SC 63

User: jtye
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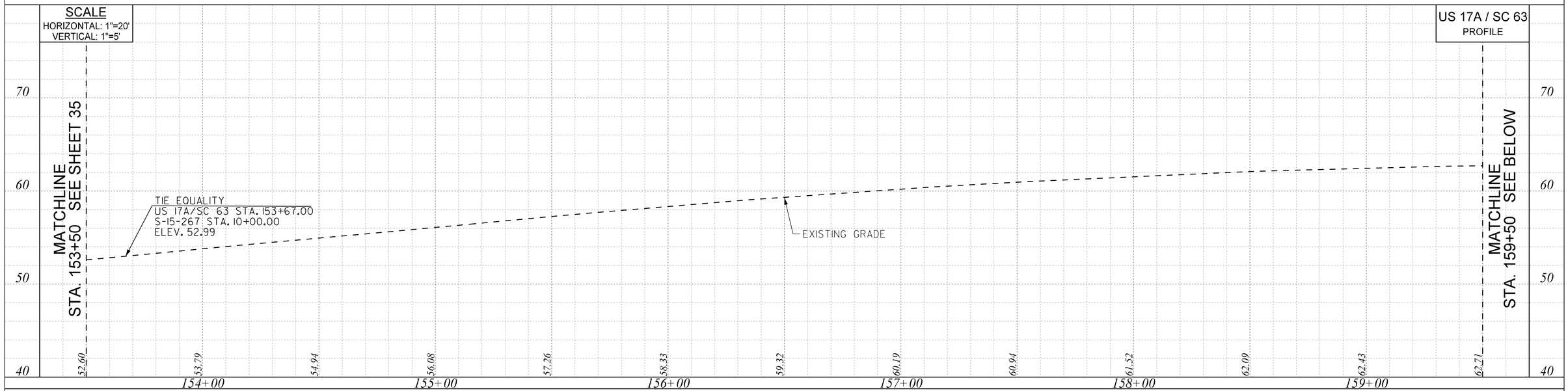
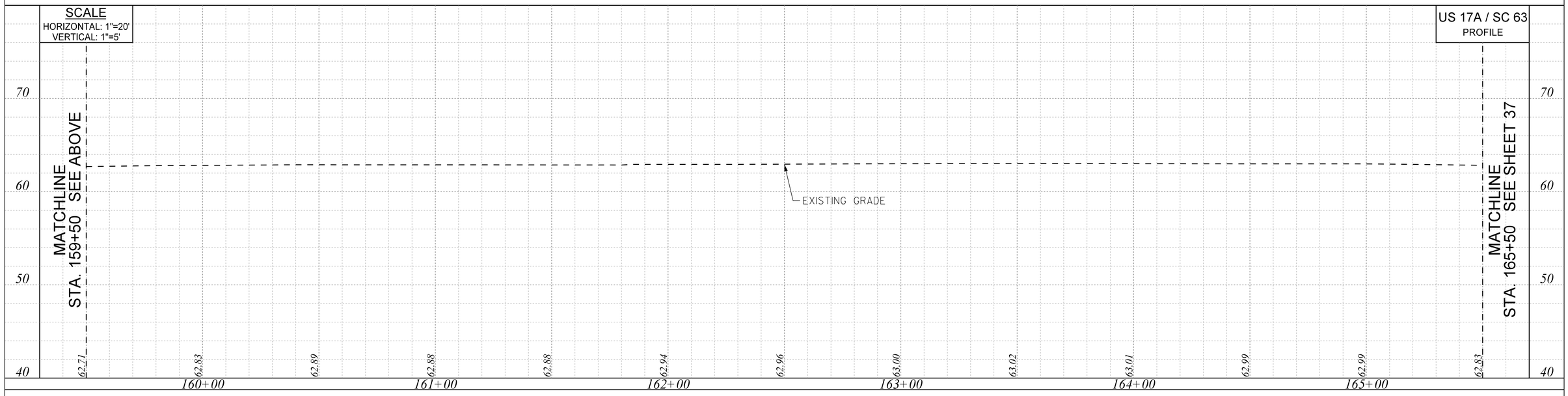
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	36





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STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
4/21/21
No. 27825
JOSEPH KENNETH TAYE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
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TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROFILE SHEET

SCALE: 1" = 20' H; 1" = 5' V RTE. US 17A / SC 63

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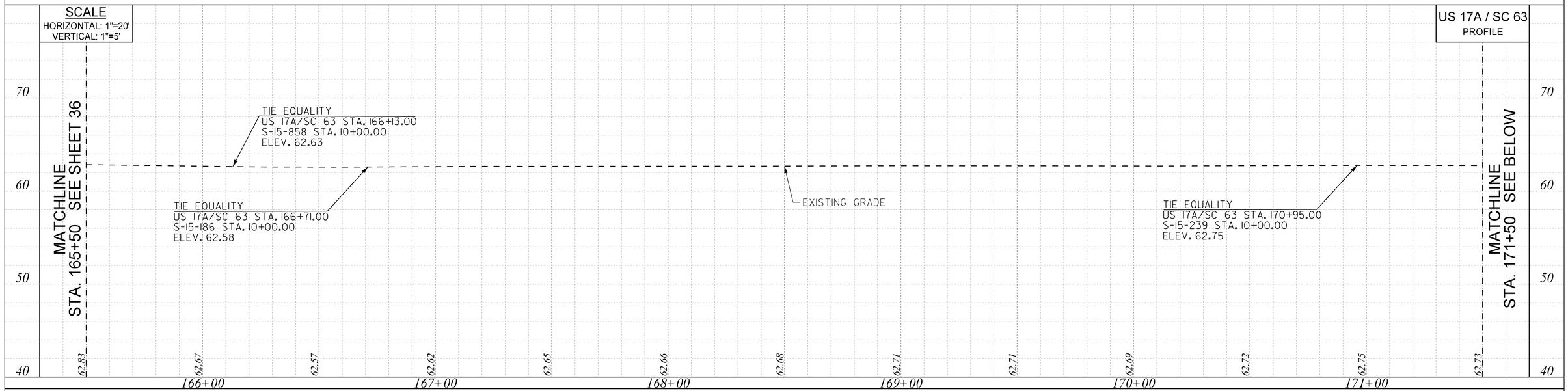
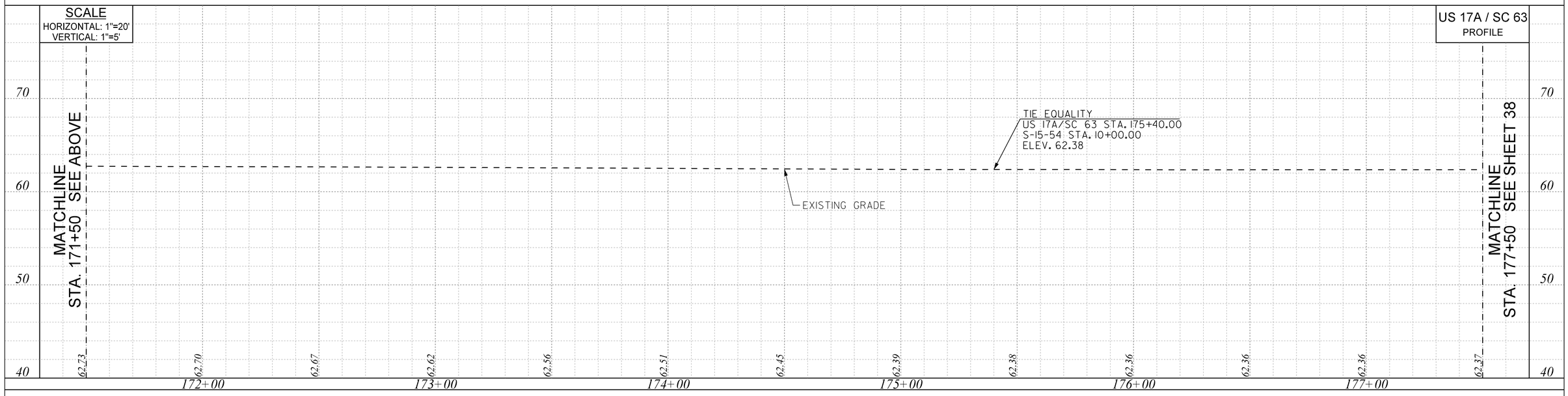
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	37





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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROFILE SHEET

SCALE: 1" = 20' H; 1" = 5' V RTE. US 17A / SC 63

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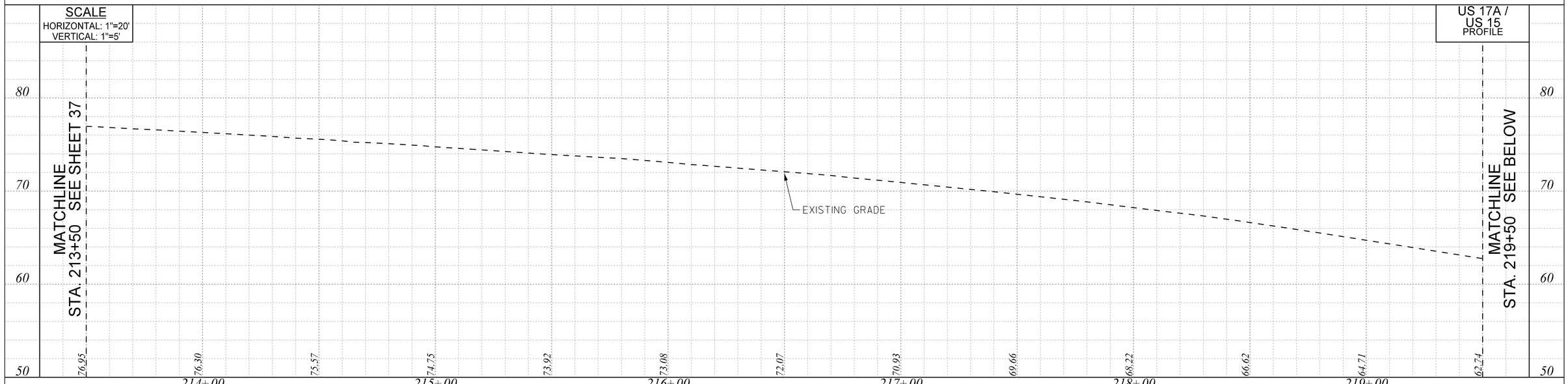
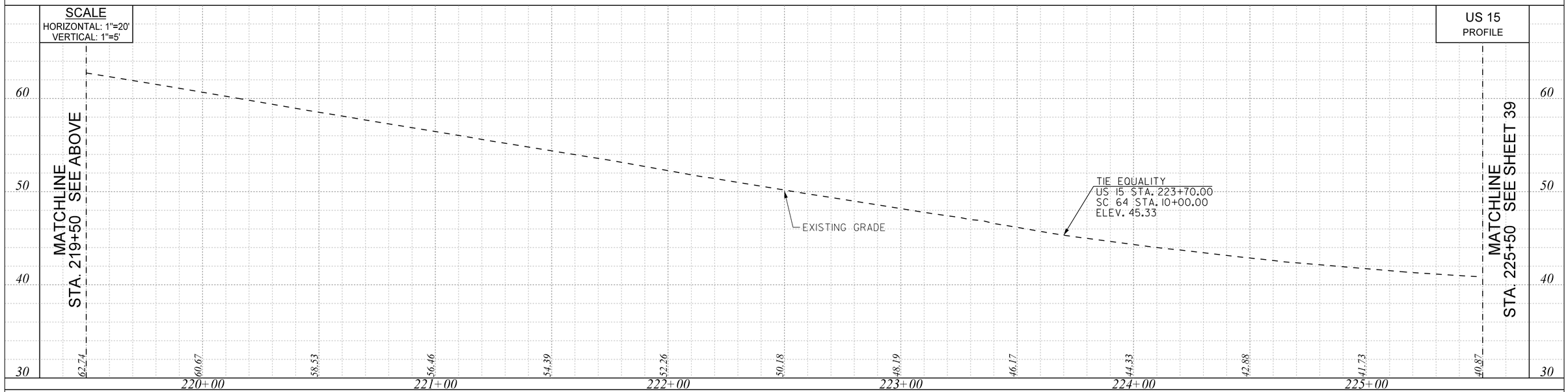
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / US 15	38





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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROFILE SHEET

SCALE: 1" = 20' H; 1" = 5' V RTE. US 17A / US 15

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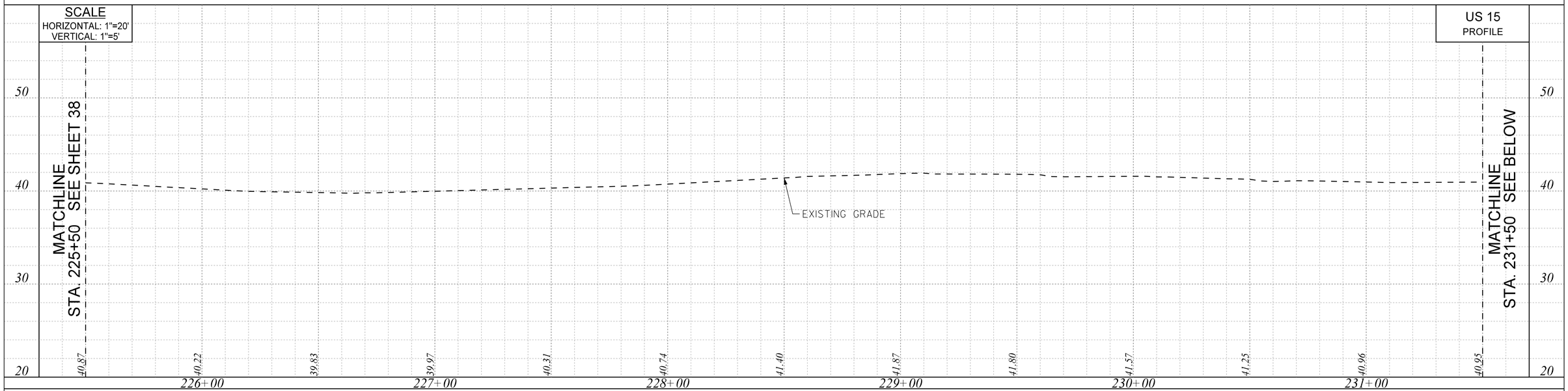
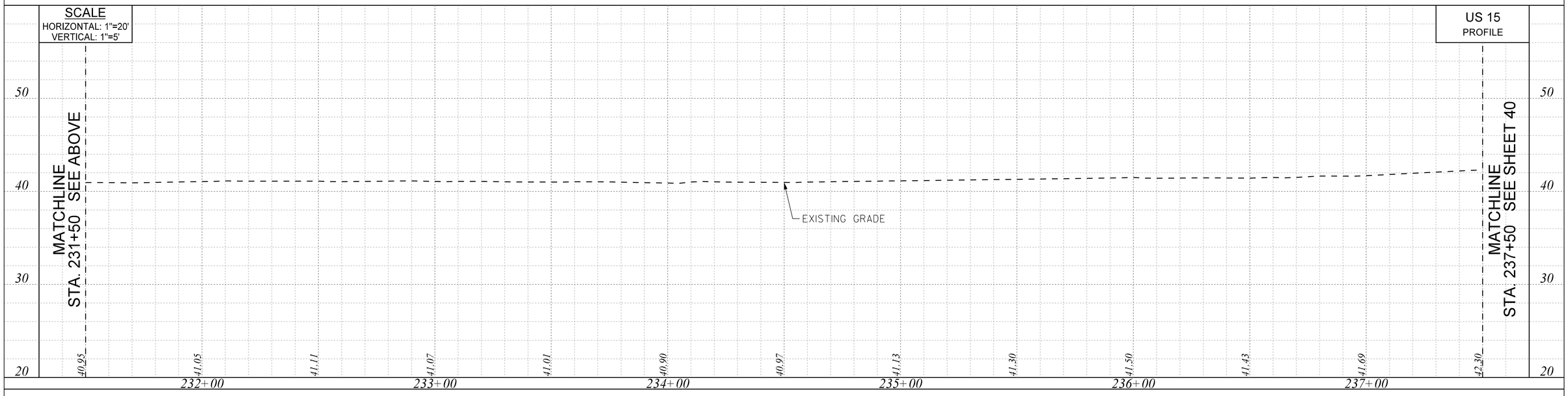
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	39





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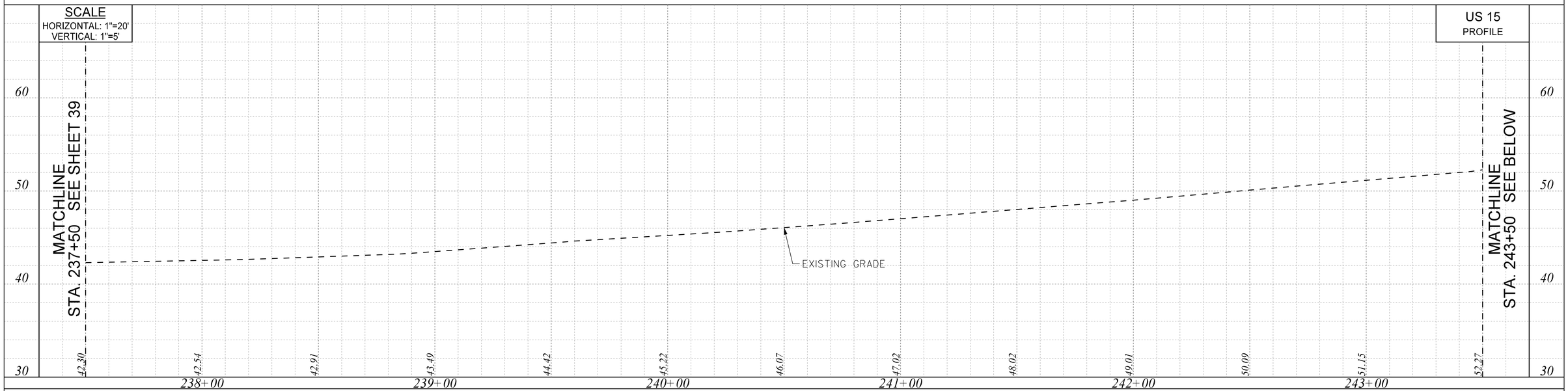
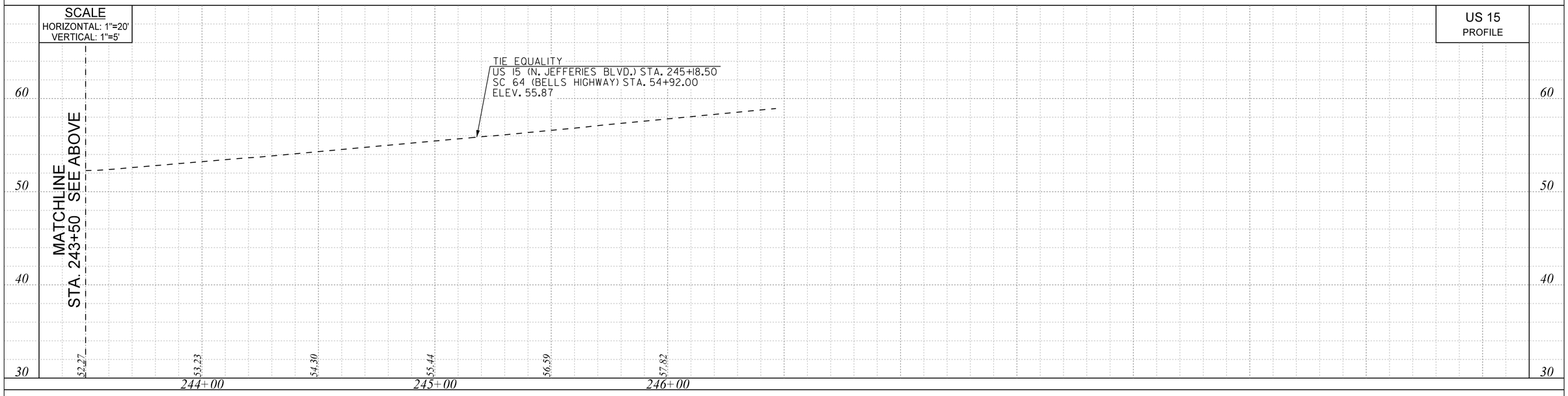
CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROFILE SHEET

SCALE: 1" = 20' H; 1" = 5' V RTE. US 15

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	40





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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PROFILE SHEET

SCALE: 1" = 20' H; 1" = 5' V RTE. US 15

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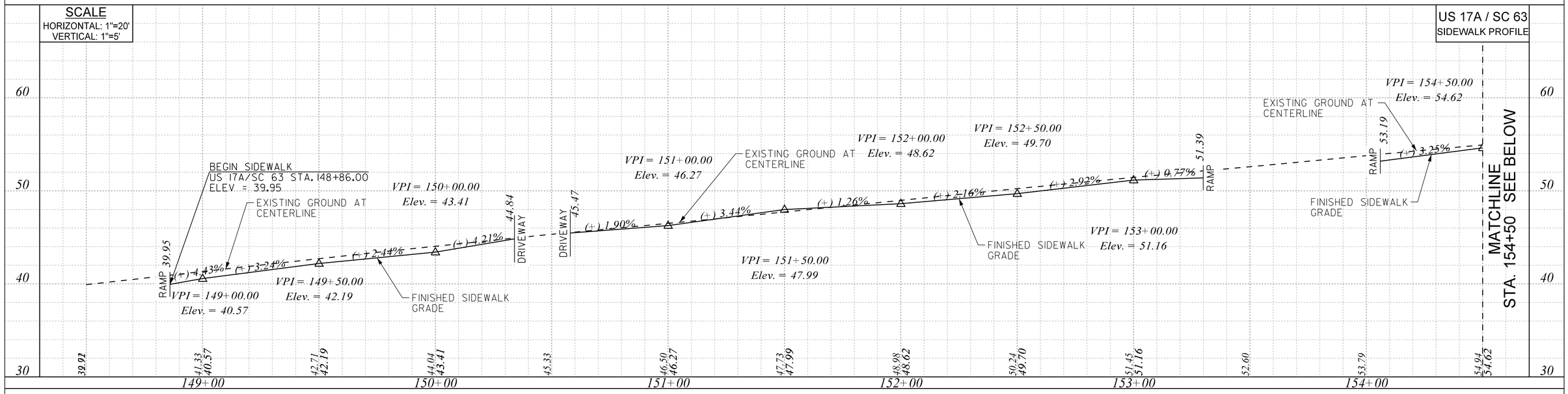
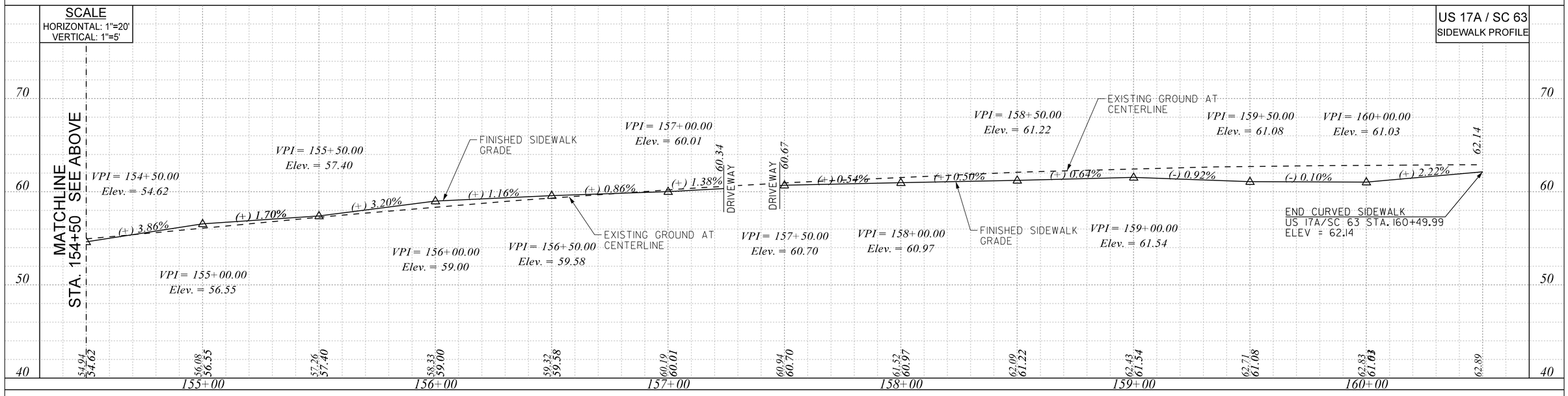
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	41





NOTES

1. PROPOSED PROFILE IS SHOWN FOR THE INSIDE EDGE OF SIDEWALK. ADJUST PROFILE BETWEEN VPI'S AS NEEDED TO MATCH FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. INCLUDE A 5-FOOT VERTICAL CURVE AT ANY PROFILE GRADE BREAK.

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
SIDEWALK PROFILE SHEET

SCALE: 1" = 20' H; 1" = 5' V RTE. US 17A / SC 63

User: jtye
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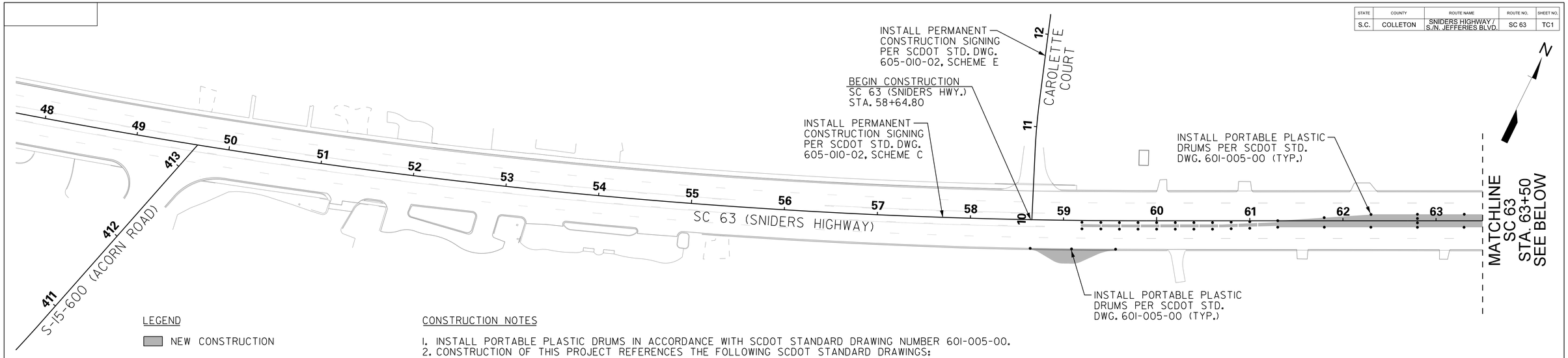
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S/N. JEFFERIES BLVD.	SC 63	TC1



LEGEND

NEW CONSTRUCTION

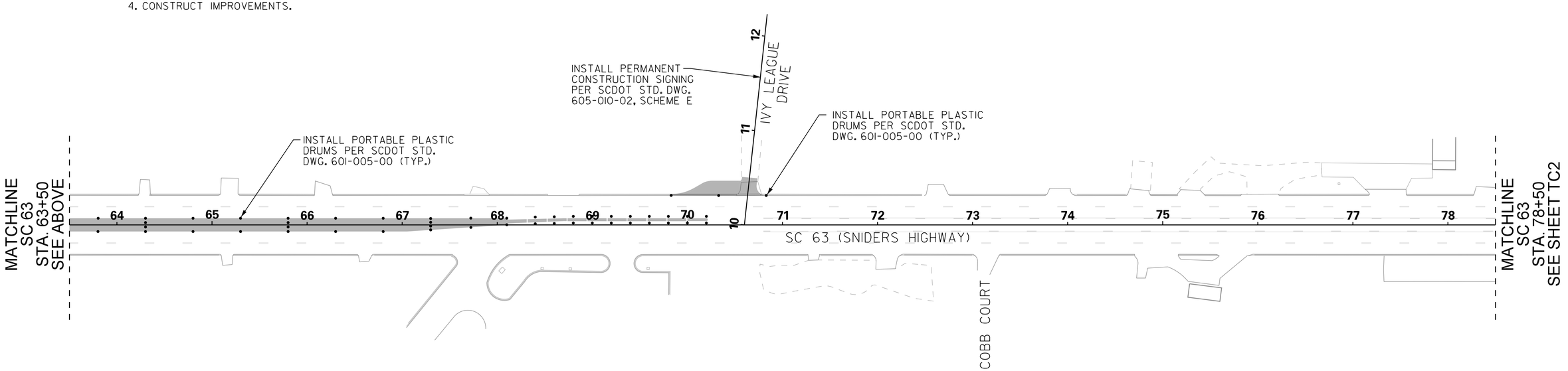
CONSTRUCTION SEQUENCE

1. INSTALL PERMANENT CONSTRUCTION SIGNS.
2. INSTALL PORTABLE PLASTIC DRUMS.
3. MAINTAIN MINIMUM ONE LANE OF TRAFFIC IN EACH DIRECTION.
4. CONSTRUCT IMPROVEMENTS.

CONSTRUCTION NOTES

1. INSTALL PORTABLE PLASTIC DRUMS IN ACCORDANCE WITH SCDOT STANDARD DRAWING NUMBER 601-005-00.
2. CONSTRUCTION OF THIS PROJECT REFERENCES THE FOLLOWING SCDOT STANDARD DRAWINGS:

601-005-00	WIDENING PROJECTS NEW ROADWAY CONSTRUCTION PRIMARY ROUTES
601-205-01	PROTECTIONS OF EXCAVATIONS ADJACENT TO ROADWAY
605-005-01	CONSTRUCTION SIGNING GROUND MOUNTED ASSEMBLY U-CHANNEL POSTS - BREAKAWAY INSTALLATION
605-010-02	CONSTRUCTION SIGNING PERMANENT PRIMARY ROUTES
605-030-02	CONSTRUCTION SIGNING "ROAD WORK" SIGNS "END ROAD WORK"
610-025-00	LANE CLOSURE DAYTIME MULTILANE PRIMARY ROUTES



SCALE IN FEET

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
TRAFFIC CONTROL PLAN
STAGE 1

SCALE: 1" = 50' RTE. SC 63

User: jtye
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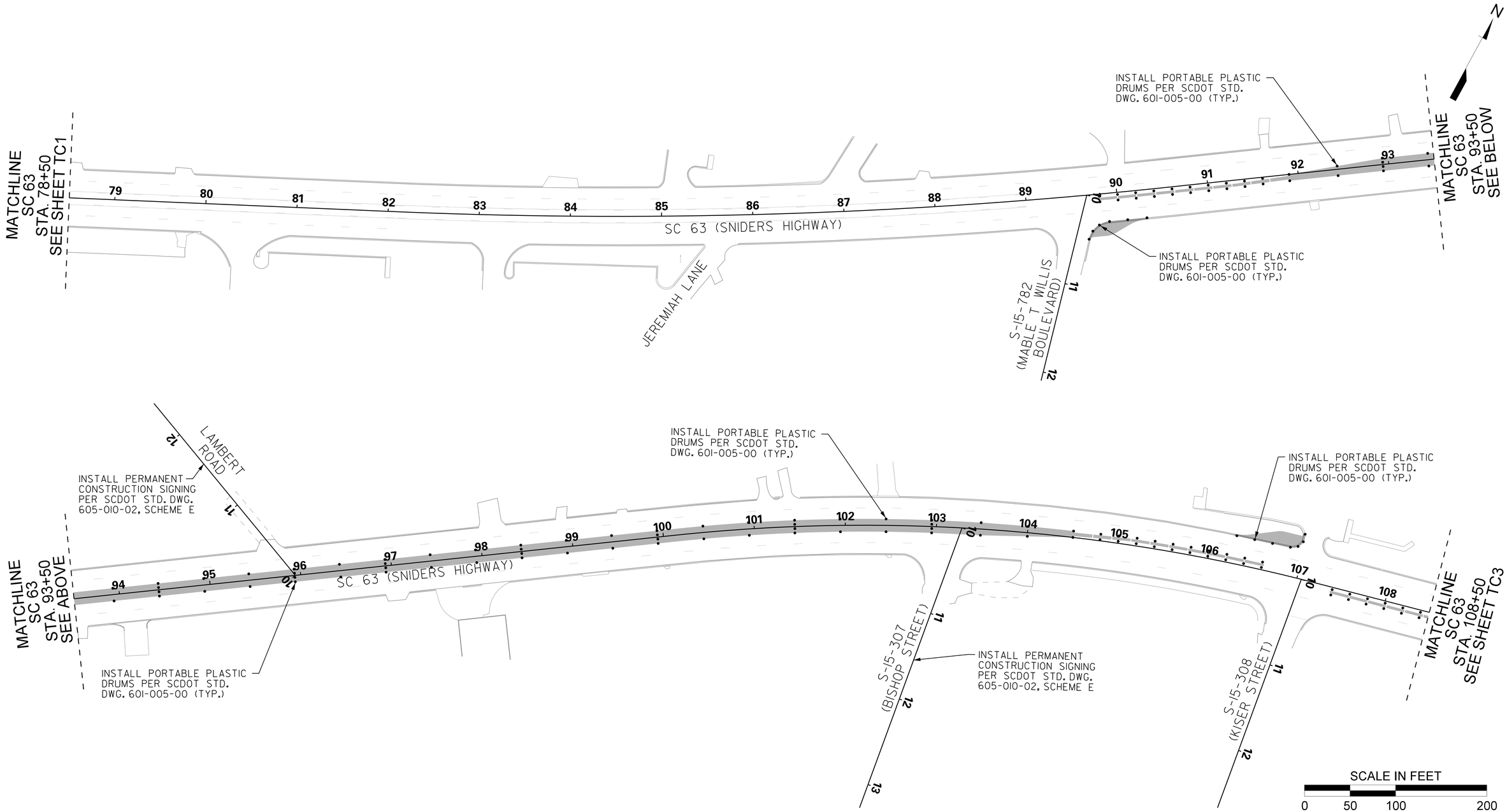
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	TC2



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TOPO. _____ DATE _____
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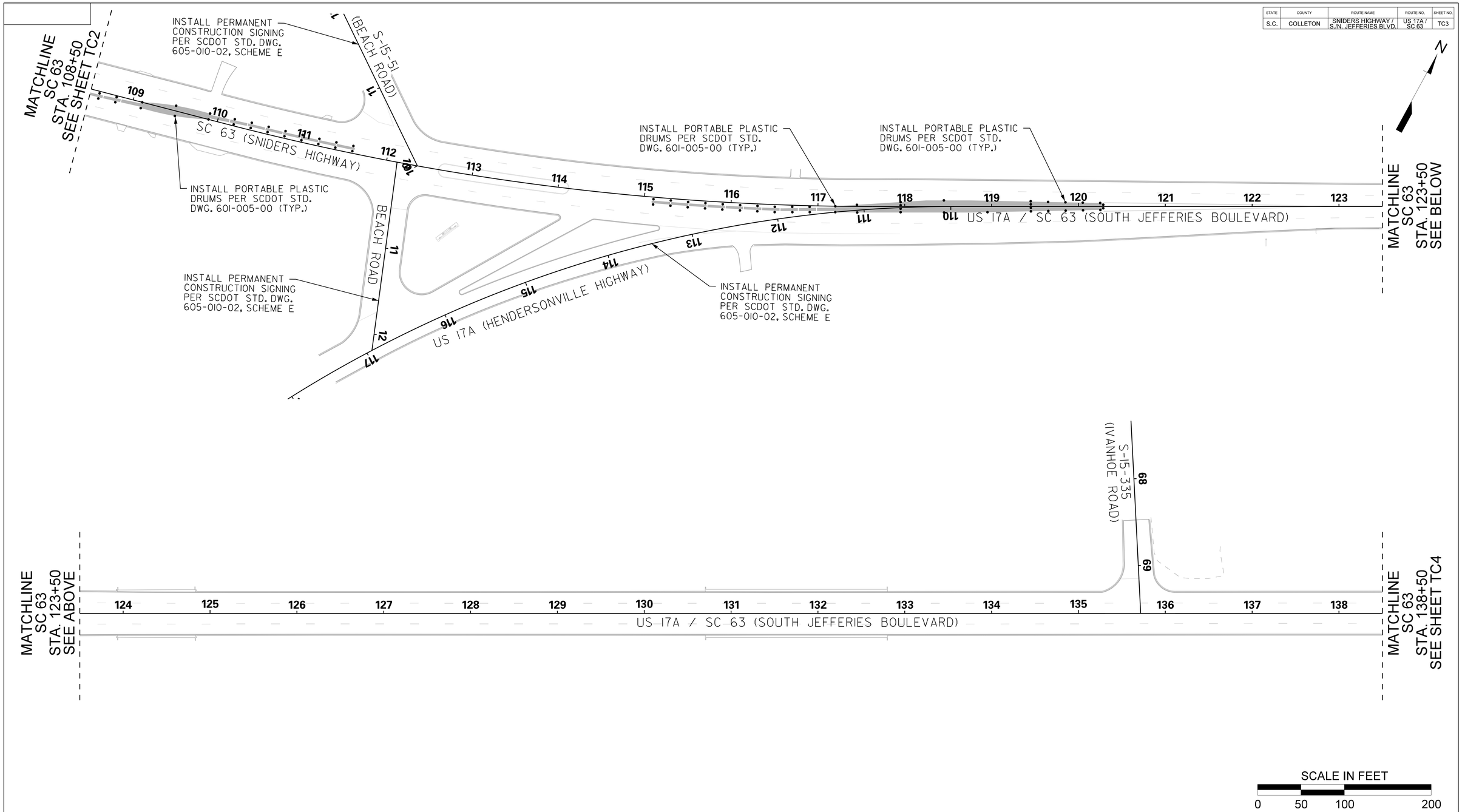
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
TRAFFIC CONTROL PLAN
STAGE 1

SCALE: 1" = 50' RTE. SC 63

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S/N. JEFFERIES BLVD.	US 17A / SC 63	TC3



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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
TRAFFIC CONTROL PLAN
STAGE 1

SCALE: 1" = 50' RTE. US 17A / SC 63

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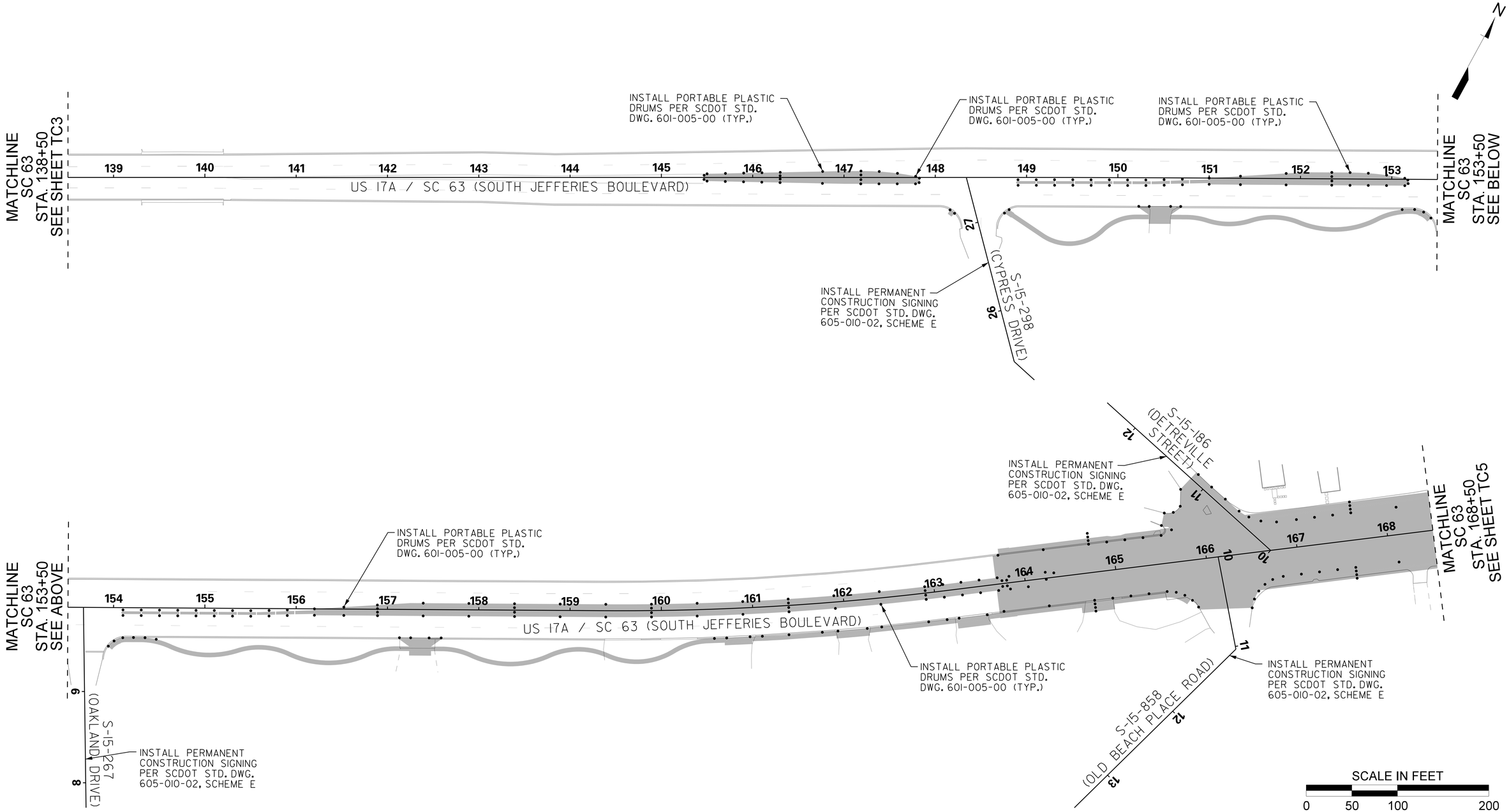
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	TC4



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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
TRAFFIC CONTROL PLAN
STAGE 1

SCALE: 1" = 50' RTE. US 17A / SC 63

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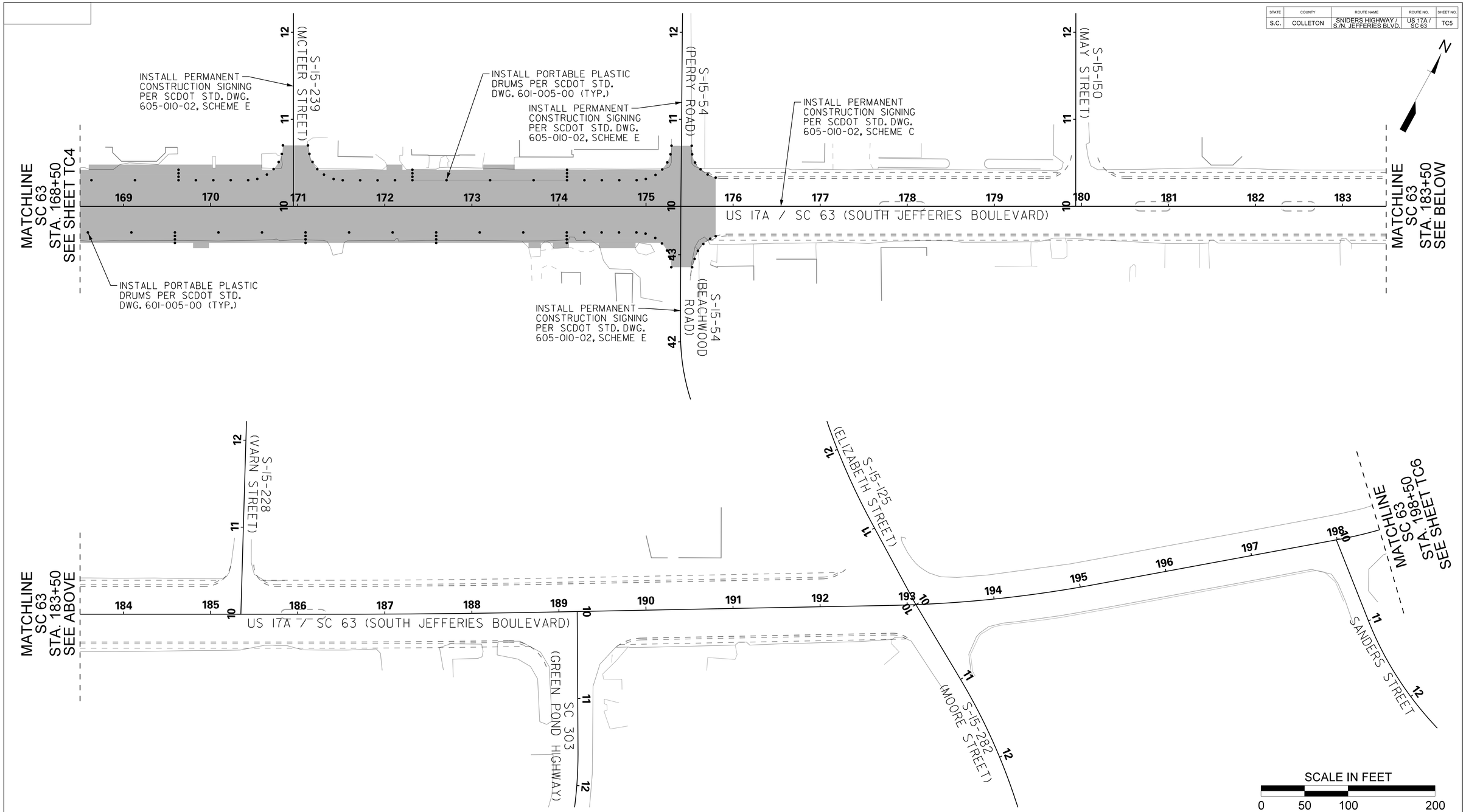
STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	TC5



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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
TRAFFIC CONTROL PLAN
STAGE 1

SCALE: 1" = 50' RTE. US 17A / SC 63

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STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63 / US 17A	TC6

N

MATCHLINE SC 63 STA. 198+50 SEE SHEET TC5

S-15-467 (HIERS STREET)

S-15-128 (W. WASHINGTON ST.)

US 17A / SC 63 (SOUTH JEFFERIES BOULEVARD)

MATCHLINE SC 63 STA. 212+50 SEE BELOW

S-15-121 (CARN STREET)

SC 63 (HAMPTON STREET)

EAST WASHINGTON STREET

MATCHLINE SC 63 STA. 212+50 SEE ABOVE

S-15-293 (BENSON STREET)

INSTALL PERMANENT CONSTRUCTION SIGNING PER SCDOT STD. DWG. 605-010-02, SCHEME C

US 15 (NORTH JEFFERIES BOULEVARD)

US 17A (WICHMAN STREET)

INSTALL PERMANENT CONSTRUCTION SIGNING PER SCDOT STD. DWG. 605-010-02, SCHEME E

INSTALL PERMANENT CONSTRUCTION SIGNING PER SCDOT STD. DWG. 605-010-02, SCHEME E

S-15-68 (FOREST HILLS ROAD)

INSTALL PORTABLE PLASTIC DRUMS PER SCDOT STD. DWG. 601-005-00 (TYP.)

NORTH WALTER STREET

INSTALL PERMANENT CONSTRUCTION SIGNING PER SCDOT STD. DWG. 605-010-02, SCHEME E

SC 64 (PAUL STREET)

MATCHLINE SC 63 STA. 226+50 SEE SHEET TC7

SCALE IN FEET

0 50 100 200

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TRAFFIC CONTROL PLAN
STAGE 1

SCALE: 1" = 50' RTE. SC 63/US 17A/US 15

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STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	TC7

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INSTALL PERMANENT CONSTRUCTION SIGNING PER SCDOT STD. DWG. 605-010-02, SCHEME E

S-15-335 (IVANHOE ROAD)

S-15-229 (IRELAND CREEK DRIVE)

INSTALL PERMANENT CONSTRUCTION SIGNING PER SCDOT STD. DWG. 605-010-02, SCHEME E

INSTALL PERMANENT CONSTRUCTION SIGNING PER SCDOT STD. DWG. 605-010-02, SCHEME E

INSTALL PORTABLE PLASTIC DRUMS PER SCDOT STD. DWG. 601-005-00 (TYP.)

S-15-229 (SWEAT STREET)

INSTALL PERMANENT CONSTRUCTION SIGNING PER SCDOT STD. DWG. 605-010-02, SCHEME E

MATCHLINE US 15 STA. 226+50 SEE ABOVE

US 15 (NORTH JEFFERIES BOULEVARD)

S-15-926 (EDDIE CHASTEEN DRIVE)

S-15-482 (SANTEE LANE)

MATCHLINE US 15 STA. 241+50 SEE BELOW

SC 64 (BELLS HIGHWAY)

INSTALL PORTABLE PLASTIC DRUMS PER SCDOT STD. DWG. 601-005-00 (TYP.)

INSTALL PERMANENT CONSTRUCTION SIGNING PER SCDOT STD. DWG. 605-010-02, SCHEME E

INSTALL PERMANENT CONSTRUCTION SIGNING PER SCDOT STD. DWG. 605-010-02, SCHEME C

MATCHLINE US 15 STA. 241+50 SEE ABOVE

US 15 (NORTH JEFFERIES BOULEVARD)

END CONSTRUCTION US 15 (N. JEFFERIES BLVD.) STA. 245+71.03

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DWG. DATE
R/W DATE
GROUP -

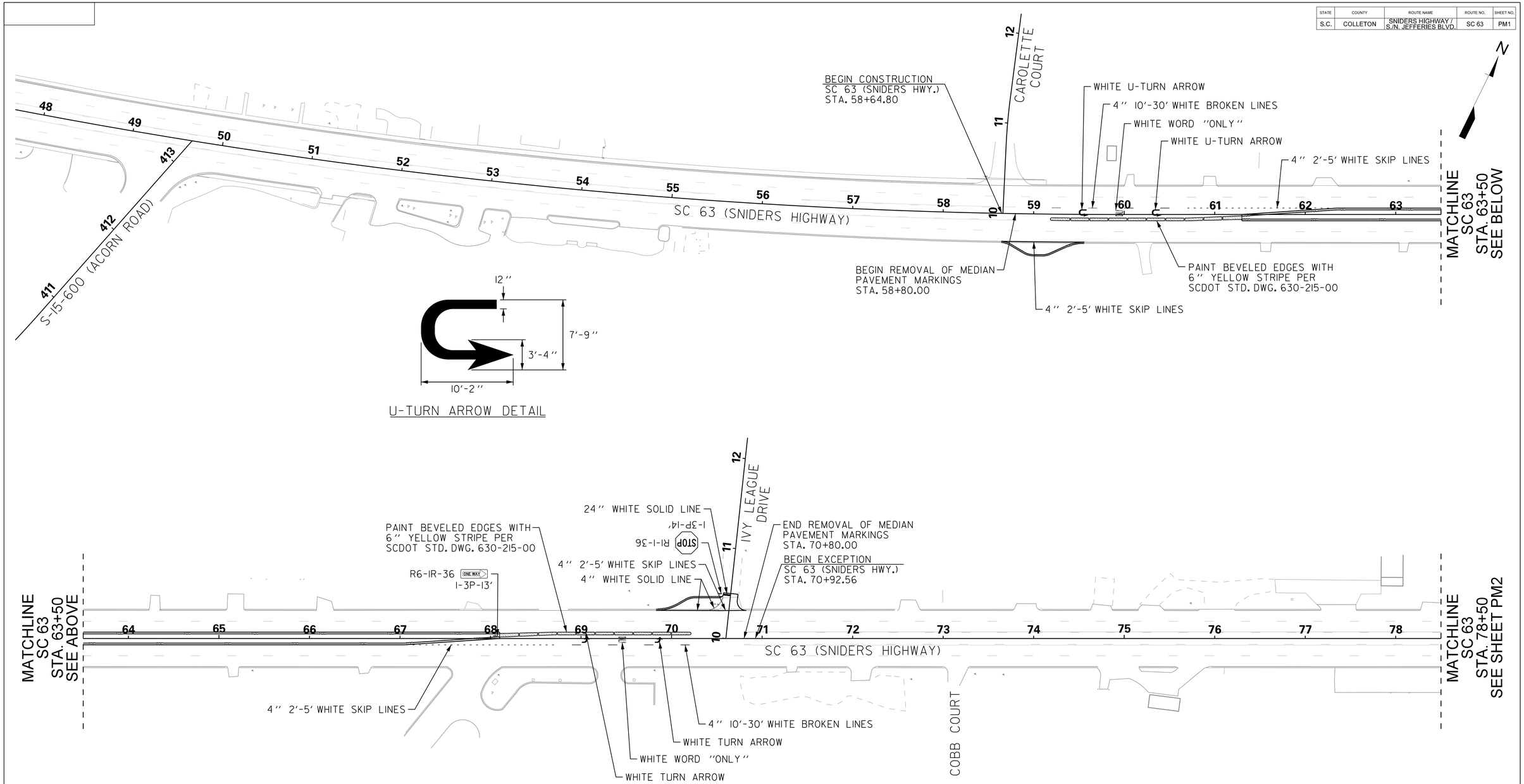
CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
TRAFFIC CONTROL PLAN
STAGE 1

SCALE: 1" = 50' RTE. US 15

User: jtye
U:\71002304\transportation\roadway\drawings\plan_sheets\02304_48_tc7.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S/N. JEFFERIES BLVD.	SC 63	PM1



SCALE IN FEET

0 50 100 200

NOTES:
1. REFERENCE SCDOT STANDARD DRAWINGS 625-305-00, 625-410-00 (ALL ARROWS AND ONLYS), AND 630-215-00.

PLANS PREPARED BY:

Stantec

Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
4/21/21
No. 27825
JUSTIN KENNETH TYE

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

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

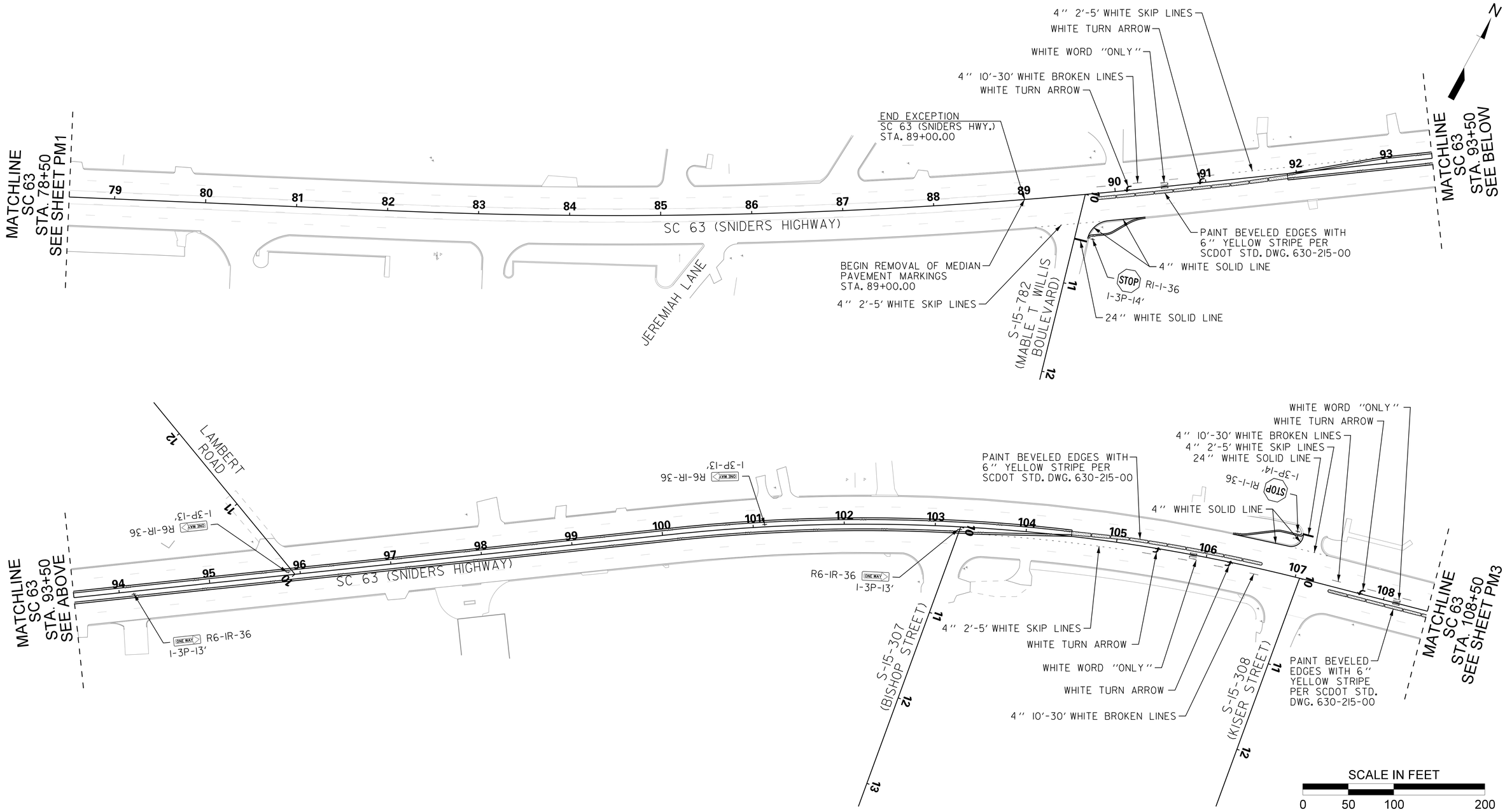
CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PAVEMENT MARKING & SIGNING PLAN

SCALE: 1" = 50' RTE. SC 63

User: jtye
Us\TI\002304\transportation\roadway\drawings\plan_sheets\02304_49_pmi.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S/N. JEFFERIES BLVD.	SC 63	PM2



NOTES:
1. REFERENCE SCDOT STANDARD DRAWINGS 625-305-00, 625-410-00 (ALL ARROWS AND ONLYS), AND 630-215-00.

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JUSTIN KENNETH TYE

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GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PAVEMENT MARKING & SIGNING PLAN

SCALE: 1" = 50' RTE. SC 63

User: jtye
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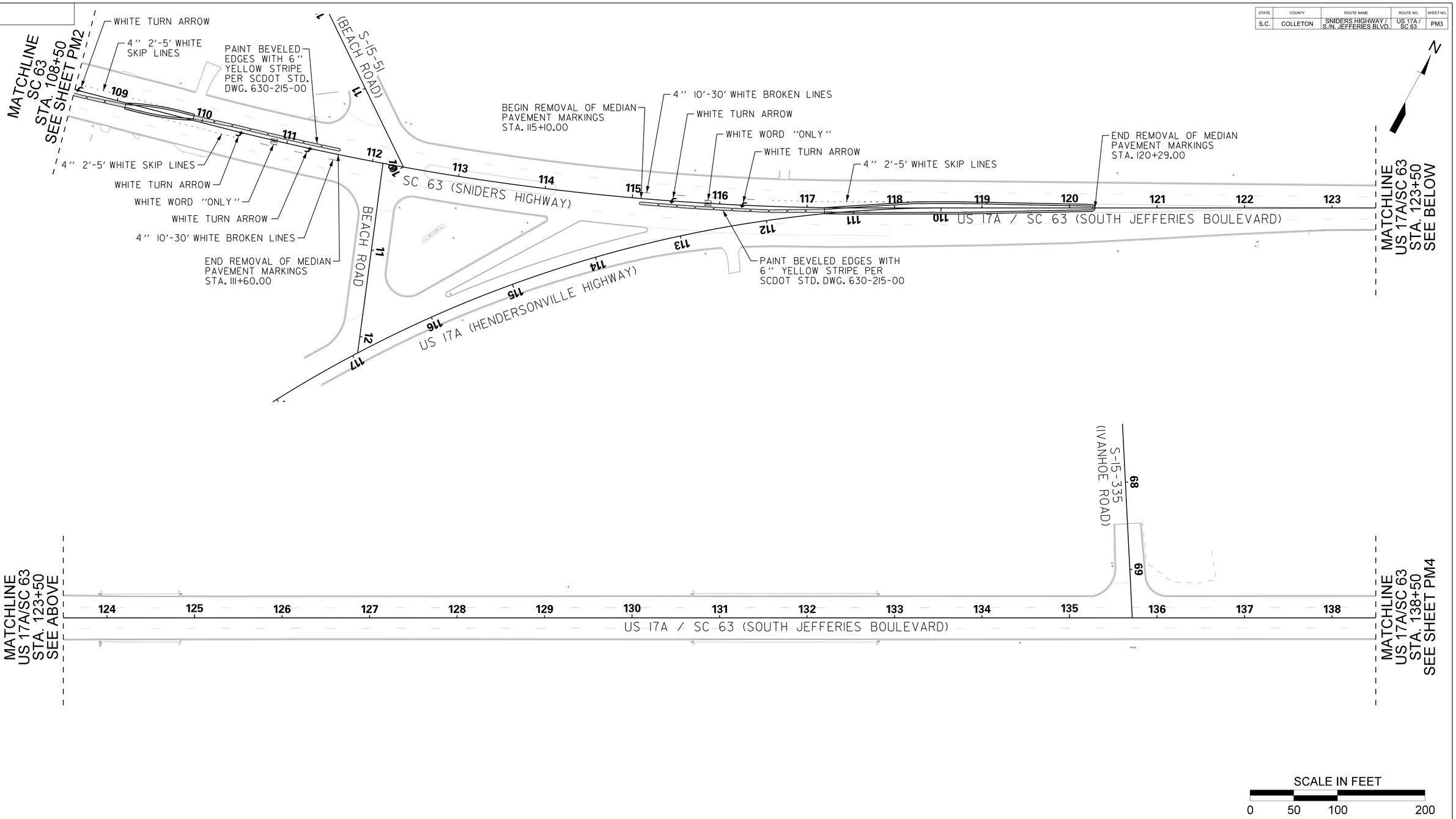
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	PM3



SCALE IN FEET

0 50 100 200

NOTES:
1. REFERENCE SCDOT STANDARD DRAWINGS 625-305-00, 625-410-00 (ALL ARROWS AND ONLYS), AND 630-215-00.

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SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH TYE

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

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PAVEMENT MARKING & SIGNING PLAN

SCALE: 1" = 50' RTE. US 17A / SC 63

User: jtye
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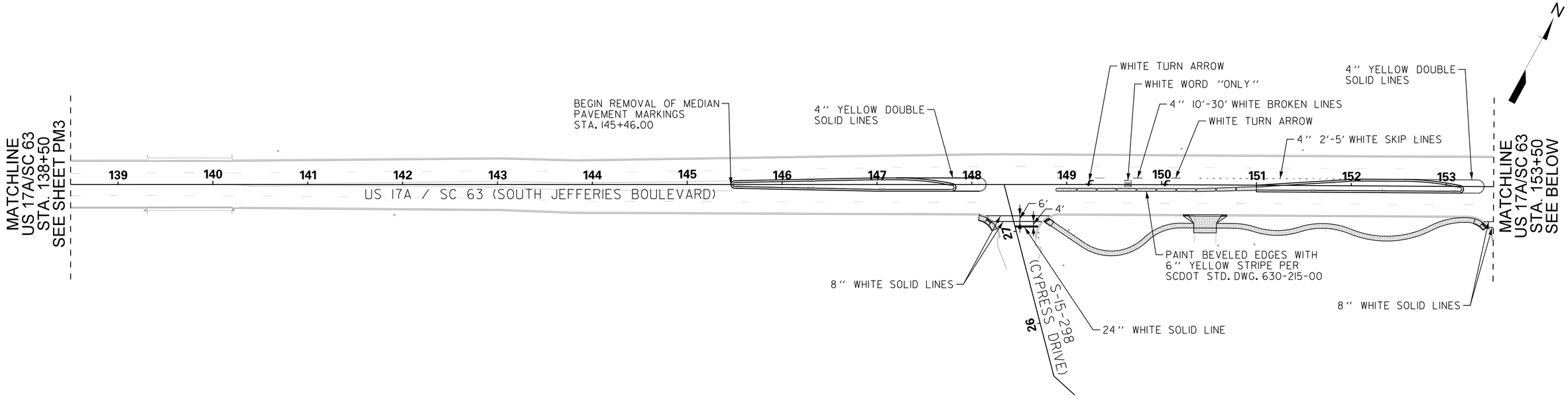
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	PM4



NOTES:
1. REFERENCE SCDOT STANDARD DRAWINGS 625-305-00, 625-410-00 (ALL ARROWS AND ONLYS), AND 630-215-00.
2. ALL PEDESTRIAN WARNING SIGNS TO BE FLUORESCENT YELLOW GREEN.
3. PEDESTRIAN RAMPS PER SCDOT STD. DWG. 720-951-11 & 720-952-11. REFER TO PLAN SHEETS 18 THROUGH 21.

PLANS PREPARED BY:
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Stantec Consulting Services Inc.
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North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 27825 4/21/21 JUSTIN KENNETH LEE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
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TOPO. DATE
DWG. DATE
R/W DATE
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PAVEMENT MARKING & SIGNING PLAN

SCALE: 1" = 50' RTE. US 17A / SC 63

User: jtye
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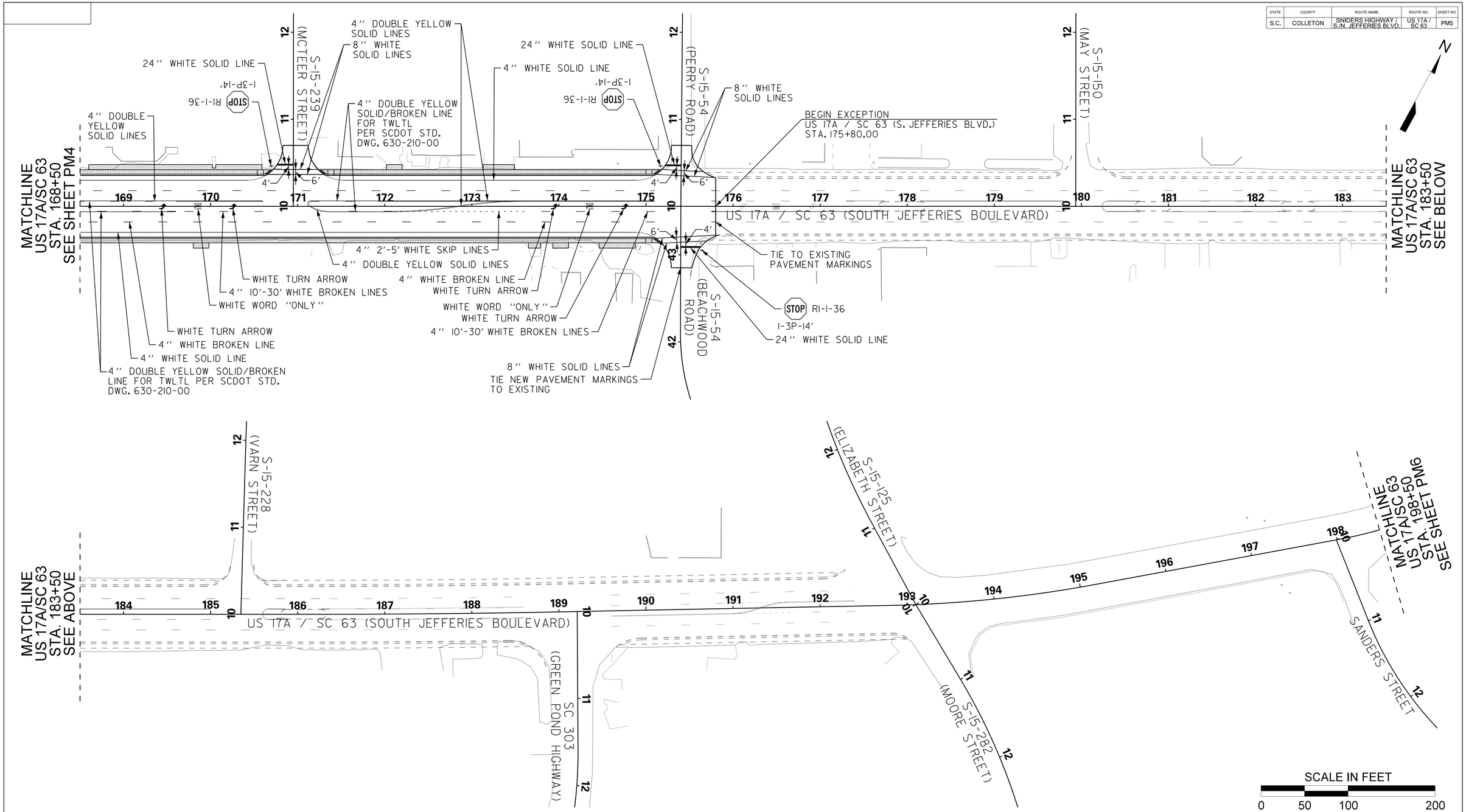
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	PM5



NOTES:
1. REFERENCE SCDOT STANDARD DRAWINGS 625-305-00, 625-410-00 (ALL ARROWS AND ONLYS), AND 630-215-00.
2. PEDESTRIAN RAMPS PER SCDOT STD. DWG. 720-952-11. REFER TO PLAN SHEETS 21 THROUGH 22.

PLANS PREPARED BY:

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North Charleston, SC 29418
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SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER 4/1/21 No. 27825 JUSTIN KENNETH TATE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
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TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PAVEMENT MARKING & SIGNING PLAN

SCALE: 1" = 50' RTE. US 17A / SC 63

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63 / US 17A	PM6

N

MATCHLINE
US 17A/SC 63
STA. 198+50
SEE SHEET PM5

S-15-467
(HIERS STREET)

S-15-128
(W. WASHINGTON ST.)

US 17A / SC 63 (SOUTH JEFFERIES BOULEVARD)

US 17A (SOUTH JEFFERIES BOULEVARD)

MATCHLINE
US 17A/SC 63
STA. 212+50
SEE BELOW

S-15-121
(CARN STREET)

SC 63
(HAMPTON STREET)

EAST WASHINGTON STREET

MATCHLINE
US 17A/SC 63
STA. 212+50
SEE ABOVE

S-15-293
(BENSON STREET)

END EXCEPTION
US 17A (N. JEFFERIES BLVD.)
STA. 214+64.58

4'' 10'-30' WHITE BROKEN LINES

WHITE TURN ARROW

8'' WHITE SOLID LINES

PAINT BEVELED EDGES WITH 6'' YELLOW STRIPE PER SCDOT STD. DWG. 630-215-00

WHITE WORD ''ONLY''

WHITE TURN ARROW

4'' 2'-5' WHITE SKIP LINES

WHITE TURN ARROW

R3-2-36
ADD TO EX. STOP SIGN

R5-1-36
DO NOT ENTER
1-3P-14'

R3-2-36
1-3P-14'

S-15-68
(FOREST HILLS ROAD)

PAINT BEVELED EDGES WITH 6'' YELLOW STRIPE PER SCDOT STD. DWG. 630-215-00

R6-1R-36
ONE WAY
1-3P-13'

MATCHLINE
US 15
STA. 226+50
SEE SHEET PM7

4'' 2'-5' WHITE SKIP LINES

ASPHALT PAVEMENT TEXTURING

US 15 (NORTH JEFFERIES BOULEVARD)

US 17A (WICHMAN STREET)

8'' WHITE SOLID LINES

4'' 2'-5' WHITE SKIP LINES

WHITE TURN ARROW

WHITE WORD ''ONLY''

4'' 10'-30' WHITE BROKEN LINES

WHITE TURN ARROW

8'' WHITE SOLID LINE

NORTH WALTER STREET

WHITE TURN ARROW

R6-1R-36
ONE WAY
1-3P-13'

SC 64 (PAUL STREET)

WHITE TURN ARROW

SCALE IN FEET
0 50 100 200

NOTES:
1. REFERENCE SCDOT STANDARD DRAWINGS 625-305-00, 625-410-00 (ALL ARROWS AND ONLYS), AND 630-215-00.

PLANS PREPARED BY:

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SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
JUSTIN KENNETH KANE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
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TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PAVEMENT MARKING & SIGNING PLAN

SCALE: 1" = 50' RTE. SC 63/US 17A/US 15

User: jtye
U:\17100230\4\transportation\roadway\drawings\plan_sheets\02304_54_pm6.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	PM7

N

S-15-335 (IVANHOE ROAD)

S-15-229 (IRELAND CREEK DRIVE)

S-15-926 (EDDIE CHASTEEN DRIVE)

US 15 (NORTH JEFFERIES BOULEVARD)

S-15-482 (SANTEE LANE)

S-15-229 (SWEAT STREET)

SC 64 (BELLS HIGHWAY)

MATCHLINE US 15 STA. 241+50 SEE BELOW

MATCHLINE US 15 STA. 241+50 SEE ABOVE

MATCHLINE US 15 STA. 246+95 SEE SHEET PM6

BEGIN EXCEPTION
US 15 (N. JEFFERIES BLVD.)
STA. 230+46.00

END EXCEPTION
US 15 (N. JEFFERIES BLVD.)
STA. 244+61.55

END CONSTRUCTION
US 15 (N. JEFFERIES BLVD.)
STA. 245+71.03

WHITE COMBINATION TURN ARROW
WHITE WORD "ONLY"
WHITE TURN ARROW
24" WHITE SOLID LINE
8" WHITE SOLID LINES
PAINT BEVELED EDGES WITH 6" YELLOW STRIPE
24" WHITE SOLID LINE
4" WHITE SOLID LINES
6'
4'
ONE WAY R6-1R-36
ONE WAY I-3P-13
4" 10'-30' WHITE BROKEN LINES
WHITE TURN ARROW
WHITE WORD "ONLY"
WHITE TURN ARROW
ASPHALT PAVEMENT TEXTURING

SCALE IN FEET
0 50 100 200

NOTES:
1. REFERENCE SCDOT STANDARD DRAWINGS 625-305-00, 625-410-00 (ALL ARROWS AND ONLYS), AND 630-215-00.
2. PEDESTRIAN RAMPS PER SCDOT STD. DWG. 720-951-11. REFER TO PLAN SHEET 26.

PLANS PREPARED BY:
Stantec
Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER JUSTIN KENNETH LOE No. 27825 4/21/21

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

TOPO. DATE
DWG. DATE
R/W DATE
GROUP -

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
PAVEMENT MARKING & SIGNING PLAN

SCALE: 1" = 50' RTE. US 15

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	TS1

SIGNAL EQUIPMENT

ONE (1) NEW 8-PHASE FULLY ACTUATED STANDARD 2070 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND BASE-MOUNTED 332A CABINET.

FIVE (5) NEW ORACLE 2-CHANNEL VEHICLE DETECTOR UNITS — EXT. ☐ PROP. ■

PEDESTRIAN SIGNALS: EXT. △P PROP. ▲P W/ACT. &SIGN

VEHICLE SIGNALS: EXT. ○→ PROP. ●→

HEAD NUMBER	2	4	5conc	5,6F	6	4P	6P
LENS	R Y G	R Y G	Y→ G→	◂R ◂Y ◁FY ◂G	R Y G		
PHASE	2	4	5	5,OLC	6	4P	6P
SIZE	12"	12"	12"	12"	12"	16"	16"
QUANTITY	2	2	1	1	2	2	2

OLA:
OLB: OLC: Ø5+Ø6(FYA)
OLD:

METAL POLES W/O MAST ARMS: EXT. ○M PROP. ●M

METAL POLES W/ MAST ARMS: EXT. ◯MAS PROP. ●MAS

WOOD POLES AS NECESSARY: EXT. ◒W PROP. ●W

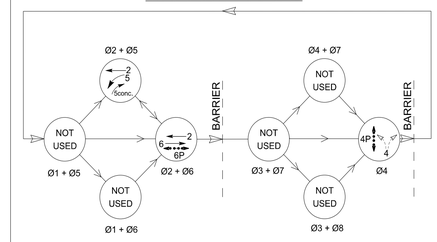
SPLICE BOXES AS NECESSARY: EXT. ▨ PROP. ▨

INDUCTANCE LOOPS AS NECESSARY: EXT. ▭ PROP. ▭

SIGNAL TIMINGS

INTERVAL	PHASE 2	4	5	6
WALK	-	7	-	7
DON'T WALK	-	21	-	27
MIN INITIAL	12	8	8	12
MAX INITIAL	-	-	-	-
ADD/VEH	-	-	-	-
VEH EXT	2.5	3.0	3.0	2.5
TIME BFR REDUCE	-	-	-	-
TIME TO REDUCE	-	-	-	-
MIN GAP	-	-	-	-
MAX LIMIT	60	30	15	60
MAXIMUM 2	-	-	-	-
YELLOW	3.0	3.0	3.0	3.0
RED CLEAR	2.9	3.3	2.9	2.9

NEMA PHASING

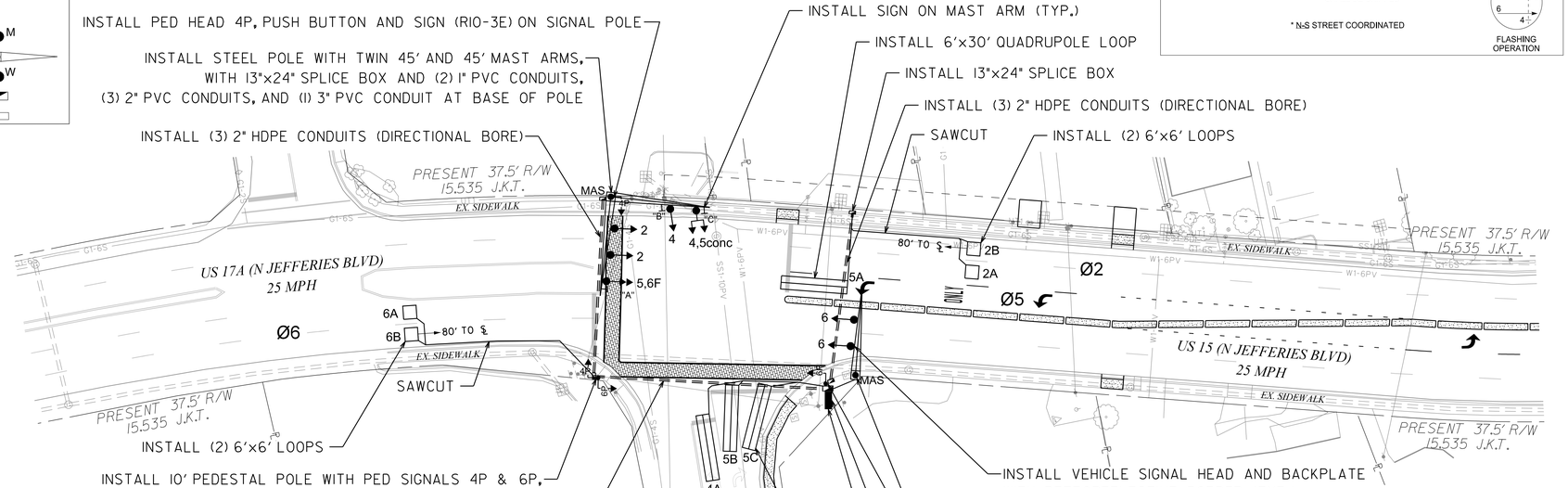


NOTE: ACTUATED PHASES HAVING NO CALL, SHALL BE SKIPPED

* N&S STREET COORDINATED

FLASHING OPERATION

TABLE OF OPERATION	PHASE IN OPERATION Ø2 + Ø5	Ø2 + Ø6	Ø4	FLASH
SIGNAL HEAD #				
2	G	G	R	Y
4	R	R	G	R
5conc	G→	-	-	-
5,6F	◂G	◁FY	◂R	◂Y
6	R	G	R	Y
4P	DW	DW	W/FDW	DRK
6P	DW	W/FDW	DW	DRK



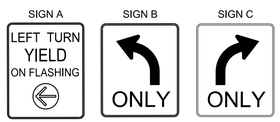
GENERAL NOTES:

1. CONTRACTOR SHALL COORDINATE WITH EXISTING UTILITIES FOR CONDUIT PLACEMENT.
2. INSTALL BACKPLATES WITH RETROREFLECTIVE BORDERS ON ALL SIGNAL HEAD
3. PROGRAM OVERLAP (FYA) YELLOW & RED CLEARANCE TIMES TO MATCH PARENT THROUGH PHASE VALUES: OLC TO MATCH Ø6
4. REMOVE EXISTING SIGNAL POLE FOUNDATIONS TO A MINIMUM OF 18" BELOW GRADE.
5. RETURN ALL SALVAGEABLE SIGNAL EQUIPMENT TO DISTRICT SIX SIGNAL SHOP
6. MAST ARM LENGTHS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO CHANGE BASED UPON FINAL POLE AND FOUNDATION LOCATIONS.
7. FINAL POLE LOCATIONS MUST BE APPROVED BY SCDOT AND SHOULD BE DONE PRIOR TO ORDERING MATERIALS.
8. CONTRACTOR IS RESPONSIBLE FOR OBTAINING MAST ARMS OF ADEQUATE LENGTH.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR MAST ARM SIGNAL POLE FOUNDATION DESIGN.
10. MAST ARMS, SIGNAL SUPPORT POLES, AND PEDESTRIAN POLES SHALL BE POWDERCOATED BLACK, AS DETAILED IN THE SUPPLEMENTAL SPECIFICATIONS.
11. VEHICLE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, AND PEDESTRIAN SIGN BRACKETS SHALL BE BLACK, AS DETAILED IN THE SUPPLEMENTAL SPECIFICATIONS.

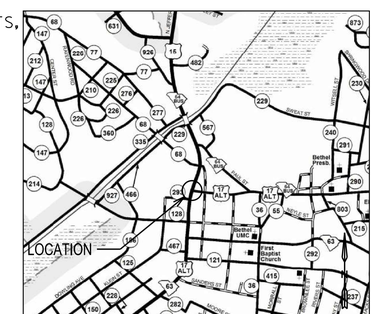
DETECTOR INSTALLATION CHART

PHASE/ LOOP LTR#	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	LOCK	NON-LOCK	PULSE	PRES	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD, SWITCHING, etc.	LOOP DESIGN SIZE _X_	NO.OF TURNS	DIST. FROM ℄
2A	1	---	2	X	-	-	X	---	---	LOOP	6'x6'	4	80'
2B	1	---	2	X	-	-	X	---	---	LOOP	6'x6'	4	80'
4A	2	---	4	-	X	-	X	---	---	QUADRUPOLE	6'x30'	2-4-2	-3'
5A	3	---	5	-	X	-	X	---	---	QUADRUPOLE	6'x30'	2-4-2	-3'
5B	4	---	5	-	X	-	X	10	---	QUAD. LOOP CALL & EXT. Ø5	6'x30'	2-4-2	-3'
5C	4	---	5	-	X	-	X	10	---	QUAD. LOOP CALL & EXT. Ø5	6'x30'	2-4-2	-3'
6A	5	---	6	X	-	-	X	---	---	LOOP	6'x6'	4	80'
6B	5	---	6	X	-	-	X	---	---	LOOP	6'x6'	4	80'

PEDESTRIAN PUSHBUTTON ASSEMBLIES AND SIGN (R10-3E)



R10-12A-30 R3-5L-30 R3-5R-30



ROUTE NUMBER	US 15 (Jefferies Blvd)		US 17A (Wichman St)	
APPROACH DIRECTION	NB	SB		WB
SIGNAL DESIGN SPEED	25	25		25
GRADE (%)	*-1.5%	*0%		*0%

* ESTIMATED

SCALE IN FEET

0 30 60 120

PLANS PREPARED BY:

Stantec

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4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 34085 ANDREW C. EGAN
4/20/2021

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

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
US 15 (N JEFFERIES) & US 17A (WICHMAN)
(TS6604) TRAFFIC SIGNAL PLAN

SCALE: 1" = 30' RTE. US 15

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	TS2

SIGNAL EQUIPMENT

ONE (1) NEW 8-PHASE FULLY ACTUATED STANDARD 2070 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND BASE-MOUNTED 332A CABINET.

FIVE (5) NEW ORACLE 2-CHANNEL VEHICLE DETECTOR UNITS — EXT. ☐ PROP. ■

PEDESTRIAN SIGNALS: EXT. △P PROP. ▲P W/ACT. &SIGN

VEHICLE SIGNALS: EXT. ○→ PROP. ●→

HEAD NUMBER	1conc	1,2F	2	4	6F	6	8	2P	6P	8P
LENS	Y	◁R ◁Y ◁FY	R Y	R Y	◁R ◁Y ◁FY	R Y	R Y			
	G	◁G	G	G	◁FY	G	G			
PHASE	1	1,OLA	2	4	OLC	6	8	2P	6P	8P
SIZE	12"	12"	12"	12"	12"	12"	12"	16"	16"	16"
QUANTITY	1	1	2	3	1	2	2	2	2	2

OLA: Ø1+Ø2(FYA) OLC: Ø6(FYA)
OLB: OLD:

METAL POLES W/O MAST ARMS: EXT. ○M PROP. ●M
METAL POLES W/ MAST ARMS: EXT. ◯MAS PROP. ●MAS
WOOD POLES AS NECESSARY: EXT. ◒W PROP. ●W
SPLICE BOXES AS NECESSARY: EXT. ▨ PROP. ◪
INDUCTANCE LOOPS AS NECESSARY: EXT. ▭ PROP. ▭

SIGNAL TIMINGS

INTERVAL	PHASE 1	2	4	6	8
WALK	-	7	-	7	7
DON'T WALK	-	15	-	9	21
MIN INITIAL	8	15	8	15	8
MAX INITIAL	-	-	-	-	-
ADD/VEH	-	-	-	-	-
VEH EXT	3.0	3.0	3.0	3.0	3.0
TIME BFR REDUCE	-	-	-	-	-
TIME TO REDUCE	-	-	-	-	-
MIN GAP	-	-	-	-	-
MAX LIMIT	15	60	30	60	30
MAXIMUM 2	-	-	-	-	-
YELLOW	3.0	3.6	3.3	3.6	3.3
RED CLEAR	3.1	3.1	3.4	3.1	3.4

NEMA PHASING

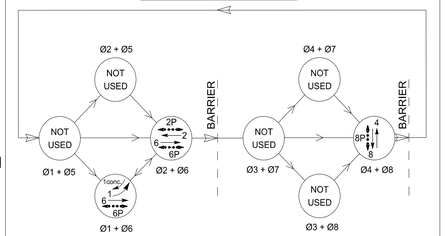
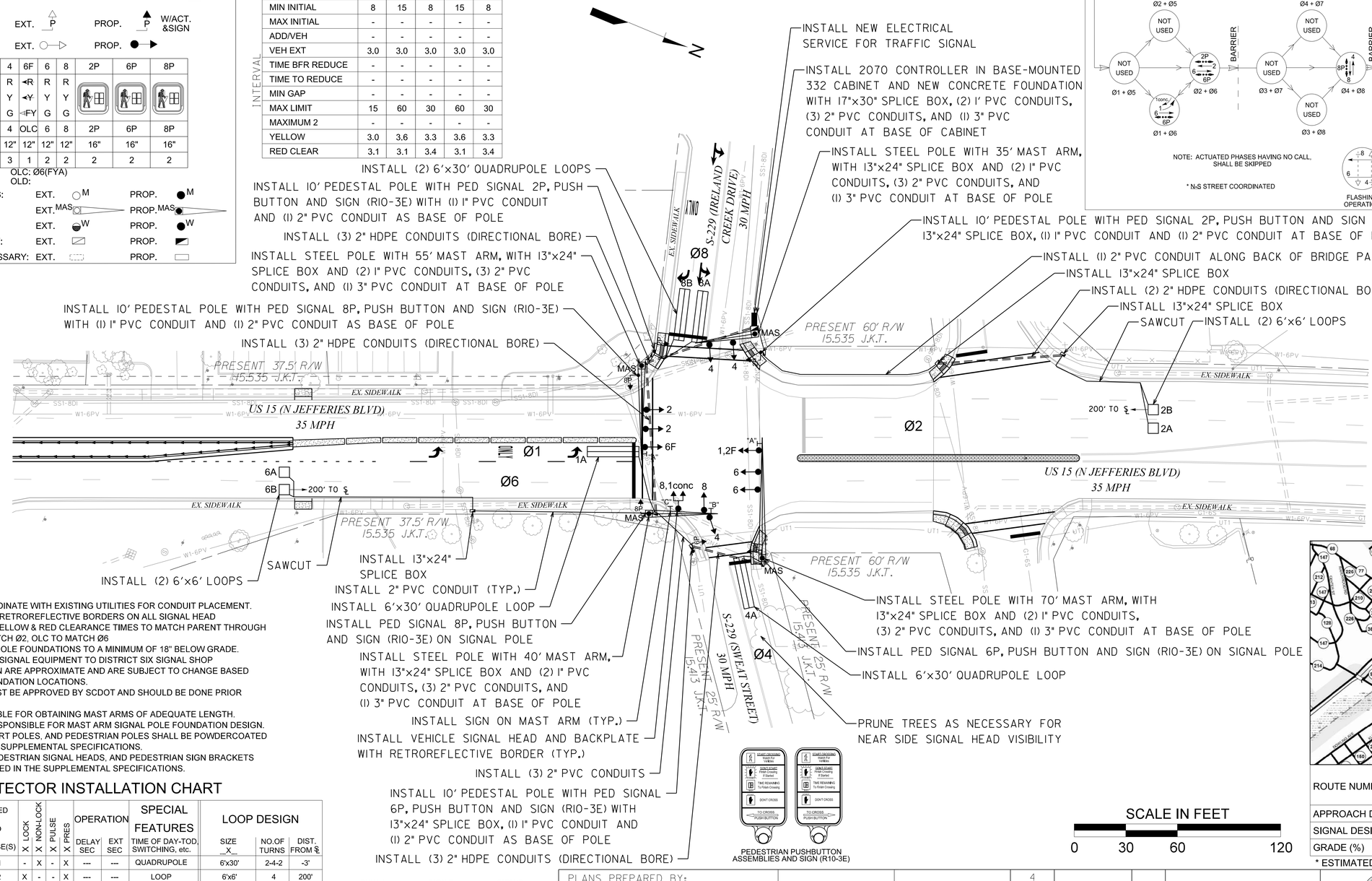
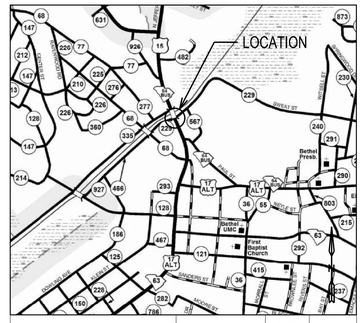


TABLE OF OPERATION	PHASE IN OPERATION Ø1 + Ø6	Ø2 + Ø6	Ø4 + Ø8	FLASH
SIGNAL HEAD #				
1conc	G▸	-	-	-
1,2F	◁G	◁FY	◁R	◁Y
2	R	G	R	Y
4	R	R	G	R
6F	◁FY	◁FY	◁R	◁Y
6	G	G	R	Y
8	R	R	G	R
2P	DW	W/FDW	DW	DRK
6P	W/FDW	W/FDW	DW	DRK
8P	DW	DW	W/FDW	DRK



PEDESTRIAN PUSHBUTTON ASSEMBLIES AND SIGN (R10-3E)

SCALE IN FEET
0 30 60 120



ROUTE NUMBER	US 15 (Jefferies Blvd)		S-229 (Ireland Creek Dr)	S-229 (Sweat St)
APPROACH DIRECTION	NB	SB	EB	WB
SIGNAL DESIGN SPEED	35	35	*30	30
GRADE (%)	*0%	*0%	*0%	*0%

* ESTIMATED

GENERAL NOTES:
1. CONTRACTOR SHALL COORDINATE WITH EXISTING UTILITIES FOR CONDUIT PLACEMENT.
2. INSTALL BACKPLATES WITH RETROREFLECTIVE BORDERS ON ALL SIGNAL HEAD
3. PROGRAM OVERLAP (FYA) YELLOW & RED CLEARANCE TIMES TO MATCH PARENT THROUGH PHASE VALUES: OLA TO MATCH Ø2, OLC TO MATCH Ø6
4. REMOVE EXISTING SIGNAL POLE FOUNDATIONS TO A MINIMUM OF 18" BELOW GRADE.
5. RETURN ALL SALVAGEABLE SIGNAL EQUIPMENT TO DISTRICT SIX SIGNAL SHOP
6. MAST ARM LENGTHS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO CHANGE BASED UPON FINAL POLE AND FOUNDATION LOCATIONS.
7. FINAL POLE LOCATIONS MUST BE APPROVED BY SCDOT AND SHOULD BE DONE PRIOR TO ORDERING MATERIALS.
8. CONTRACTOR IS RESPONSIBLE FOR OBTAINING MAST ARMS OF ADEQUATE LENGTH.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR MAST ARM SIGNAL POLE FOUNDATION DESIGN.
10. MAST ARMS, SIGNAL SUPPORT POLES, AND PEDESTRIAN POLES SHALL BE POWDERCOATED BLACK, AS DETAILED IN THE SUPPLEMENTAL SPECIFICATIONS.
11. VEHICLE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, AND PEDESTRIAN SIGN BRACKETS SHALL BE BLACK, AS DETAILED IN THE SUPPLEMENTAL SPECIFICATIONS.

DETECTOR INSTALLATION CHART

PHASE/ LOOP LTR#	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	LOCK	NON-LOCK	PULSE	PRES	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD, SWITCHING, etc.	LOOP DESIGN SIZE _X_	NO.OF TURNS	DIST. FROM ℄
1A	1	---	1	-	X	-	X	---	---	QUADRUPOLE	6'x30'	2-4-2	-3'
2A	2	---	2	X	-	-	X	---	---	LOOP	6'x6'	4	200'
2B	2	---	2	X	-	-	X	---	---	LOOP	6'x6'	4	200'
4A	3	---	4	-	X	-	X	---	---	QUADRUPOLE	6'x30'	2-4-2	-3'
6A	4	---	6	X	-	-	X	---	---	LOOP	6'x6'	4	200'
6B	4	---	6	X	-	-	X	---	---	LOOP	6'x6'	4	200'
8A	5	---	8	-	X	-	X	---	---	QUADRUPOLE	6'x30'	2-4-2	-3'
8B	5	---	8	-	X	-	X	---	---	QUADRUPOLE	6'x30'	2-4-2	-3'

SIGN A: LEFT TURN YIELD ON FLASHING — R10-12A-30
SIGN B — R3-6L-30
SIGN C: ONLY — R3-5R-30

PLANS PREPARED BY:
Stantec
Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA — STANTEC CONSULTING SERVICES, INC. No. C02310 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — No. 34085 — LICENSED PROFESSIONAL ENGINEER — ANDREW C. EGAN — 4/20/2021

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

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
US 15 (JEFFERIES) & IRELAND CREEK/SWEAT (TS6603) TRAFFIC SIGNAL PLAN

SCALE: 1" = 30' RTE. US 15

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	TS3

SIGNAL EQUIPMENT

ONE (1) NEW 8-PHASE FULLY ACTUATED STANDARD 2070 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND BASE-MOUNTED 332A CABINET.

SIX (6) NEW ORACLE 2-CHANNEL VEHICLE DETECTOR UNITS — EXT. □ PROP. ■

PEDESTRIAN SIGNALS: EXT. △P PROP. ▲P W/ACT. &SIGN

VEHICLE SIGNALS: EXT. ○→ PROP. ●→

HEAD NUMBER	1conc	1	2	4	6F	6	8	2P	4P	6P	8P
LENS		◂R	R	R	◂R	R	R				
	Y▸	◂Y	Y	Y	◂Y	Y	Y				
	G▸	◂G	G	G	◂FY	G	G				
PHASE		1	1	2	4	OLC	6	8	2P	4P	6P	8P
SIZE		12"	12"	12"	12"	12"	12"	12"	16"	16"	16"	16"
QUANTITY		1	2	2	2	1	2	2	2	2	2	2

OLA: OLC: Ø6(FYA)
OLB: OLD:

METAL POLES W/O MAST ARMS: EXT. ○M PROP. ●M

METAL POLES W/ MAST ARMS: EXT. MAS PROP. MAS

WOOD POLES AS NECESSARY: EXT. W PROP. ●W

SPLICE BOXES AS NECESSARY: EXT. PROP.

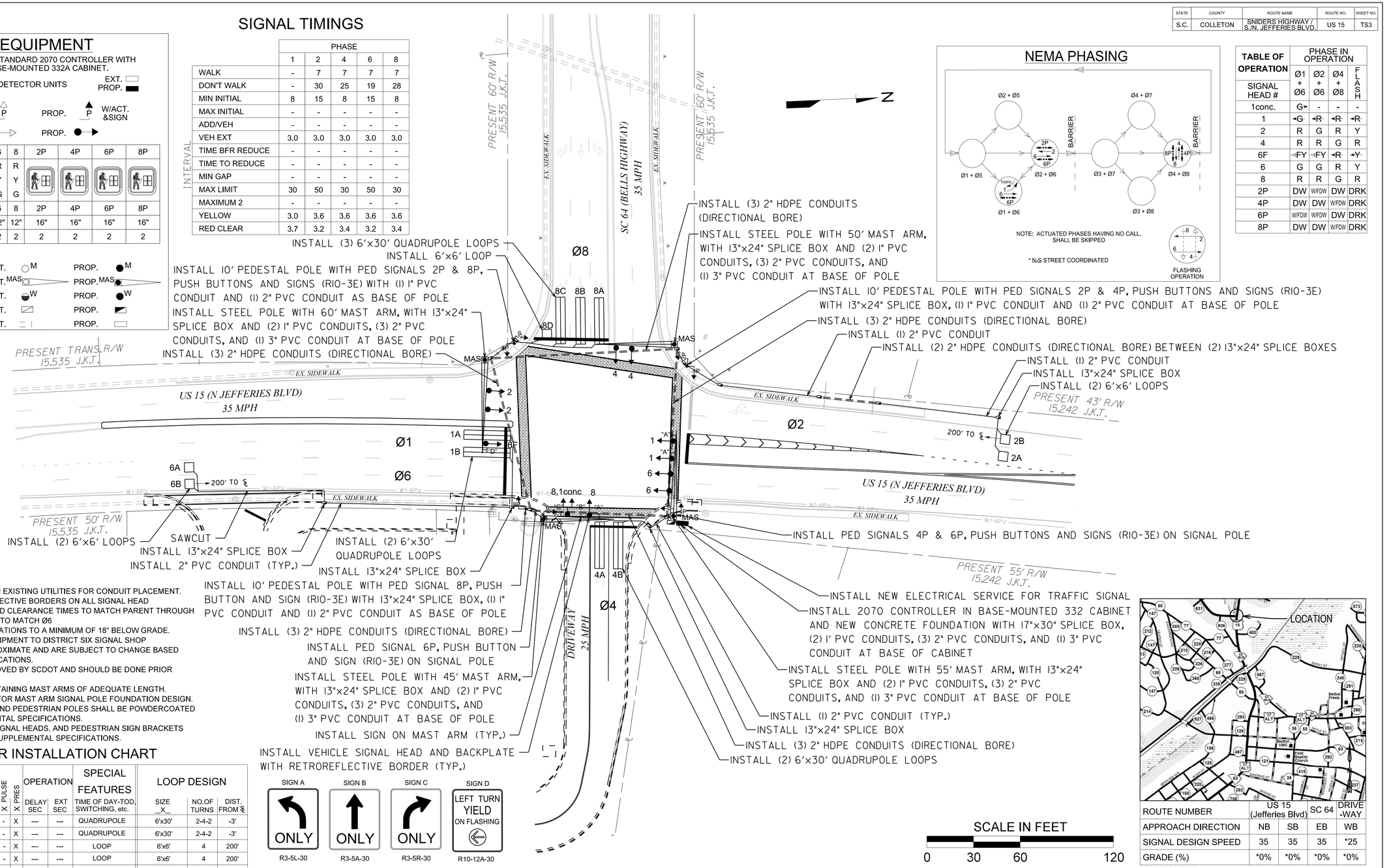
INDUCTANCE LOOPS AS NECESSARY: EXT. PROP.

SIGNAL TIMINGS

INTERVAL	PHASE 1	2	4	6	8
WALK	-	7	7	7	7
DON'T WALK	-	30	25	19	28
MIN INITIAL	8	15	8	15	8
MAX INITIAL	-	-	-	-	-
ADD/VEH	-	-	-	-	-
VEH EXT	3.0	3.0	3.0	3.0	3.0
TIME BFR REDUCE	-	-	-	-	-
TIME TO REDUCE	-	-	-	-	-
MIN GAP	-	-	-	-	-
MAX LIMIT	30	50	30	50	30
MAXIMUM 2	-	-	-	-	-
YELLOW	3.0	3.6	3.6	3.6	3.6
RED CLEAR	3.7	3.2	3.4	3.2	3.4

NEMA PHASING

TABLE OF OPERATION	PHASE IN OPERATION			
SIGNAL HEAD #	Ø1 + Ø6	Ø2 + Ø6	Ø4 + Ø8	FLASH
1conc.	G▸	-	-	-
1	◂G	◂R	◂R	◂R
2	R	G	R	Y
4	R	R	G	R
6F	◂FY	◂FY	◂R	◂Y
6	G	G	R	Y
8	R	R	G	R
2P	DW	W/FDW	DW	DRK
4P	DW	DW	W/FDW	DRK
6P	W/FDW	W/FDW	DW	DRK
8P	DW	DW	W/FDW	DRK



GENERAL NOTES:
1. CONTRACTOR SHALL COORDINATE WITH EXISTING UTILITIES FOR CONDUIT PLACEMENT.
2. INSTALL BACKPLATES WITH RETROREFLECTIVE BORDERS ON ALL SIGNAL HEAD
3. PROGRAM OVERLAP (FYA) YELLOW & RED CLEARANCE TIMES TO MATCH PARENT THROUGH PHASE VALUES: OLA TO MATCH Ø2, OLC TO MATCH Ø6
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DETECTOR INSTALLATION CHART

PHASE/ LOOP LTR#	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	LOCK	NON-LOCK	PULSE	PRES	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD SWITCHING, etc.	LOOP DESIGN SIZE _X_	NO.OF TURNS	DIST. FROM ℄
1A	1	---	1	-	X	-	X	---	---	QUADRUPOLE	6'x30'	2-4-2	-3'
1B	1	---	1	-	X	-	X	---	---	QUADRUPOLE	6'x30'	2-4-2	-3'
2A	2	---	2	X	-	-	X	---	---	LOOP	6'x6'	4	200'
2B	2	---	2	X	-	-	X	---	---	LOOP	6'x6'	4	200'
4A	3	---	4	-	X	-	X	---	---	QUADRUPOLE	6'x30'	2-4-2	-3'
4B	3	---	4	-	X	-	X	---	---	QUADRUPOLE	6'x30'	2-4-2	-3'
6A	4	---	6	X	-	-	X	---	---	LOOP	6'x6'	4	200'
6B	4	---	6	X	-	-	X	---	---	LOOP	6'x6'	4	200'
8A	5	---	8	-	X	-	X	---	---	QUADRUPOLE	6'x30'	2-4-2	-3'
8B	5	---	8	-	X	-	X	---	---	QUADRUPOLE	6'x30'	2-4-2	-3'
8C	6	---	8	-	X	-	X	10	---	QUADRUPOLE	6'x30'	2-4-2	-3'
8D	6	---	8	-	X	-	X	10	---	LOOP	6'x6'	4	0'

SIGN A — R3-5L-30 — ONLY

SIGN B — R3-5A-30 — ONLY

SIGN C — R3-5R-30 — ONLY

SIGN D — R10-12A-30 — LEFT TURN YIELD ON FLASHING

PEDESTRIAN PUSHBUTTON ASSEMBLIES AND SIGN (R10-3E)

ROUTE NUMBER	US 15 (Jefferies Blvd)	SC 64		DRIVE -WAY
APPROACH DIRECTION	NB	SB	EB	WB
SIGNAL DESIGN SPEED	35	35	35	*25
GRADE (%)	*0%	*0%	*0%	*0%

* ESTIMATED

SCALE IN FEET
0 30 60 120

PLANS PREPARED BY:

Stantec

Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 34085 ANDREW C. EGAN 4/20/2021

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

TOPO. DATE
DWG. DATE
R/W DATE
GROUP -

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
US 15 (JEFFERIES) & SC 64 (BELLS)
(TS6602) TRAFFIC SIGNAL PLAN

SCALE: 1" = 30' RTE. US 15

User: jtye
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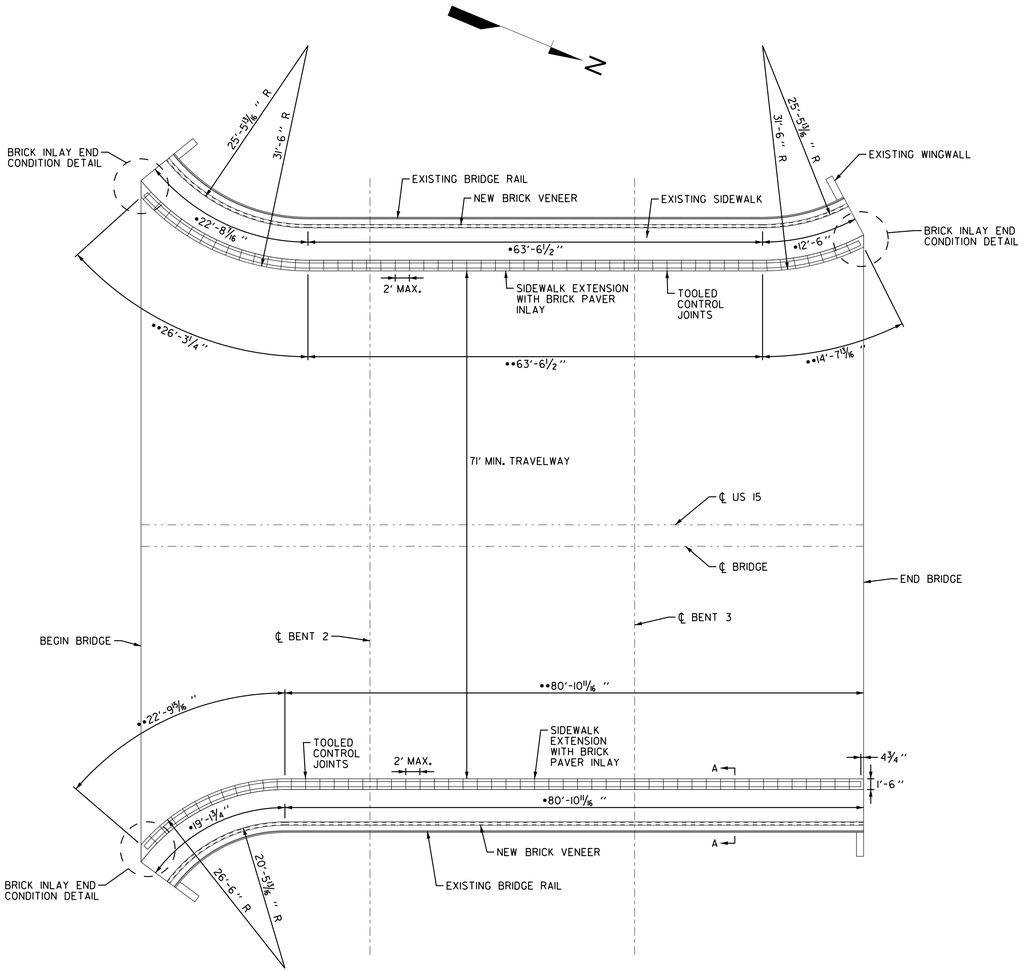
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD. US17A/US15	SC 63/	S1

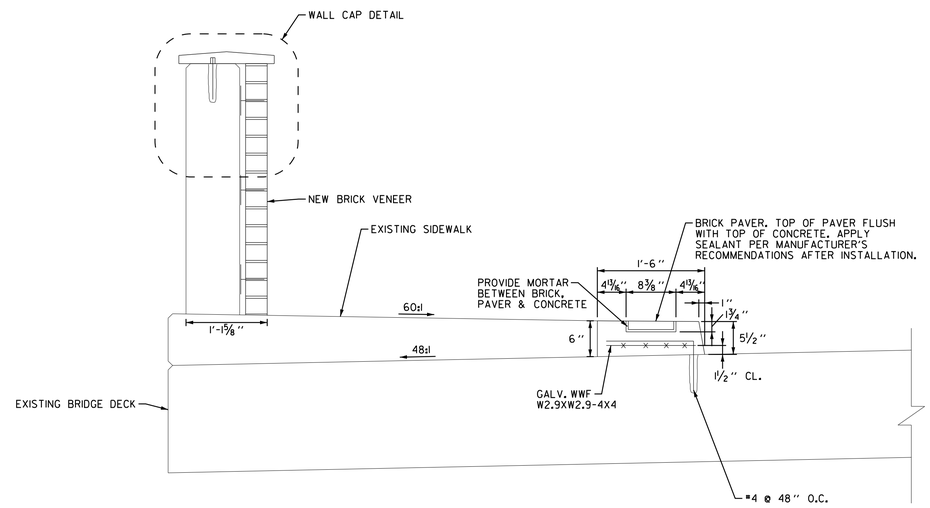


SIDEWALK MODIFICATION PLAN

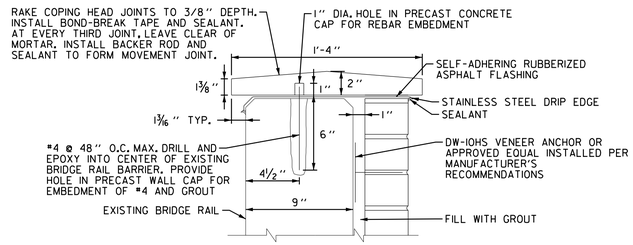
1" = 10'

- • ALONG INSIDE FACE OF PRECAST CONCRETE CAP
- •• ALONG GUTTER SIDE OF SIDEWALK EXTENSION

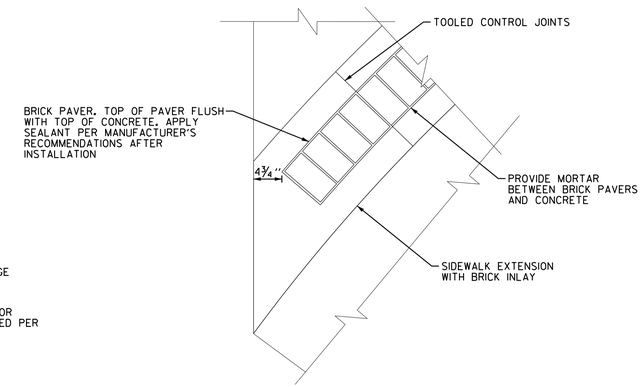
NOTES:
1. PROVIDE ALL WORKMANSHIP IN ACCORDANCE WITH THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION 2007 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, UNLESS OTHERWISE SPECIFIED ON THE PLANS OR IN THE SPECIAL PROVISIONS.
2. CONCRETE SHALL BE SCDOT CLASS 4000.
3. DEFORMED REINFORCING STEEL SHALL BE ASTM A706, LATEST REVISION, GRADE 60.
4. DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE CURRENT C.R.S.I. MANUAL OF STANDARD PRACTICE.
5. CONCRETE COVER FOR REINFORCING SHALL BE 2" UNLESS NOTED OTHERWISE.
6. INCLUDE ALL COSTS ASSOCIATED WITH SIDEWALK EXTENSIONS, RAILING WALL BRICK VENEER, BRICK PAVERS AND RAILING WALL PRECAST CONCRETE CAP INCLUDING BUT NOT LIMITED TO REINFORCING, CONCRETE, MASONRY, MANUFACTURING AND INSTALLATION IN THE LUMP SUM PRICE FOR PAYITEM NUMBER 5000001 SIDEWALK & RAILING BRICK VENEER.
7. CONTRACTOR TO VERIFY ALL BRIDGE DIMENSIONS PRIOR TO FABRICATION OF PRECAST CONCRETE CAP.
8. PROVIDE AND INSTALL ANCHORAGES IN ACCORDANCE WITH THE REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATION FOR ADHESIVELY BONDED ANCHORS AND DOWELS. USE AN ADHESIVE BONDING SYSTEM THAT HAS A MINIMUM BOND STRENGTH OF 1.5 KSI. FIELD TESTING OF THE ANCHORAGE IS NOT REQUIRED.
9. BRICK VENEER & THIN PAVER SHALL BE PINEHALL BRICK. BRICK VENEER DIMENSIONS: 7 5/8"X2 1/4"X3 5/8", THIN PAVER DIMENSIONS: 7 5/8"X1 3/8"X3 1/2". COLOR: FULL RANGE OR APPROVED EQUAL.
10. PRECAST CONCRETE CAP TO BE COLOR: ARGOS SAVANNAH IVORY



1 SI SECTION A-A
1" = 1'



2 SI WALL CAP DETAIL
1" = 6"



3 SI BRICK INLAY END CONDITION DETAIL
1" = 1'

PLANS PREPARED BY:

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www.stantec.com

SOUTH CAROLINA — STANTEC CONSULTING SERVICES, INC. No. C02310 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — 4/21/21 — No. 27825 — JUSTIN KENNETH TATE

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

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
STRUCTURE PLAN

SCALE: VARIES RTE. SC63/US17A/US15

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63/ US17A/US15	EC1

EROSION CONTROL DATA SHEET

RECEIVING WATERS

ROAD / ROUTE	OUTFALL DITCH STATION	SIDE	NAME OF RECEIVING WATERS	NAME OF ULTIMATE RECEIVING WATERS
SC 63	58+40	RT	TRIBUTARY TO	ASHEPOO RIVER
			ASHEPOO RIVER	
SC 63	76+50	RT	TRIBUTARY TO	ASHEPOO RIVER
			ASHEPOO RIVER	
SC 63	96+60	LT	TRIBUTARY TO	ASHEPOO RIVER
			ASHEPOO RIVER	
SC 63	112+60	LT	TRIBUTARY TO	ASHEPOO RIVER
			ASHEPOO RIVER	
US 17A/SC 63	120+00	LT	ASHEPOO RIVER	ATLANTIC OCEAN
US 17A/SC 63	120+00	RT	ASHEPOO RIVER	ATLANTIC OCEAN
US 17A/SC 63	144+40	RT	IRELAND CREEK	ASHEPOO RIVER

ROAD / ROUTE	OUTFALL DITCH STATION	SIDE	NAME OF RECEIVING WATERS	NAME OF ULTIMATE RECEIVING WATERS
US 17A/SC 63	185+75	LT	TRIBUTARY TO	IRELAND CREEK
US 15	228+80	LT	IRELAND CREEK	ASHEPOO RIVER
US 15	244+50	RT	IRELAND CREEK	ASHEPOO RIVER

SOIL TYPES

ROAD / ROUTE	STATION TO STATION		SOIL PARTICLE SIZE (COARSE / FINE)	ZONE
SC 63 /	10+00	250+00	FINE	*CP
US 17A /				
US 15				
*COASTAL	PLAINS			

TEMPORARY EROSION CONTROL BLANKET

ROAD / ROUTE	STATION TO STATION		SIDE	DEPTH OF BLANKET (FT)	DITCH BOTTOM WIDTH (FT)	SLOPES x : 1 FRONT	BACK	MSY
							TOTAL	0.000

TURF REINFORCED MATTING (TRM)

ROAD / ROUTE	STATION TO STATION		SIDE	DEPTH OF MAT (FT)	SLOPES (x : 1) FRONT	BACK	DITCH BOTTOM WIDTH (FT)	TYPE 1 (MSY)	TYPE 2 (MSY)	TYPE 3 (MSY)
							TOTALS	0.000	0.000	0.000

SEDIMENT TUBES IN DITCHES

ROAD / ROUTE	STATION TO STATION		SIDE	AVERAGE LENGTH	SPACING (FT)	TOTAL	COMMENTS
					GRAND TOTAL	0.000	

SEDIMENT DAM

NO	ROAD / ROUTE	STATION	SIDE	DRAINED OR NOT DRAINED	LENGTH OF SILT BASIN	WIDTH OF SILT BASIN	DAM HEIGHT	SIDE SLOPE OF SILT BASIN	SPILLWAY BOTTOM WIDTH	DAM BOTTOM WIDTH	RIP RAP CLASS	TOTAL STORAGE VOLUME	SEDIMENT STORAGE HEIGHT	OUTFALL CHANNEL WIDTH	OUTFALL CHANNEL DEPTH	OUTFALL CHANNEL LENGTH

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STANTEC CONSULTING SERVICES, INC. No. C02310

4/21/21
No. 27825
JUSTIN KENNETH

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

TOPO. ________ DATE ________
DWG. ________ DATE ________ GROUP _____ - ______
R/W ________ DATE ________

CITY OF
WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
EROSION CONTROL DATA SHEET

SCALE: N/A
RTE. SC63/US17A/US15

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63/ US17A/US15	EC2

EROSION CONTROL NOTES

SCDHEC STANDARD NOTES

1. IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL 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 WITH GRASSING 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 SEDIMENT 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 CONSTRUCTION AREAS 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 BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.

11. A COPY OF THE SWPPP, INSPECTIONS 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.).

SCDHEC STANDARD NOTES (CONTINUED)

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$^{5}/_{32}$ 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.

SEDIMENT AND EROSION CONTROL GENERAL NOTES

1. CONTACT COLLETON COUNTY AND SCDOT 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

2. CLEARING AND GRUBBING
   THE CONTRACTOR WILL BE REQUIRED TO CLEAR ALL AREAS NECESSARY FOR THE CONSTRUCTION OF ANY SEDIMENT DAMS AND INSTALL THE SEDIMENT DAMS AND ALL OTHER PERIMETER EROSION CONTROL MEASURES PRIOR TO CLEARING AND GRUBBING ACTIVITIES. ALSO, THE CONTRACTOR SHALL STAGE HIS CLEARING AND GRUBBING WORK ALONG WITH HIS ROADWAY CONSTRUCTION WORK TO MINIMIZE THE AMOUNT OF EROSION AND SEDIMENTATION. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED DURING ALL STAGES OF CONSTRUCTION.

3. SEEDING
   SEEDING SHALL BE ACCOMPLISHED ACCORDING TO S.C.D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION 2007 EDITION, SECTION 810.

4. EROSION CONTROL MEASURES
   ALL EROSION CONTROL MEASURES SHALL COMPLY WITH S.C.D.O.T. STANDARD DRAWINGS, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2007 EDITION, AND THE SUPPLEMENTAL SPECIFICATIONS.

5. STABILIZED CONSTRUCTION ENTRANCES
   STABILIZED CONSTRUCTION ENTRANCES SHALL BE LOCATED BY THE FIELD ENGINEER. STABILIZED CONSTRUCTION ENTRANCES SHALL BE LOCATED IN ANY AREAS WHERE CONSTRUCTION TRAFFIC WILL ENTER THE LIMITS OF DISTURBANCE. STABILIZED CONSTRUCTION ENTRANCES SHALL BE MAINTAINED THROUGHOUT THE PROJECT.

SEDIMENT AND EROSION CONTROL CONSTRUCTION SEQUENCE

1. CONTACT COLLETON COUNTY AND SCDOT 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. INSTALL PERIMETER EROSION CONTROL DEVICES.
3. BEGIN GRADING AND STORM DRAINAGE CONSTRUCTION.
4. INSTALL INTERNAL TEMPORARY EROSION CONTROL DEVICES AS NEEDED DURING GRADING ACTIVITIES.
5. REMOVE BUILT-UP SEDIMENT AS NEEDED.
6. PLACE PERMANENT VEGETATION AS GRADING IS COMPLETED.
7. REMOVE INTERNAL TEMPORARY EROSION CONTROL DEVICES FOR STABILIZED AREAS.
8. REMOVE PERIMETER EROSION CONTROL DEVICES.
9. CONTACT COLLETON COUNTY AND SCDOT FOR FINAL INSPECTION AND CLOSEOUT.

PLANS PREPARED BY:
Stantec
Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA — STANTEC CONSULTING SERVICES, INC. — No. C02310 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER — LICENSED — 4/21/21 — No. 27825 — JUSTIN KENNETH TATE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
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TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
EROSION CONTROL NOTES

SCALE: N/A RTE. SC63/US17A/US15

User: jtye
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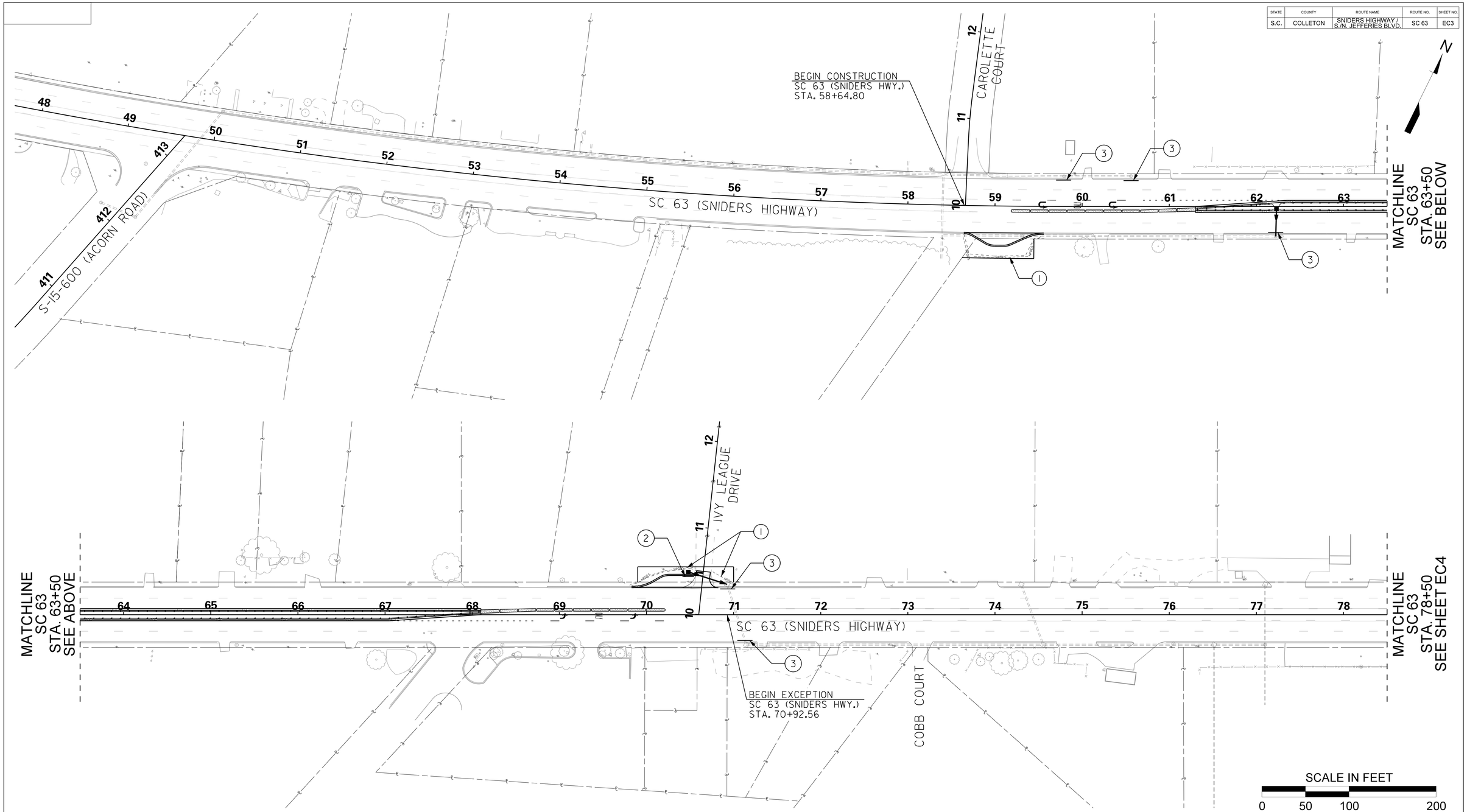
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	EC3



LEGEND:

1. INSTALL & MAINTAIN TEMPORARY SILT FENCE PER SCDOT STD. DWG. 815-605-00
2. INSTALL & MAINTAIN INLET STRUCTURE FILTER TYPE B PER SCDOT STD. DWF. 815-002-00
3. INSTALL & MAINTAIN INLET STRUCTURE FILTER TYPE F (WEIGHTED) PER SCDOT STD. DWG. 815-006-00
4. INSTALL & MAINTAIN INLET STRUCTURE FILTER TYPE F (WEIGHTED & NON-WEIGHTED) PER SCDOT STD. DWG. 815-006-00

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SOUTH CAROLINA PROFESSIONAL ENGINEER — JUSTIN KENNETH TATE — 4/21/21 — No. 27825

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
EROSION CONTROL PLAN

SCALE: 1" = 50' RTE. SC 63

User: jtye
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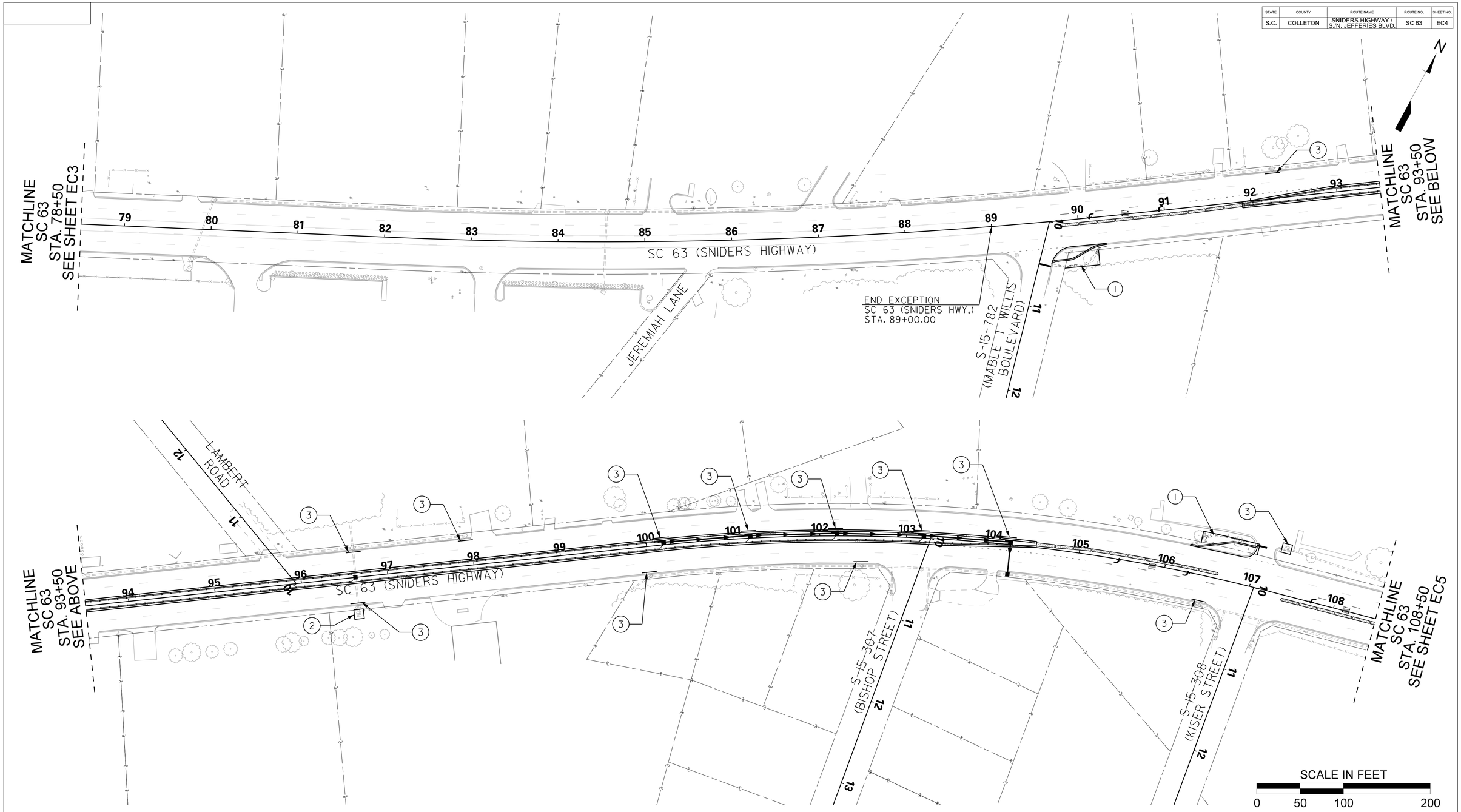
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	EC4



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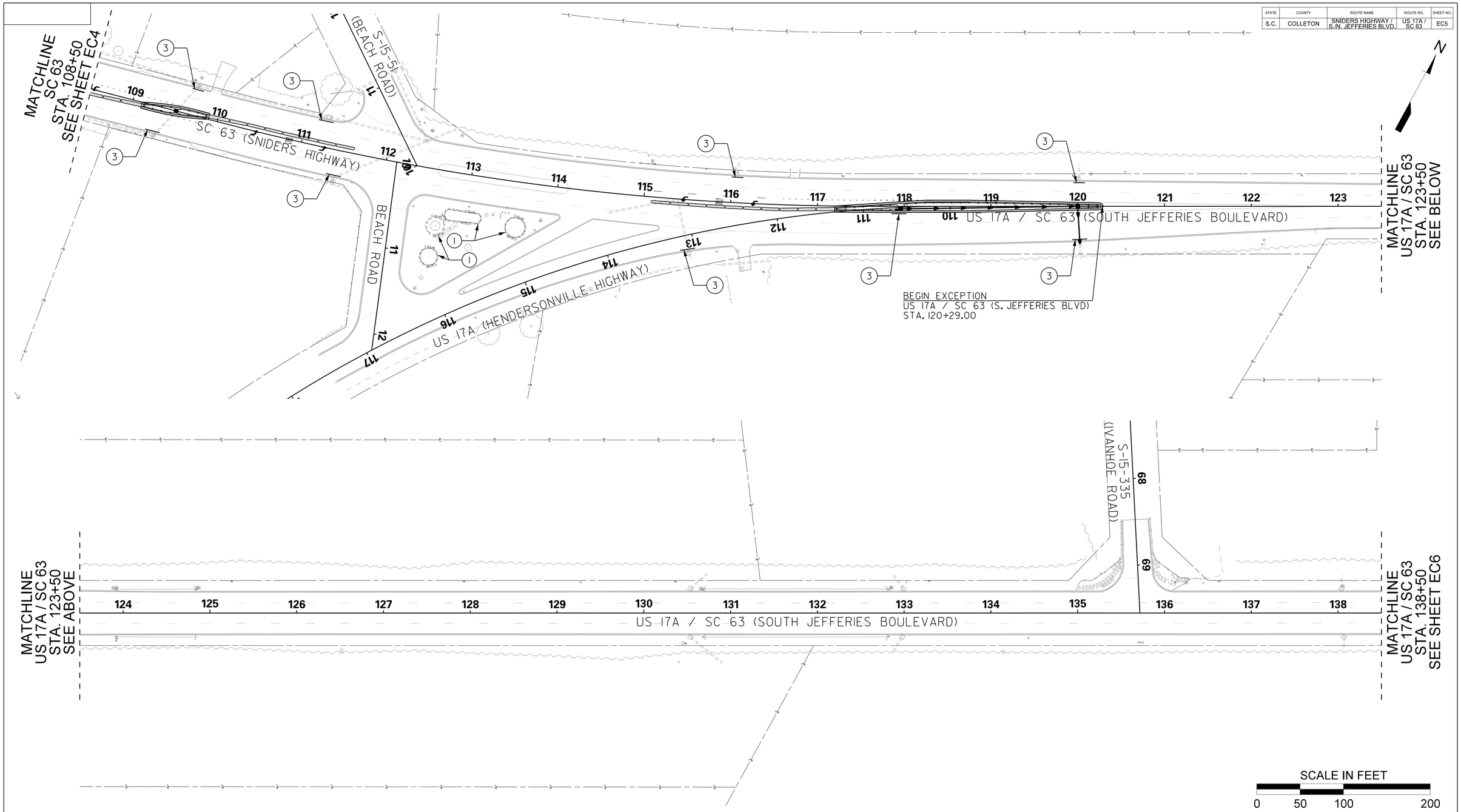
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
EROSION CONTROL PLAN

SCALE: 1" = 50' RTE. SC 63

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	EC5



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SOUTH CAROLINA
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4/1/21
No. 27825
JUSTIN KENNETH TYE

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
EROSION CONTROL PLAN

SCALE: 1" = 50' RTE. US 17A / SC 63

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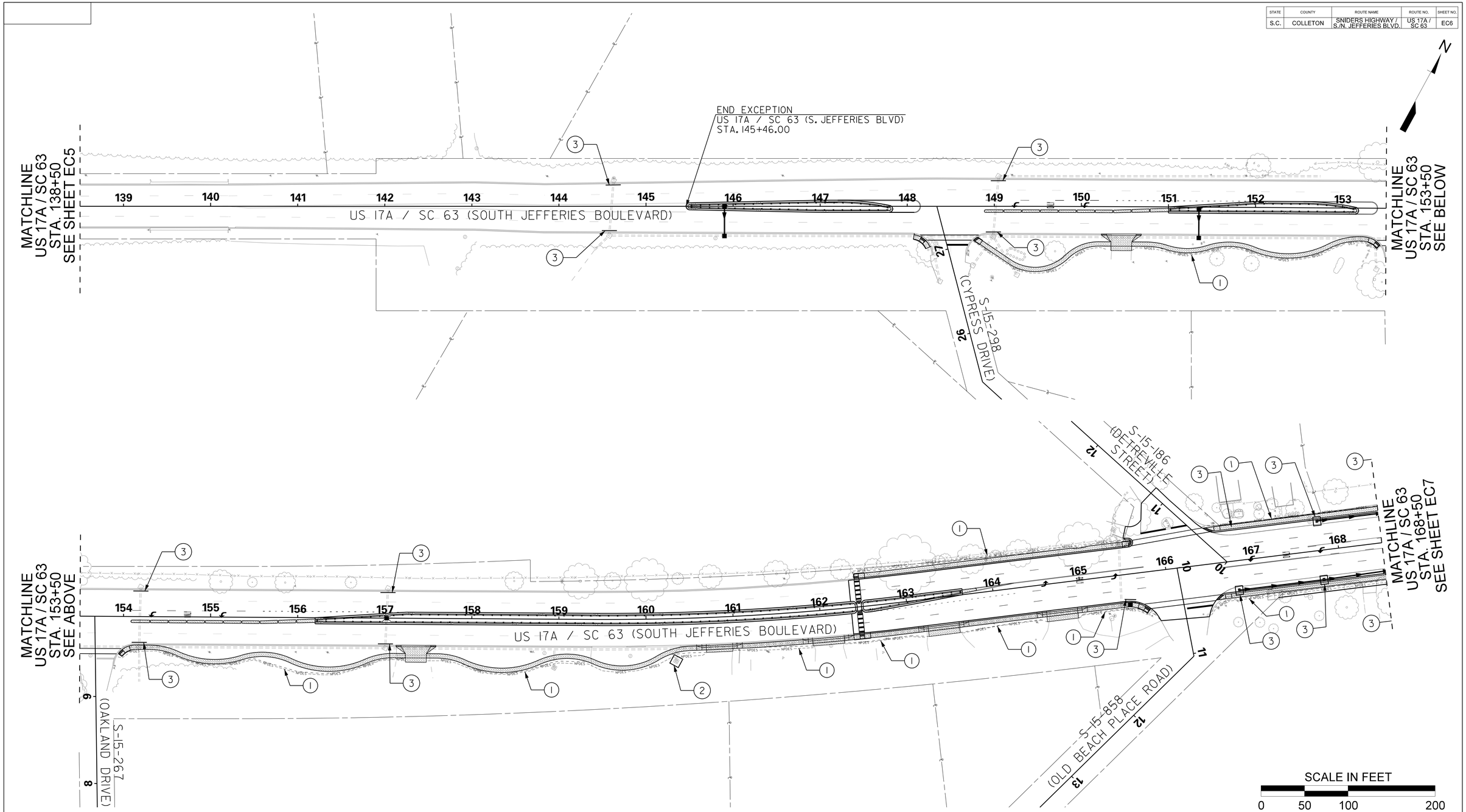
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	EC6



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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 27825 4/21/21 JUSTIN KENNETH LANE

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
EROSION CONTROL PLAN

SCALE: 1" = 50' RTE. US 17A / SC 63

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	EC7

MATCHLINE
US 17A / SC 63
STA. 168+50
SEE SHEET EC6

S-15-239
(MCTEER STREET)

S-15-54
(PERRY ROAD)

BEGIN EXCEPTION
US 17A / SC 63 (S. JEFFERIES BLVD.)
STA. 175+80.00

S-15-150
(MAY STREET)

US 17A / SC 63 (SOUTH JEFFERIES BOULEVARD)

S-15-54
(BEACHWOOD ROAD)

MATCHLINE
US 17A / SC 63
STA. 183+50
SEE BELOW

S-15-228
(VARN STREET)

S-15-125
(ELIZABETH STREET)

MATCHLINE
US 17A / SC 63
STA. 183+50
SEE ABOVE

US 17A / SC 63 (SOUTH JEFFERIES BOULEVARD)

SC 303
(GREEN POND HIGHWAY)

S-15-282
(MOORE STREET)

SANDERS STREET

MATCHLINE
US 17A / SC 63
STA. 198+50
SEE SHEET EC8

SCALE IN FEET
0 50 100 200

LEGEND:

(1) INSTALL & MAINTAIN TEMPORARY SILT FENCE PER SCDOT STD. DWG. 815-605-00
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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
EROSION CONTROL PLAN

SCALE: 1" = 50' RTE. US 17A / SC 63

User: jtye
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STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63 / US 17A	EC8

N

MATCHLINE US 17A / SC 63 STA. 198+50 SEE SHEET EC7

S-15-467 (HIERS STREET)

S-15-128 (W. WASHINGTON ST.)

US 17A / SC 63 (SOUTH JEFFERIES BOULEVARD)

US 17A (SOUTH JEFFERIES BOULEVARD)

MATCHLINE US 17A / SC 63 STA. 212+50 SEE BELOW

S-15-121 (CARN STREET)

SC 63 (HAMPTON STREET)

EAST WASHINGTON STREET

END EXCEPTION
US 17A (N. JEFFERIES BLVD.)
STA. 214+64.58

MATCHLINE US 17A / SC 63 STA. 212+50 SEE ABOVE

S-15-293 (BENSON STREET)

US 15 (NORTH JEFFERIES BOULEVARD)

US 17A (WICHMAN STREET)

NORTH WALTER STREET

S-15-68 (FOREST HILLS ROAD)

SC 64 (PAUL STREET)

MATCHLINE US 15 STA. 226+50 SEE SHEET EC9

SCALE IN FEET
0 50 100 200

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
EROSION CONTROL PLAN

SCALE: 1" = 50' RTE. SC 63/US 17A/US 15

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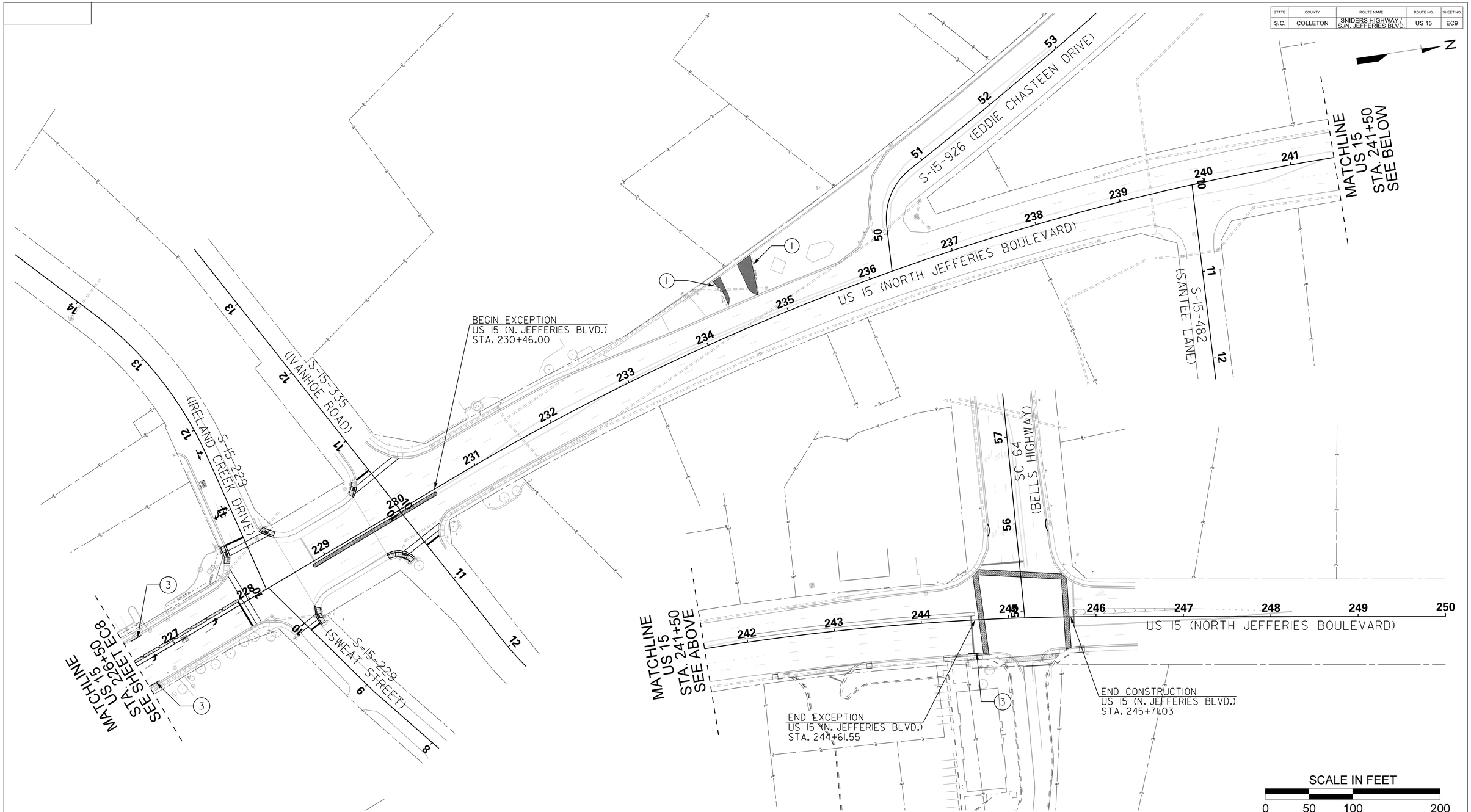
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	EC9

N



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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
EROSION CONTROL PLAN

SCALE: 1" = 50' RTE. US 15

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63/ US17A/US15	U1

ALL INFORMATION SHALL BE REFERENCED TO THE PROJECT DATUM.

UTILITY DATA

I.D. NO.	TYPE OF UTILITY	OWNER	CAPACITY / SIZE	MATERIAL COMPOSITION	REMARKS
E1-1	ELECTRIC	DOMINION	1 PHASE		
E1-3	ELECTRIC	DOMINION	3 PHASE		
E2-1	ELECTRIC	COASTAL ELECTRIC CO-OP	1 PHASE		
E2-3	ELECTRIC	COASTAL ELECTRIC CO-OP	3 PHASE		
SS1-8PV	SANITARY SEWER	WALTERBORO WATER DEPARTMENT	8"	PVC	
SS1-8PV	SANITARY SEWER	WALTERBORO WATER DEPARTMENT	8"	PVC	
W1-6PV	WATER	WALTERBORO WATER DEPARTMENT	6"	PVC	
W1-8PV	WATER	WALTERBORO WATER DEPARTMENT	8"	PVC	
T1 / UT1	COMMUNICATIONS	COMCAST			
T2 / UT2	COMMUNICATIONS	FRONTIER COMMUNICATIONS			
T3 / UT3	COMMUNICATIONS	HARGRAY COMMUNICATIONS			
T4 / UT4	COMMUNICATIONS	PALMETTO RURAL TELEPHONE			

NOTE: NO UTILITY WORK CAN BEGIN WITHIN THE R/W WITHOUT AN APPROVED SCDOT ENCROACHMENT PERMIT FOR EACH UTILITY.

UTILITY OWNERS AND CONTACT INFORMATION

DOMINION
OWNER I.D. - E1
2390 AVIATION AVE
NORTH CHARLESTON, SC 29406
MICHAEL DANDRIDGE
(843) 549-8623

COASTAL ELECTRIC CO-OP
OWNER I.D. - E2
2269 JEFFERIES HWY
WALTERBORO, SC 29488

WALTERBORO WATER DEPARTMENT
OWNER I.D. - SS1, W1
248 HAMPTON STREET
WALTERBORO, SC 29488
WAYNE CROSBY
(843) 782-1020

DOMINION - GAS
OWNER I.D. - G1
2390 AVIATION AVE
NORTH CHARLESTON, SC 29406
FRED MORILLO
(843) 815-8807

COMCAST
OWNER I.D. - T1 / UT1
711 BELLS HWY
WALTERBORO, SC 29488
JON BLANCHE
(843) 266-3109

FRONTIER COMMUNICATIONS
OWNER I.D. - T2 / UT2

HARGRAY COMMUNICATIONS
OWNER I.D. - T3 / UT3
60 ROBERT SMALLS PKWY
BEAUFORT, SC 29902

PALMETTO RURAL TELEPHONE
OWNER I.D. - T4 / UT4
292 ROBERTSON BLVD
WALTERBORO, SC 29488
JIMMY HENDERSON
(843) 538-9345

PLANS PREPARED BY:

Stantec

Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
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SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH TATE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
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TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY DATA SHEET

SCALE: N/A RTE. SC63/US17A/US15

User: jtye
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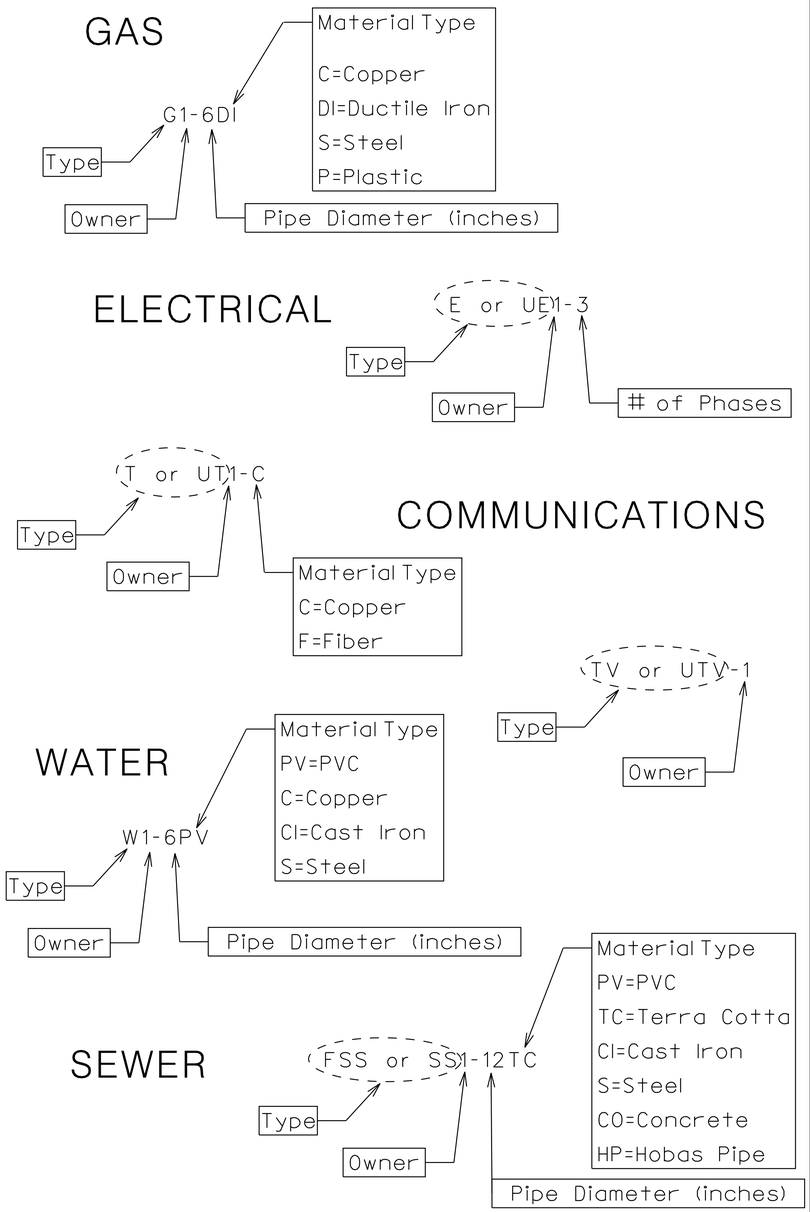
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US17A/US15 SC 63/	U2

UTILITY LINE LABEL KEY



UTILITY SYMBOLS AND LINES

Gas

- GM - Gas Meter
- GV - Gas Valve
- GMH - Gas Manhole
- GVT - Gas Vent
- GR- Gas Pressure Regulator

G1-6DI — GAS LINE UNDERGROUND (Recorded)

G1-6DI — GAS LINE UNDERGROUND (Designated)

G — G — GAS LINE PUPS (Recorded)

Water

- WM - Water Meter
- WV - Water Valve
- WMW - Water Monitoring Well
- FH - Fire Hydrant
- WMH - Water Manhole
- WAR- Water Air Release Valve

W1-6PV — WATER LINE (Designated)

W1-6PV — WATER LINE (Recorded)

W — W — WATER LINE PUPS (Recorded)

Electrical

- PP - Power Pole
- MP - Meter Pole
- ETB - Electric Transformer Box
- LP - Light Pole
- PMH - Power Manhole
- PHH - Power Cable Hand Hold
- GW - Guy Wire
- GP - Guy Pole
- PLT - Power Line Tower
- TSP - Traffic Signal Pole
- TSJ - Traffic Signal Junction Box

E1-3 — ABOVE GROUND ELECTRIC LINE

UE1-3 — UNDERGROUND ELECTRIC (Recorded)

UE1-3 — UNDERGROUND ELECTRIC (Designated)

E1-2,T1-C — ELECTRIC – TELEPHONE (ABOVE)

E1-3,TV1 — ELECTRIC – TELEVISION (ABOVE)

E2-2,T1-F,TV2 — ELECTRIC – TELEPHONE – TELEVISION (ABOVE)

UE — UE — UNDERGROUND ELECTRIC LINE PUPS (Recorded)

Sewers

- SVC - Sewer Clean Out
- SMH - Sanitary Sewer Manhole
- SAR - Sewer Air Release Valve

SS1-12TC — GRAVITY SANITARY SEWER (Designated)

SS1-12TC — GRAVITY SANITARY SEWER (Recorded)

FSS1-12CI — FORCED SANITARY SEWER (Designated)

FSS1-18CI — FORCED SANITARY SEWER (Recorded)

SS — SS — SANITARY SEWER LINE PUPS (Recorded)

Communications

- TB - Telephone Booth
- TV - Cable TV Pedestal
- TP - Telephone Pole
- TPP - Telephone Pedestal
- TM - Telephone Manhole
- FHH - Fiber Optic Hand Hold
- CT - Cell Phone Tower
- THH - Telephone Hand Hold
- TVHH - Cable TV Hand Hold

T1-C — TELEPHONE LINE ABOVE

T1-C,TV1 — TELEPHONE CABLE TV ABOVE

UT1-C — UNDERGROUND TELEPHONE (Designated)

UT1-F — UNDERGROUND TELEPHONE (Recorded)

TV-1 — CABLE TV ABOVE

UTV-2 — UNDERGROUND CABLE TV (Designated)

UTV-2 — UNDERGROUND CABLE TV (Recorded)

DB-1 — DUCT BANK RUN (Designated)

DB-1 — DUCT BANK RUN (Recorded)

UTV — UTV — UNDERGROUND TV LINE PUPS (Recorded)

FOL — FOL — FIBER OPTIC LINE PUPS (Recorded)

Miscellaneous

- OP - Other Use Pole
- EOI - End of Information
- TH - Test Hole
- WTS - WITNESS MARKER

?UTIL1 — UNKNOWN UTILITY LINE

SUE — LIMITS OF SUE SWEEP

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY LEGEND

SCALE: N/A RTE. SC63/US17A/US15

User:jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S/N. JEFFERIES BLVD.	SC 63	U3

19

20

21

123

124

DEDICATED 25' R/W PER PB 658 PJ JKT.

CAROLETTE COURT

DEDICATED 25' R/W PER PB 658 PJ JKT.

11

10

BEGIN CONSTRUCTION
SC 63 (SNIDERS HWY.)
STA. 58+64.80

I.E. = 93.02
15" RCP

PRESENT 37.5' R/W
556-A REOP J.K.T.

24" RCP

24" RCP

EX.C.B.TYPE 17
TOP = 96.52
I.E. = 90.58

18" RCP

EX.C.B.TYPE 17
TOP = 96.41
I.E. = 91.83

18" RCP

MH-102
4'x4' J.B. W/ M.H.
TOP = 97.34
I.E. = 93.34

PRESENT 37.5' R/W
556-A REOP J.K.T.

58 59 60 61 62 63

ONLY

SC 63 (SNIDERS HIGHWAY)

NP-101
15'' RCP
30 LF @ 0.30%

RELOCATE WATER MAIN
BELOW STORM DRAIN
(BY CITY OF WALTERBORO)

(EX-101)
EX.C.B.TYPE 17
TOP = 96.79
I.E. = 93.25

15" RCP

PRESENT 37.5' R/W
556-A REOP J.K.T.

MATCHLINE
SC 63
STA. 63+50
SEE SHEET U4

PRESENT 37.5' R/W
556-A REOP J.K.T.

24" RCP

I.E. = 90.66

PRESENT TRANS. R/W
15.427 J.K.T.

PRESENT TRANS. R/W
15.427 J.K.T.

BEGIN NEW R/W
58+63.43
60.00' RT

ADJUST SEWER MANHOLE
TO PROPOSED GRADE
(BY CITY OF WALTERBORO)

END NEW R/W
59+45.00
37.50' RT

59+45.00
60.00' RT

37°C

58'F

NPDES

SCALE IN FEET
0 20 40 80

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SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
4/21/21
No. 27825
JUSTIN KENNETH TYE

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3			
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TOPO. _____ DATE _____
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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
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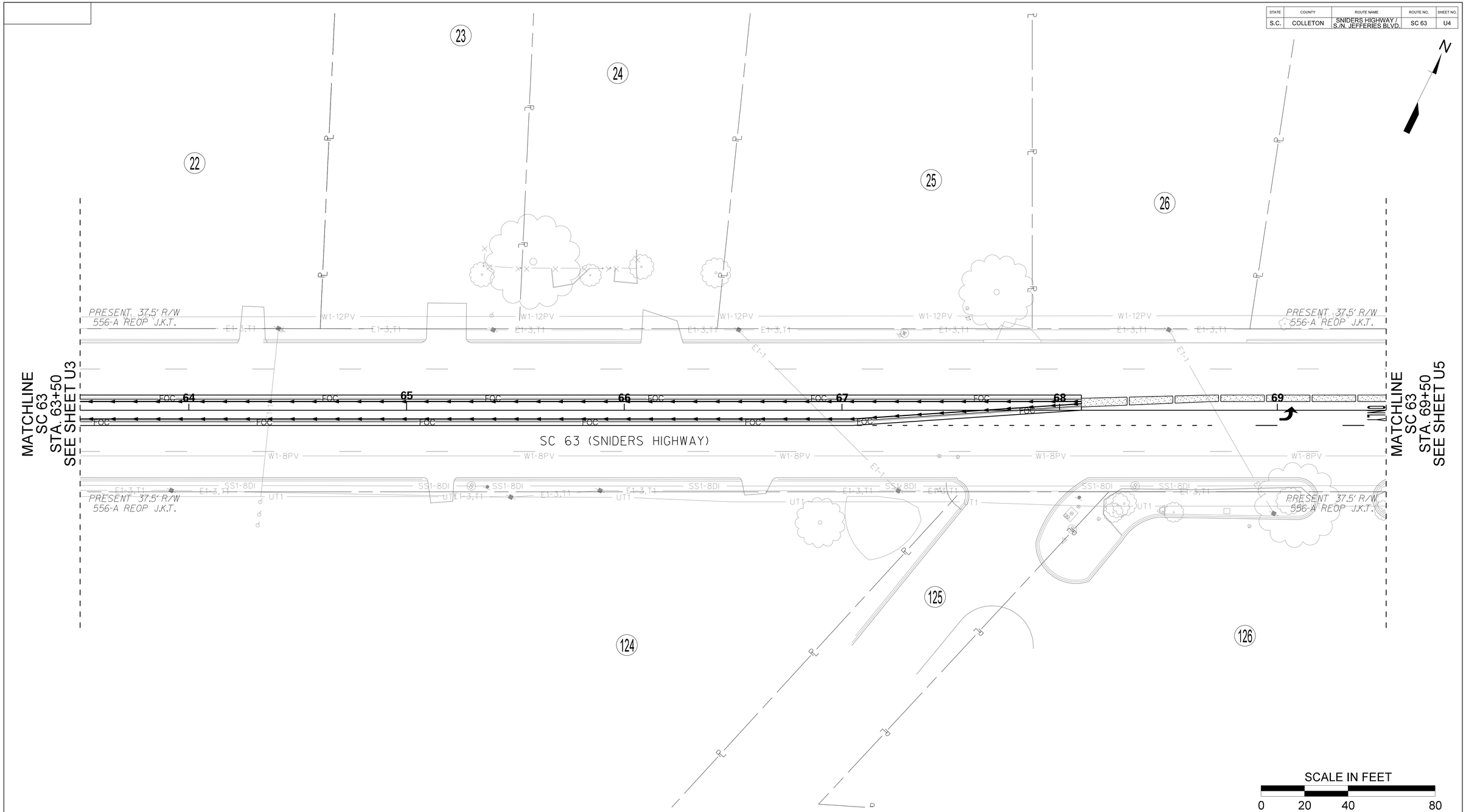
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	U4



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DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	U5

N

MATCHLINE SC 63 STA. 69+50 SEE SHEET U4

MATCHLINE SC 63 STA. 75+50 SEE SHEET U6

IVY LEAGUE DRIVE

BEGIN NEW R/W
69+90.00
37.50' LT

CB-202
C.B. TYPE 16
TOP = 96.36
I.E. = 93.06

NP-201
18'' RCP
45 LF @ 0.30%

RELOCATE WATER MAIN
BELOW STORM DRAIN
(BY CITY OF WALTERBORO)

(EX-201)
EX.C.B.TYPE 16
TOP = 96.51
I.E.= 92.93

69+90.00
55.00' LT

71+00.00
55.00' LT

END NEW R/W
71+00.00
37.50' LT

EX.C.B.TYPE 17
TOP = 95.89
I.E.= 91.45

18" RCP

SC 63 (SNIDERS HIGHWAY)

EX.C.B.TYPE 17
TOP = 96.54
I.E.(NW) = 92.64
I.E.(NE) = 92.08

COBB COURT

EX.C.B.TYPE 17
TOP = 95.80
I.E.= 90.97

SCALE IN FEET
0 20 40 80

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SOUTH CAROLINA PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH TYE

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GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
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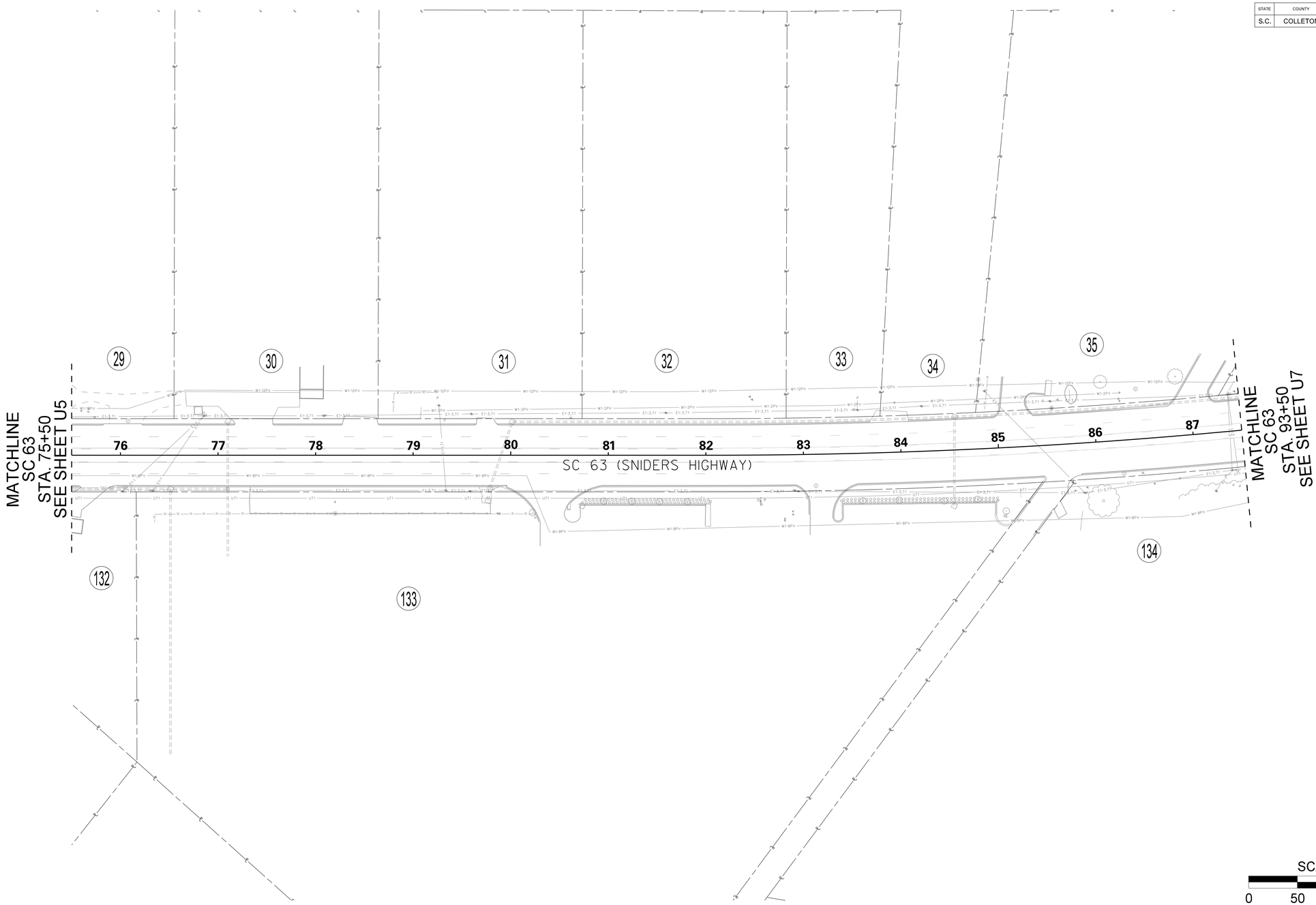
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	U6



NOTES
1. FOR INFORMATION ONLY.

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No. 27825
JUSTIN KENNETH TATE
4/21/21

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DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 50' RTE. SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	U7

N

MATCHLINE SC 63 STA. 87+50 SEE SHEET U6

MATCHLINE SC 63 STA. 93+50 SEE SHEET U8

SC 63 (SNIDERS HIGHWAY)

S-15-782 (MABLE T WILLS BOULEVARD)

ONLY

END NEW R/W
90+20.00
37.50' RT

90+20.00
55.00' RT

BEGIN NEW R/W
89+79.69
55.00' RT

RELOCATE POWER POLE
(BY DOMINION)

PRESENT 30' R/W
15.522 J.K.T.

PRESENT 30' R/W
15.522 J.K.T.

SCALE IN FEET
0 20 40 80

PLANS PREPARED BY:

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 27825 JUSTIN KENNETH LANE 4/21/21

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
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TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
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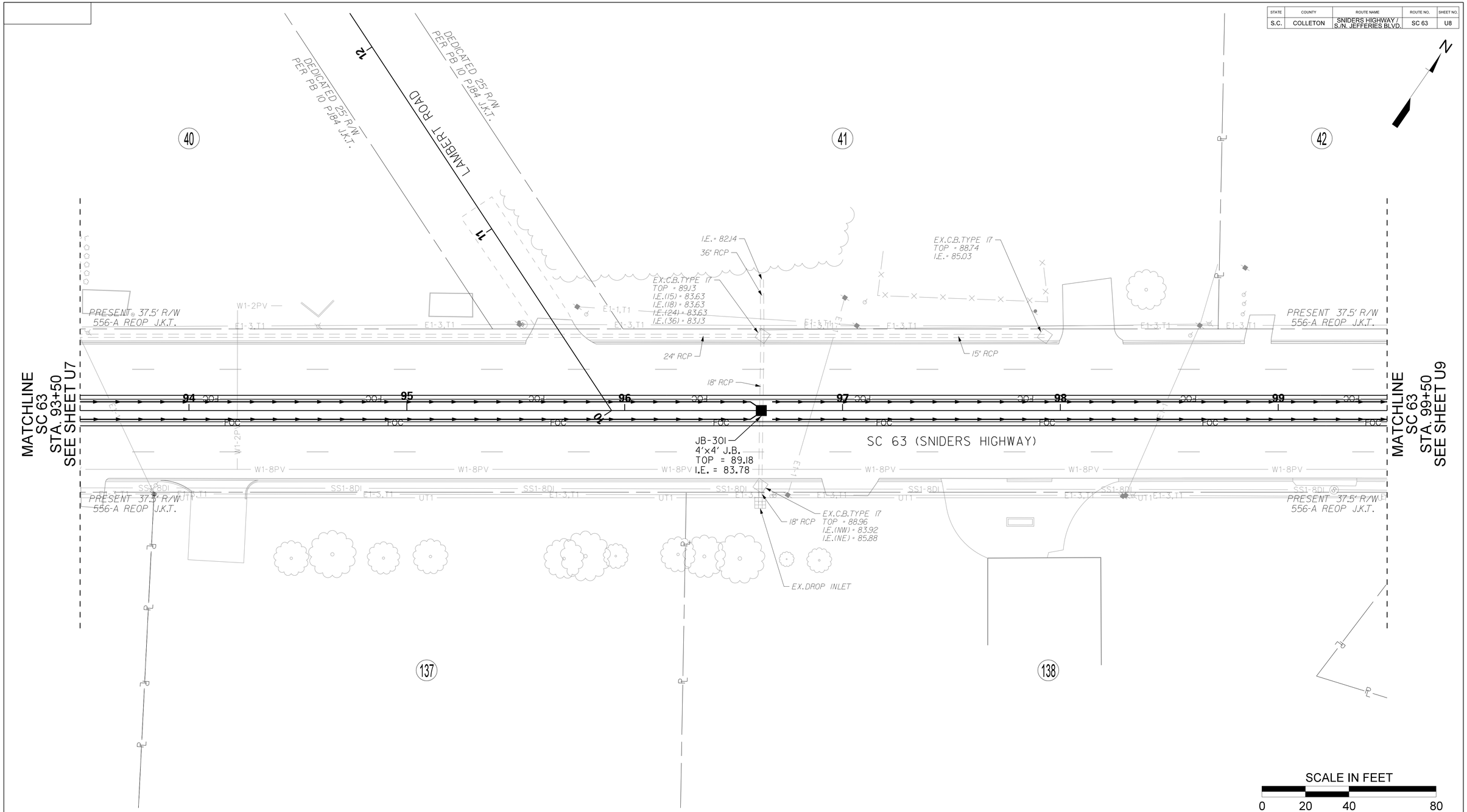
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	U8



SCALE IN FEET

0 20 40 80

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	U9

N

RATTLESNAKE TRAIL

CB-407
C.B. TYPE 17
TOP = 88.00
I.E. = 84.00

NP-405
18'' RCP
96 LF @ 1.04%

CB-406
C.B. TYPE 17
TOP = 87.48
I.E. = 83.00

NP-404
18'' RCP
96 LF @ 1.04%

CB-405
C.B. TYPE 17
TOP = 86.25
I.E. = 82.00

NP-403
18'' RCP
96 LF @ 2.08%

CB-404
C.B. TYPE 17
TOP = 84.56
I.E. = 80.00

NP-402
18'' RCP
96 LF @ 2.08%

CB-403
C.B. TYPE 17
TOP = 82.08
I.E. = 78.00

NP-401
18'' RCP
34 LF @ 5.88%

MH-402
4'x4' J.B. W/ M.H.
TOP = 79.96
I.E. = 76.00

RELOCATE WATER MAIN
BELOW STORM DRAIN
(BY CITY OF WALTERBORO)

100 101 102 103 104 105

SC 63 (SNIDERS HIGHWAY)

MATCHLINE
SC 63
STA. 99+50
SEE SHEET U8

MATCHLINE
SC 63
STA. 105+50
SEE SHEET U10

PRESENT 37.5' R/W
556-A REOP J.K.T.

15" RCP

EX.C.B.TYPE 17
TOP = 87.32
I.E.(15) = 84.24
I.E.(18) = 83.82

18" RCP

EX.C.B.TYPE 17
TOP = 84.02
I.E. = 80.44

PRESENT 25' R/W
15.339 J.K.T.

S-15-307 (BISHOP STREET)

42 43 44 139 140 141 142 143

SCALE IN FEET
0 20 40 80

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	U10

N

RELOCATE PEDESTAL (BY PALMETTO RURAL TELEPHONE)

RELOCATE HYDRANT (BY CITY OF WALTERBORO)

RELOCATE METER (BY CITY OF WALTERBORO)

106+35.00 50.00' LT

BEGIN NEW R/W 106+35.00 37.50' LT

107+00.00 50.00' LT

END NEW R/W 107+00.00 37.50' LT

PRESENT 37.5' R/W 556-A REOP J.K.T.

SC 63 (SNIDERS HIGHWAY)

MATCHLINE SC 63 STA. 105+50 SEE SHEET U9

MATCHLINE SC 63 STA. 111+50 SEE SHEET U11

EX.C.B.TYPE 17 TOP = 59.38 I.E.(18) = 55.46 I.E.(24) = 53.80

EX.C.B.TYPE 17 TOP = 52.02 I.E. = 47.89

EX.C.B.TYPE 17 TOP = 72.86 I.E. = 69.07

EX.C.B.TYPE 17 TOP = 61.54

JB-401 4'x4' J.B. TOP = 60.19 I.E. = 55.45

S-15-308 (KISER STREET)

PRESENT 25' R/W 15339 J.K.T.

PRESENT 25' R/W 15339 J.K.T.

43

44

45

46

143

144

145

SCALE IN FEET

0 20 40 80

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	U11

N

MATCHLINE SC 63 STA. 112+50 SEE SHEET U10

MATCHLINE SC 63 STA. 118+50 SEE SHEET U12

SC 63 (SNIDERS HIGHWAY)

US 17A (HENDERSONVILLE HIGHWAY)

S-15-51 (BEACH ROAD)

BEACH ROAD

PRESENT 33' R/W 15.427 J.K.T.

PRESENT 37.5' R/W 208-A&B REOP J.K.T.

PRESENT TRANS.R/W 15.427 J.K.T.

PRESENT 33' R/W 15.427 J.K.T.

PRESENT 33' R/W 15292 J.K.T.

24" RCP

I.E.= 40.24

I.E.= 28.26

I.E.= 27.98

I.E.= 30.62

I.E.= 31.92

I.E.= 32.99

I.E.= 35.37

47 48 146 147

SCALE IN FEET

0 20 40 80

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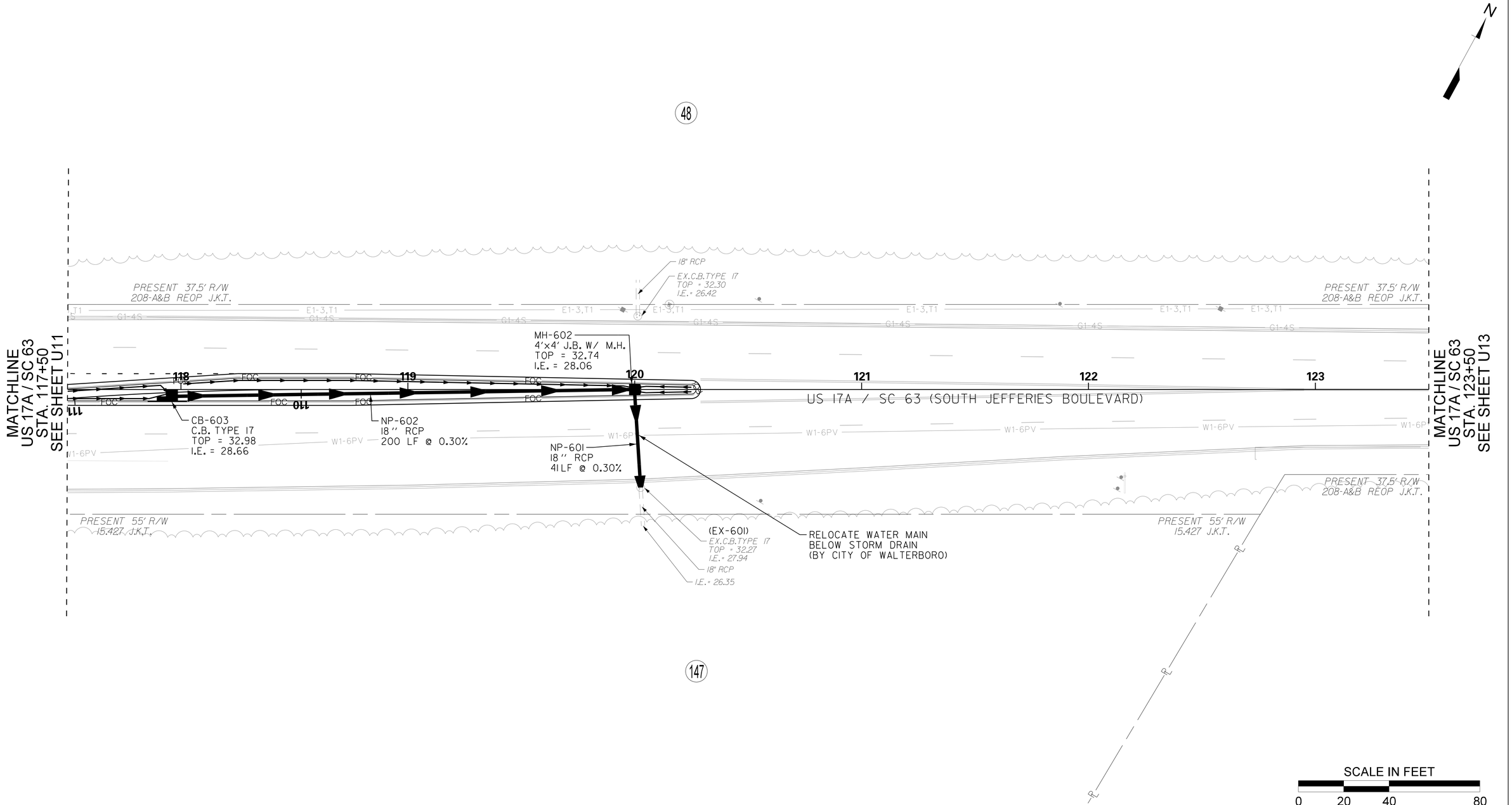

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SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
JUSTIN KENNETH TYE

REV.NO.	BY	DATE	DESCRIPTION OF REVISION
4			
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TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / SC 63

User: jtye
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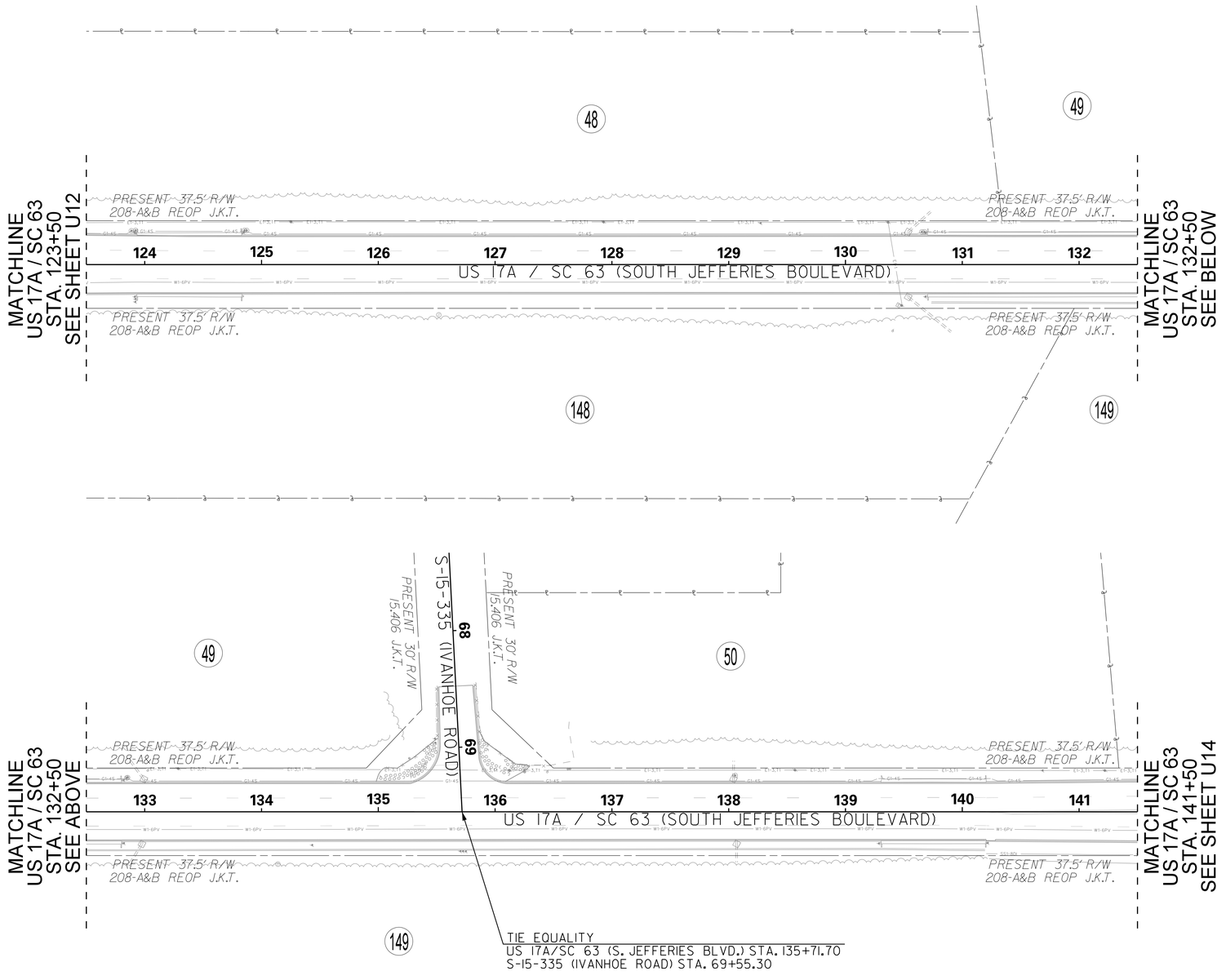
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	SC 63	U13



SCALE IN FEET

0 50 100 200

NOTES
1. FOR INFORMATION ONLY.

PLANS PREPARED BY:

Stantec

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STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
LICENSED
No. 27825
4/21/21
JUSTIN KENNETH JAYE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
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R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 50' RTE. US 17A / SC 63

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	U14

N

MATCHLINE
US 17A / SC 63
STA. 141+50
SEE SHEET U13

MATCHLINE
US 17A / SC 63
STA. 147+50
SEE SHEET U15

51 52 53 149 150

PRESENT 55' R/W
15.427 J.K.T.

PRESENT 120' R/W
15.427 J.K.T.

EX.C.B.TYPE 17
TOP = 31.94
I.E.= 28.69

18" RCP

142 143 144 145 146 147

US 17A / SC 63 (SOUTH JEFFERIES BOULEVARD)

MH-702
4'x4' J.B. W/ M.H.
TOP = 33.81
I.E. = 30.10

NP-701
18'' RCP
30 LF @ 0.33%

36" RCP

I.E.= 26.44

EX.C.B.TYPE 17
TOP = 31.89
I.E.= 27.68

30" RCP

JB-701
4'x4' J.B.
TOP = 33.44
I.E. = 30.00

RELOCATE WATER MAIN
BELOW STORM DRAIN
(BY CITY OF WALTERBORO)

UT1 E1-3,T1 G1-4S W1-6PV SS1-8DI FOC

SCALE IN FEET
0 20 40 80

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4/21/21
No. 27825
JUSTIN KENNETH TATE

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	U15

N

53

MATCHLINE
US 17A / SC 63
STA. 147+50
SEE SHEET U14

MATCHLINE
US 17A / SC 63
STA. 153+50
SEE SHEET U16

PRESENT 55' R/W
15.427 J.K.T.

US 17A / SC 63 (SOUTH JEFFERIES BOULEVARD)

EX.C.B.TYPE 17
TOP = 40.88
I.E.= 37.00

6" UNDERDRAIN

MH-704
4'x4' J.B. W/ M.H.
TOP = 47.30
I.E. = 43.60

148 149 150 151 152 153

ONLY

18" RCP

EX.C.B.TYPE 17
TOP = 40.64
I.E.= 35.31

24" RCP

NP-702
18'' RCP (CLASS V)
29 LF @ 0.34%

JB-703
4'x4' J.B.
TOP = 47.08
I.E. = 43.50

30" RCP

18" RCP

EX.C.B.TYPE 9
TOP = 39.85

EX.C.B.TYPE 9
TOP = 39.65

18" RCP

EX.C.B.TYPE 9
TOP = 41.64
I.E.= 35.06

RELOCATE WATER MAIN
BELOW STORM DRAIN
(BY CITY OF WALTERBORO)

18" RCP

EX.C.B.TYPE 9
TOP = 51.89

S-15-298 (CYPRESS DRIVE)

26 27

PRESENT 120' R/W
15.427 J.K.T.

PRESENT 20' R/W
15.326 J.K.T.

PRESENT 20' R/W
15.326 J.K.T.

PRESENT 20' R/W
15.326 J.K.T.

151 152 153

SCALE IN FEET
0 20 40 80

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / SC 63

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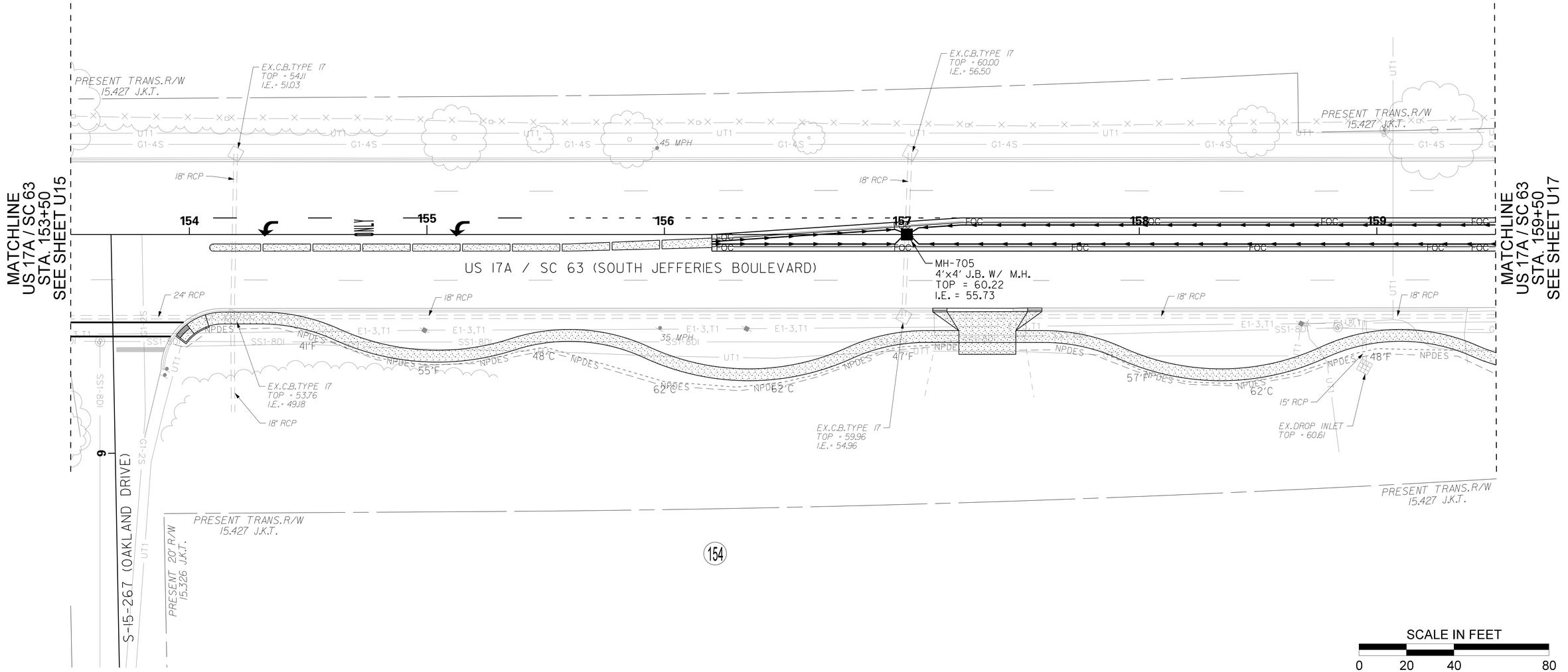
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	U16



SCALE IN FEET

0 20 40 80

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4/21/21
No. 27825
JUSTIN KENNETH LANE

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / SC 63

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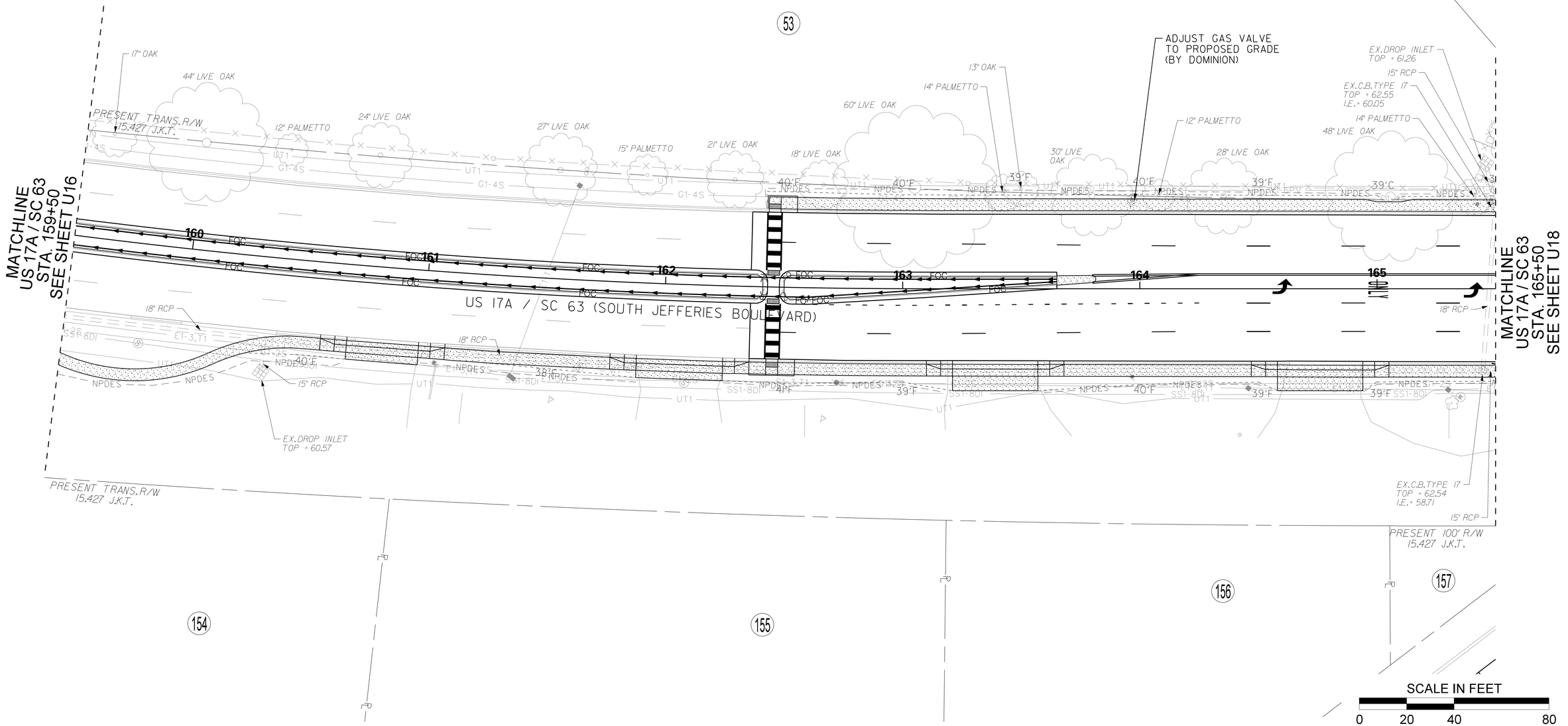
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	U17



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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 27825 JUSTIN KENNETH RYE 4/21/21

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / SC 63

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	U18

MATCHLINE US 17A / SC 63 STA. 165+50 SEE SHEET U17

MATCHLINE US 17A / SC 63 STA. 171+50 SEE SHEET U19

S-15-186 (DETREVILLE STREET)

PRESENT 25' R/W 1524' J.K.T.

S-15-239 (MCTEER STREET)

PRESENT 25' R/W 15.322 J.K.T.

US 17A / SC 63 (SOUTH JEFFERIES BOULEVARD)

PRESENT 43' R/W 15.242 J.K.T.

ADJUST SEWER MANHOLE TO PROPOSED GRADE (BY CITY OF WALTERBORO)

DI-809
24"x36" D.I.
TOP = 61.59
I.E. = 57.53

NP-804
18" RCP
87 LF @ 0.30%

(EX-808)
(ADJUST)
EX.DROP INLET
TOP = 61.02
I.E. = 57.27

DI-807
24"x36" D.I.
TOP = 61.82
I.E. = 57.13

ADJUST METER TO PROPOSED GRADE (BY CITY OF WALTERBORO)

ADJUST SEWER MANHOLE TO PROPOSED GRADE (BY CITY OF WALTERBORO)

DI-813
24"x36" D.I.
TOP = 61.85
I.E. = 58.84

NP-807
18" RCP
96 LF @ 0.30%

BEGIN NEW R/W
107+24.39
48.00' RT

DI-812
24"x36" D.I.
TOP = 61.82
I.E. = 58.55

NP-806
18" RCP
88 LF @ 0.30%

NEW 48' R/W

NP-805
18" RCP
136 LF @0.30%

DI-811
24"x36" D.I.
TOP = 61.75
I.E. = 58.70

RELOCATE POWER POLE (BY DOMINION)

RELOCATE POWER POLE (BY DOMINION)

RELOCATE PEDESTAL (BY PALMETTO RURAL TELEPHONE)

(EX-810)
(ADJUST)
EX.DROP INLET
TOP = 61.37
I.E. = 58.29

EX.DROP INLET
TOP = 61.37
I.E. = 59.24

S-15-858 (OLD BEACH PLACE ROAD)

PRESENT 20' R/W 1555' J.K.T.

54 55 56 158 159

166 167 168 169 170 171

ONLY

SCALE IN FEET
0 20 40 80

NOTES:
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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JOSEPH KENNETH TYE

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
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R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	U19

MATCHLINE US 17A / SC 63 STA. 171+50 SEE SHEET U18

MATCHLINE US 17A / SC 63 STA. 177+50 SEE SHEET U20

US 17A / SC 63 (SOUTH JEFFERIES BOULEVARD)

S-15-54 (PERRY ROAD)

S-15-54 (BEACHWOOD ROAD)

PRESENT 25' R/W 15,318 J.K.T.

PRESENT 43' R/W 15,242 J.K.T.

NEW 48' R/W

ADJUST SEWER MANHOLE TO PROPOSED GRADE (BY CITY OF WALTERBORO)

DI-806
24"x36" D.I.
TOP = 61.97
I.E. = 56.95

DI-805
24"x36" D.I.
TOP = 61.63
I.E. = 56.76

(ADJUST)
EX.DROP INLET
TOP = 60.87
I.E. = 56.64

EX.JCT.BOX
TOP = 60.86
I.E. = 55.53

18" RCP

EX.DROP INLET
TOP = 61.02
I.E. = 58.89

15" RCP

END NEW R/W
174+86.86
48.00' RT

DI-804
24"x36" D.I.
TOP = 61.91
I.E. = 58.50

NP-803
18" RCP
192 LF @ 0.52%

RELOCATE POWER POLE
(BY DOMINION)

DI-803
24"x36" D.I.
TOP = 61.61
I.E. = 57.50

RELOCATE POWER POLE
(BY DOMINION)

NP-802
18" RCP
128 LF @ 0.55%

DI-802
24"x36" D.I.
TOP = 61.10
I.E. = 56.80

(EX-801)
EX.DROP INLET
TOP = 60.94
I.E. = 56.44

NP-801
18" RCP
67 LF @ 0.54%

57 58 59 60 61 160 161 162 163 164 165

172 173 174 175 176 177

11 10 43 42

SCALE IN FEET
0 20 40 80

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 9/21/21 No. 27825 JUSTIN KENNETH TYE

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GROUP ____ - ____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / SC 63

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / SC 63	U20

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SOUTH CAROLINA PROFESSIONAL ENGINEER No. 27825 JUSTIN KENNETH LOVE 4/21/21

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 100' RTE. US 17A / SC 63

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 17A / US 15	U21

N

WATER MAIN UNDER SEWER MAIN
6"x6"x6" TEE
6" VALVE
1" & 2" SERVICE LINES WITH METER BOX (NO METER)
CAP 6" WATER MAIN
8"x6" REDUCER
8" VALVE
8"x8"x6" TEE
8" VALVE
1" SERVICE LINE AND METER
WATER MAIN UNDER STORM DRAIN
WATER MAIN UNDER GAS SERVICE
10' WATER EASEMENT
1" SERVICE LINE AND METER
8" VALVE
8"x8"x8" TEE
8" VALVE
WATER MAIN UNDER GAS SERVICE
1½" SERVICE LINE AND METER
WATER MAIN UNDER STORM DRAIN
DIRECTIONAL DRILL WATER MAIN (1,200 LF)
EX.C.B.TYPE 17 TOP = 63.27 I.E. = 59.69
NEW FIRE HYDRANT ASSEMBLY
6" VALVE
FILL ABANDONDED LINE WITH FLOWABLE FILL
8" VALVE
8"x2" REDUCER
8" PVC C900 DR-18 WATER MAIN
¾" SERVICE LINE AND METER
OPEN CUT WATER MAIN UNDER US 15. INSTALL 6" PVC IN 16" STEEL CASING (120 LF).
OPEN CUT WATER MAIN UNDER US 15. INSTALL 2" PVC IN 12" STEEL CASING (70 LF).
2"x1" REDUCER AND TIE TO EXISTING WATER MAIN
90° BEND
TIE TO EXISTING WATER MAIN
6" CUT-IN VALVE
US 15 (NORTH JEFFERIES BOULEVARD)
US 17A (WICHMAN STREET)
NORTH WALTER STREET
PRESENT 37.5' R/W 15.535 J.K.T.
PRESENT 30' R/W 15.535 J.K.T.
PRESENT 33.5' R/W 15.535 J.K.T.
MATCHLINE US 17A STA. 213+50 SEE SHEET U20
MATCHLINE US 15 STA. 219+50 SEE SHEET U22

SCALE IN FEET
0 20 40 80

NOTES
1. RECONNECT ALL NEW SERVICE LINES AND METERS TO EXISTING SERVICE LINES. COORDINATE THE CONNECTION WITH THE CITY OF WALTERBORO.

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SOUTH CAROLINA PROFESSIONAL ENGINEER LICENSED No. 27825 4/21/21 JUSTIN KENNETH LEE

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. US 17A / US 15

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	U22

DIRECTIONAL DRILL NOTES:

DRILLING FLUID SPECIFICATIONS

A. MIXING SYSTEM

1. PROVIDE SELF-CONTAINED, CLOSED DRILLING FLUID MIXING SYSTEM OF SUFFICIENT SIZE TO MIX AND DELIVER DRILLING FLUID COMPOSED OF BENTONITE CLAY, POTABLE WATER AND APPROPRIATE ADDITIVES.
2. MIXING SYSTEM MUST BE ABLE TO MOLECULARLY SHEAR INDIVIDUAL BENTONITE PARTICLES FROM THE DRY POWDER TO AVOID CLUMPING AND ENSURE THOROUGH MIXING.
3. SYSTEM TO CONTINUALLY AGITATE THE DRILLING FLUID DURING DRILLING OPERATIONS.

B. FLUIDS:

1. FLUID TO BE COMPOSED OF CLEAN WATER, BENTONITE CLAY AND APPROVED ADDITIVES.
2. USE WATER FROM AN AUTHORIZED SOURCE WITH A PH OF 8.5 - 10.
3. WATER OF A LOWER PH OR WITH EXCESSIVE CALCIUM TO BE TREATED WITH THE APPROPRIATE AMOUNT OF SODIUM CARBONATE, OR EQUAL.
4. MIX WATER AND BENTONITE CLAY THOROUGHLY, ABSENT OF ANY CLUMPS OR CLODS.
5. NO ADDITIONAL MATERIAL MAY BE USED IN DRILLING FLUID WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

GUIDANCE SYSTEM

1. MUST PROVIDE A CONTINUOUS AND ACCURATE DETERMINATION OF THE LOCATION OF THE DRILL HEAD DURING THE DRILLING OPERATION.
2. MUST BE CAPABLE OF TRACKING AT ALL DEPTHS UP TO 100' IN ANY SOIL CONDITION (INCLUDING HARD ROCK).
3. PROBE MUST PROVIDE IMMEDIATE INFORMATION ON THE TOOL FACE, AZIMUTH (HORIZONTAL DIRECTION) AND INCLINATION (VERTICAL DIRECTION) AND MUST BE ACCURATE TO ±2% OF THE VERTICAL DEPTH OF THE BORE HOLE AT SENSING POSITION AT DEPTHS UP TO 100' AND ACCURATE WITHIN 1.5 METERS HORIZONTALLY.
4. SYSTEM MUST BE SETUP AND OPERATED BY PERSONNEL TRAINED AND EXPERIENCED. OPERATOR MUST BE AWARE OF ANY GEOMAGNETIC ANOMALIES AND MUST CONSIDER SUCH INFLUENCES IN THE OPERATION OF THE GUIDANCE SYSTEM IF USING A MAGNETIC SYSTEM.

DRILLING SYSTEM

1. HYDRAULICALLY POWERED SYSTEM TO ROTATE, PUSH AND PULL HOLLOW DRILL PIPE INTO THE GROUND AT A VARIABLE ANGLE WHILE DELIVERING A PRESSURIZED FLUID MIXTURE TO A GUIDABLE DRILL (BORE) HEAD.
   A. ANCHOR THE MACHINE TO THE GROUND TO WITHSTAND THE PULLING, PUSHING AND ROTATING PRESSURE REQUIRED TO COMPLETE THE CROSSING.
   B. HYDRAULIC POWER SYSTEM TO BE SELF-CONTAINED WITH SUFFICIENT PRESSURE AND VOLUME TO POWER DRILLING OPERATIONS AND TO BE FREE OF LEAKS.
2. RIG TO HAVE A SYSTEM TO MONITOR AND RECORD MAXIMUM PULL-BACK PRESSURE DURING PULL-BACK OPERATIONS.
3. ELECTRICALLY GROUND THE RIG DURING DRILLING AND PULL-BACK OPERATIONS.
4. CONSTRUCT DRILL PIPE OF HIGH QUALITY 4130 SEAMLESS TUBING, GRADE D, OR BETTER, WITH THREADED BOX AND PINS. TOLL JOINTS SHOULD BE HARDENED TO 32-36 RC.

NOTES

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 27825 JUSTIN KENNETH TYE 4/21/21

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20'   RTE. US 15

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	U23

N

MATCHLINE US 15 STA. 225+50 SEE SHEET U22

MATCHLINE US 15 STA. 231+50 SEE SHEET U24

WATER MAIN UNDER GAS SERVICE

8" PVC C900 DR-18 WATER MAIN

DIRECTIONAL DRILL WATER MAIN (1,200 LF)

1" SERVICE LINES AND METER

5' WATER EASEMENT

8" VALVE

8"x8"x6" TEE

8" VALVE

6" VALVE

45° BEND

11¼° BEND

6"x6"x6" TEE

OPEN CUT WATER MAIN UNDER US 15. INSTALL 6" PVC IN 16" STEEL CASING (70 LF).

CAP EXISTING 6" WATER MAIN AND MAINTAIN EXISTING SERVICE LINE CONNECTIONS

TIE TO EXISTING WATER MAIN

6" VALVE

8"x8"x6" TEE

8" VALVE

8"x6" REDUCER

TIE TO EXISTING WATER MAIN

45° BEND

OPEN CUT WATER MAIN UNDER IRELAND CREEK DRIVE. INSTALL 8" PVC IN 18" STEEL CASING (60 LF).

S-15-229 (IRELAND CREEK DRIVE)

S-15-335 (IVANHOE ROAD)

US 15 (NORTH JEFFERIES BOULEVARD)

S-15-229 (SWEAT STREET)

DRIVEWAY

PRESENT 37.5' R/W 15.535 J.K.T.

PRESENT 30' R/W 15.535 J.K.T.

PRESENT 60' R/W 15.535 J.K.T.

PRESENT 25' R/W 15.413 J.K.T.

92 93 94 95 205 206 207

SCALE IN FEET

0 20 40 80

NOTES

1. RECONNECT ALL NEW SERVICE LINES AND METERS TO EXISTING SERVICE LINES. COORDINATE THE CONNECTION WITH THE CITY OF WALTERBORO.

PLANS PREPARED BY:

Stantec

Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH TYE

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

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. US 15

User: jtye
U:\T\002304\transportation\roadway\drawings\plan_sheets\02304_u23_util_psh.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	U24

N

MATCHLINE US 15 STA. 231+50 SEE SHEET U23

MATCHLINE US 15 STA. 243+50 SEE SHEET U25

US 15 (NORTH JEFFERIES BOULEVARD)

S-15-926 (EDDIE CHASTEEN DRIVE)

S-15-482 (SANTEE LANE)

REMOVE & DISPOSE OF EXISTING ASPHALT PAVEMENT

TIE EQUALITY
US 15 (NORTH JEFFERIES BOULEVARD) STA. 239+84.50
S-15-482 (SANTEE LANE) STA. 10+00.00

TIE EQUALITY
US 15 (NORTH JEFFERIES BOULEVARD) STA. 236+27.00
S-15-926 (EDDIE CHASTEEN DRIVE) STA. 49+57.01

PRESENT 20' R/W 15,388 J.K.T.

PRESENT 20' R/W 15,388 J.K.T.

SCALE IN FEET
0 50 100 200

NOTES
1. FOR INFORMATION ONLY.

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R/W _____ DATE _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 50' RTE. US 15

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S./N. JEFFERIES BLVD.	US 15	U25

N

SC 64 (BELLS HIGHWAY)

PRESENT 60' R/W
15.535 J.K.T.

PRESENT 60' R/W
15.535 J.K.T.

PRESENT TRANS.R/W
15.535 J.K.T.

PRESENT 43' R/W
15.242 J.K.T.

PRESENT 50' R/W
15.535 J.K.T.

PRESENT 55' R/W
15.242 J.K.T.

END CONSTRUCTION
US 15 (N. JEFFERIES BLVD.)
STA. 245+71.03

MATCHLINE
US 15
STA. 243+50
SEE SHEET U24

US 15 (NORTH JEFFERIES BOULEVARD)

W1-6PV

102 103 104 215 216 217 218 219

244 245 246 247 248 249

55 56

SCALE IN FEET
0 20 40 80

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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY PLAN SHEET

SCALE: 1" = 20' RTE. US 15

User: jtye
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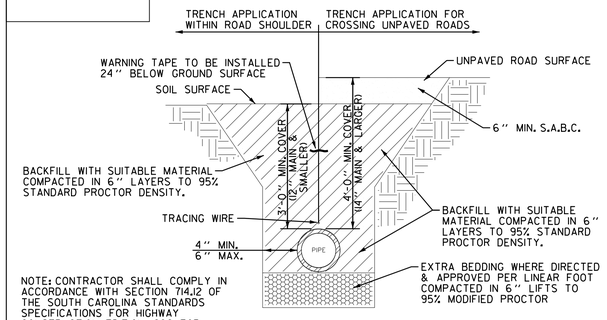
4/21/2021

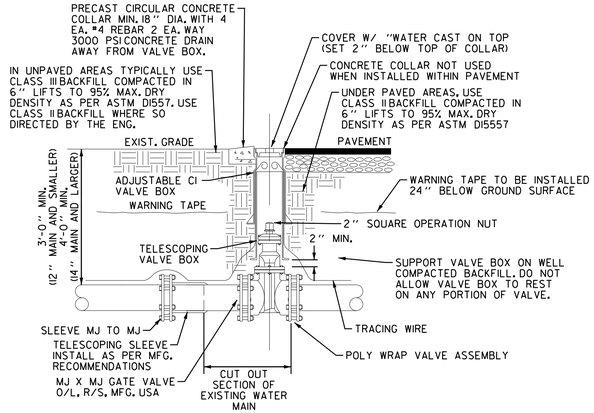
STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S/N. JEFFERIES BLVD.	SC 63/ US17A/US15	U26



NOTE: CONTRACTOR SHALL COMPLY IN ACCORDANCE WITH SECTION 714.12 OF THE SOUTH CAROLINA STANDARDS SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION 1986, FOR TRENCH BACKFILLING.

WATER MAIN TRENCH DETAIL

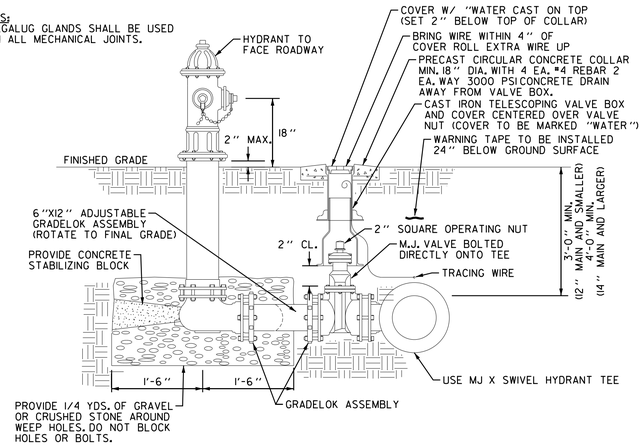
SCALE: N.T.S.



CUTTING-IN SLEEVE AND VALVE INSTALLATION DETAIL

SCALE: N.T.S.

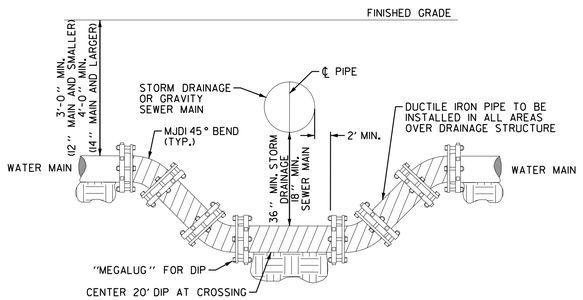
NOTES:
1. MEGALUG GLANDS SHALL BE USED ON ALL MECHANICAL JOINTS.



FIRE HYDRANT WITH VALVE AND BOX DETAIL

SCALE: N.T.S.

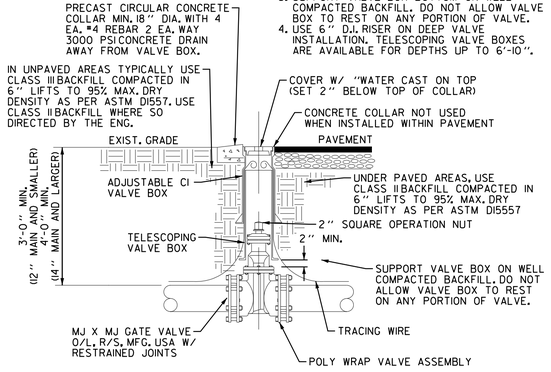
WATER NOTES:
1. WATER INSTALLATION SHALL BE IN ACCORDANCE WITH "TEN STATES STANDARDS" AND SCDHEC REGULATIONS.
2. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE CITY OF WALTERBORO AT LEAST 72 HOURS PRIOR TO BEGINNING WORK.
3. CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING WORK. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOUND IN THE FIELD OR ON THE DRAWINGS PRIOR TO BEGINNING OR CONTINUING WORK. ANY DEVIATIONS FROM THE CONSTRUCTION PLANS SHALL NEED TO BE APPROVED IN WRITING BY THE CITY OF WALTERBORO.
4. CONNECTION TO EXISTING WATER SYSTEM SHALL BE MADE IN THE PRESENCE OF THE CITY OF WALTERBORO INSPECTOR WITH AT LEAST 72 HOURS ADVANCED NOTICE.
5. ALL WATER LINES SHALL HAVE A MINIMUM COVER OF 36".
6. DIP SHALL BE INSTALLED AT ALL AREAS ABOVE OR BELOW DRAINAGE STRUCTURES.
7. FIRE HYDRANTS, WATER VALVES AND OTHER WATER SYMBOLS MAY BE SHOWN IN LARGE SCALE FOR CLARITY. WATER VALVES, VALVE BOXES AND COVERS SHALL NOT BE LOCATED WITHIN PAVED AREAS. FIRE HYDRANTS SHALL BE PLACED AS CLOSE AS POSSIBLE TO THE WATER MAIN IN ORDER TO REMAIN WITHIN THE RIGHT-OF-WAY.
8. HYDRANTS SHALL BE INSTALLED BASED ON THE BURY DEPTH OF THE WATER MAIN UNLESS OTHERWISE NOTED. HYDRANT EXTENSIONS ARE NOT ALLOWED UNLESS THE DEPTH OF THE WATER MAIN EXCEEDS 6'.
9. WATER SERVICE AND SEWER SERVICE FOR EACH LOT SHALL MAINTAIN A MINIMUM 5' OF SEPARATION.
10. DEFLECT WATER LINES IN LIEU OF FITTINGS IN ACCORDANCE WITH THE PIPE MANUFACTURER'S SPECIFICATIONS.
11. ALL FITTINGS, VALVES AND HYDRANTS SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS PER CITY OF WALTERBORO REQUIREMENTS.
12. WATER SERVICE STUBOUTS & SERVICE TEE SHALL BE INSTALLED WITHIN THE RIGHT-OF-WAY OR GENERAL UTILITY EASEMENT (GUE) AND HAVE A MINIMUM 1FOOT SEPARATION FROM SIDEWALKS. INSTALL WATER SERVICE STUBOUTS NO MORE THAN 18" FROM THE COMMON PROPERTY CORNER UNLESS OTHERWISE NOTED ON THE CONSTRUCTION PLANS.
13. CONTRACTOR SHALL SCHEDULE ALL REQUIRED TESTS AND INSPECTIONS WITH THE CITY OF WALTERBORO AT LEAST 72 HOURS IN ADVANCE. A SET OF RECORD DRAWINGS SHALL BE PROVIDED TO THE CITY OF WALTERBORO INSPECTOR FOR FINAL INSPECTION.
14. CONTRACTOR SHALL KEEP A RED-LINED SET OF THE CONSTRUCTION DRAWINGS ON SITE AT ALL TIMES.
15. CONTRACTOR TO INSTALL TEMPORARY CONSTRUCTION WATER METER AND BACKFLOW PREVENTER AT TIE IN LOCATIONS WITH EXISTING WATER MAINS. WATER METER AND BFP TO REMAIN IN PLACE UNTIL PTO IS OBTAINED.



TYPICAL WATER MAIN DEFLECTION BELOW

SCALE: N.T.S.

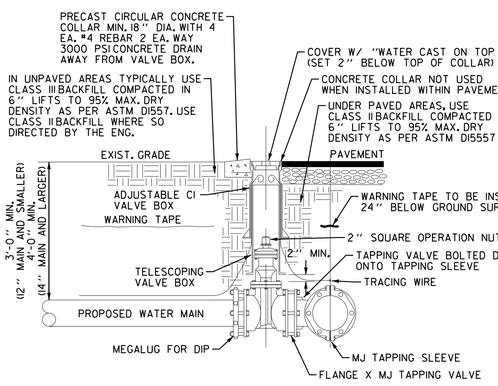
NOTES:
1. CENTER VALVE BOX OVER OPERATING NUT TO INSURE FREE VALVE OPERATION.
2. USE TELESCOPING VALVE BOX ON ALL VALVES.
3. SUPPORT VALVE BOX BOTTOM ON WELL COMPACTED BACKFILL. DO NOT ALLOW VALVE BOX TO REST ON ANY PORTION OF VALVE.
4. USE 6" D.I. RISER ON DEEP VALVE INSTALLATION. TELESCOPING VALVE BOXES ARE AVAILABLE FOR DEPTHS UP TO 6'-10".



TYPICAL VALVE AND VALVE BOX INSTALLATION DETAIL

SCALE: N.T.S.

NOTES:
1. CENTER VALVE BOX OVER OPERATING NUT TO INSURE FREE VALVE OPERATION.
2. USE TELESCOPING VALVE BOX ON ALL VALVES.
3. SUPPORT VALVE BOX BOTTOM ON WELL COMPACTED BACKFILL. DO NOT ALLOW VALVE BOX TO REST ON ANY PORTION OF VALVE.
4. TO BE USED ON ALL TAPS GREATER THAN 1".



TYPICAL TAPPING SLEEVE AND VALVE DETAIL

SCALE: N.T.S.

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SOUTH CAROLINA — STANTEC CONSULTING SERVICES, INC. No. C02310 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — LICENSED PROFESSIONAL ENGINEER — 4/21/21 — No. 27825 — JUSTIN KENNETH TATE

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

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R/W _____ DATE _____
GROUP _____ - _____

CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY DETAILS SHEET

SCALE: N.T.S. RTE. SC63/US17A/US15

User: jtye
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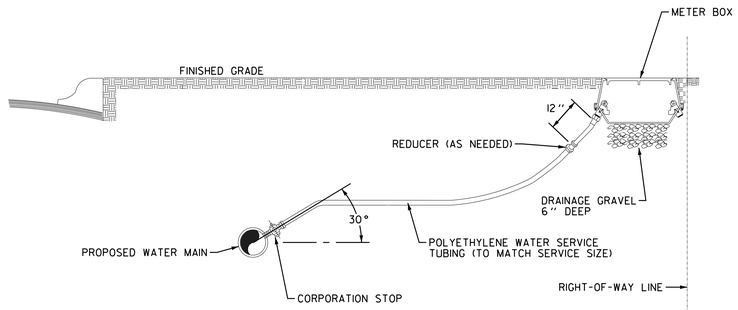
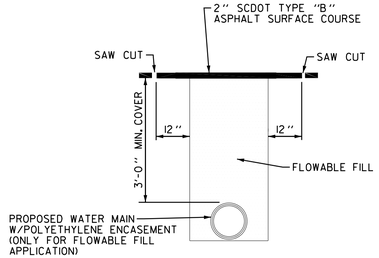
4/21/2021

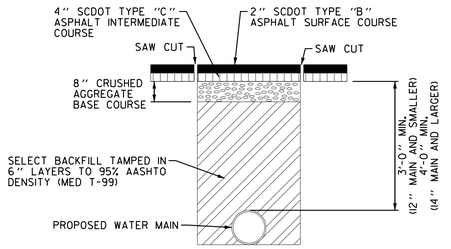
STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S/N. JEFFERIES BLVD.	SC 63/ US17A/US15	U27



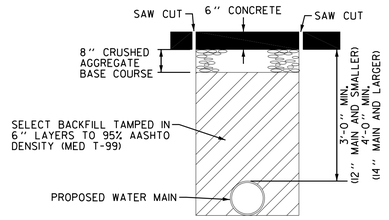
NEAR SIDE SINGLE WATER SERVICE
SCALE: N.T.S.



ROADWAY PAVEMENT REPLACEMENT DETAIL
SCALE: N.T.S.



ASPHALT DRIVEWAY PAVEMENT REPLACEMENT DETAIL
SCALE: N.T.S.



CONCRETE DRIVEWAY PAVEMENT REPLACEMENT DETAIL
SCALE: N.T.S.

RESTRAINED JOINT TABLE FOR BENDS

MINIMUM LENGTH TO BE RESTRAINED EACH SIDE OF BEND (FT.):

PVC PIPE (IN.)	HORIZONTAL BENDS				VERTICAL BENDS (UPPER/LOWER)		
	90°	45°	22½°	11¼°	45°	22½°	11¼°
6	20	8	4	2	22/5	11/2	6/1
8	26	11	5	3	29/6	14/3	7/2

D.I. PIPE (IN.)	HORIZONTAL BENDS				VERTICAL BENDS (UPPER/LOWER)		
	90°	45°	22½°	11¼°	45°	22½°	11¼°
6	16	7	4	2	14/4	7/2	4/1
8	21	9	5	3	19/5	9/3	5/2

TABLE IS BASED UPON CLASS II SOIL TYPE SP, TRENCH TYPE 4, 150 PSI TESTING PRESSURE, A SAFETY FACTOR OF 1.5, AND AN ASSUMED MINIMUM COVER OF 3' ON UPPER VERTICAL BENDS, AND 6' ON LOWER VERTICAL BENDS. THIS TABLE WAS DERIVED FROM EBAA IRON, INC. RESTRAINED LENGTH CALCULATION PROGRAM.

RESTRAINED JOINT TABLE FOR TEES

MINIMUM BRANCH LENGTH TO BE RESTRAINED (FT.):

PVC PIPE

BRANCH PIPE SIZE (IN.)	RUN PIPE SIZE (IN.)	
	6	8
6	26	17
8		42

DUCTILE IRON PIPE

BRANCH PIPE SIZE (IN.)	RUN PIPE SIZE (IN.)	
	6	8
6	17	12
8		28

TABLE IS BASED UPON CLASS II SOIL TYPE SP, TRENCH TYPE 4, 150 PSI TESTING PRESSURE, A SAFETY FACTOR OF 1.5, AN ASSUMED MINIMUM COVER OF 3', AND THE MINIMUM ATTACHED LENGTH OF PIPE (LR) TO EXTEND IN EACH DIRECTION ALONG THE RUN OF THE TEE IS 5'. THIS TABLE WAS DERIVED FROM EBAA IRON, INC. RESTRAINED LENGTH CALCULATION PROGRAM.

RESTRAINED JOINT TABLE FOR REDUCERS

MINIMUM LENGTH TO BE RESTRAINED ON LARGE SIZE SIDE OF REDUCER (FT.):

PVC PIPE (IN.)	REDUCER SMALL SIZE (IN.)
6	
8	30

D.I. PIPE (IN.)	REDUCER SMALL SIZE (IN.)
6	
8	19

TABLE IS BASED UPON CLASS II SOIL TYPES SP, TRENCH TYPE 4, 150 PSI TESTING PRESSURE, A SAFETY FACTOR OF 1.5, AND AN ASSUMED MINIMUM COVER OF 3'. THIS TABLE WAS DERIVED FROM EBAA IRON, INC. RESTRAINED LENGTH CALCULATION PROGRAM.

RESTRAINED JOINT TABLES
SCALE: N/A

PLANS PREPARED BY:

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SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH LEE

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2			
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CITY OF WALTERBORO

COLLETON COUNTY
I-95 BUSINESS LOOP
PHASES 2 & 10
UTILITY DETAILS SHEET

SCALE: N.T.S. RTE. SC63/US17A/US15

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X1

70 60 50 40 30 20 10 ℄ 10 20 30 40 50

100 95 90

EX. R/W

EX 18" RCP
FL 91.71

96.88 97.09 3' 97.11

60+50.00

EX. R/W

EX 15" RCP
FL 92.77

EX. R/W

EX 18" RCP
FL 90.91

96.90 97.13 3' 97.16 1.70% 97.79 30:1 4:1

60+00.00

EX. R/W

EX 15" RCP
FL 92.57

EX. R/W

EX 18" RCP
FL 90.62

96.96 97.19 3' 97.24 1.70% 97.92 30:1

59+50.00

EX. R/W

EX 15" RCP
FL 92.37

EX. R/W

EX 18" RCP
FL 90.70

97.01 1.70% 98.25 30:1 2:1

59+00.00

EX. R/W NEW R/W

EX 15" RCP
FL 92.17

BEGIN CONSTRUCTION 58+64.80

EX 18" RCP
FL 90.77

97.08

58+50.00

EX 15" RCP
FL 91.70

5' 5'

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JUSTIN KENNETH KANE

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X2

70 60 50 40 30 20 10 ℄ 10 20 30 40 50

100 95 90

EX. R/W

11.00'

97.39 | 96.93 | 97.39

63+00.00

EX. R/W

11.00'

97.38 | 96.93 | 97.40

62+50.00

EX. R/W

8.67'

97.41 | 96.92 | 97.45

EX 15" RCP
FL 93.17

62+00.00

EX. R/W

5.33'

96.89 | 97.45 | 97.42

EX 15" RCP
FL 93.17

61+50.00

EX. R/W

3.45'

96.89 | 97.09 | 97.11

EX 15" RCP
FL 92.97

61+00.00

5'
5'

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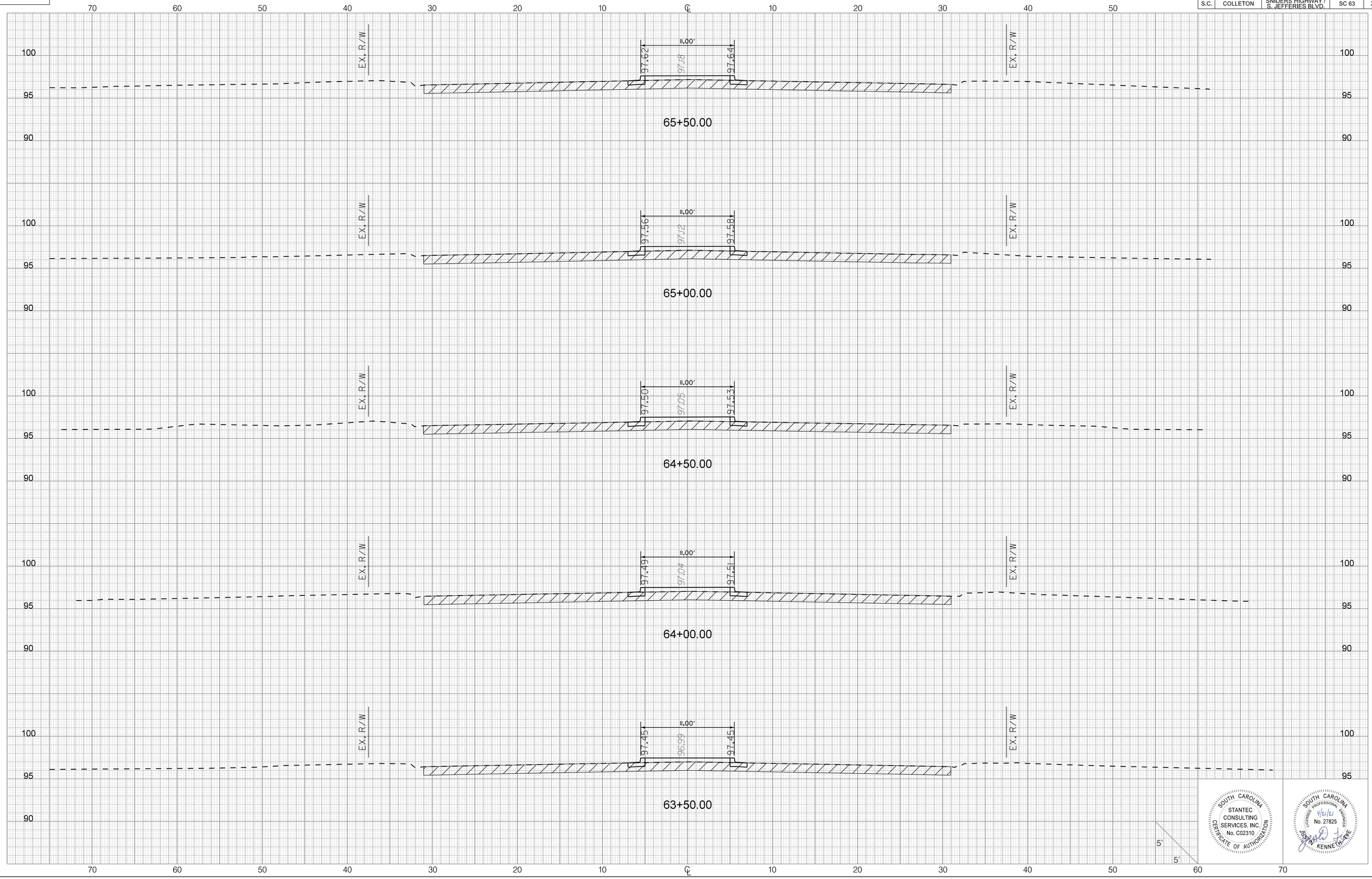
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X3



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4/21/21
JUSTIN KENNETH LAIRE

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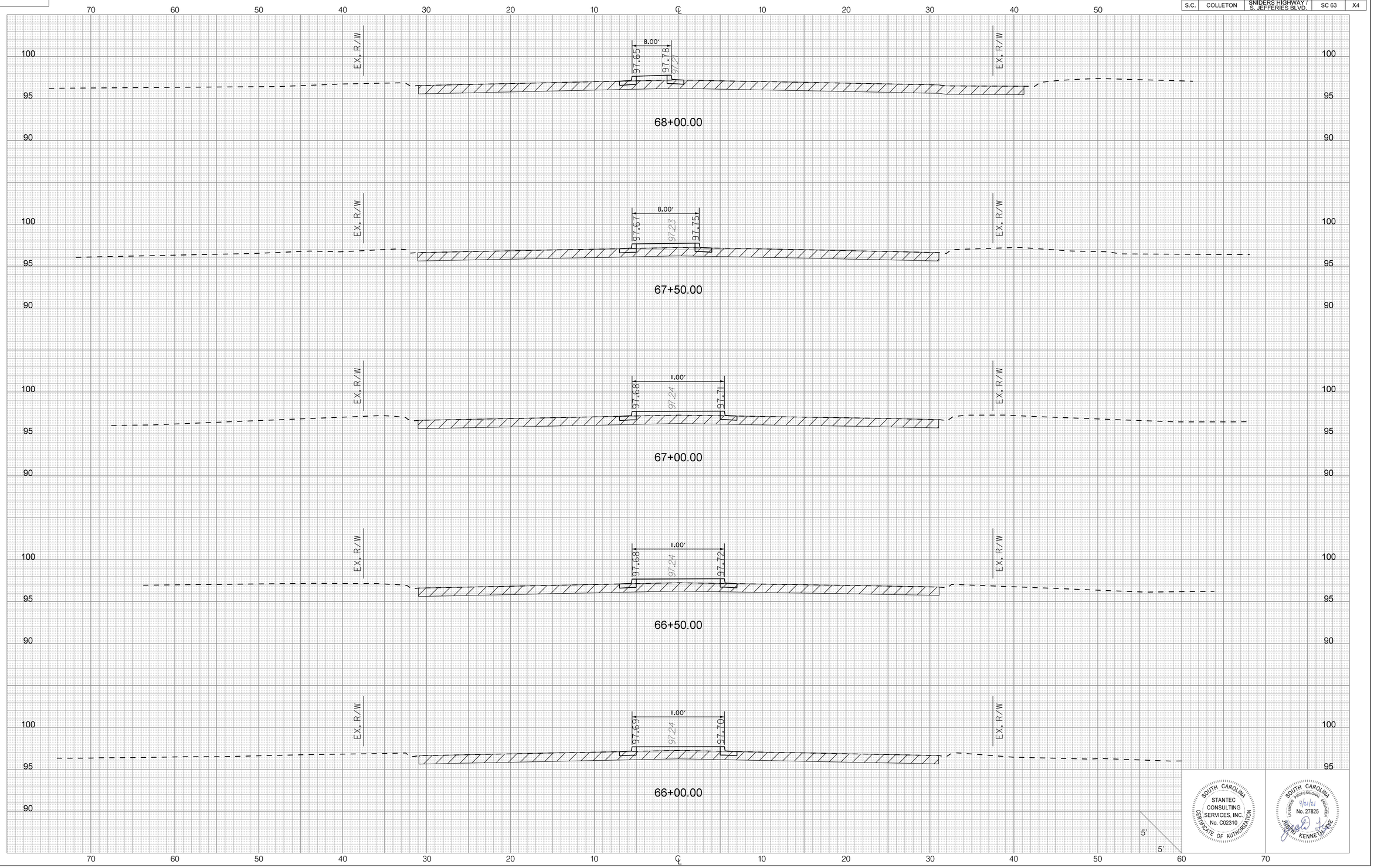
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X4



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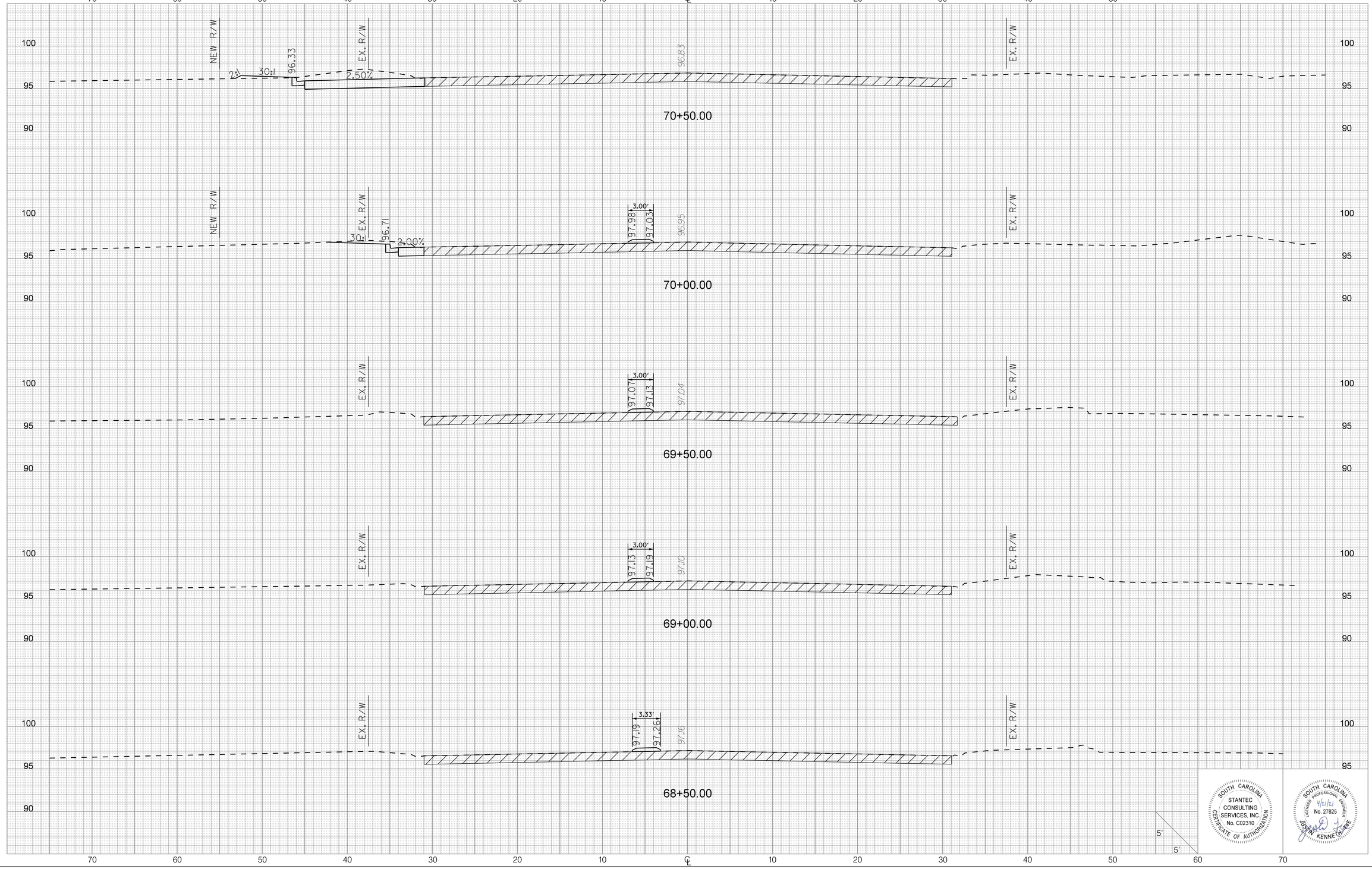
STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X5



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JUSTIN KENNETH LANE

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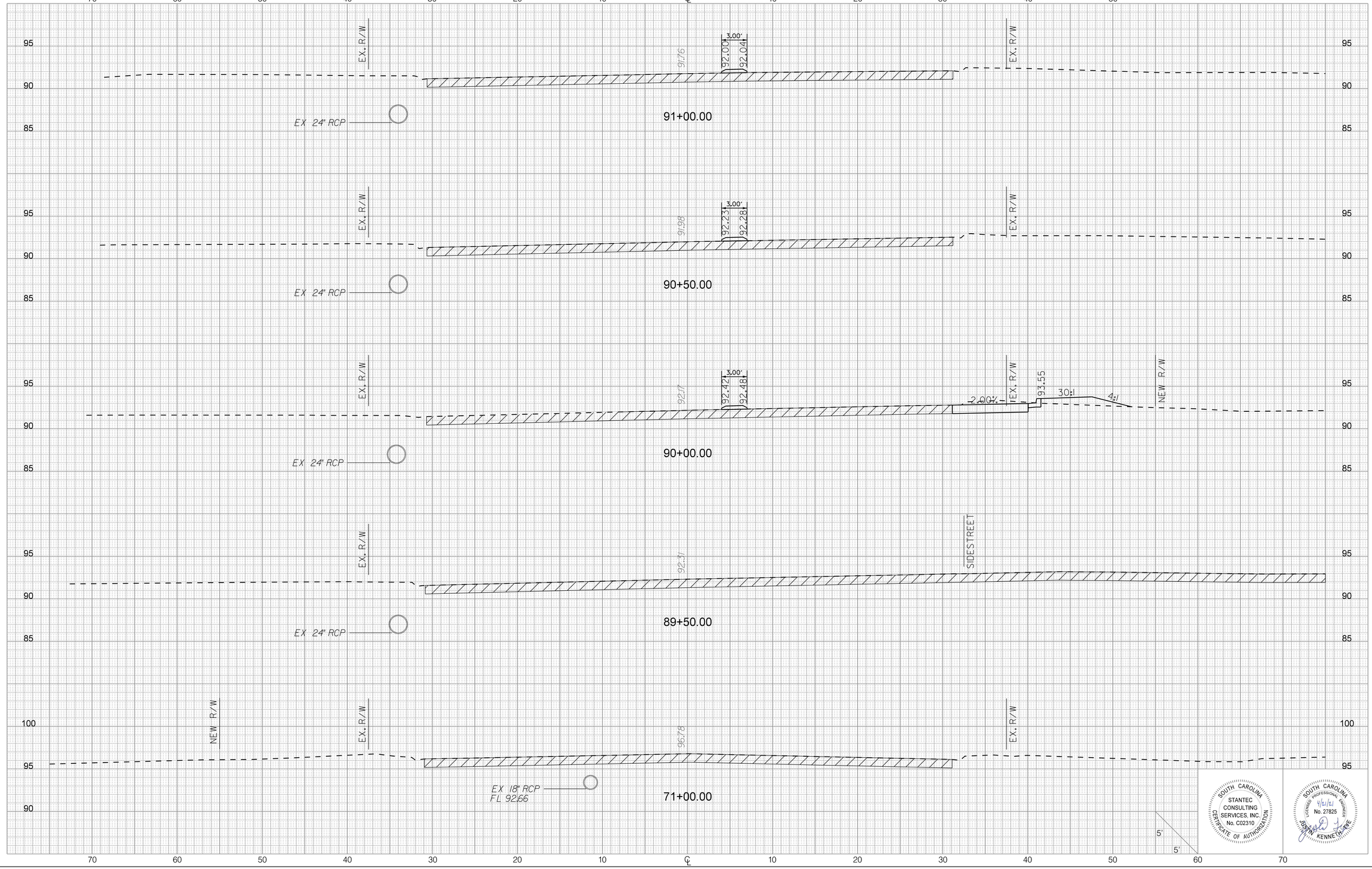
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X6



STANTEC CONSULTING SERVICES, INC. No. C02310 — SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 27825 — 4/21/21 — JUSTIN KENNETH KANE

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X7

70 60 50 40 30 20 10 ℄ 10 20 30 40 50

95 90 85

EX. R/W

11.00'

91.02 90.60 91.01

EX. 24" RCP

93+50.00

EX. R/W

95 90 85

EX. R/W

11.00'

91.21 90.79 91.24

EX. 24" RCP

93+00.00

EX. R/W

95 90 85

EX. R/W

8.00'

91.54 91.05 91.57

EX. 24" RCP

92+50.00

EX. R/W

95 90 85

EX. R/W

4.66'

91.29 91.86 91.82 91.23

EX. 24" RCP

92+00.00

EX. R/W

95 90 85

EX. R/W

3.33'

91.51 91.68 91.68

EX. 24" RCP

91+50.00

EX. R/W

95 90 85

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

5'
5'

SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
4/21/21
No. 27825
JUSTIN KENNETH KANE

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X8

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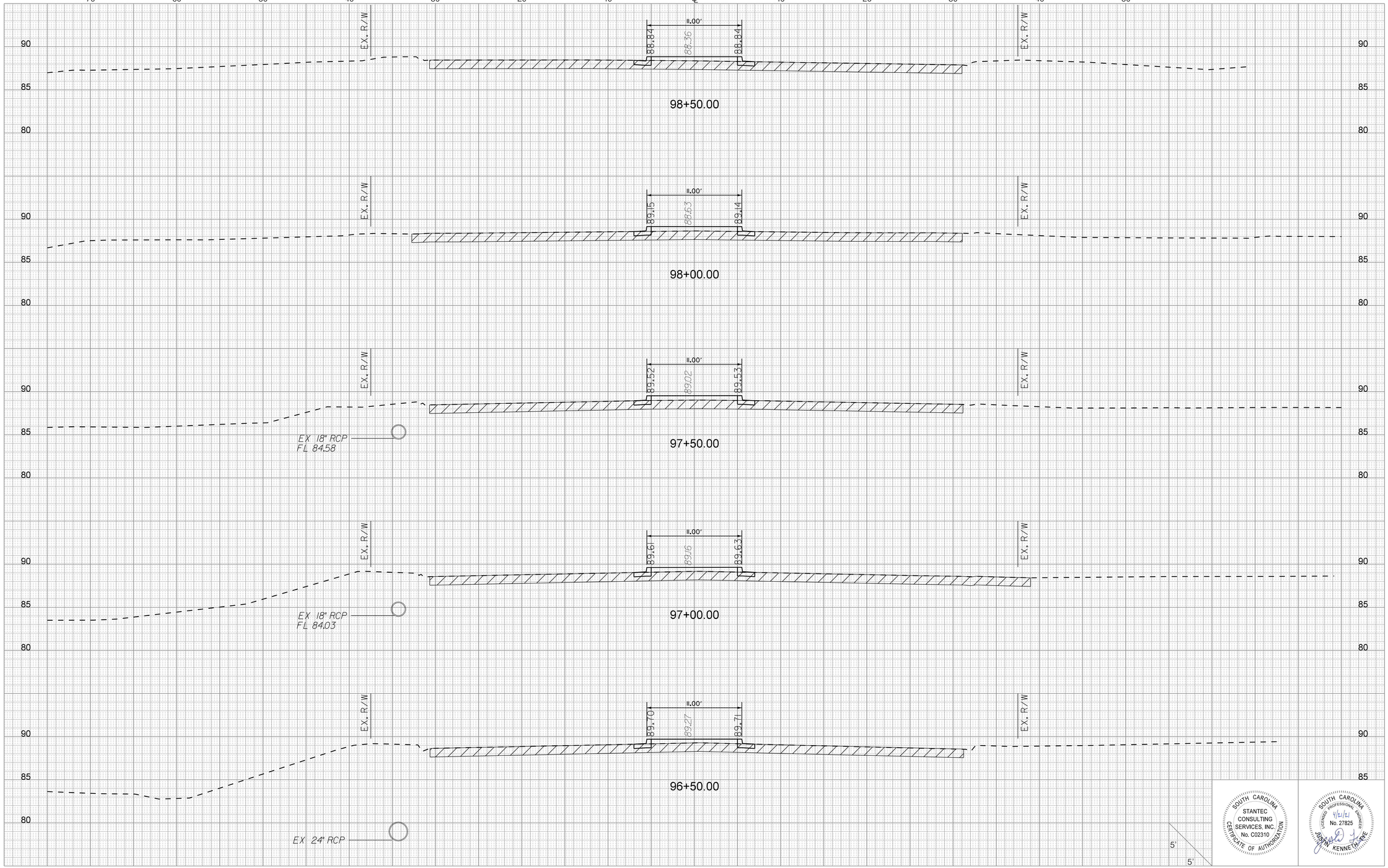
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X9



SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
4/21/21
No. 27825
JUSTIN KENNETH LORE

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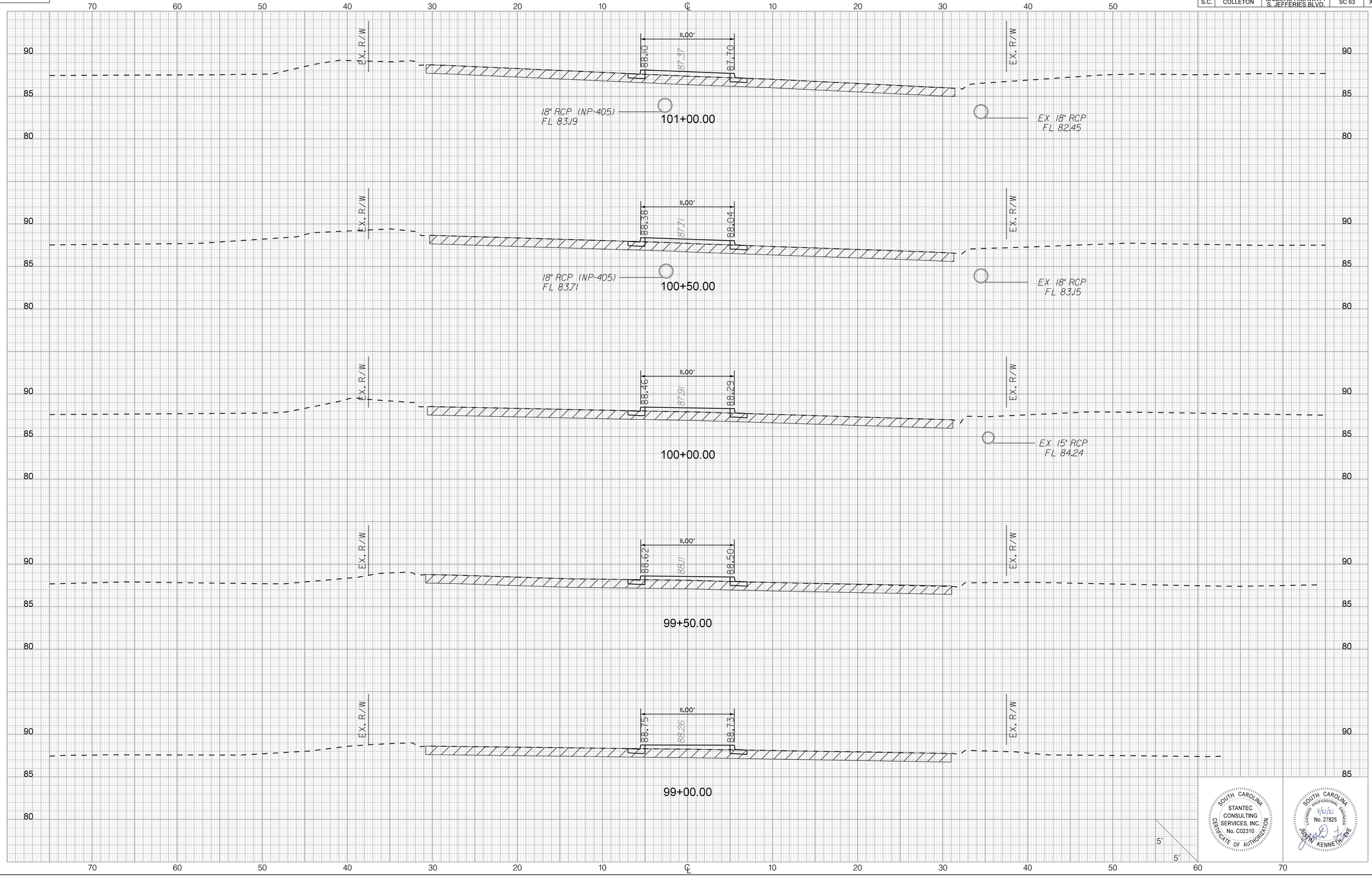
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X10



STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 27825 4/21/21 JUSTIN KENNETH LORE

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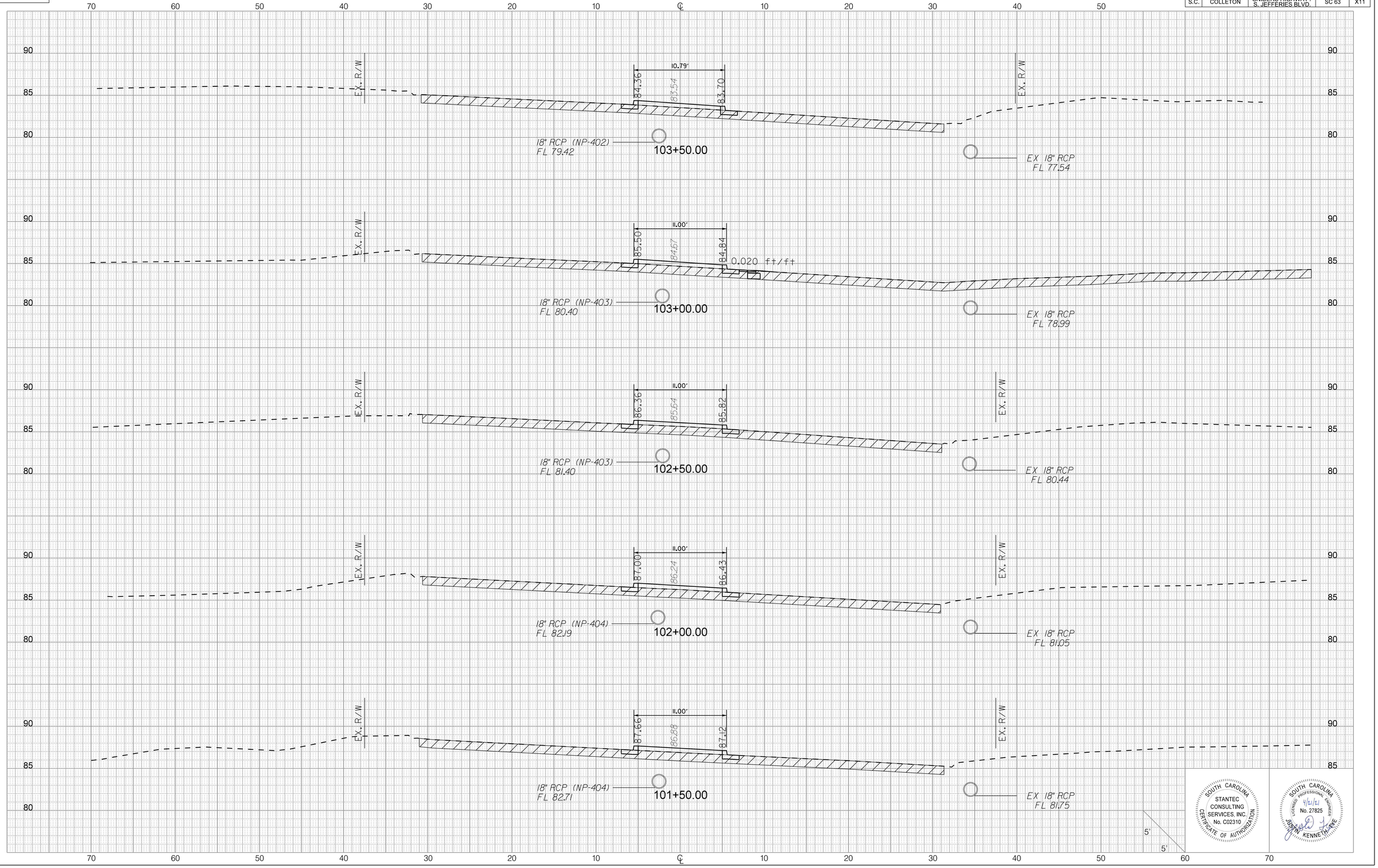
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X11



STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH LANE

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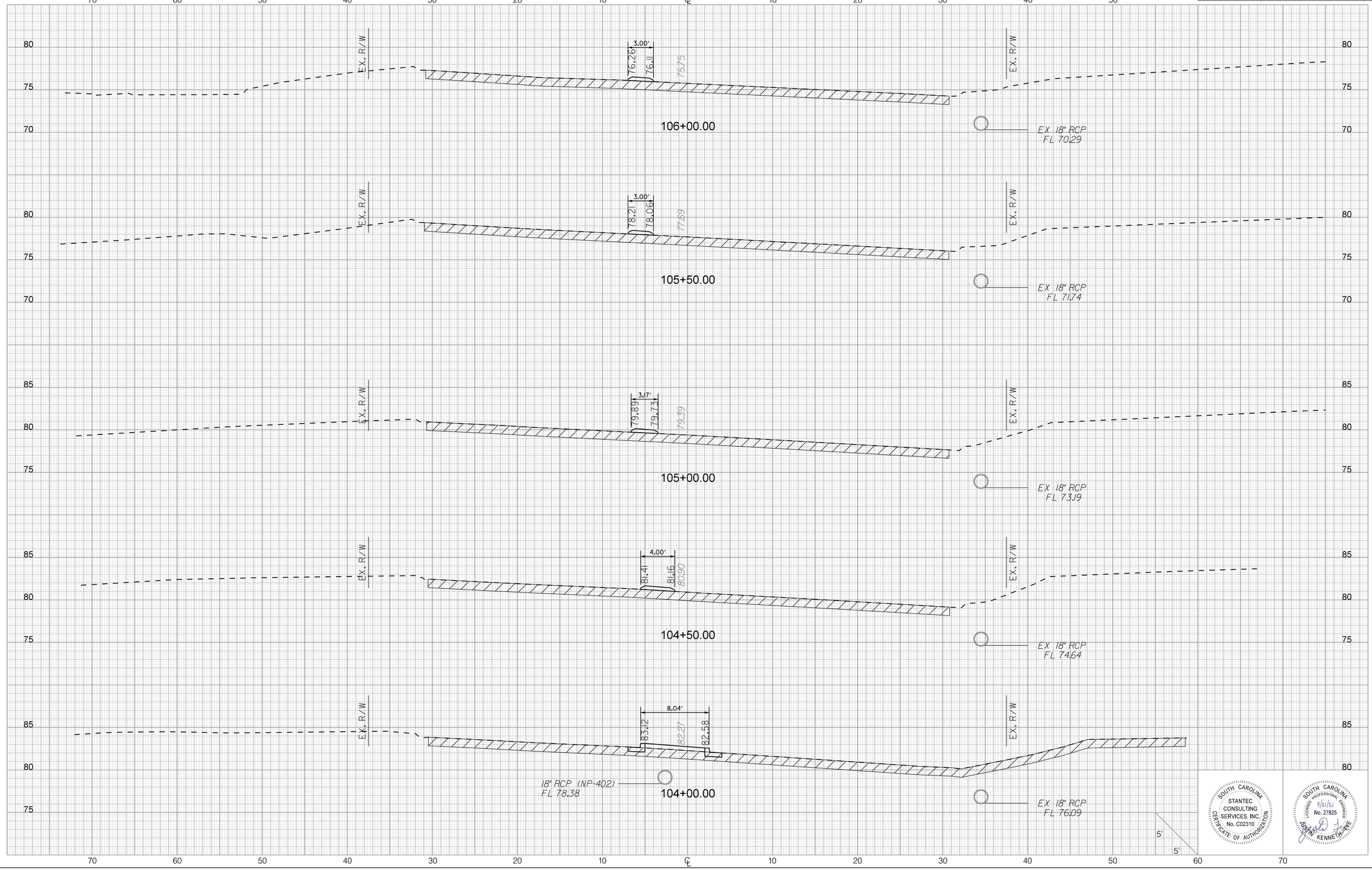
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X12



STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/2/21 No. 27825 JUSTIN KENNETH RYE

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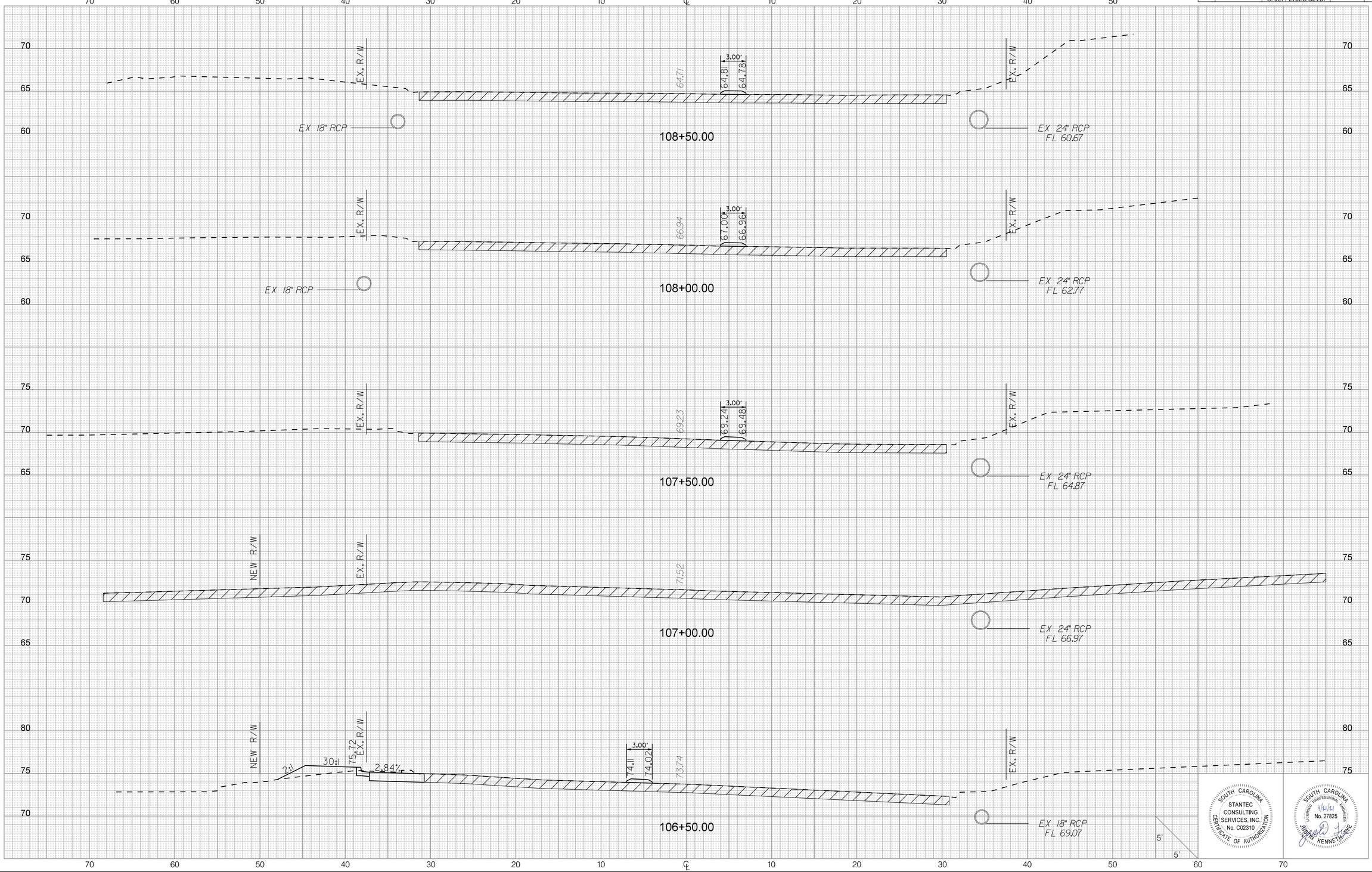
4/2/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X13

70 60 50 40 30 20 10 ℄ 10 20 30 40 50



70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
4/21/21
No. 27825
JUSTIN KENNETH LORE

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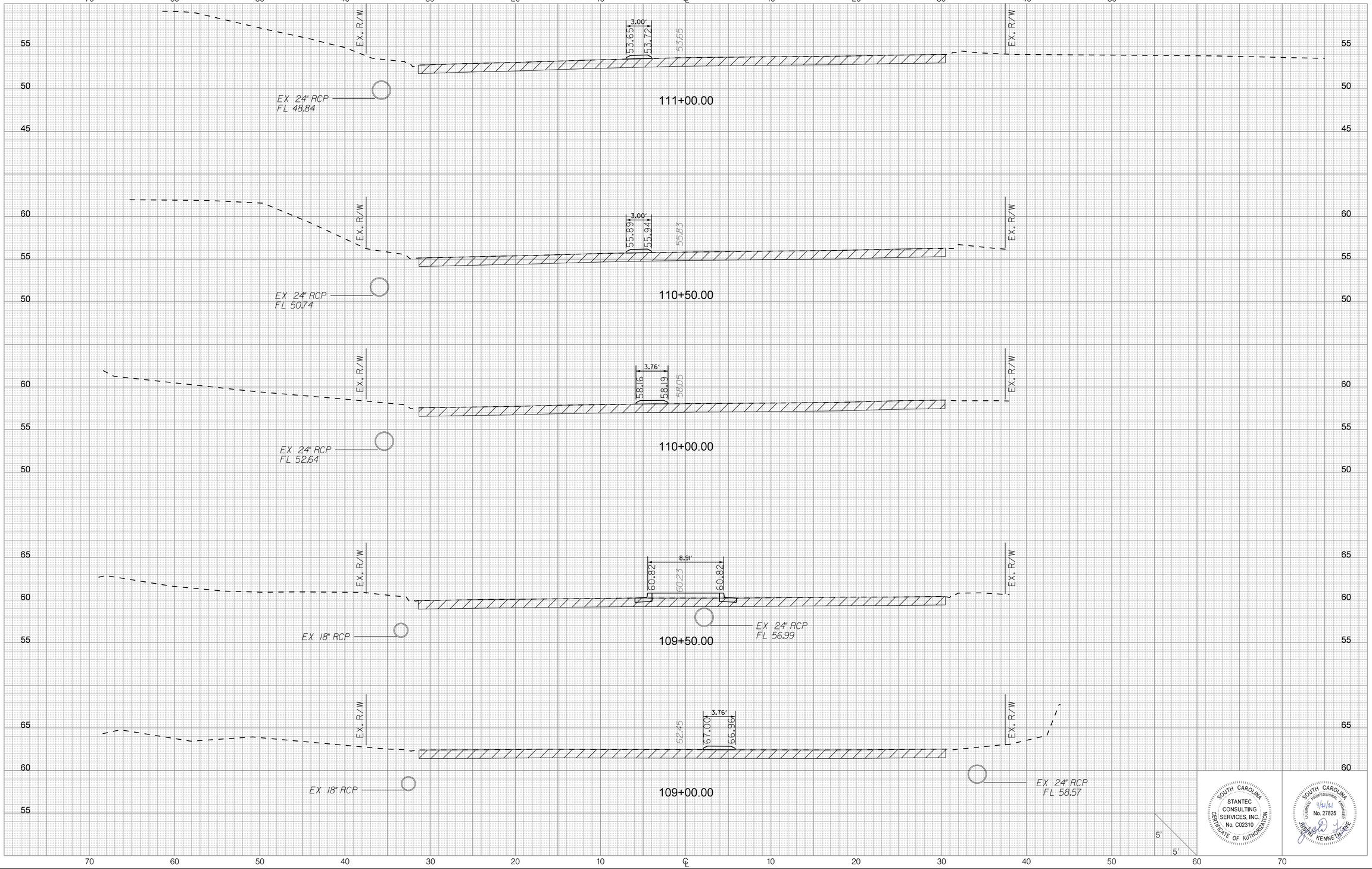
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X14



SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
JUSTIN KENNETH LORE

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X15

70 60 50 40 30 20 10 ℄ 10 20 30 40 50

45 40 35

EX. R/W

42.42

113+50.00

50 45 40

EX. R/W

44.55

113+00.00

50 45 40

EX. R/W

46.75

112+50.00

55 50 45 40

49.04

EX 24" RCP

112+00.00

55 50 45

3.00'

51.35

51.44

51.37

EX. R/W

EX 24" RCP

111+50.00

5'

5'

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
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SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
KENNETH E. KIRE

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X16

70 60 50 40 30 20 10 ℄ 10 20 30 40 50

40 35 30

EX. R/W

34.47

3.00'

34.71'

34.74'

EX. R/W

116+00.00

EX 18" RCP
FL 28.01

40 35 30

EX. R/W

35.36

3.00'

35.63'

35.69'

115+50.00

40 35 30

EX. R/W

36.61

115+00.00

40 35 30

EX. R/W

38.27

114+50.00

45 40 35

EX. R/W

40.28

114+00.00

5'
5'

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

SOUTH CAROLINA
STANTEC
CONSULTING
SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
JUSTIN KENNETH LANE

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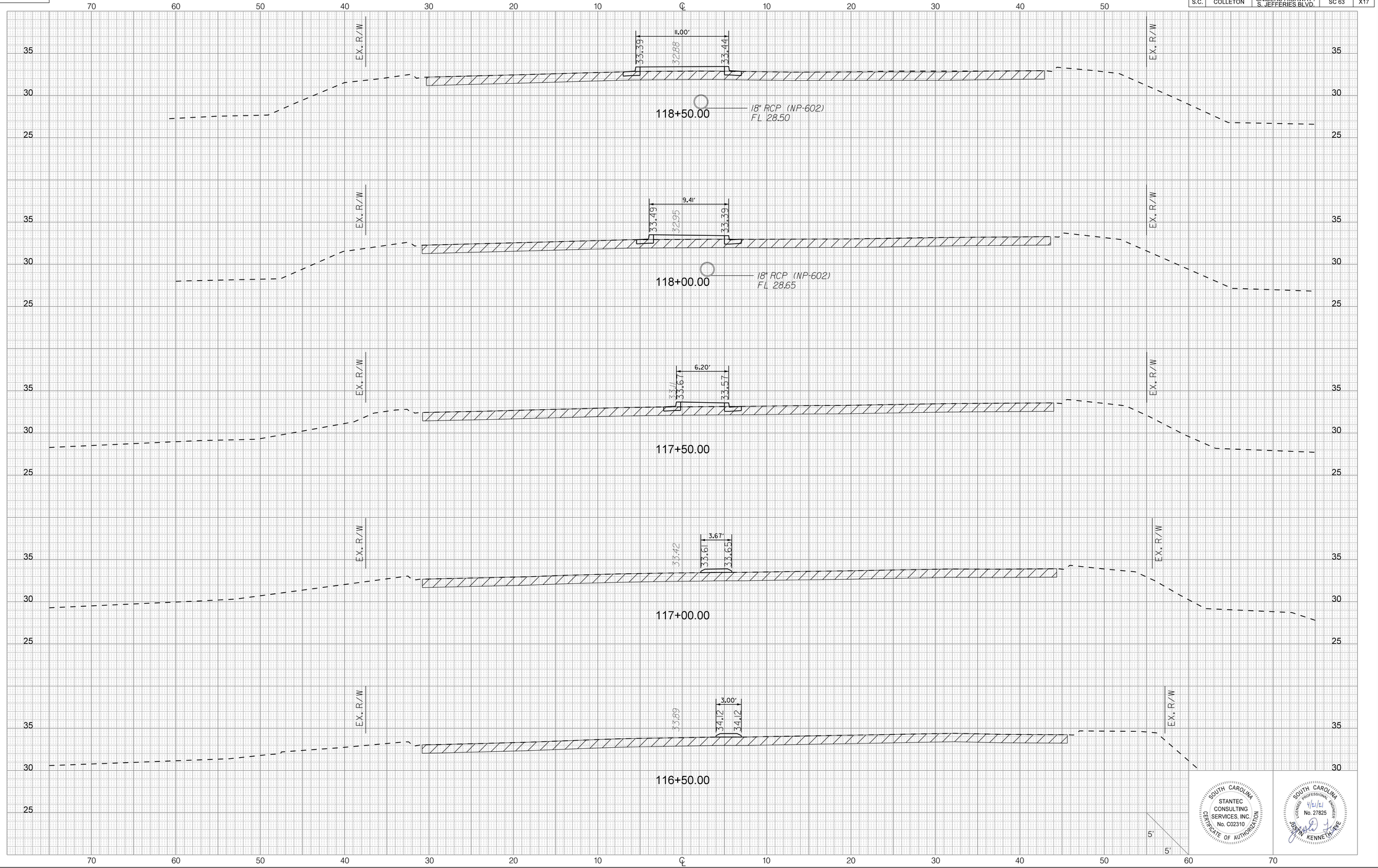
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X17



SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
JUSTIN KENNETH LORE

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X18

70 60 50 40 30 20 10 ℄ 10 20 30 40 50

EX. R/W

3279

145+00.00

EX. 30" RCP
FL 28.40

EX. R/W

3277

120+50.00

EX. R/W

6.00'

33.32'

3276

33.28'

EX. R/W

120+00.00

18" RCP (NP-602)
18" RCP (NP-601)
FL 28.06

EX. R/W

8.00'

33.33'

3279

33.30'

EX. R/W

119+50.00

18" RCP (NP-602)
FL 28.20

EX. R/W

10.00'

33.34'

3282

33.33'

EX. R/W

119+00.00

18" RCP (NP-602)
FL 28.35

35 30 25

5'
5'

SOUTH CAROLINA
STANTEC
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No. C02310
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SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
4/21/21
No. 27825
JUSTIN KENNETH LEE

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

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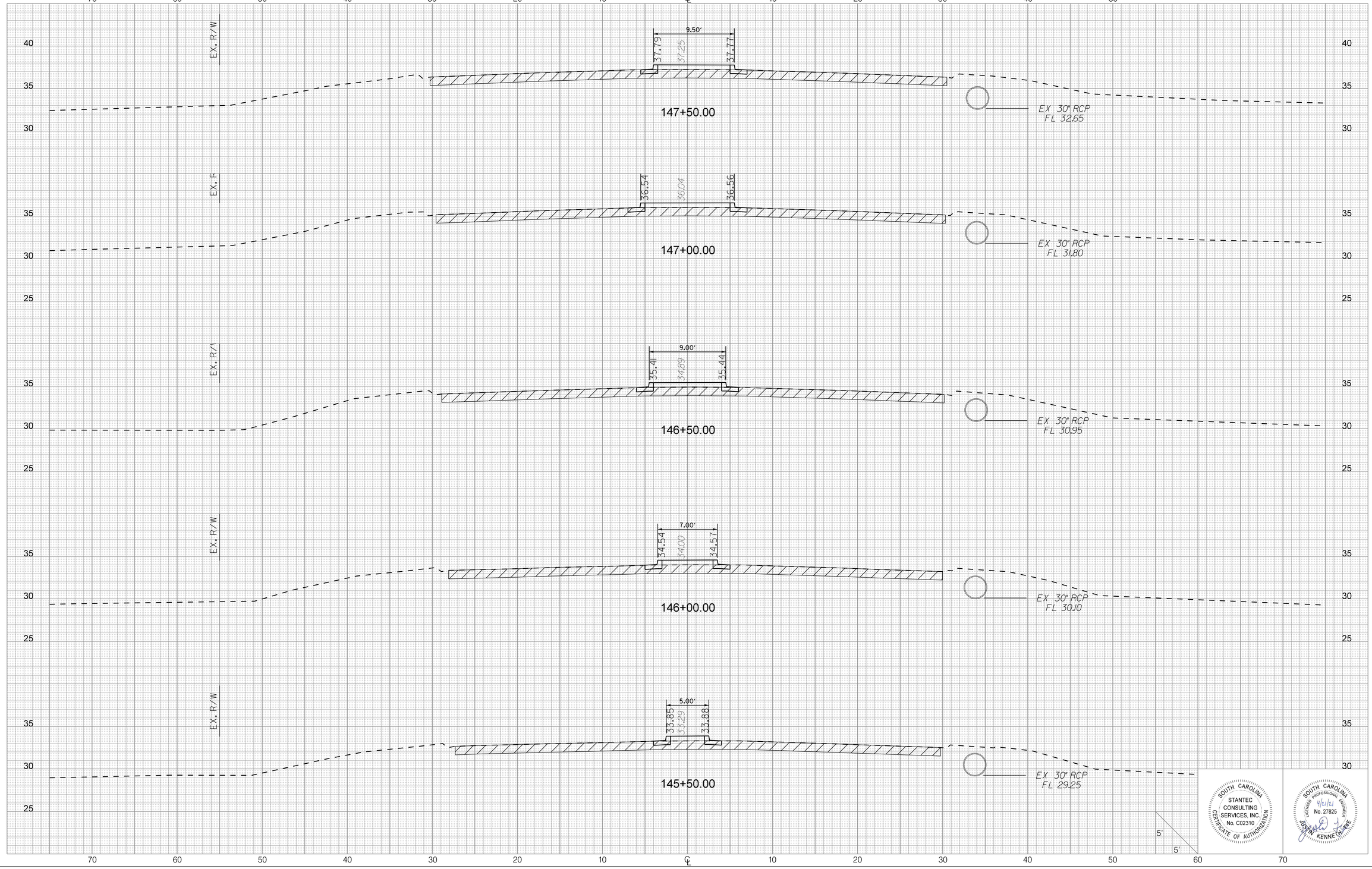
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X19



SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
JUSTIN KENNETH KANE

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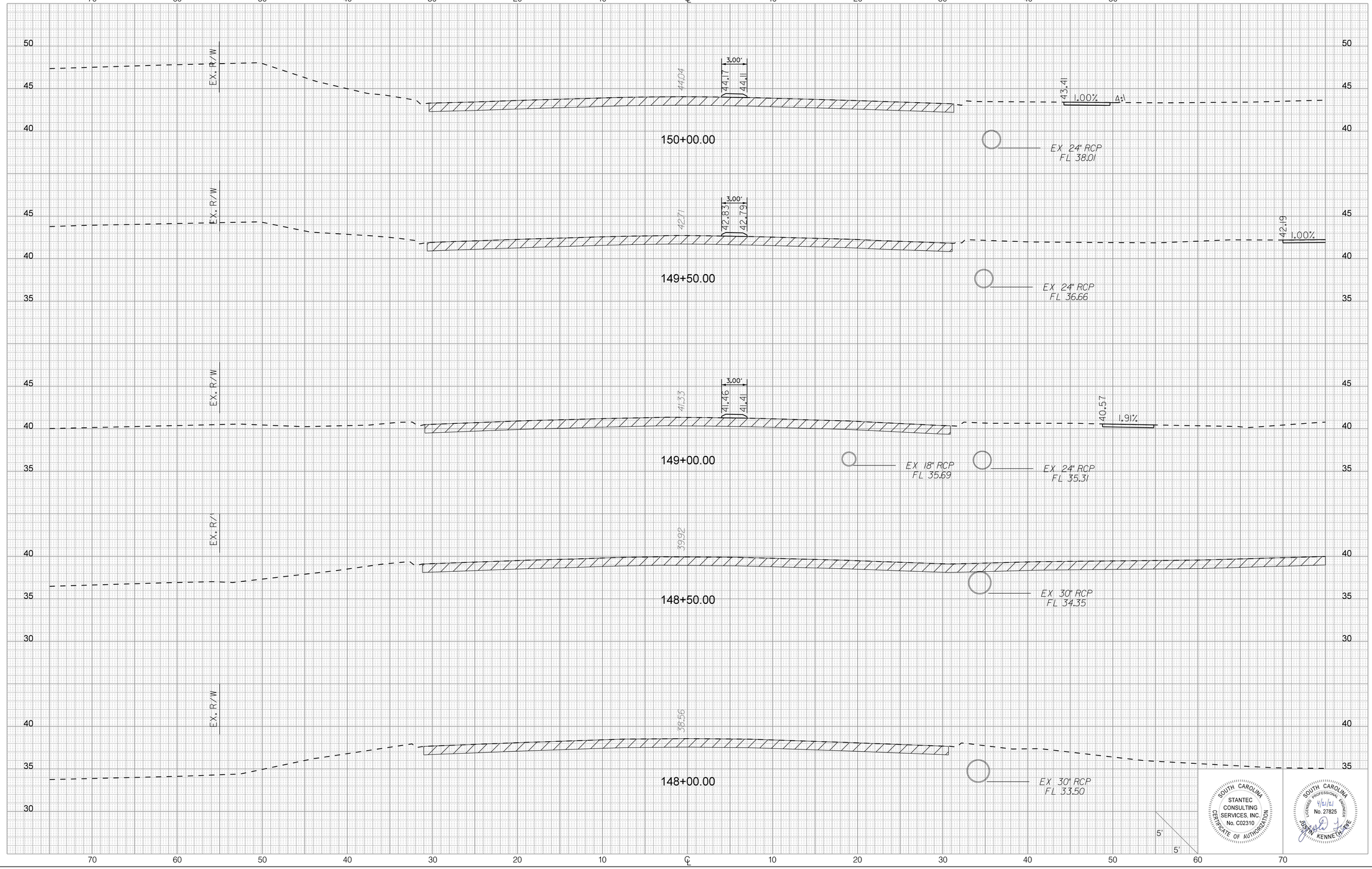
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X20



SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
JUSTIN KENNETH LANE

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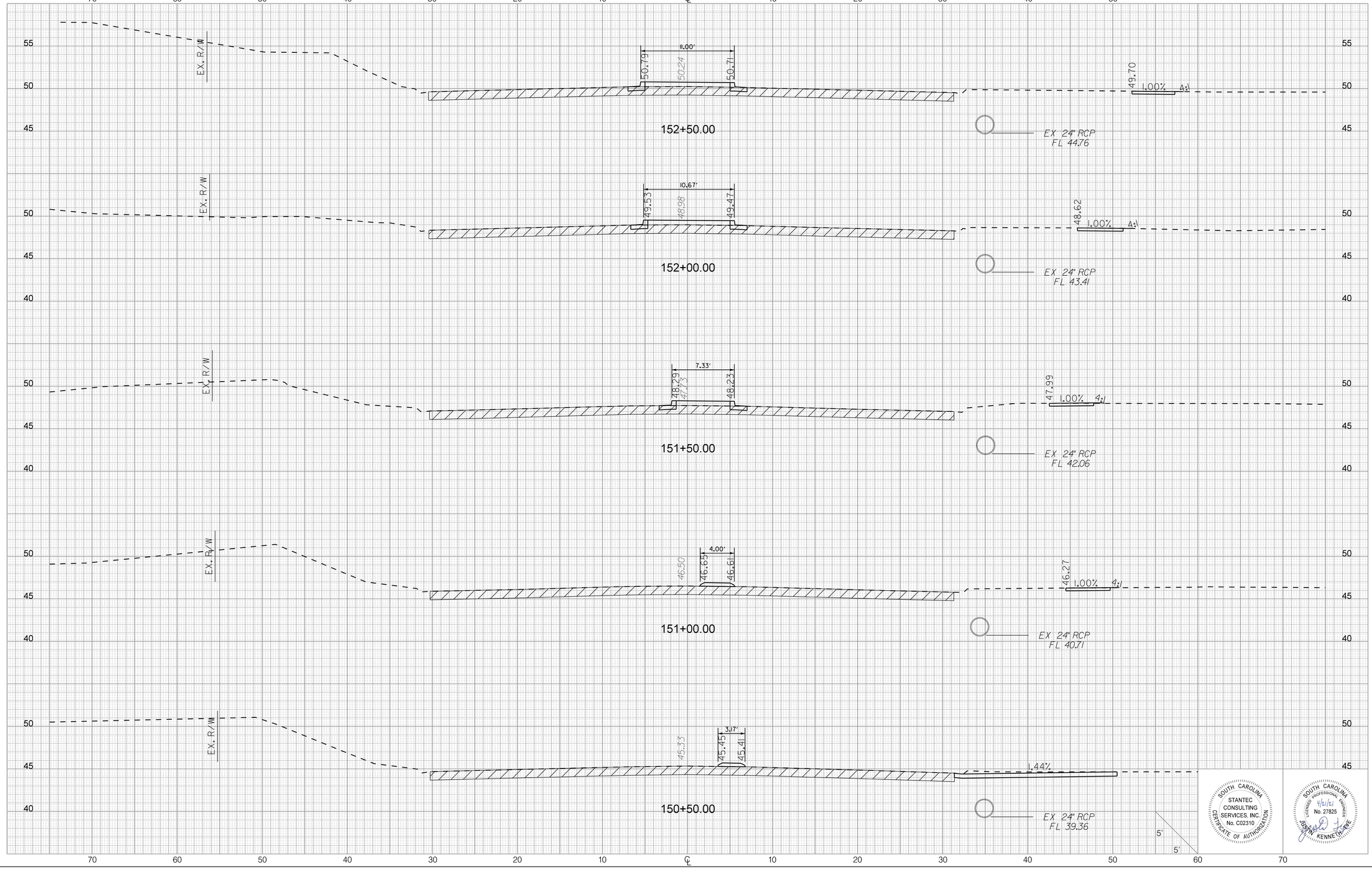
STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	SC 63	X21



SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
JUSTIN KENNETH KLARE

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 17A / SC 63	X22

70 60 50 40 30 20 10 ℄ 10 20 30 40 50

60 55 50 45

EX. R/W

56.08

3.00'

56.21

56.18

56.55

1.00% 4:1

155+00.00

EX 18" RCP
FL 50.82

EX. R/

54.94

3.00'

55.08

55.03

54.62

1.00% 4:1

154+50.00

EX 18" RCP
FL 49.82

EX. R/W

53.79

154+00.00

EX 24" RCP
FL 48.81

EX. R/W

52.60

SIDESTREET

153+50.00

EX 24" RCP
FL 47.46

EX. R/W

7.6'

52.01

51.91

51.45

51.16

1.00% 4:1

153+00.00

EX 24" RCP
FL 46.11

5'

5'

SOUTH CAROLINA
STANTEC
CONSULTING
SERVICES, INC.
No. C02310
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SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
JUSTIN KENNETH LEE

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STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 17A / SC 63	X23

70 60 50 40 30 20 10 ℄ 10 20 30 40 50

65 60 55 50

EX. R/W

11.00'

61.53 60.94 61.39

7.04% 60.70 2.00%

157+50.00

EX 18" RCP
FL 55.18

EX. R/

9.55'

60.76 60.19 60.65

60.01 1.00% 4:1

157+00.00

18" RCP (EP-903)
FL 54.96

EX. R/W

6.00'

59.78 59.18 59.78

59.58 2.00% 4:1

156+50.00

EX 18" RCP
FL 53.82

EX. R/W

3.67'

58.46 58.33 58.40

59.00 2.00% 4:1

156+00.00

EX 18" RCP
FL 52.82

EX. R/W

3.00'

57.37 57.26 57.34

57.40 2.00% 4:1

155+50.00

EX 18" RCP
FL 51.82

5' 5'

SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
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SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
JUSTIN KENNETH RYE

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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 17A / SC 63	X24

70 60 50 40 30 20 10 ℄ 10 20 30 40 50

65 60 55

EX. R/W

11.00'

63.50' 62.83' 63.20'

61.03 0.77%

160+00.00

EX 18" RCP
FL 56.28

EX. R/W

11.00'

63.37' 62.71' 63.09'

61.08 1.72%

159+50.00

EX 18" RCP
FL 56.06

EX. R/W

11.00'

63.05' 62.43' 62.84'

61.54 2.00% 4:1

159+00.00

EX 18" RCP
FL 55.84

EX. R/W

11.00'

62.68' 62.09' 62.53'

61.22 1.00% 4:1

158+50.00

EX 18" RCP
FL 55.62

EX. R/W

11.00'

62.11' 61.52' 61.97'

60.97 2.00% 4:1

158+00.00

EX 18" RCP
FL 55.40

5'
5'

SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
4/21/21
No. 27825
JUSTIN KENNETH KANE

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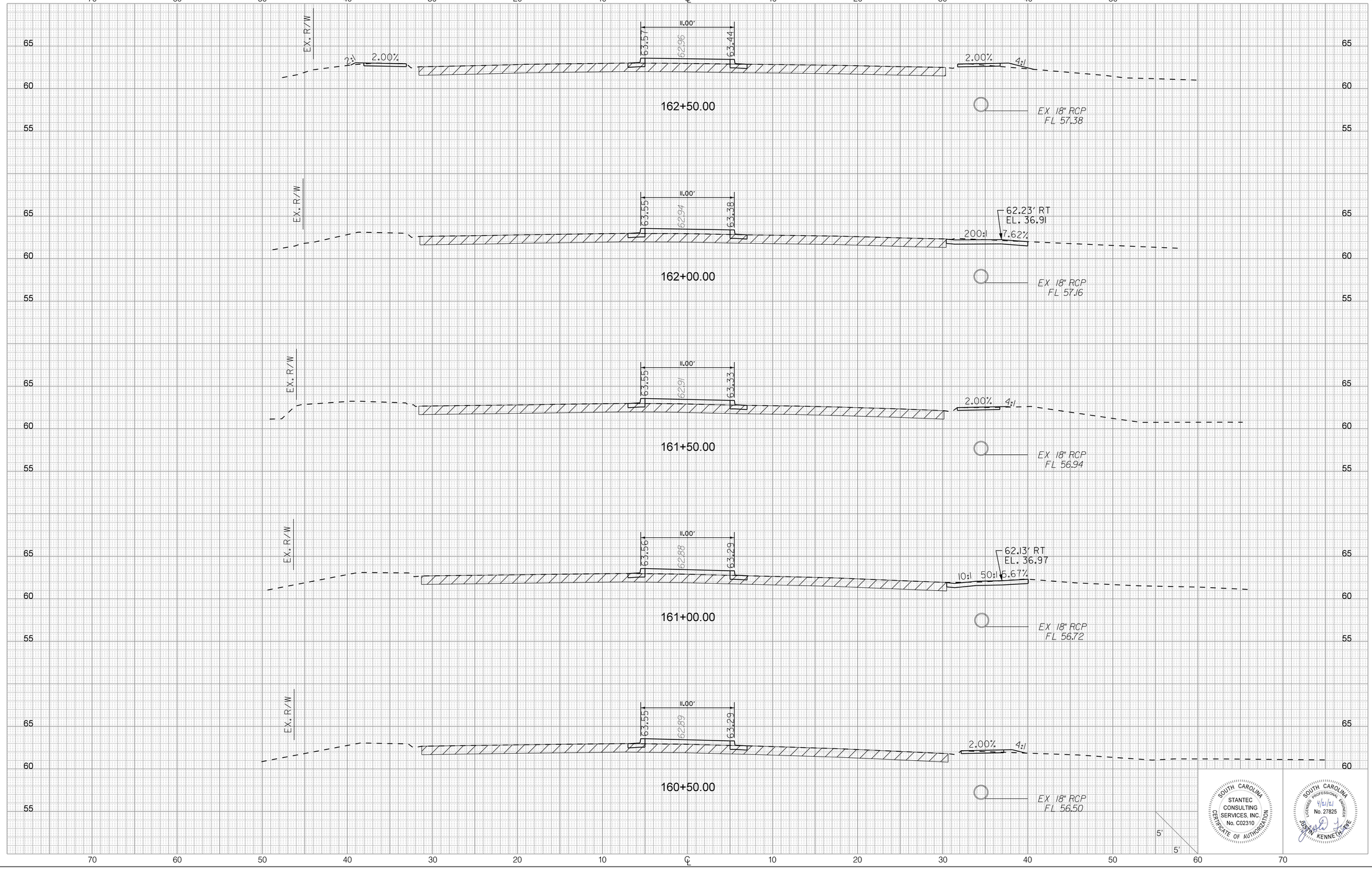
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 17A / SC 63	X25



STANTEC CONSULTING SERVICES, INC. No. C02310 — SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 27825 — 4/21/21 — JUSTIN KENNETH LANE

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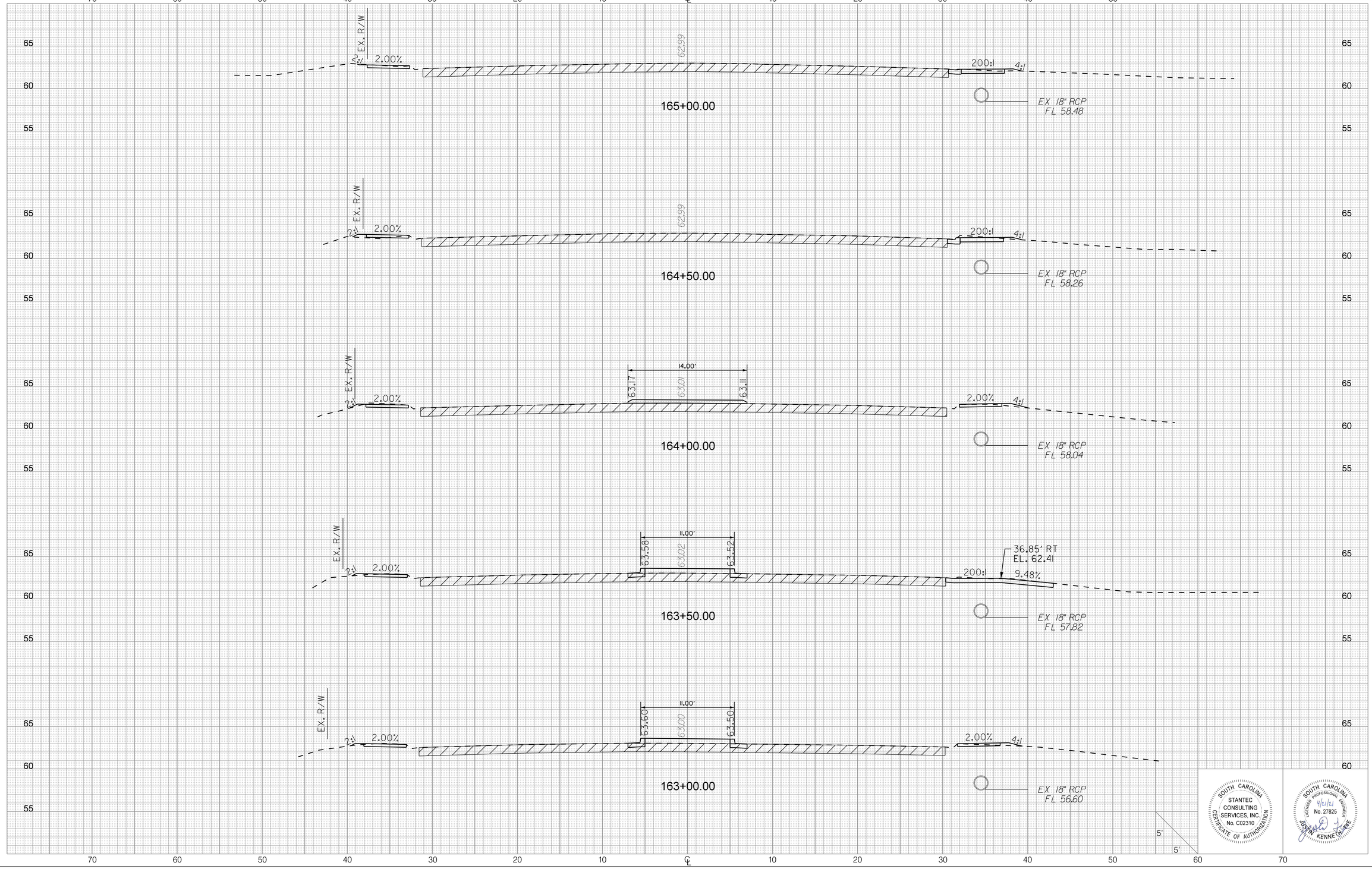
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 17A / SC 63	X26



STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER 4/21/21 No. 27825 JUSTIN KENNETH LANE

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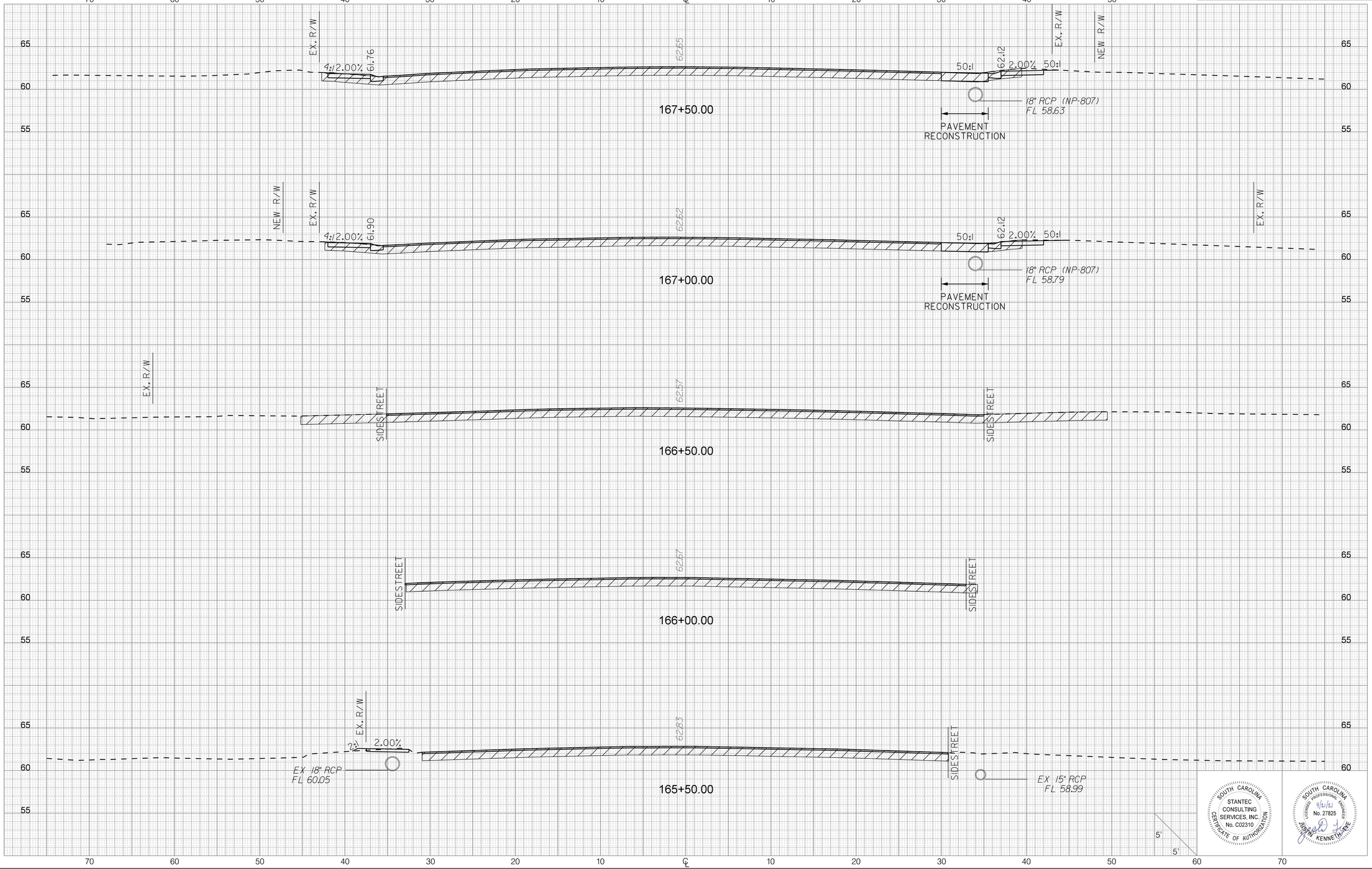
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 17A / SC 63	X27



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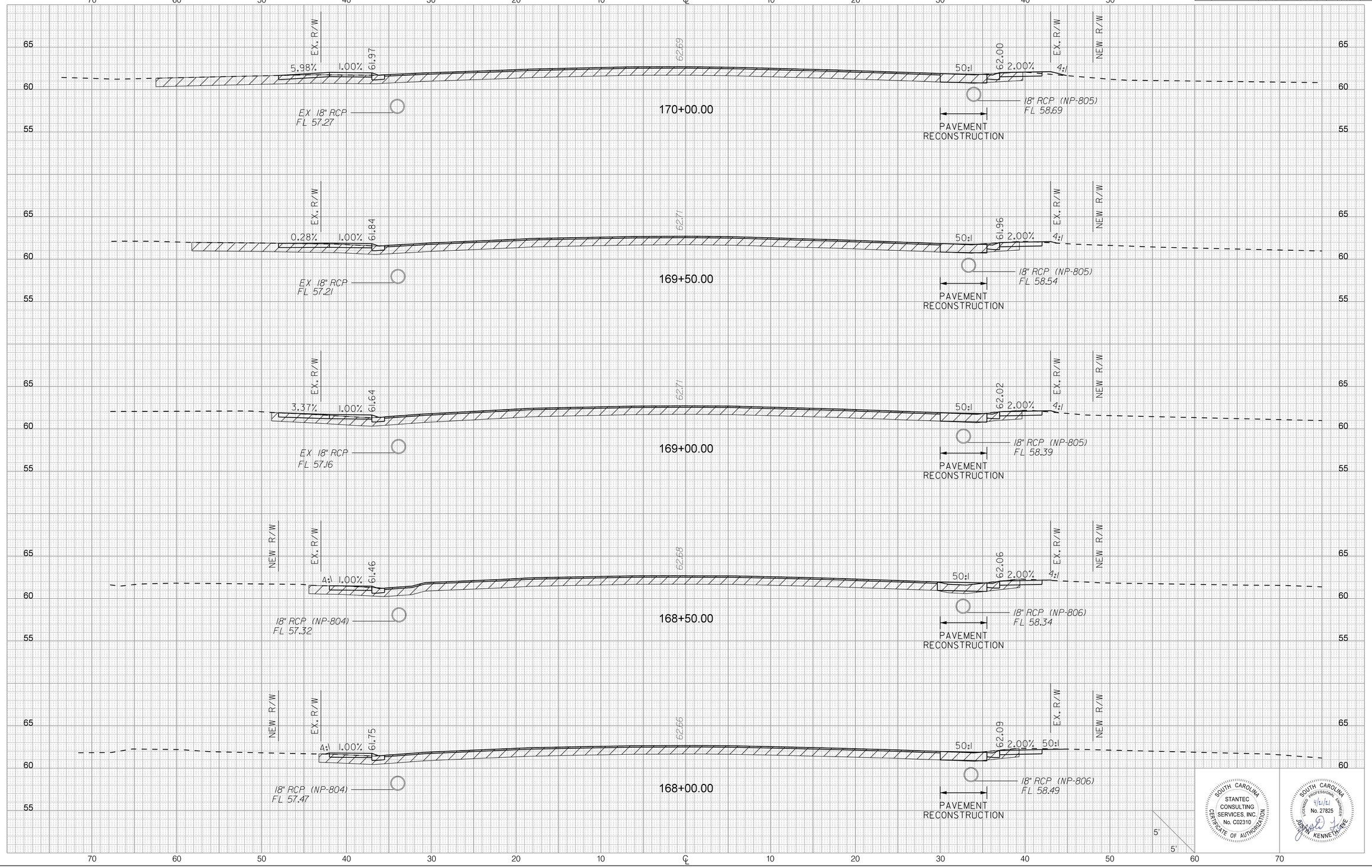
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 17A / SC 63	X28



SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
4/21/21
No. 27825
JUSTIN KENNETH LANE

User: jtye
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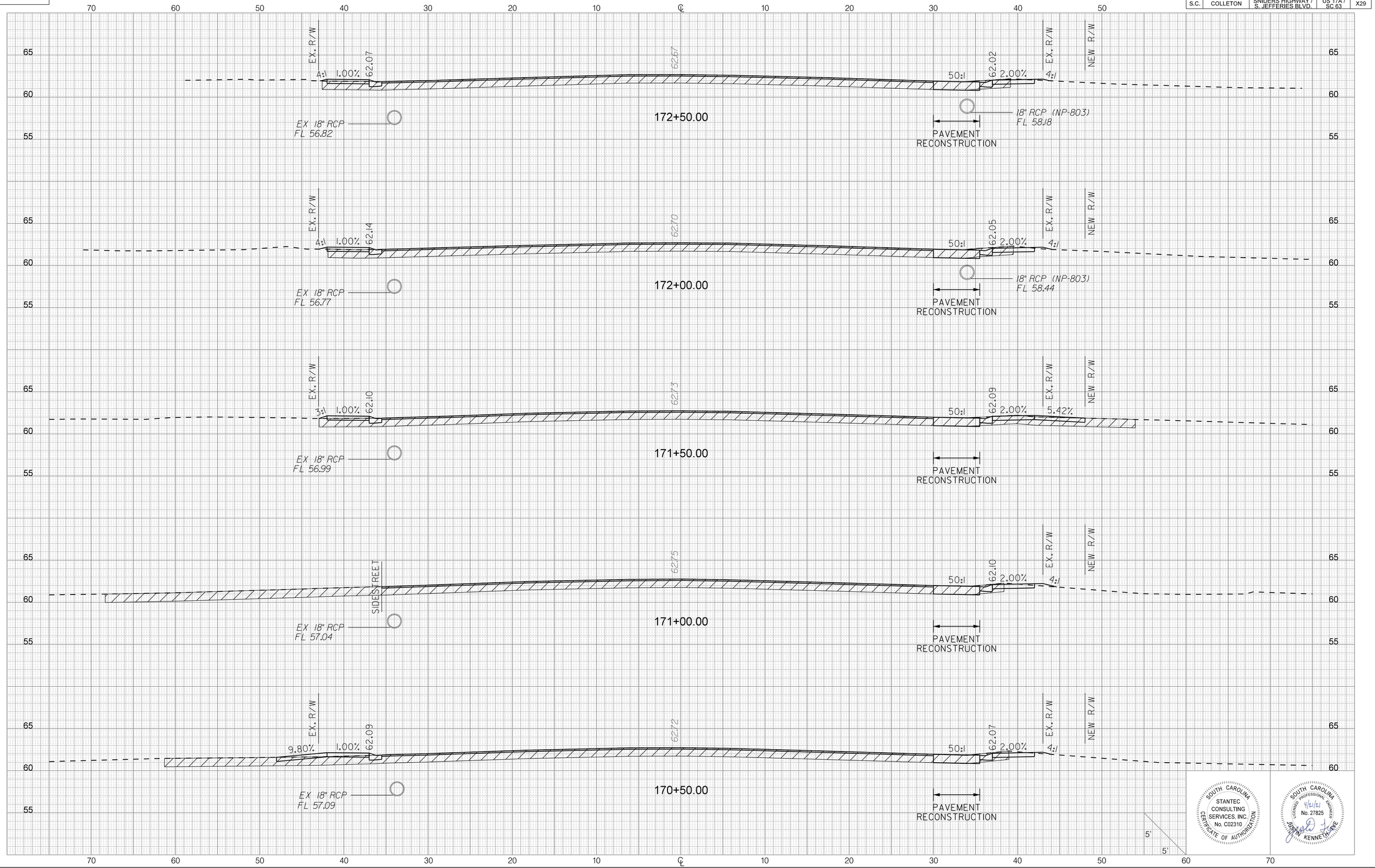
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 17A / SC 63	X29



SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
4/21/21
No. 27825
JUSTIN KENNETH LAIRE

User: jtye
U:\71002304\transportation\roadway\drawings\plan_sheets\02304_xs_sc63.dgn
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 17A / SC 63	X30

175+00.00
EX. R/W
2:1 2.00% 61.32
50:1 61.48 1.00% 4:1
EX 18" RCP FL 56.65
18" RCP (NP-802) FL 56.86
PAVEMENT RECONSTRUCTION
174+50.00
EX. R/W
NEW R/W
4:1 2.00% 61.54
50:1 61.75 1.00% 11.77%
EX 18" RCP FL 56.70
18" RCP (NP-802) FL 57.13
PAVEMENT RECONSTRUCTION
174+00.00
36.7:1 1.00% 61.77
50:1 61.88 1.00% 12.22%
EX 18" RCP FL 56.74
18" RCP (NP-802) FL 57.41
PAVEMENT RECONSTRUCTION
173+50.00
58.5:1 1.00% 61.80
50:1 61.99 2.00% 4:1
EX 18" RCP FL 56.92
18" RCP (NP-803) FL 57.66
PAVEMENT RECONSTRUCTION
173+00.00
4:1 1.00% 61.94
50:1 62.01 2.00% 4:1
EX 18" RCP FL 56.87
18" RCP (NP-803) FL 57.92
PAVEMENT RECONSTRUCTION
SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION
SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 27825 JUSTIN KENNETH TYE

User: jtye
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 17A / SC 63/US 15	X31

70 60 50 40 30 20 10 ℄ 10 20 30 40 50

75 70 65 60 55

EX. R/W

73.08

3.00'

73.19

73.12

EX. R/W

EX 18" RCP

216+00.00

EX 18" RCP

EX. R/W

73.91

3.00'

74.03

73.99

EX 18" RCP

215+50.00

EX 18" RCP

EX. R/W

74.18

EX 18" RCP

215+00.00

EX 18" RCP

EX. R/W

62.36

EX. R/W

176+00.00

62.38

EX 18" RCP
FL 55.99

175+50.00

18" RCP (NP-801)
FL 56.60

5'
5'

SOUTH CAROLINA
STANTEC
CONSULTING
SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
JUSTIN KENNETH LORE

User: jtye
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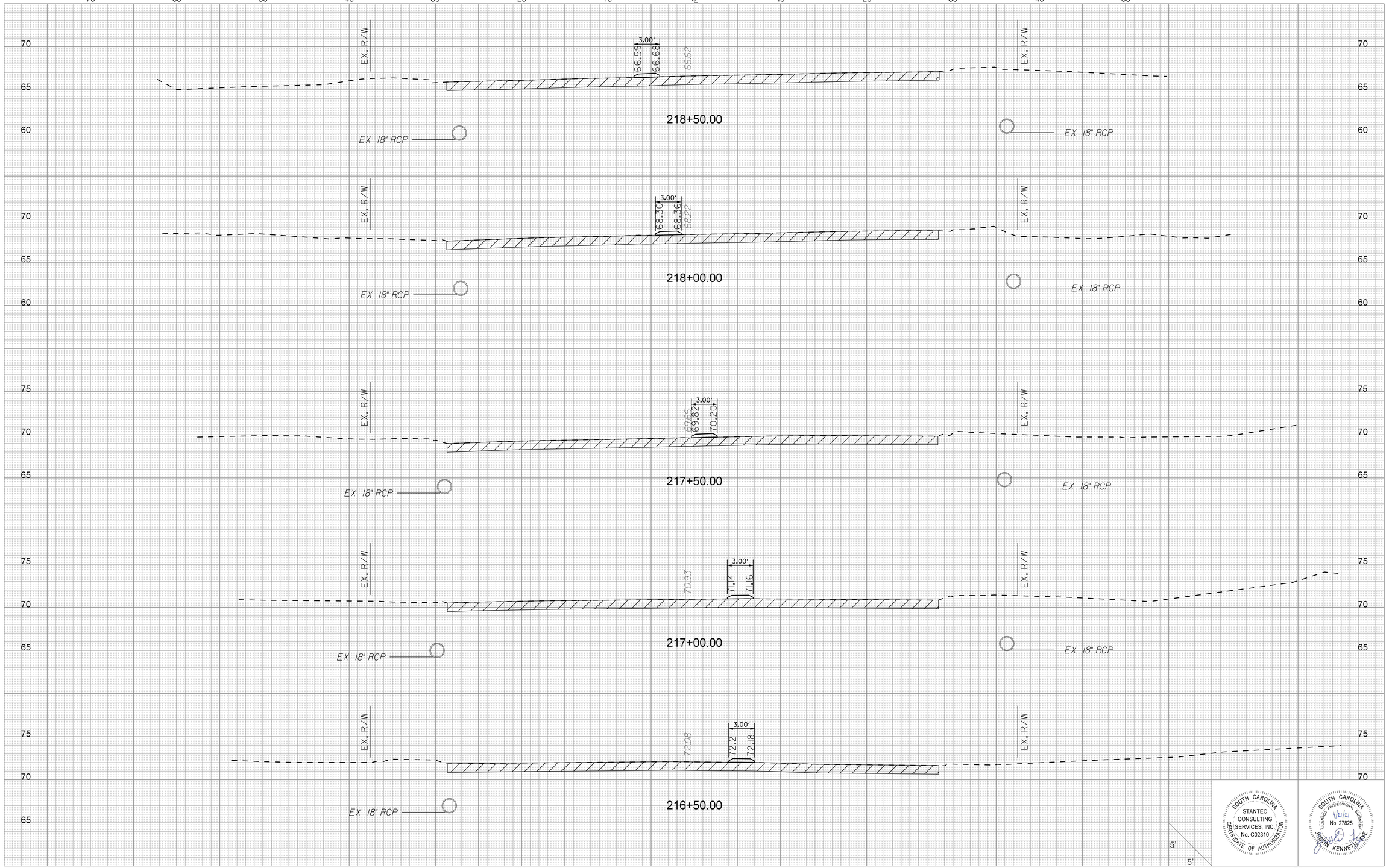
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 15	X32



SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
4/21/21
No. 27825
JUSTIN KENNETH LANE

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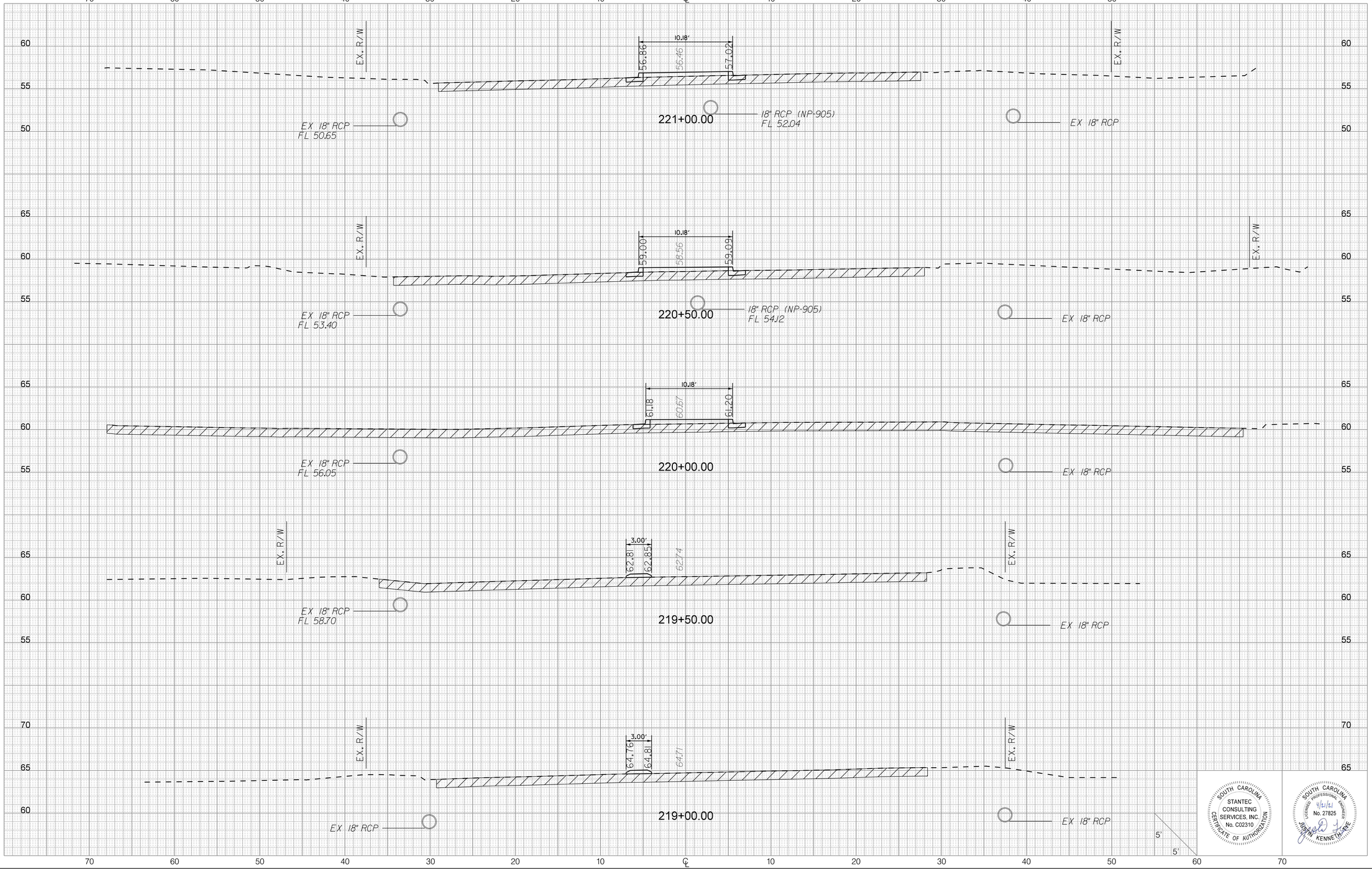
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 15	X33



SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
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No. 27825
4/21/21
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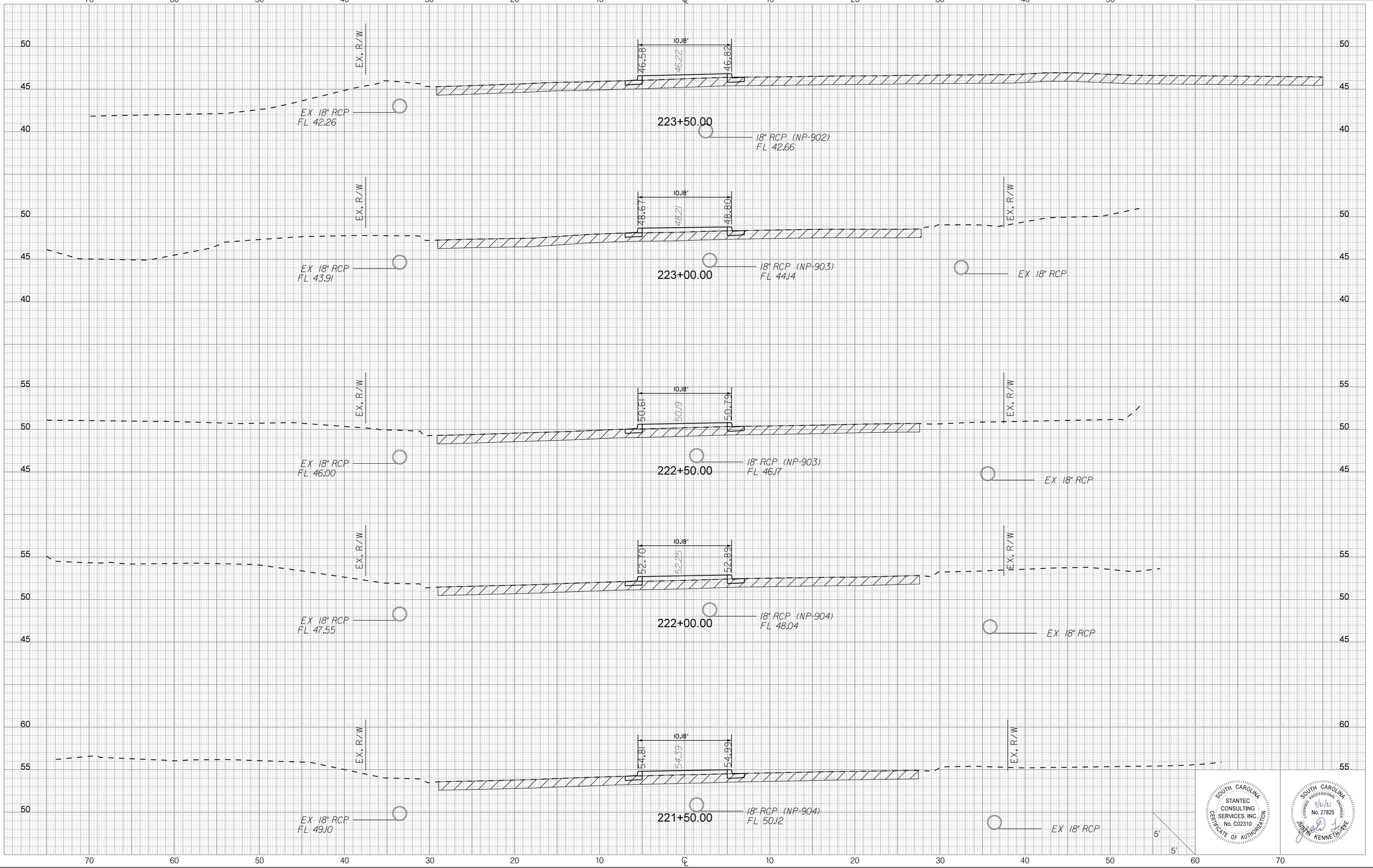
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 15	X34



SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
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4/21/21
No. 27825
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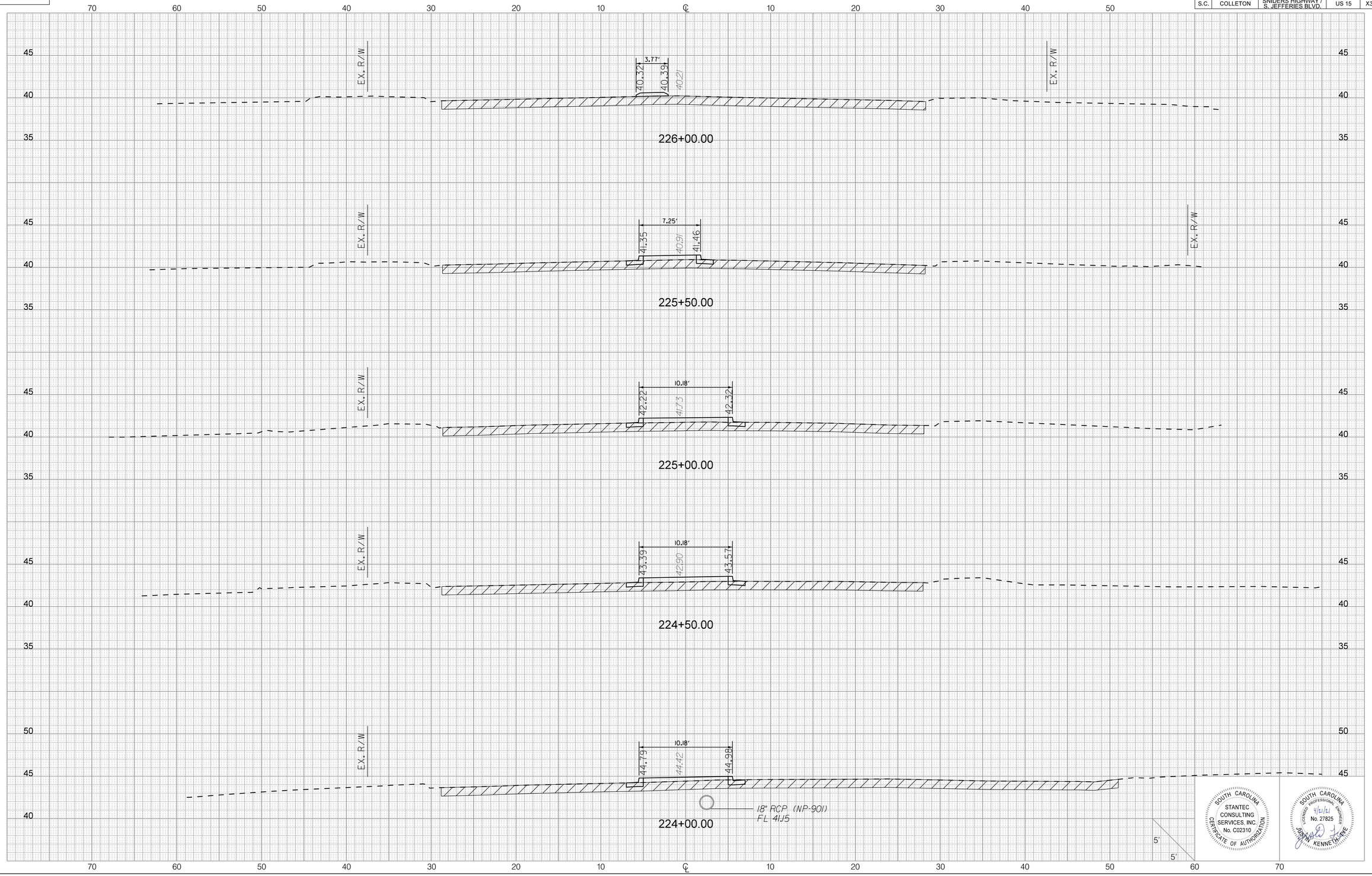
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 15	X35



SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
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SOUTH CAROLINA
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4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 15	X36

END CONSTRUCTION 245+71.03

228+00.00

EX. R/W

40.74

EX. R/W

227+50.00

EX. R/W

3.00'

40.48

40.54

40.30

EX. R/W

227+00.00

EX. R/W

3.00'

40.13

40.20

39.96

EX. R/W

226+50.00

EX. R/W

3.00'

40.32

40.39

39.80

EX. R/W

5'

5'

SOUTH CAROLINA
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LICENSED PROFESSIONAL ENGINEER
4/21/21
No. 27825
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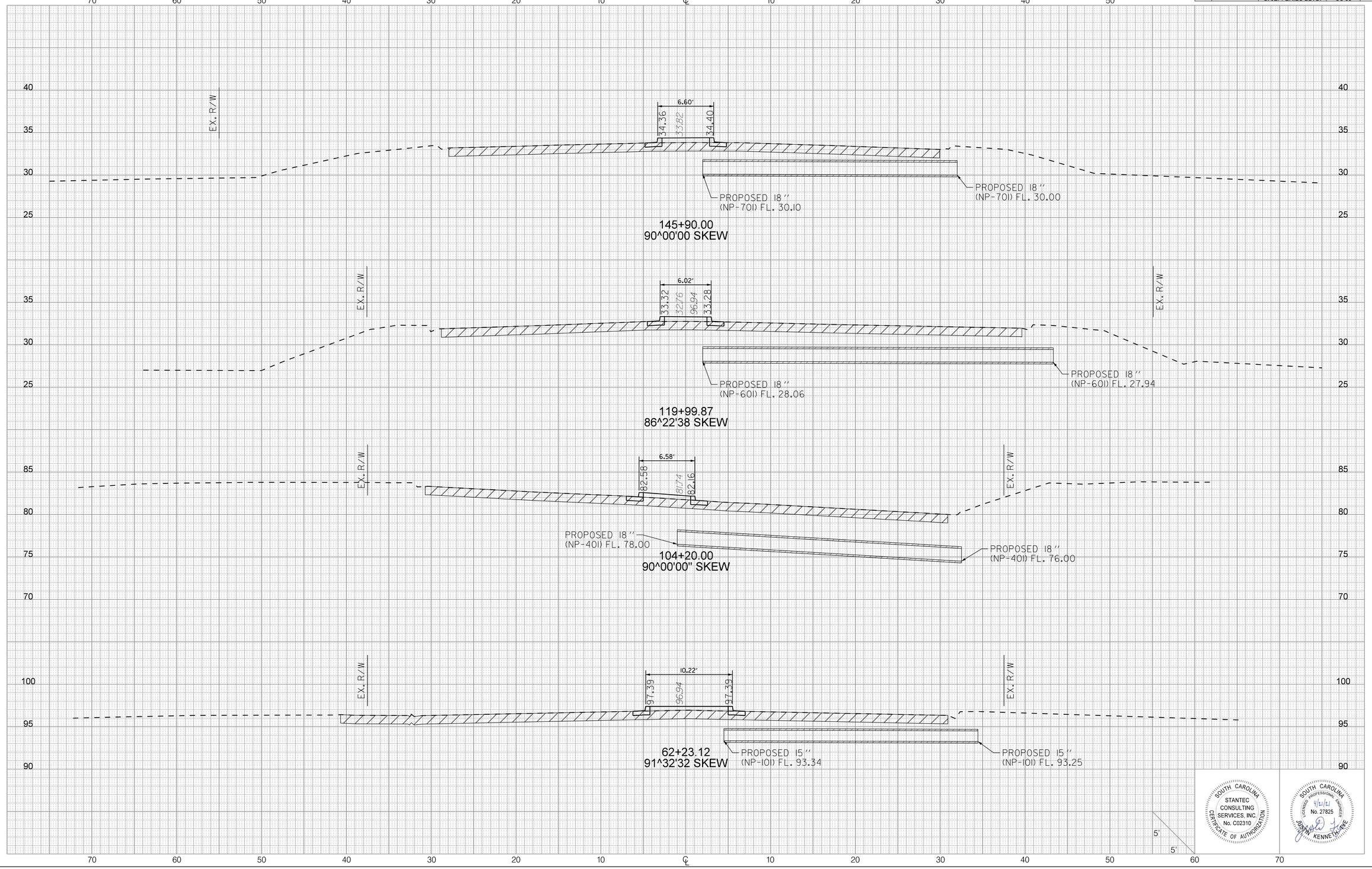
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 17A / SC 63	X37



SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/21/21
JUSTIN KENNETH KANE

User: jtye
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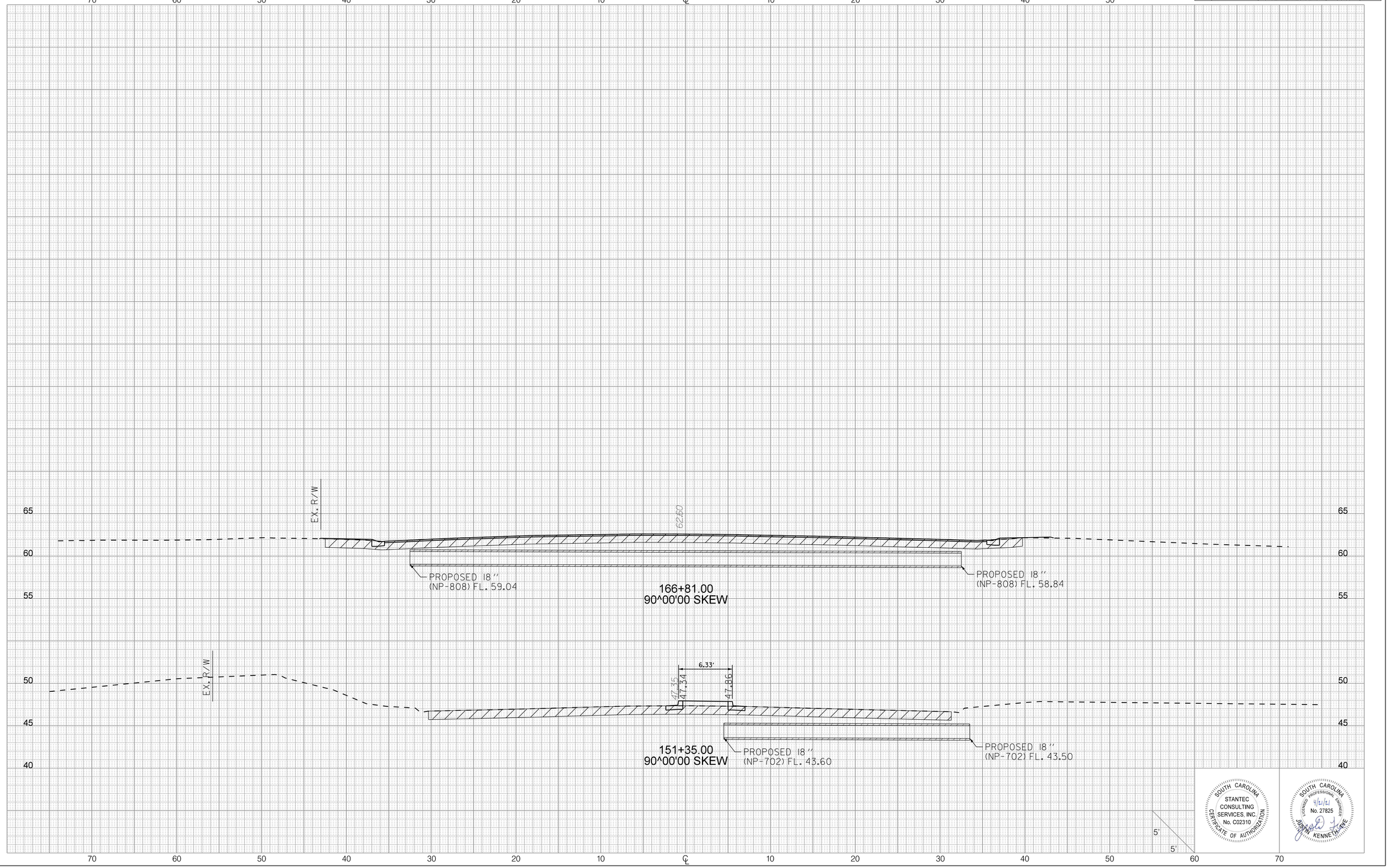
4/21/2021

STATE	COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
S.C.	COLLETON	SNIDERS HIGHWAY / S. JEFFERIES BLVD.	US 17A / SC 63	X38



SOUTH CAROLINA
STANTEC CONSULTING SERVICES, INC.
No. C02310
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 27825
4/2/21
JUSTIN KENNETH RYE

User: jtye
U:\71002304\transportation\roadway\drawings\plan_sheets\02304_xs_sc63.dgn
4/2/2021

FED. RD. DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				1	10

CONSTRUCTION DOCUMENTS:

1. THIS CONSTRUCTION DOCUMENTS SET HAS BEEN CREATED TO ILLUSTRATE THE GENERAL DESIGN INTENT OF THE PROJECT. THE CONTRACTOR SHALL WORK CLOSELY WITH THE OWNER'S REPRESENTATIVE AND NOTIFY THEM AS ADDITIONAL INFORMATION IS NEEDED TO PROPERLY CONSTRUCT/INSTALL/BUILD ELEMENTS DEPICTED HEREIN.

2. THE SITE PLANS AND SPECIFICATIONS ARE INTENDED TO PORTRAY THE SITE AS A COMPLETED, FUNCTIONAL PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS USED TO ACHIEVE THE COMPLETED SITE CONDITION AS SET OUT IN THE PLANS. IT IS NOT THE INTENTION OF THESE PLANS TO PROVIDE SPECIFIC GUIDANCE OF EVERY ASPECT OF THE CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR THE IMPLEMENTATION OF THE PLANS IN COMPLIANCE WITH GENERALLY ACCEPTED PRACTICES AND UNDER CURRENT STANDARDS. CONTRACTOR SHALL APPLY APPROPRIATE CONSTRUCTION DETAILS AND PROCESSES WHETHER OR NOT THESE INDIVIDUAL ASPECTS OF THE WORK ARE SPECIFICALLY CALLED OUT ON THE PLANS.

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, LOCAL, STATE, AND FEDERAL REQUIREMENTS UNLESS SPECIFIED OTHERWISE. CONTRACTOR SHALL OBTAIN THESE DOCUMENTS, BECOME FAMILIAR WITH THEM AND HAVE THEM ON THE JOB SITE AT ALL TIMES.

2. THE CONTRACTOR SHALL MAKE ALL NECESSARY SITE VISITS AND INSPECTIONS TO BECOME FAMILIAR WITH THE PROJECT AND MAKE ANY INVESTIGATIONS WHICH ARE APPROPRIATE TO CONFIRM THE SOILS/GEOTECHNICAL INFORMATION, TOPOGRAPHIC INFORMATION, WETLANDS, UTILITIES, ETC. TO BE ABLE TO PREPARE THE BID FOR CONSTRUCTING THE PROJECT IN ACCORDANCE WITH THE DRAWINGS AND INFORMATION PROVIDED FOR BIDDING AND CONSTRUCTION. ANY DEVIATIONS AND/OR DISCREPANCIES IN THE CONTRACTOR'S FINDING'S VERSUS THE CONSTRUCTION DOCUMENTS SHALL BE REPORTED IN WRITING TO OWNER PRIOR TO THE BID AND PRIOR TO COMMENCEMENT OF CONSTRUCTION ON THE AREAS IN QUESTION.

3. CONTRACTOR SHALL VERIFY THAT ALL NECESSARY PERMITS FOR CONSTRUCTION HAVE BEEN OBTAINED PRIOR TO THE START OF THE PROJECT. ALL REQUIRED PERMITS SHALL BE MAINTAINED ON SITE AT ALL TIMES.

4. ALL MATERIALS, METHODS AND DETAILS OF CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF FEDERAL, STATE, LOCAL MUNICIPALITY AND/OR THE APPROPRIATE UTILITY COMPANY, WHICHEVER TAKES PRECEDENCE. ALL RIGHT-OF-WAY CONSTRUCTION SHALL MEET LOCAL AND STATE DEPARTMENT OF TRANSPORTATION DESIGN INDEXES AND SPECIFICATIONS, LATEST EDITION.

5. CONTRACTOR TO COORDINATE WITH OWNER TO DETERMINE CONSTRUCTION STAGING AND STORAGE AREA PRIOR TO COMMENCEMENT OF MOBILIZATION.ANY CONSTRUCTION TRAILERS USED ON-SITE BY THE CONTRACTOR (IF NECESSARY) SHALL BE PERMITTED THROUGH LOCAL GOVERNING AGENCY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ACQUIRE ALL NECESSARY PERMITS. CONTRACTOR MAY UTILIZE EXISTING STRUCTURE AT TEMPORARY CONSTRUCTION ENTRANCE AND WILL BE RESPONSIBLE FOR ALL NECESSARY PERMITS AND UTILITY CONNECTIONS.

6. WITHIN ALL NOTES, THE TERM CONTRACTOR SHALL MEAN THE CONTRACTOR AND ANY SUBCONTRACTOR OR VENDOR PERFORMING CONSTRUCTION ON THE SITE.

LAYOUT NOTES:

1. DIGITAL BASE FILE SHALL BE MADE AVAILABLE FOR USE IN FIELD LOCATION OF ELEMENTS AND SITE FEATURES. HARDCOPY INFORMATION SHALL PREVAIL.

2. PRIOR TO CONSTRUCTION ALL IMPROVEMENTS SHALL BE STAKED/ LAID OUT IN THE FIELD FOR REVIEW AND APPROVAL BY THE OWNER'S REPRESENTATIVE. FIELD ADJUSTMENTS AND GRADING COORDINATION SHALL OCCUR AT THAT TIME.

3. ALL FIELD ADJUSTMENTS SHALL RECEIVE APPROVAL FROM THE OWNER PRIOR TO CONSTRUCTION.

FINAL ACCEPTANCE:

1. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING "AS-BUILT" DRAWINGS CERTIFIED BY A SOUTH CAROLINA REGISTERED SURVEYOR.

2. "AS-BUILT" DRAWINGS SHALL BE PROVIDED TO THE OWNER AND OWNERS REPRESENTATIVE IN CAD AND HARDCOPY FORMATS.

3. FINAL INSPECTION SHALL NOT OCCUR UNTIL "AS-BUILT" DRAWINGS HAVE BEEN PROVIDED TO AND REVIEWED BY OWNER AND OWNERS REPRESENTATIVE.

4. THERE SHALL BE A MINIMUM TEN (10) DAYS NOTICE GIVEN FOR SCHEDULING THE SUBSTANTIAL COMPLETION INSPECTION.

5. THERE SHALL BE A MINIMUM TEN (10) DAYS NOTICE GIVEN FOR SCHEDULING THE FINAL INSPECTION.

PAVING AND DRAINAGE NOTES:

1. ALL GRADING, PLACEMENT OF FILL AND COMPACTION SHALL BE IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS. ALL FILL PLACED AS A PART OF THIS PROJECT SHALL BE PLACED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL FILL AREAS MUST BE COMPACTED AS STATED. A REPORT FROM AN APPROPRIATE LICENSED PROFESSIONAL MAY BE REQUIRED BY THE CONSTRUCTION INSPECTOR FOR ALL AREAS WITHIN THE RIGHT OF WAY.

2. ALL CONSTRUCTION LINES & GRADES SHALL BE ESTABLISHED AND MAINTAINED BY THE CONTRACTOR.

3. CONTRACTOR SHALL VERIFY ALL ELEVATIONS PRIOR TO CONSTRUCTION AND NOTIFY OWNER OF DISCREPANCIES. CONTRACTOR TO ENSURE PROPER AND POSITIVE DRAINAGE OF ALL GRADES.

4. IF DISCREPANCIES DEVELOP BETWEEN THE PROPOSED GRADES AS SHOWN ON THE PLAN AND THE EXISTING GROUND SURFACE, THE CONTRACTOR, WITH PRIOR APPROVAL FROM THE OWNER, SHALL MAKE GRADING ADJUSTMENTS NECESSARY TO MAINTAIN THE GENERAL INTENT OF THE DESIGN.

5. CONTRACTOR SHALL PROTECT ALL TREES, VEGETATION AND REFERENCE POINTS AS INDICATED ON THE DRAWINGS.

6. ALL SLEEVE LENGTHS AND LOCATIONS (SEE IRRIGATION PLANS) ARE APPROXIMATE AND MAY REQUIRE SLIGHT FIELD ADJUSTMENTS TO FIT CONDITIONS.

7. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF THE SIGNS, WALLS, LANDSCAPING AND IRRIGATION WITH ALL OTHER CONSTRUCTION.

8. CONTRACTOR TO FIELD VERIFY EXISTING GRADES AT EACH SIGN AND WALL LOCATION TO ESTABLISH HORIZONTAL BASE OF STRUCTURE, POSITIVE DRAINAGE AWAY FROM ANY FOUNDATION, STAKE OUT AND OBTAIN APPROVAL FROM OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.

12. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PERMITTED CONSTRUCTION DOCUMENTS. ANY DEVIATION FROM THE APPROVED CONSTRUCTION DOCUMENTS SHALL BE THE SOLE RESPONSIBILITY OF THE ORGANIZATION AND/OR ENTITY RESPONSIBLE FOR THE INSTALLATION TO UPDATE/REPLACE ANY DEFICIENT MATERIAL/EQUIPMENT NECESSARY TO BRING THE FINAL PRODUCT TO THE STANDARDS OF THE PERMITTED CONSTRUCTION DOCUMENTS.

GENERAL DETAIL NOTES:

1. THESE NOTES SHALL APPLY TO ALL DETAILS INCLUDED IN THIS SET OF CONSTRUCTION DOCUMENTS.

2. ALL WOOD UNLESS OTHERWISE SPECIFIED, SHALL BE GRADE NO. 2 COMMON OR BETTER, S4S, SIZED AS SHOWN ON DRAWINGS, TREATED, UNLESS OTHERWISE SPECIFIED. ALL WOOD, IN CONTACT WITH GROUND, UNLESS OTHERWISE SPECIFIED, SHALL BE SOUTHERN YELLOW PINE, SPIB GRADE NO. 2 COMMON OR BETTER, S4S, SIZED AS SHOWN ON DRAWINGS, TREATED AWPB LP22, UNLESS OTHERWISE SPECIFIED.

3. ALL WOOD POSTS IN CONTACT WITH THE GROUND SHALL BE DIP SOAKED, FOR THE PORTION OF THE WOOD IN CONTACT WITH THE GROUND, WITH COPPER-GREEN WOOD PRESERVATIVE, OR APPROVED EQUAL, IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.

4. ALL WELDS CONTINUOUS.

5. RESTORE DAMAGED FINISHES AND REPLACE DAMAGED OR DEFECTIVE UNITS AT NO ADDITIONAL EXPENSE TO OWNER.

6. SUBMIT SHOP DRAWINGS, PRODUCT DATA AND MAINTENANCE DATA FOR APPROVAL PRIOR TO PURCHASING, FABRICATION AND INSTALLATION.

7. ALL CONCRETE FOOTINGS AND BASES SHALL BE A MINIMUM OF 3,000 PSI, UNLESS OTHERWISE SPECIFIED.

8. ALL HARDWARE AND FASTENERS TO BE STAINLESS STEEL TYPE 316.

9. ALL SCREWS SHALL BE COUNTERSUNK, FLUSH TO FINISHED FACE. SELF-COUNTER SINKING SCREWS MAY BE USED IN LIEU OF COUNTERSINKING SCREWS.

10. ALL THRU BOLTS SHALL BE COUNTERSUNK, FLUSH TO FINISHED FACE.

SIGNAGE NOTES:

1. OWNER TO PROVIDE CONTENT FOR ALL SIGNAGE PRIOR TO FABRICATION AND CONSTRUCTION. MATERIALS AND DIMENSIONS AS IDENTIFIED ARE NOT SUBJECT TO CHANGE.

2. SIGNAGE CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL OF PANEL DESIGN, GRAPHIC LAYOUT, TYPEFACE/FONT AND STRUCTURAL WIND LOAD CALCULATIONS PRIOR TO FABRICATION AND CONSTRUCTION.

3. CONTRACTOR TO PROVIDE LIGHTING FOR GATEWAY SIGNAGE TO INCLUDE CONNECTION TO POWER SOURCE, ALL ELECTRICAL WIRING, SPECIFIED LIGHT FIXTURES, GROUND MOUNTING, PHOTOCELL AND TIMER CONTROL.

ABBREVIATIONS:

1. DIMENSIONS AND MEASUREMENTS

AC	ACRE(S)	CF	CUBIC FOOT/FEET
DEG(*)	DEGREE(S)	CY	CUBIC YARD(S)
ELEV	ELEVATION	DIA (Ø)	DIAMETER
FFE	FINISHED FLOOR ELEVATION	FT	FOOT/FEET
GAL	GALLON(S)	GA	GAUGE
GSF	GROSS SQUARE FEET	GPM	GALLONS PER MINUTE
H:V	HORIZONTAL:VERTICAL	H	HEIGHT
in	INCH(ES)	HORIZ	HORIZONTAL
LF	LINEAR FOOT/FEET	LB	POUND
mi	MILES	MAX	MAXIMUM
MSF	1,000 SQUARE FEET	MIN	MINIMUM
NTS	NOT TO SCALE	mph	MILES PER HOUR
PSI	POUNDS PER SQUARE INCH	SY	SQUARE YARD
MSL	MEAN SEA LEVEL	OC	ON CENTER
T	THICKNESS	SF	SQUARE FEET
YR	YEAR	W	WIDTH

2. GENERAL

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS		
ADA	AMERICANS WITH DISABILITIES ACT		
ARCH	ARCHITECT/ARCHITECTURAL		
BLDG	BUILDING	CO	CERTIFICATE OF OCCUNPANCY
DEMO	DEMOLISH	EXT	EXTENSION
DEP	DEPARTMENT OF ENVIRONMENTAL PROTECTION	FIRM	FLOOD INSURANCE RATE MAP
DOT	DEPARTMENT OF TRANSPORTATION	GPS	GLOBAL POSITIONING SYSTEM
EX	EXISTING	INV.	INVERT
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY	LLC	LIMITED LIABILITY CORPERATION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	MEP	MECHANICAL, ELECTRICAL, PLUMBING
MAINT	MAINTENANCE	NFIP	NATIONAL FLOOD INSURANCE PROGRAM
MECH	MECHANICAL	REV	REVISION
MUTCD	MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES	TEMP	TEMPORARY
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	TYP	TYPICAL
NFPA	NATIONAL FIRE PROTECTION AGENCY	WWM	WELDED WIRE MESH
PROP	PROPOSED		
PSM	PROFESSIONAL SURVEYOR & MAPPER		
PT	PRESSURE TREATED		
RLS	REGISTERED LAND SURVEYOR		
ROW	RIGHT OF WAY		
STD	STANDARD		
TRANS	TRANSITION		
USGS	UNITED STATES GEOLOGICAL SURVEY		
USACE	UNITED STATES ARMY CORPS OF ENGINEERS		

FLOOD ZONES PRESENT ON SITE: (SEE FEMA FLOOD MAPS FOR ZONE CHARACTERISTICS)

ZONE VE11
ZONE VE10
ZONE AE9
ZONE AE8
ZONE X

PREPARED FOR:

CITY OF WALTERBORO
242 HAMPTON STREET
WALTERBORO, SOUTH CAROLINA 29488

I-95 BUSINESS LOOP PHASE 2 SOUTH

Walterboro, South Carolina

SOUTH CAROLINA LANDSCAPE ARCHITECT No. 276 MARK BAKER

SOUTH CAROLINA WOOD & PARTNERS, INC. No. C00XXX CERTIFICATE OF AUTHORIZATION

DGN: BB
R/W: TT
CHK: MB/TT

#	REVISION	DATE	BY

SHEET NUMBER HS00-1

Stantec
Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

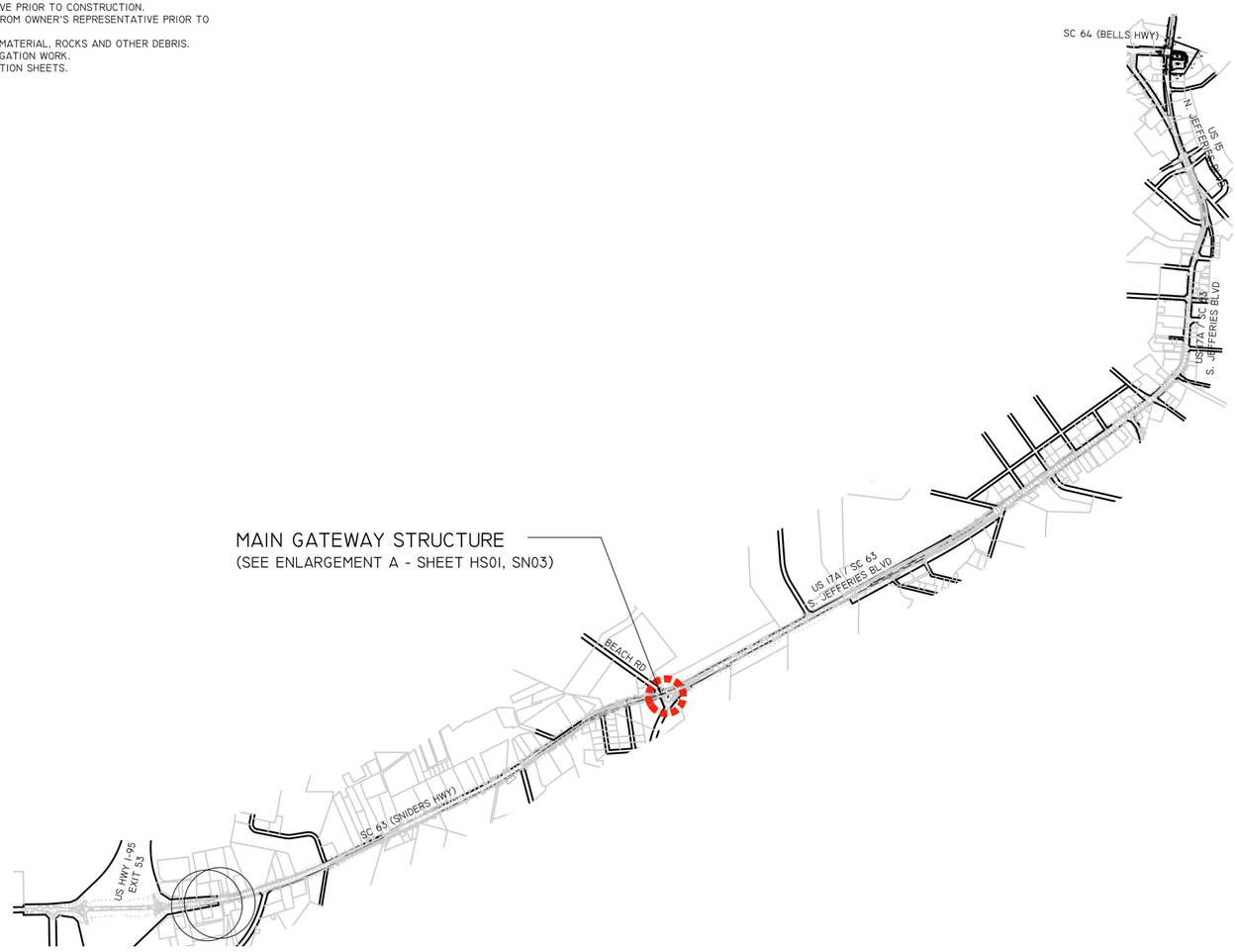
Wood+Partners Inc. WPi
Landscape Architects
Land Planners
FL LC0000364
1211 Miccosukee Rd. Tallahassee, FL 32308
850.391.0360 Fax 850.386.1010 www.woodandpartners.com

FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				2	10

GENERAL SITE PLAN AND LAYOUT NOTES:

1. THE CONTRACTOR SHALL WORK CLOSELY WITH THE OWNER'S REPRESENTATIVE AND NOTIFY THEM AS ADDITIONAL INFORMATION IS NEEDED TO PROPERLY CONSTRUCT/INSTALL/BUILD ELEMENTS DEPICTED HEREIN.
2. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND REPORT ANY DISCREPANCIES AND UNUSUAL CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND VERIFYING ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND IS RESPONSIBLE FOR ANY DAMAGE TO THEM DURING CONSTRUCTION.
4. ALL AREAS THAT ARE DISTURBED BY CONSTRUCTION INSIDE OR OUTSIDE THE LIMIT OF WORK SHALL BE REPAIRED, GRADED AND GRASSED AT THE CONTRACTOR'S EXPENSE.
5. TREE PROTECTION FENCES SHALL BE MAINTAINED IN PLACE AT ALL TIMES UNTIL WORK IS COMPLETED. NOTHING SHALL BE STORED WITHIN THE FENCES.
6. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND ALL LOCAL, STATE, AND FEDERAL AGENCIES AND REGULATIONS.
8. ALL FIELD ADJUSTMENTS SHALL RECEIVE APPROVAL FROM OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
9. CONTRACTOR SHALL STAKE ALL WORK TO BE COMPLETED AND OBTAIN APPROVAL FROM OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE RESOLVED PRIOR TO CONSTRUCTION.
10. CONTRACTOR TO PREPARE SUBGRADE FOR FOUNDATIONS AND REMOVE ANY HUMUS MATERIAL, ROCKS AND OTHER DEBRIS.
11. COORDINATE MASONRY FOUNDATION WORK WITH SITE CIVIL, LANDSCAPING AND IRRIGATION WORK.
12. REFER TO ADDITIONAL NOTES ON SHEET HS00-1, LANDSCAPING SHEETS AND IRRIGATION SHEETS.

DETAIL NUMBER
X
XX
SHEET NUMBER



MAIN GATEWAY STRUCTURE
(SEE ENLARGEMENT A - SHEET HS01, SN03)

PREPARED FOR:
CITY OF WALTERBORO
242 HAMPTON STREET
WALTERBORO, SOUTH CAROLINA 29488

I-95 BUSINESS LOOP PHASE 2 SOUTH

Walterboro, South Carolina

SOUTH CAROLINA LANDSCAPE ARCHITECT No. 276 REGISTERED

WOOD & PARTNERS, INC. No. C00xxx CERTIFICATE OF AUTHORIZATION SOUTH CAROLINA

DGN: BB
R/W: TT
CHK: MB/TT

#	REVISION	DATE	BY

Stantec
Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

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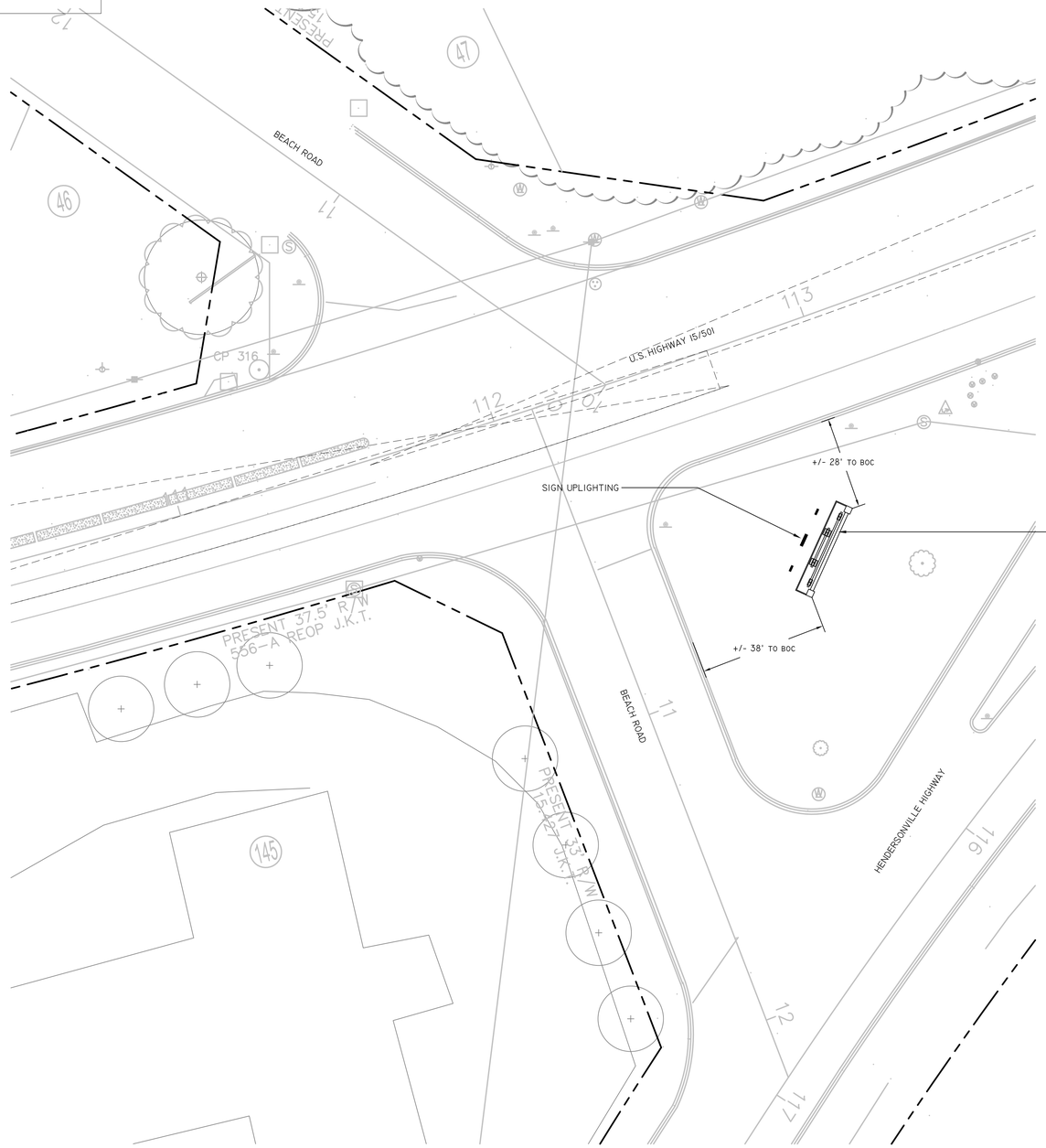
Wood+Partners Inc.
Landscape Architects
Land Planners
FL LC0000364
1211 Miccosukee Rd. Tallahassee, FL 32308
850.391.0360 Fax 850.386.1010 www.woodandpartners.com

0 500' 1,000' 2,000' 3,000' 4,000'
SCALE: 1" = 1,000'

NORTH

SHEET NUMBER
HS00-2

FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				3	10



ENLARGEMENT (A)

MAIN GATEWAY SIGNAGE

(SEE SHEET SN01 & SN03)

NORTH COLUMN CENTER	SOUTH COLUMN CENTER
N 383716.772	N 383691.267
E 2094801.346	E 2094789.792

PREPARED FOR:

CITY OF WALTERBORO
242 HAMPTON STREET
WALTERBORO, SOUTH CAROLINA 29488

I-95 BUSINESS LOOP PHASE 2 SOUTH

Walterboro, South Carolina

SOUTH CAROLINA LANDSCAPE ARCHITECT REGISTERED No. 276

WOOD & PARTNERS, INC. No. C00004 CERTIFICATE OF AUTHORIZATION

DGN: BB
R/W: TT
CHK: MB/TT

#	REVISION	DATE	BY

Stantec
Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

South Carolina 811 Call 811 Before you Dig

Wood+Partners Inc.
Landscape Architects
Land Planners
FL LC0000364
1211 Miccosukee Rd. Tallahassee, FL 32308
850.391.0360 Fax 850.386.1010 www.woodandpartners.com

0 10' 20' 40' 60' 80'
SCALE: 1" = 20'

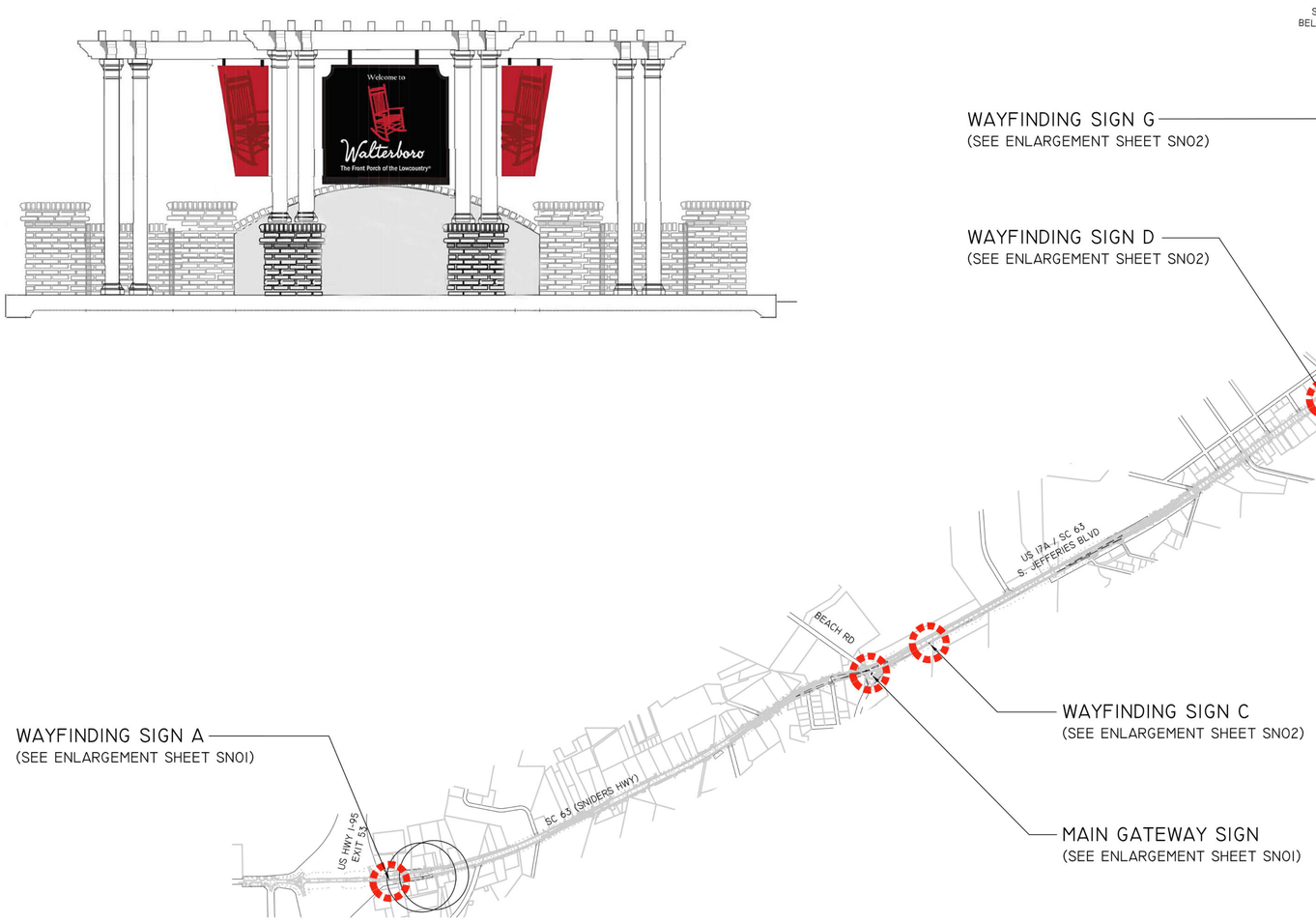
NORTH

SHEET NUMBER
HS01

FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				4	10

MAIN GATEWAY SIGN

WAYFINDING SIGNAGE



PREPARED FOR:
CITY OF WALTERBORO
242 HAMPTON STREET
WALTERBORO, SOUTH CAROLINA 29488

I-95 BUSINESS LOOP PHASE 2 SOUTH

Walterboro, South Carolina

SOUTH CAROLINA LANDSCAPE ARCHITECT No. 276 REGISTERED

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION WPI PARTNERS, INC. No. C00XXX

DGN: BB
R/W: TT
CHK: MB/TT

#	REVISION	DATE	BY

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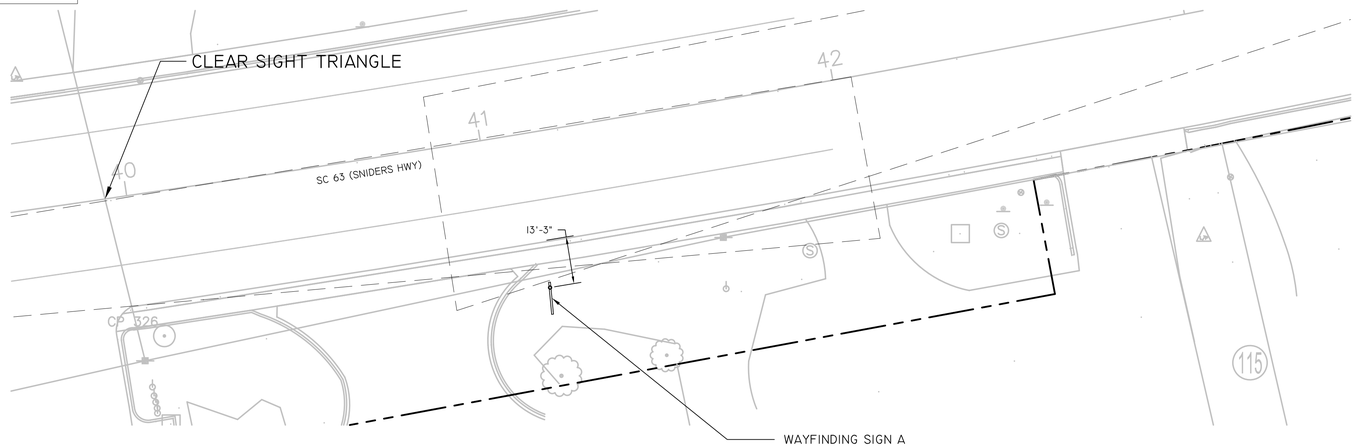
850.391.0360 Fax 850.386.1010 www.woodandpartners.com

0 500' 1,000' 2,000' 3,000' 4,000'
SCALE: 1" = 1,000'

NORTH

SHEET NUMBER
SN00-1

FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				5	10



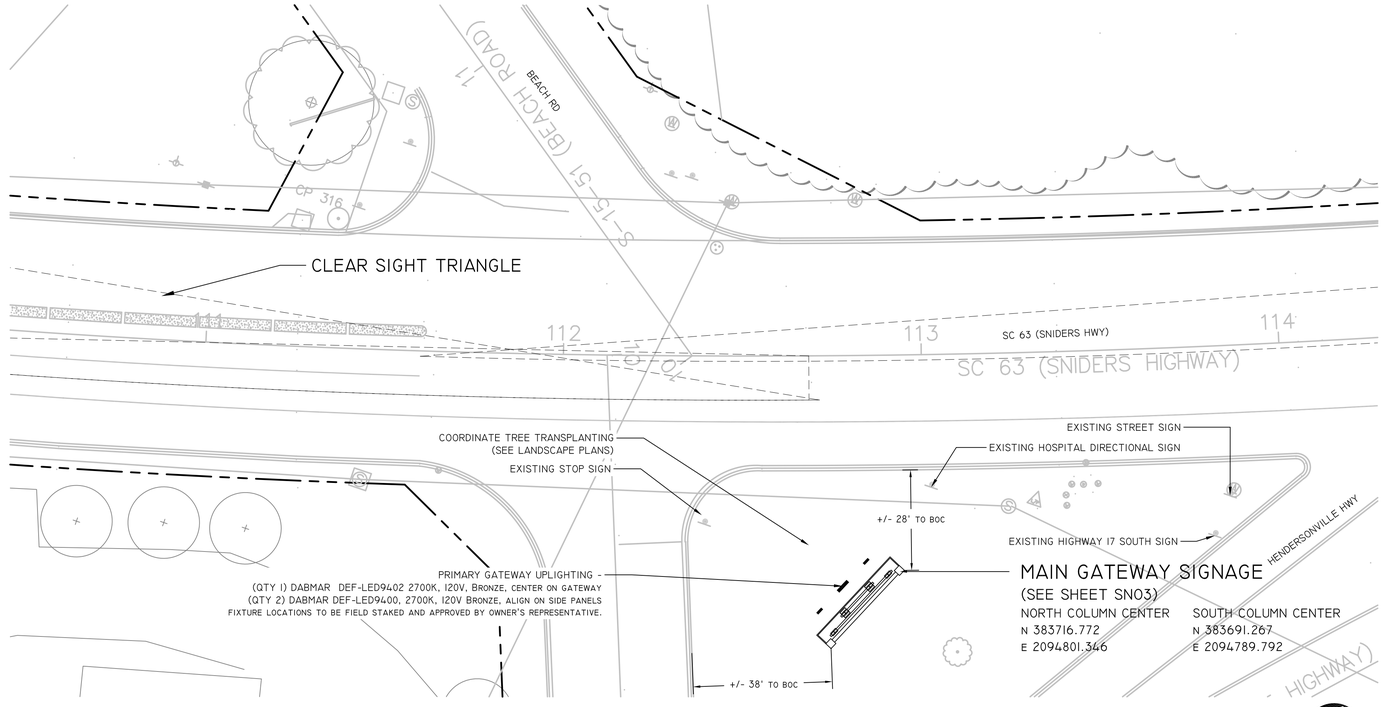
WAYFINDING SIGN A

NOTE:
1. SEE ENLARGEMENT (SHEET SN04 & SN05) FOR TYPICAL WAYFINDING SIGNAGE DETAIL

0 10' 20' 40' 60' 80'
SCALE: 1" = 20'

NORTH

WAYFINDING SIGN A
SIGN FACE ROTATED TO BE PERPENDICULAR TO ROAD



MAIN GATEWAY SIGN

NOTE:
1. ORIENT SIGN PANEL FACE AS SHOWN.
2. SEE SHEET SN01 & SN03 FOR ENLARGEMENT/DETAIL.

0 10' 20' 40' 60' 80'
SCALE: 1" = 20'

NORTH

MAIN GATEWAY SIGNAGE
SEE PLAN FOR DIMENSIONS & SN03/SN04 FOR DETAILS

PREPARED FOR:
CITY OF WALTERBORO
242 HAMPTON STREET
WALTERBORO, SOUTH CAROLINA 29488

I-95 BUSINESS LOOP PHASE 2 SOUTH

Walterboro, South Carolina

DGN: BB
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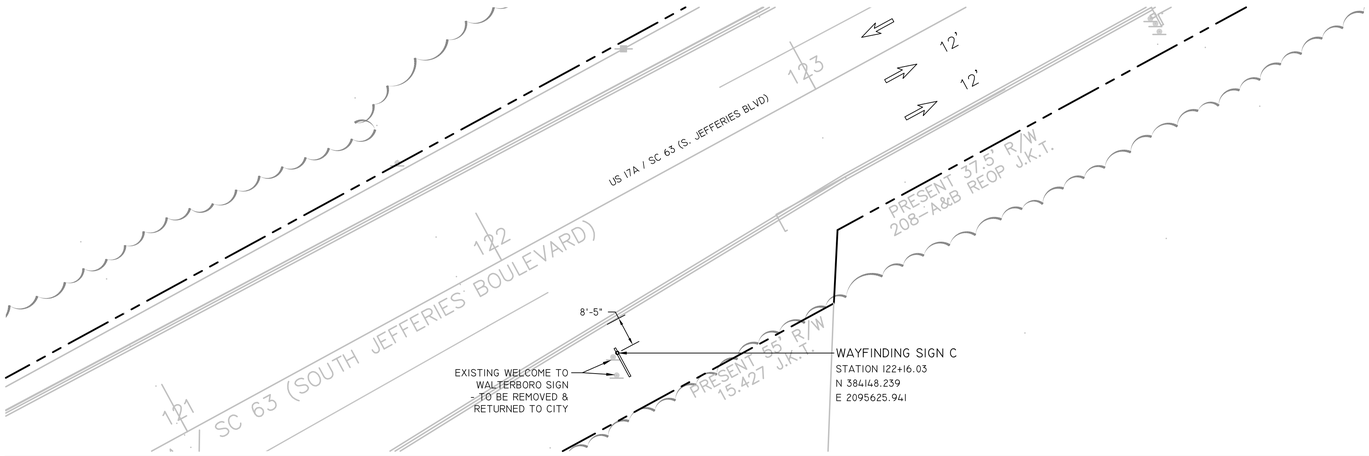
SHEET NUMBER
SN01

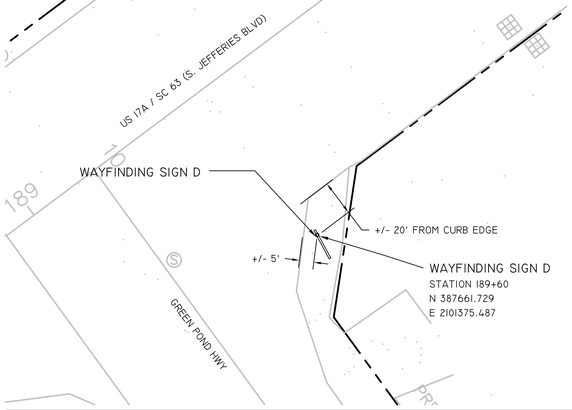
FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				6	10



WAYFINDING SIGN C
SIGN FACE ROTATED TO BE PERPENDICULAR TO ROAD

WAYFINDING SIGN C

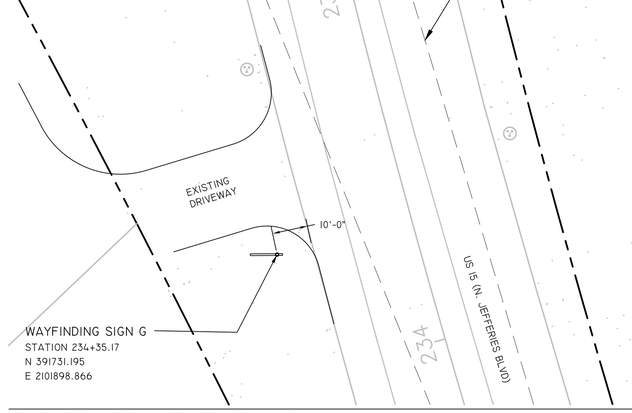
NOTE:
1. SEE ENLARGEMENT (SHEET SN04 & SN05) FOR TYPICAL WAYFINDING SIGNAGE DETAIL



WAYFINDING SIGN D
SIGN POLE TO REPLACE ORIGINAL WAYFINDING SIGN (REPLACE FOUNDATION)
SIGN FACE ROTATED TO BE PERPENDICULAR TO ROAD

WAYFINDING SIGN D

NOTE:
1. THIS SIGN IS EXISTING AS IS FOR INFORMATION ONLY



WAYFINDING SIGN G
SIGN FACE ROTATED TO BE PERPENDICULAR TO ROAD

WAYFINDING SIGN G

NOTE:
1. SEE ENLARGEMENT (SHEET SN04 & SN05) FOR TYPICAL WAYFINDING SIGNAGE DETAIL

PREPARED FOR:
CITY OF WALTERBORO
242 HAMPTON STREET
WALTERBORO, SOUTH CAROLINA 29488

I-95 BUSINESS LOOP PHASE 2 SOUTH

Walterboro, South Carolina

SOUTH CAROLINA LANDSCAPE ARCHITECTURE No. 276 REGISTERED

DGN: BB
R/W: TT
CHK: MB/TT

#	REVISION	DATE	BY

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SOUTH CAROLINA LANDSCAPE ARCHITECTURE WOOD & PARTNERS, INC. No. C00000 CERTIFICATE OF AUTHORITY

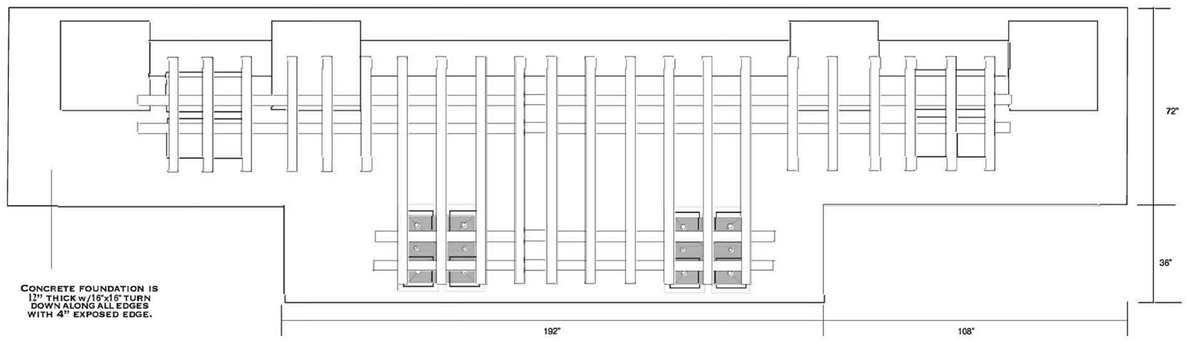
0 10' 20' 40' 60' 80'
SCALE: 1" = 20'

NORTH

SHEET NUMBER
SN02

T:\Projects-TL\HURBAN\Walterboro\WalterboroBusLpImprv\CD-0213015\Production\Work CDs\0213015_basePh2SouthMERGE_ROW.dwg 4/20/2021 5:17:42 PM TODD THEODORE

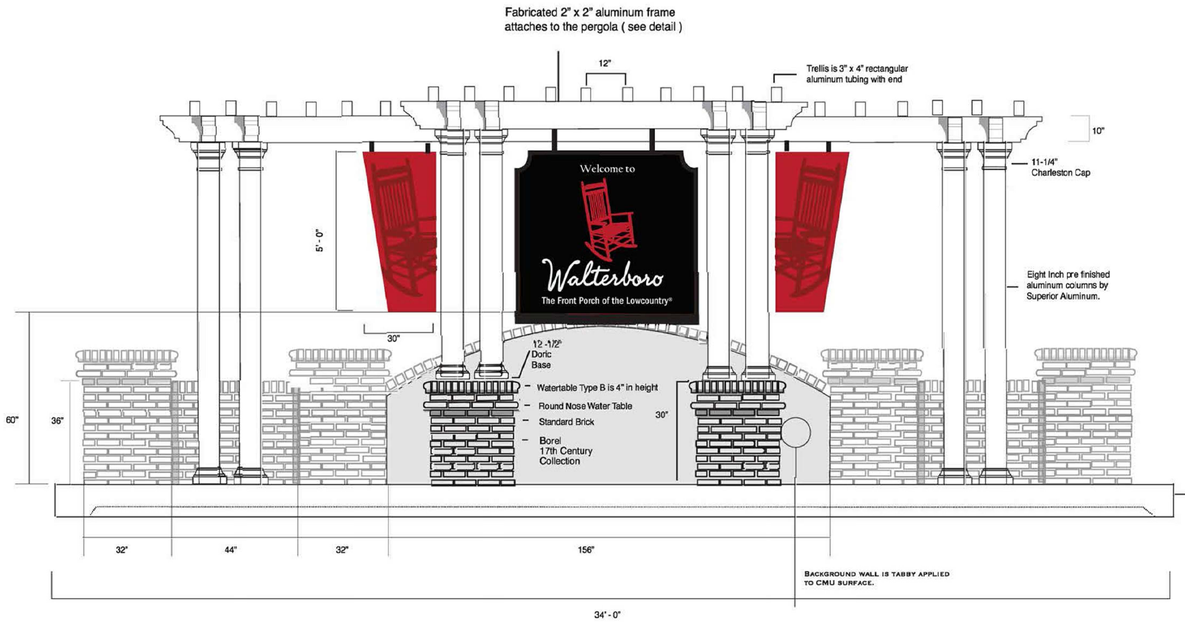
FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				4	10



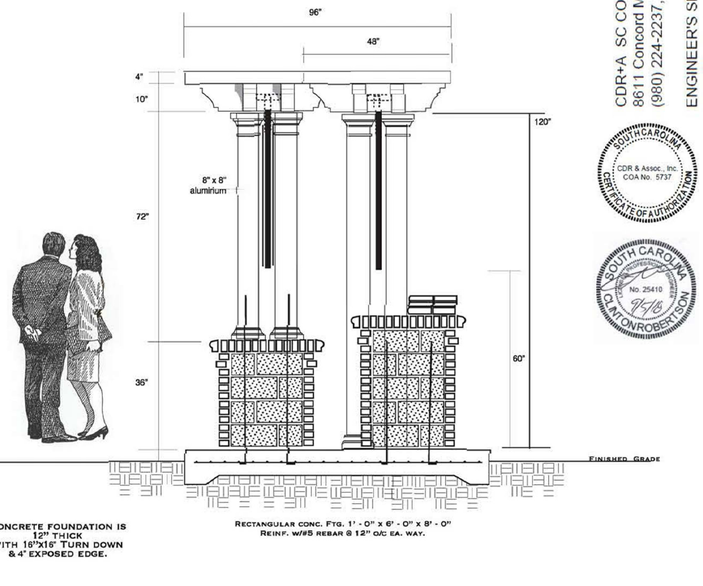
CONCRETE FOUNDATION IS 12" THICK w/16"x16" TURN DOWN ALONG ALL EDGES WITH 4" EXPOSED EDGE.

THE MAIN GATEWAY INTO WALTERBORO IS LOCATED WITHIN TRIANGLE MEDIAN AT THE INTERSECTION OF S.JEFFERIES AND HENDERSON HWY. THE LARGE SCALE DESIGN INTRODUCES ARCHITECTURAL ELEMENTS FEATURED ON MANY OF THE TOWNS HISTORIC HOMES. THE MAIN MESSAGE IS A RELAXING FRONT PORCH.

THIS GATEWAY WELCOME SIGN IS DESIGNED TO BE PLACED OUTSIDE OF SCDOT HWY "CLEAR ZONE".



NOTE: FOR FULL SIZE PRODUCTION (AI) FILES FOR CNC CUTTING, DIGITAL REFLECTIVE PRINTS OR COST INFORMATION, CONTACT BIZZELL DESIGN, INC (704) 651-3528 OR BUZZ.BIZZELL@GMAIL.COM FOLLOW WRITTEN DIMENSIONS / DRAWINGS NOT TO SCALE.



CONCRETE FOUNDATION IS 12" THICK WITH 18"X18" TURN DOWN & 4" EXPOSED EDGE.

RECTANGULAR CONC. FTG. 1' - 0" x 6' - 0" x 8' - 0" REINF. w/#5 REBAR @ 12" O/C EA. WAY.

MAIN GATEWAY SIGN
(SEE DETAILS SN04)

CDR+A SC COA: 5737
8611 Concord Mills Blvd., Ste 160, Concord, NC 28027
(980) 224-2237, mail@cdr-a.com, www.cdr-a.com

ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS

SOUTH CAROLINA CDR & Assoc., Inc. COA No. 5737 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA No. 25410 9/4/18 CLAY MONROE ROBERTSON

PREPARED FOR:

CITY OF WALTERBORO
242 HAMPTON STREET
WALTERBORO, SOUTH CAROLINA 29488

I-95 BUSINESS LOOP
PHASE 2 SOUTH

Walterboro, South Carolina

#	REVISION	DATE	BY

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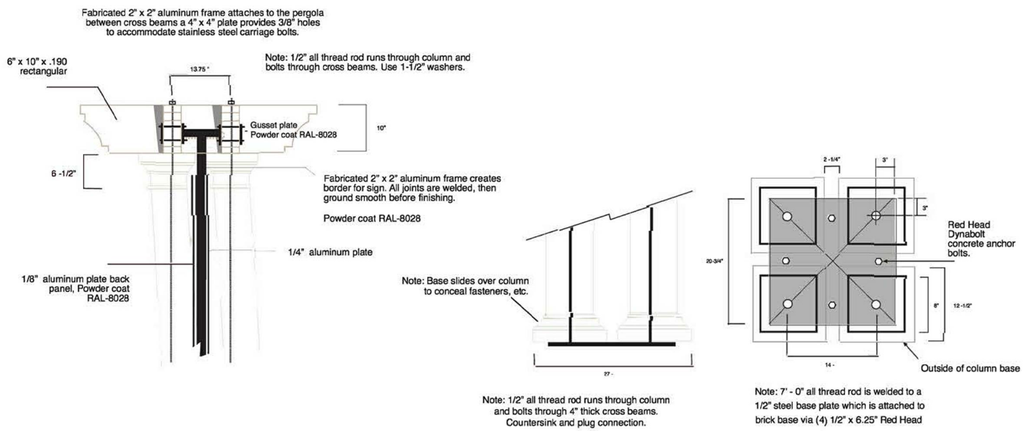
SHEET NUMBER
SN03

FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				20	20

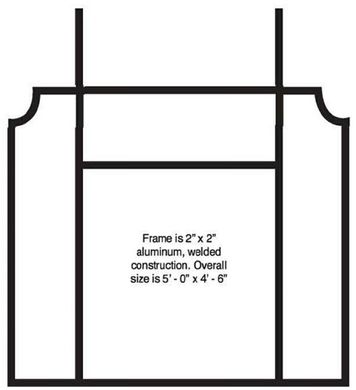
CDR+A SC COA: 5737
8611 Concord Mills Blvd., Ste 160, Concord, NC 28027
(980) 224-2237, mail@cdr-a.com, www.cdr-a.com

ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS

TYPICAL WAYFINDING SIGN (ENLARGEMENT)



MAIN GATEWAY SIGN



GATEWAY SIGN PANEL

Note: Sign panel is fabricated from CNC routed 1/4" aluminum The graphics are applied reflective digitally printed vinyl per spectfication. 1/4" inside aluminum panel edge. The city seal is 14" diameter aluminum with 2" returns. Edges and face are painted Matthews bright gold. Dititally printed Scotchlite graphic is applied to front surface. Mount the logo with #8 self tapping machine screws and hidden edge clips.

The sign face assembly is mounted to the pergola aluminum cross members using a custom fabricated bracket. All joints are ground smooth before painting.

Note: Applied finishes can be Tiger Drylac Powder Coatings or Matthews Paint.

CDR+A SC COA: 5737
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(980) 224-2237, mail@cdr-a.com, www.cdr-a.com

ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS

PREPARED FOR:
CITY OF WALTERBORO
242 HAMPTON STREET
WALTERBORO, SOUTH CAROLINA 29488

I-95 BUSINESS LOOP PHASE 2 SOUTH

Walterboro, South Carolina

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North Charleston, SC 29418
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SHEET NUMBER
SN04

FED. RD. DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				9	10

Note: Bizzell Design will provide full size vector files for CNC cutting of sign panel shapes.

Brackets are CNC cut from two layers of 1/4" flat aluminum & welded into place.

Note: 2" x 3" square aluminum tube is welded to 3/16" aluminum sign panel.

Sign Panel Construction:
A 1/4" slot is cut into the front and back of the 5" diameter pole. The 5' x 9' x 3/16" aluminum sign panel slides into the slot then is welded into place. All welds to be ground smooth before final painting.

2" x 3" square aluminum tube (A & B) is welded to 3/16" aluminum sign panel then welded to pole for additional support.

Paint the assembled units with Matthews Acrylic Polyurethane finish

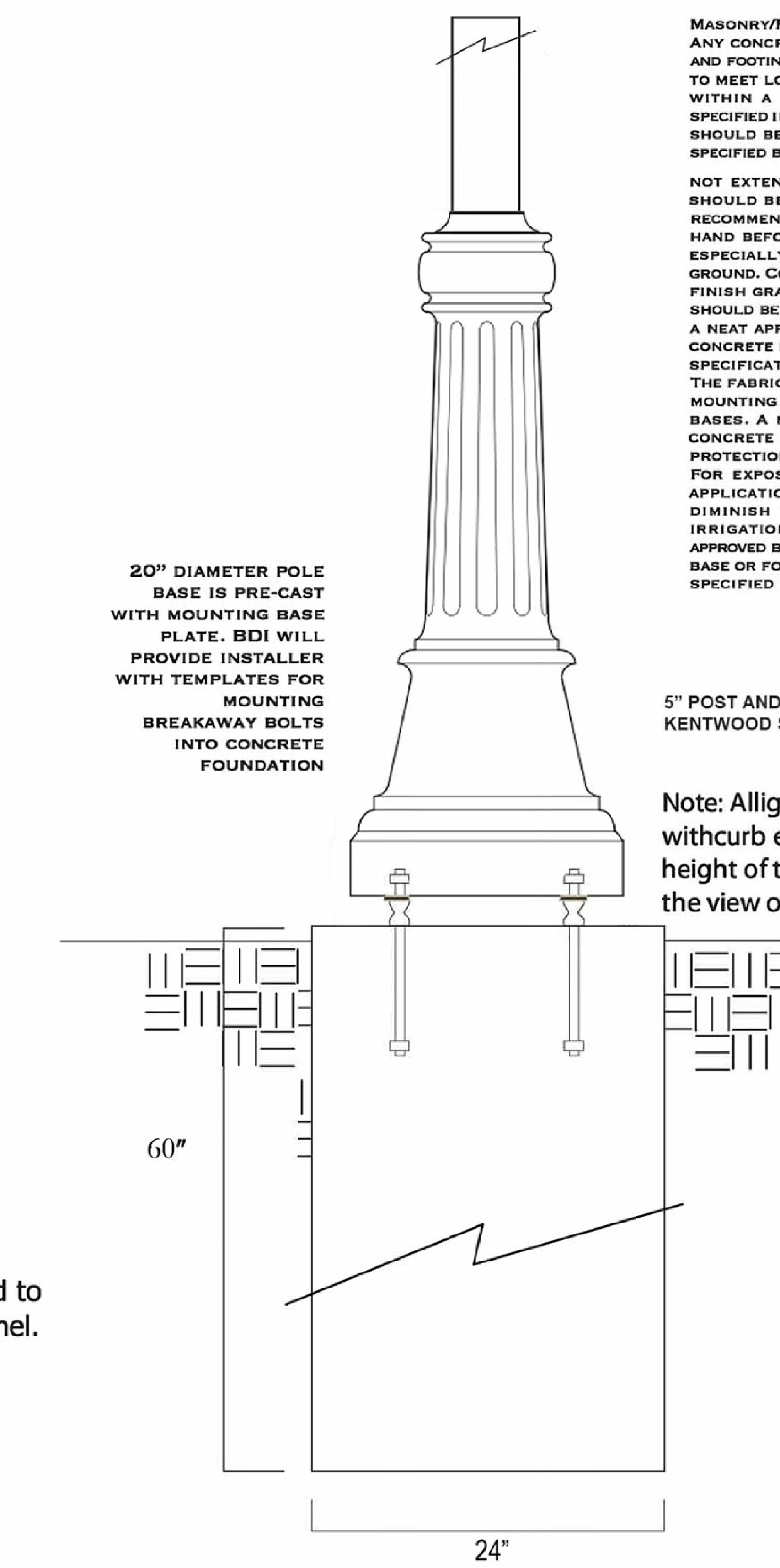
NOTE: FOR FULL SIZE PRODUCTION (AI) FILES FOR CNC CUTTING, DIGITAL REFLECTIVE PRINTS OR COST INFORMATION, CONTACT BIZZELL DESIGN, INC (704) 651-3528 OR BUZZ.BIZZELL@GMAIL.COM
FOLLOW WRITTEN DIMENSIONS / DRAWINGS NOT TO SCALE.

WAYFINDING SIGNAGE
BREAKAWAY BASE IS FHWA APPROVED DEVICE

MASONRY/FOOTINGS
ANY CONCRETE BASES FOR SIGNAGE ARE TO BE POURED IN PLACE AND FOOTINGS ARE TO EXTEND BENEATH THE FROST LINE, OR DEEPER TO MEET LOCAL CODE. ALL FOOTINGS OR BASES SHOULD BE POURED WITHIN A FORM AND LEVEL WITH GRADE UNLESS OTHERWISE SPECIFIED IN THE DESIGN INTENT DRAWINGS. FOUNDATION/FOOTINGS SHOULD BE LEVEL WITH GRADE UNLESS OTHERWISE NOTED OR AS SPECIFIED BY STATE OR LOCAL CODE. FOUNDATION/FOOTINGS SHOULD

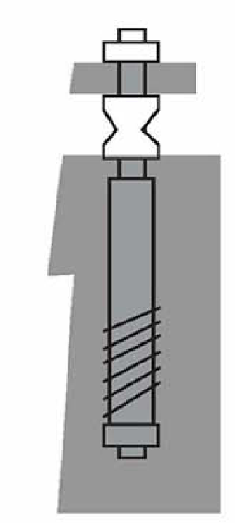
NOT EXTEND ABOVE GRADE MORE THAN 2" AND EXPOSED EDGES SHOULD BE FINISHED WITH A BEVEL TO PREVENT CHIPPING. IT IS RECOMMENDED THAT THE CONCRETE BE FLOATED BY MACHINE OR HAND BEFORE FINISHING IN ORDER TO EMBED LARGER AGGREGATES ESPECIALLY WHEN PART OF THE FOOTING OR BASE EXTENDS ABOVE GROUND. CONCRETE SURFACE SHOULD HAVE A SMOOTH OR BRUSHED FINISH GRADE APPEARANCE. ALL CONCRETE BASES AND FOOTINGS SHOULD BE EDGED TO BREAK ANY BOND WITH THE FORM AND CREATE A NEAT APPEARANCE. ALL FORMS SHOULD BE REMOVED ONCE THE CONCRETE HAS PROPERLY CURED. CONCRETE AND REINFORCEMENT SPECIFICATIONS SHALL BE SHOWN ON SHOP DRAWING SUBMITTALS. THE FABRICATOR IS RESPONSIBLE FOR THE NECESSARY TEMPLATES, MOUNTING PLATES AND HARDWARE FOR CONCRETE AND MASONRY BASES. A MINIMUM 1' ROCK BED WITH LANDSCAPE EDGING OR CONCRETE PAD MUST BE ADDED AROUND EACH CONCRETE BASE AS PROTECTION FROM LANDSCAPING MAINTENANCE.
FOR EXPOSED OR VISIBLE MASONRY, THIS SHALL INCLUDE THE APPLICATION OF PROTECTIVE SEALERS OR SIMILAR FINISHES TO DIMINISH THE EFFECTS OF CLOSE-PROXIMITY SPRINKLING OR IRRIGATION SYSTEMS. SIGNS ARE TO BE MOUNTED ON FHWA APPROVED BREAKAWAY -BOLT FOOTINGS, CENTERED ON THE CONCRETE BASE OR FOOTING, AND ENGINEERED PER CODE, UNLESS OTHERWISE SPECIFIED IN THE DESIGN INTENT DRAWINGS

20" DIAMETER POLE BASE IS PRE-CAST WITH MOUNTING BASE PLATE. BDI WILL PROVIDE INSTALLER WITH TEMPLATES FOR MOUNTING BREAKAWAY BOLTS INTO CONCRETE FOUNDATION

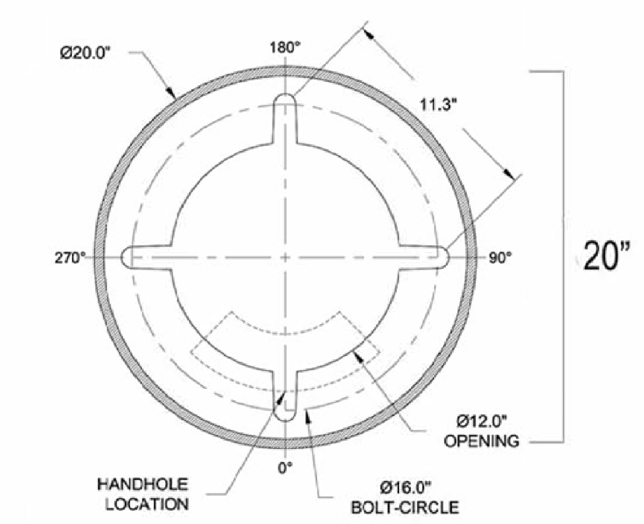


5" POST AND DECORATIVE BASE IS SUPPLIED BY HOLOPHANE KENTWOOD STYLE

Note: Allign concrete base withcurb elevation keeping height of the sign consisten in the view of the motorest.



The Dent Breakaway Bolt® was introduced in the fall of 1995 as a breakaway bolt for sign supports. The reduced section of the bolt provides reliable and predictable impact performance, but yet provide the strength to resist the wind load on most sign sizes. This reduced bolt section lead to the bolt being tested and approved as fully compliant with NCHRP Report 350, including the Omni-directional criteria in October 1996.



Pergola	Black	Accent Trim Pantone 186 C
White Tiger Drylac Powder Coatings RAL-9010 Matthews Paint. MPC -42202SP	Black	Old Red Tiger Drylac Powder Coatings RAL-3013 Matthews Paint. MPC -58765

Note: Sign panel is fabricated from CNC routed 1/4" aluminum The graphics are applied reflective digitally printed vinyl per spectfication. 1/4" inside aluminum panel edge. The city seal is 14" diameter aluminum with 2" returns. Edges and face are painted Matthews bright gold. Ditially printed Scotchlite graphic is applied to front surface. Mount the logo with #8 self tapping machine screws and hidden edge clips.

The sign face assembly is mounted to the pergola aluminum cross members using a custom fabricated bracket. All joints are ground smooth before painting.

Note: Applied finishes can be Tiger Drylac Powder Coatings or Matthews Paint.

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 25410 CLINTON ROBERTSON 9/6/18

SOUTH CAROLINA CDR & Assoc., Inc. COA No. 5737 CERTIFICATE OF AUTHORIZATION

CDR+A SC COA: 5737
8611 Concord Mills Blvd., Ste 160, Concord, NC 28027
(980) 224-2237, mail@cdr-a.com, www.cdr-a.com

ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS

TYPICAL WAYFINDING SIGN DETAIL

(SEE SHEET HS00-1 FOR ADDITIONAL NOTES)

PREPARED FOR:
CITY OF WALTERBORO SOUTH CAROLINA
CITY OF WALTERBORO
242 HAMPTON STREET
WALTERBORO, SOUTH CAROLINA 29488

I-95 BUSINESS LOOP PHASE 2 SOUTH

Walterboro, South Carolina

#	REVISION	DATE	BY

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Landscape Architects
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SHEET NUMBER
SN05

T:\Projects-TLH\URBAN\Walterboro\WalterboroBusLpImprvCD-0213015\Production\Work CDs\0213015_basePh2SouthMERGE_ROW.dwg 4/20/2021 5:17:42 PM TODD THEODORE

FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				10	10

STATION(APPROX.)	CONTENT	REFERENCE IMAGE
164+00.00	"WALTERBORO WILDLIFE SANCTUARY"	
168+50.00	"WALTERBORO WILDLIFE SANCTUARY"	
206+10.00	"ARTISAN CENTER"	
216+50.00	"COLLETON MUESEUM" & "ARTISANS CENTER"	
213+70.00	"COLLETON MUESEUM" & "ARTISANS CENTER"	

NOTE: SIGNS SHALL BE REMOVED AND RETURNED TO SCDOT

PREPARED FOR:

CITY OF WALTERBORO
242 HAMPTON STREET
WALTERBORO, SOUTH CAROLINA 29488

I-95 BUSINESS LOOP PHASE 2 SOUTH

Walterboro, South Carolina

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www.stantec.com

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Landscape Architects
Land Planners
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SHEET NUMBER
SN06

FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				1	23

PHASE 2 SOUTH PLANT SCHEDULE

PLANT SCHEDULE

CANOPY TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	HEIGHT	REMARKS
	MAGR	27	MAGNOLIA GRANDIFLORA	SOUTHERN MAGNOLIA	FG B&B	4" CAL.	14'-16'	
	MAGR-LG	4	MAGNOLIA GRANDIFLORA `LITTLE GEM`	DWARF SOUTHERN MAGNOLIA	FG B&B	2" CAL.	8' MIN.	
	QUVI-C	88	QUERCUS VIRGINIANA `CATHEDRAL`	CATHEDRAL LIVE OAK	FG B&B	4" CAL	14'-16'	
	ZESE	2	ZELKOVA SERRATA `CITY SPRITE`	CITY SPRITE ZELKOVA	FG B&B	3" CAL.	12'-14'	
FLOWERING TREES	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**HEIGHT**	**REMARKS**
	CECA	83	CERCIS CANADENSIS	REDBUD	FG B&B	2" CAL.	10` - 12`	SINGLE LEADER
	LAIN-M	3	LAGERSTROEMIA INDICA x FAURIEI `MUSKOGEE`	MUSKOGEE CRAPE MYRTLE	FG B&B	2" CAL.	10`-14`	MULTI-STEM; LAVENDAR BLOOMS
	LANA-N	58	LAGERSTROEMIA INDICA x FAURIEI `NATCHEZ`	NATCHEZ CRAPE MYRTLE	FG B&B	2" CAL.	10`-14`	SINGLE LEADER; WHITE BLOOMS
	LAIN-T	38	LAGERSTROEMIA INDICA x FAURIEI `TUSCARORA`	TUSCARORA CRAPE MYRTLE	FG B&B	2" CAL.	10`-14`	MULTI STEM; RED BLOOMS
	LAIN-C	10	LAGERSTROEMIA INDICA `CATAWBA`	CATAWBA CRAPE MYRTLE	FG B&B	1.5" CAL.	7 `- 8'	MULTI-STEM; PURPLE BLOOMS
PALM TREES	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**HEIGHT**	**REMARKS**
	SAB-14	51	SABAL PALMETTO	SABAL PALM	FG B&B		14`	HEIGHT REPRESENTS CLEAR TRUNK
	SAPA-8	10	SABAL PALMETTO	SABAL PALM	FG B&B		8`	HEIGHT REPRESENTS CLEAR TRUNK
SHRUBS	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**HEIGHT**	**SPREAD**	**REMARKS**
	RHIN-GT	179	RHODODENDRON INDICUM `GEORGE TABER`	SOUTHERN INDIAN AZALEA	7 GAL.		12` - 15`	
	RORA	7	ROSA `RADTKO`	DOUBLE KNOCKOUT ROSE	5 GAL.		12`-15`	RED BLOOMS
	SPBA	200	SPARTINA BAKERI	SAND CORDGRASS	3 GAL		12` - 15`	
SHRUB AREAS	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**HEIGHT**	**SPREAD**	**SPACING**	**REMARKS**
	ILVO-D	99	ILEX VOMITORIA `NANA`	DWARF YAUPON HOLLY	3 GAL.	14`-16`	12` - 15`	48" O.C.	FULL
	MUCA	1,347	MUHLENBERGIA CAPILLARIS	PINK MUHLY	3 GAL.	14`-16`	12` - 15`	36" O.C.	FULL
	TRFL	413	TRIPSACUM FLORIDANUM	DWARF FAKAHATCHEE GRASS	3 GAL.	14`-16`	10`-12`	48" O.C.	FULL
GROUND COVERS	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**HEIGHT**	**SPREAD**	**SPACING**	**REMARKS**
	ANNUALS	1,880 SF	ANNUALS	ANNUALS	4" POT				CITY P&R DEPT. TO SELECT
	JUHO	709	JUNIPERUS HORIZONTALIS `WILTONII`	BLUE RUG JUNIPER	1 GAL	6" - 8"	6"-12"	30" O.C.	
	LIMU	699	LIRIOPE MUSCARI `BIG BLUE`	BIG BLUE LIRIOPE	1 GAL.	6" - 8"	12" - 15"	18" O.C.	
	TRAS	1,998	TRACHELOSPERMUM ASIATICUM `ASIATIC`	ASIATIC JASMINE	1 GAL	4" - 6"	4" - 6"	15" O.C.	
SOD/SEED	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**HEIGHT**	**SPREAD**	**SPACING**	**REMARKS**
	SOD-2	28,334 SF	CYNODON DACTYLON	BERMUDA GRASS	TURF				

NOTES:
1. TREES AND SHRUBS REPRESENTED BY SYMBOL ARE LABELED ONCE IN EACH PLAN VIEW. PLANTS WITH HATCH HAVE LABEL FOR EACH BED.

2. CALIPER INCH OF MULTI-STEM TREES SHALL EQUAL THE AVERAGE OF ITS MAIN LEADERS.

PLANTING NOTES:

1. CONTRACTOR SHALL FULLY REVIEW ALL PLANS AND SPECIFICATIONS PRIOR TO CONSTRUCTION / INSTALLATION. CONTRACTOR SHALL NOTIFY OWNER IF ANY DISCREPANCIES EXIST.

2. ANY DEVIATION FROM THESE PLANS MUST BE SPECIFICALLY APPROVED BY OWNER.

3. NOTIFY OWNER OF ANY SITE CONDITIONS WHICH MAY NECESSITATE MODIFICATION TO THE PLAN. OWNER SHALL, IF NECESSARY, MAKE "IN-FIELD MODIFICATIONS".

4. FINE GRADING SHALL CONSIST OF HAND RAKED SMOOTH, FREE OF DEBRIS, ALL AREAS TO RECEIVE LANDSCAPE PLANTING AND/OR PINE STRAW MULCH.

5. CONTRACTOR IS RESPONSIBLE FOR INSPECTION OF EXISTING CONDITIONS AND PROMPTLY REPORTING ANY DISCREPANCIES. CONTRACTOR TO PERFORM SOIL TESTS AS NECESSARY TO ASSURE PLANT HEALTH AND GROWTH.

6. CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UTILITIES AND IS RESPONSIBLE FOR ANY DAMAGE THAT MAY OCCUR TO EXISTING UTILITIES.

7. ALL PLANTING BEDS ARE TO BE CLEAN AND FREE OF DEBRIS (WEEDS, STONE, STICKS, ROOTS, TRASH, ETC.), INCLUDING REMOVAL OF ANY EXISTING PAVEMENT, APPLY WEED KILLER PRIOR TO STARTING PLANT BED PREPARATION.

8. ALL PLANT BEDS ARE TO BE TILLED AND SOIL AMENDED BASED ON SOIL TESTING, APPLY PRE-EMERGENT AND FINISH WITH PINE STRAW MULCH TO A MINIMUM 4" DEPTH. MULCH SHALL BE REPLACED TWICE WITHIN ONE YEAR ESTABLISHMENT WARRANTY PERIOD.

9. CONTRACTOR VERIFIES THAT ALL PLANT MATERIAL IS DETERMINED AVAILABLE AS SPECIFIED WHEN BID/PROPOSAL IS SUBMITTED.

10. PLANT SCHEDULE WAS PREPARED FOR ESTIMATING PURPOSES. CONTRACTOR SHALL MAKE OWN QUANTITIES USING DRAWINGS TO DETERMINE QUANTITIES TO HIS SATISFACTION. REPORT PROMPTLY ANY DISCREPANCIES WHICH MAY AFFECT BIDDING. NO ROOT BOUND PLANT MATERIAL IS ALLOWED / WILL BE ACCEPTED.

11. WHEN CONFLICTS EXIST BETWEEN THE SPECIFICATIONS AND THESE PLANS, THE SPECIFICATIONS SHALL PREVAIL.

PLANTING DETAIL NOTES:

1. ALL WORK CONDUCTED BY LANDSCAPE CONTRACTOR SHALL BE IN ACCORDANCE WITH THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION ACCESS AND ROADSIDE MANAGEMENT STANDARDS (ARMS MANUAL).

2. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES IN THE PLANTING SCHEDULE AND INSTALL ALL PLANTS AND MATERIALS AS INDICATED ON THE PLANS.
PROVIDE UNIT PRICES FOR EACH PLANT, WHICH INCLUDE ALL OTHER INCIDENTAL MATERIALS (I.E. APPROVED MULCH, FERTILIZER, ETC.), LABOR, ETC. REPORT PROMPTLY ANY DISCREPANCIES WHICH MAY AFFECT BIDDING.

3. CONTRACTOR VERIFIES THAT ALL PLANT MATERIAL IS DETERMINED AVAILABLE AS SPECIFIED WHEN BID/PROPOSAL IS SUBMITTED.

4. THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS OR REVISIONS WITHOUT THE OWNER'S REPRESENTATIVE APPROVAL.

5. THE CONTRACTOR SHALL ENSURE ALL TREES AND PLANTS ARE FIRST CLASS REPRESENTATIVES, FREE OF DISEASE AND DEAD MATERIAL.

6. PLANTS WITH BROKEN ROOT BALLS, BOUND ROOTS OR SUBSTANTIAL DAMAGE TO ANY PART SHALL BE REPLACED PRIOR TO PLANTING.

7. PLANTS SHALL BE DEEMED DEAD IF THE TERMINAL LEADER DIES OR THE PLANT HAS LESS THAN 90% VIABLE LEAF SURFACE AREA.

8. ALL PLANTS, MATERIALS AND WORKMANSHIP ARE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

9. NO TREE PLANTING SHALL OCCUR WITHIN APPLICABLE SIGHT DISTANCE TRIANGLE AREAS AS SPECIFIED BY ARMS MANUAL, CURRENT EDITION AT THE TIME OF INSTALLATION. CONTRACTOR SHALL STAKE THE LOCATION OF ALL TREE PLANTINGS IN THE RIGHT-OF-WAY IN THE FIELD PRIOR TO INSTALLATION FOR REVIEW AND APPROVAL BY THE OWNER'S REPRESENTATIVE. OWNER SHALL AGREE TO MAINTAIN THE STRUCTURE OF TREE PLANTINGS IN THE RIGHT-OF-WAY TO ELIMINATE SIGHT DISTANCE CONFLICTS.

10. SHRUBS, ORNAMENTAL GRASSES, AND GROUNDCOVERS SHALL BE LAID OUT ON THE GROUND FOR APPROVAL BY THE OWNER'S REPRESENTATIVE. CONTRACTOR SHALL ANTICIPATE THAT SOME RE-ARRANGEMENT OF MATERIAL WILL OCCUR.

11. EACH TREE AND SHRUB SHALL BE PRUNED AS NEEDED TO REMOVE ALL DEAD WOOD, SUCKERS, OR BROKEN/DAMAGED BRANCHES. ALL PRUNING SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND SHALL PRESERVE THE NATURAL HABIT AND CHARACTER OF THE PLANT.

12. PLANT CONTAINERS SHALL BE REMOVED PRIOR TO PLANTING. IF PLANTS ARE NOT CONTAINER GROWN, REMOVE A MINIMUM OF THE TOP 1/3 OF BURLAP, FABRIC, OR WIRE MESH. WIRE BASKETS MUST BE COMPLETELY REMOVED PRIOR TO INSTALLATION.

13. CONTAINER GROWN STOCK SHALL HAVE BEEN GROWN IN A CONTAINER LONG ENOUGH FOR THE ROOT SYSTEM TO HAVE DEVELOPED SUFFICIENTLY TO HOLD ALL THE SOIL TOGETHER FIRMLY, BUT NOT LONG ENOUGH TO HAVE BECOME POT BOUND.

14. ROOTFLARES SHALL BE SET 1" ABOVE FINISHED GRADE AND SET PLUMB TO THE HORIZON.

15. BACKFILL SHALL BE LOOSENED EXISTING SOIL. REMOVE ROCKS, STICKS, OR OTHER DELETERIOUS MATERIAL GREATER THAN 1" IN ANY DIRECTION PRIOR TO BACKFILLING. WATER AND TAMP TO REMOVE AIR POCKETS. IF EXISTING SOILS CONTAIN EXCESSIVE SAND, CLAY, OR OTHER MATERIAL NOT CONDUCIVE TO PROPER PLANT GROWTH CONTACT OWNER'S REPRESENTATIVE PRIOR TO PLANTING. A SOIL TEST TO CONFIRM ADHERENCE TO THE SPECIFICATIONS FOR ANY STOCKPILED OR IMPORTED SOIL WILL BE REQUIRED. SEE SPECIFICATIONS FOR REQUIRED TESTING DATA AND AMEND THE SOIL AS REQUIRED BY THE SOIL TEST.

16. SOIL BERMS SHALL BE CONSTRUCTED OF EXISTING SOIL AT THE OUTER EDGE OF THE PLANTING PIT WITH A HEIGHT AND WIDTH OF 6".

17. THE CONTRACTOR SHALL APPLY SEED FREE/WEED FREE MULCH TO PLANTED AREAS AT A MINIMUM 3" COMPACTED THICKNESS WITH AN APPROVED ORGANIC MULCH. MULCH SHALL BE APPLIED IMMEDIATELY AFTER COMPLETION OF PLANTING OPERATIONS. LIMITS OF MULCHING SHALL BE AS SHOWN ON PLAN, OR FOR INDIVIDUAL PLANTS, THE AREA OF THE PLANTING PIT, SEE PLANTING DETAILS.

18. MULCH SHALL BE A 3" DEEP LAYER PLACED TO THE EDGE OF THE TRUNK FLARE, AROUND THE BASE OF SHRUB, OR SOLIDLY AROUND GROUNDCOVER. MULCH SHALL BE AT A MINIMUM 2" CLEARANCE FROM TREE TRUNKS AND SHRUB STEMS.

19. STRAPPING SHALL BE MINIMUM 1" WIDE BLACK NYLON OR POLYPROPYLENE. ALL WOODEN STAKES SHALL BE LOCATED BEYOND THE EDGE OF SOIL RING.

20. CONTRACTOR SHALL STAKE TREES FOR APPROVAL PRIOR TO INSTALLATION. ANY CONFLICTS OR DISCREPANCIES SHALL BE FIELD ADJUSTED AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

21. STAKING FOR ALL TREES SHALL BE KEPT WITHIN SCDOT RIGHT OF WAY.

22. THE CONTRACTOR SHALL FERTILIZE ALL PLANT MATERIAL. FERTILIZATION WILL BE AS RECOMMENDED BY SOIL TESTS.

23. THE CONTRACTOR SHALL APPLY ORGANIC HERBICIDES AND PRE-EMERGENTS ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS TO ALL PLANTING BEDS.

24. PRIOR TO INSTALLING MULCH, ALL PLANT BEDS ARE TO BE TREATED WITH A PRE-EMERGENT. CONTRACTOR TO SUBMIT PRODUCT INFORMATION ON PRE-EMERGENT AND OBTAIN APPROVAL PRIOR TO MULCHING.

25. FOR DISTURBED AREAS OF EXISTING SOD/GRASS, CONTRACTOR TO INSTALL SOD OF THE SAME SPECIES. THE CONTRACTOR SHALL LAY SOD SOLIDLY IN ALL INDICATED OR DISTURBED AREAS WITH JOINTS IN CONTACT WITH EACH OTHER. PIN ALL SODDED SLOPES GREATER THAN 4:1 STEEL U PINS/SOD STAPLES.

26. THE CONTRACTOR SHALL KEEP ALL AREAS OF WORK CLEAN, NEAT AND ORDERLY. ALL PAVED SURFACES ARE TO BE CLEANED OF SOIL AND DEBRIS AT THE CLOSE OF THE WORK DAY.

IRRIGATION/WATERING NOTES:

1. IRRIGATION PLANS WILL BE PROVIDED TO THE CONTRACTOR PRIOR TO FINAL CONTRACT AWARD. APPROXIMATE IRRIGATION ZONES AND TREES WITH WATERBAGS HAVE BEEN SHOWN OF THE LANDSCAPE PLANS.

2. CITY WILL PROVIDE AND INSTALL IRRIGATION METERS (9 ESTIMATED 1" METERS).

3. CONTRACTOR SHALL SUPPLY AND INSTALL A FULLY FUNCTIONAL AUTOMATIC IRRIGATION SYSTEM, COMPLETE AND INSTALLED. SYSTEM TO INCLUDE ELECTRICAL POWER, BACKFLOW PREVENTERS, CONTROLLERS, ALL VALVES, UNDER PAVEMENT SLEEVING, PIPES, HEADS, FITTINGS AND DRIP TUBING, ETC., AND TO PROVIDE 100% COVERAGE AS INDICATED ON THE LANDSCAPE PLANS.

2. CONTRACTOR IS RESPONSIBLE FOR WATERING ALL PLANTED AREAS AND MAINTAINING TREE WATERBAGS IN ADDITION TO IRRIGATED AREAS FOR PLANT ESTABLISHMENT THROUGH WARRANTY/MAINTENANCE PERIOD.

WARRANTY AND MAINTENANCE:

1. CONTRACTOR SHALL PROVIDE A WARRANTY ON ALL PLANT MATERIAL AND IRRIGATION DURING THE ONE YEAR ESTABLISHMENT PERIOD (STARTING AT TIME OF FINAL ACCEPTANCE ACCEPTANCE) AND PROVIDE A MAINTENANCE SCHEDULE ON ALL INSTALLED LANDSCAPE AND IRRIGATION.

2. THE CONTRACTOR SHALL MAINTAIN ALL PLANTINGS INCLUDING WATERING, MOWING, MULCHING, FERTILIZING, WEED, PEST CONTROL, LITTER REMOVAL, REMOVAL OF UNDESIRABLE VEGETATION, MAINTENANCE AND EDGING OF BEDLINES, ETC. UNTIL FINAL ACCEPTANCE (BY THE OWNER'S REPRESENTATIVE OR AS INDICATED OTHERWISE) AND DURING THE ONE YEAR MAINTENANCE PERIOD.

3. LANDSCAPE IMPROVEMENT AREAS NOT TO BE IRRIGATED WITH AN AUTOMATED IRRIGATION SYSTEM, CONTRACTOR SHALL HAND WATER LANDSCAPE THROUGHOUT ONE YEAR WARRANTY PERIOD, INCLUDING MAINTAINING GATOR BAG WATERING SYSTEM FOR EACH NON-IRRIGATED TREE.

4. CONTRACTOR SHALL KEEP LANDSCAPE IN A HEALTHY VIABLE STATE THROUGHOUT ONE YEAR ESTABLISHMENT WARRANTY PERIOD. LANDSCAPE FOUND TO BE IN POOR HEALTH SHALL BE REJECTED AND REPLACED WITH VIABLE PLANT MATERIAL AT CONTRACTOR'S EXPENSE. THIS REPLACEMENT SHALL OCCUR WITHIN SEVEN (7) DAYS OF REJECTION. PAYMENT FOR ESTABLISHMENT AND MAINTENANCE SHALL BE LET ON A QUARTERLY BASIS FOLLOWING SUBMITTAL OF REPORT AND REPLACEMENT OF REJECTED LANDSCAPE MATERIAL.

5. PROVIDE THE OWNER AND OWNER'S REPRESENTATIVE WITH SEVEN CALENDAR DAYS ADVANCE NOTICE OF COMPLETING INSTALLATION OF ALL PLANTS AND INCIDENTAL LANDSCAPING. THE ESTABLISHMENT PERIOD WILL BEGIN UPON ACCEPTANCE OF THE COMPLETE INSTALLATION OF ALL PLANTS, BY THE OWNER. NOT LESS THAN FORTY-FIVE DAYS PRIOR TO THE SCHEDULED COMPLETION OF THE INSTALLATION, SUBMIT A MAINTENANCE PLAN TO THE OWNER AND OWNER'S REPRESENTATIVE. THE MAINTENANCE PLAN IS SUBJECT TO REVIEW AND COMMENT BY THE OWNER AND OWNER'S REPRESENTATIVE. INSTALLATION WILL NOT BE CONSIDERED COMPLETE UNTIL THE MAINTENANCE PLAN HAS WRITTEN APPROVAL FROM THE OWNER. THE MAINTENANCE PLAN SHALL SPECIFICALLY DESCRIBE THE METHODS, ACTIVITIES, MATERIALS AND SCHEDULE TO ACHIEVE THE FOLLOWING AT ALL TIMES THROUGHOUT THE ESTABLISHMENT PERIOD:

   A. KEEP ALL PLANTS INSTALLED AS SPECIFIED IN THESE PLANS.

   B. REMOVE DEAD AND UNHEALTHY PLANTS IMMEDIATELY AND REPLACE WITH HEALTHY PLANT OF SAME SPECIES.

   C. KEEP ALL PLANTS UNDAMAGED, INCLUDING FREE OF PESTS AND DISEASE, PROPERLY HYDRATED AND NOURISHED, TO SUPPORT TO GROWTH AND MAINTAIN FORM AND HABIT SPECIFIED IN THESE PLANS.

   D. KEEP ALL PLANTS PRUNED TO MAINTAIN PLANT HEALTH, CLEAR VISIBILITY OF SIGNS, TRAFFIC SIGNALS, SAFE SIGHT DISTANCE AT INTERSECTIONS AND DRIVEWAYS, SAFE AND OPERATIONAL HORIZONTAL AND VERTICAL CLEARANCE FROM ROADWAYS, SIDEWALKS, UTILITIES, LIGHT POLES, MECHANICALS EQUIPMENT, FENCES, WALLS AND DRAINAGE STRUCTURES, AND UNOBSTRUCTED ACCESS FOR ALL AUTHORIZED USERS.

   E. KEEP THE INDIVIDUAL PLANT LOCATIONS AND PLANT BEDS FREE OF LITTER AND UNDESIRABLE VEGETATION.

   F. KEEP LANDSCAPE BEDS EDGING CORRECTLY LOCATED AND TRIMMED, AND THE MULCH GROOMED AND REPLENISHED AS SPECIFIED IN THESE PLANS

   G. OPERATE AND MAINTAIN ALL COMPONENTS OF ANY IRRIGATION SYSTEM AS SPECIFIED IN THE PLANS WHEN INSTALLED AS PART OF THE CONTRACT.

   H. CONTINUE MOWING AND LITTER PICK UP OF THE TURF AREAS.

6. OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO END THE MAINTENANCE SERVICES AT ANY POINT FOR ANY REASON.

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I-95 BUSINESS LOOP PHASE 2 SOUTH

Walterboro, South Carolina

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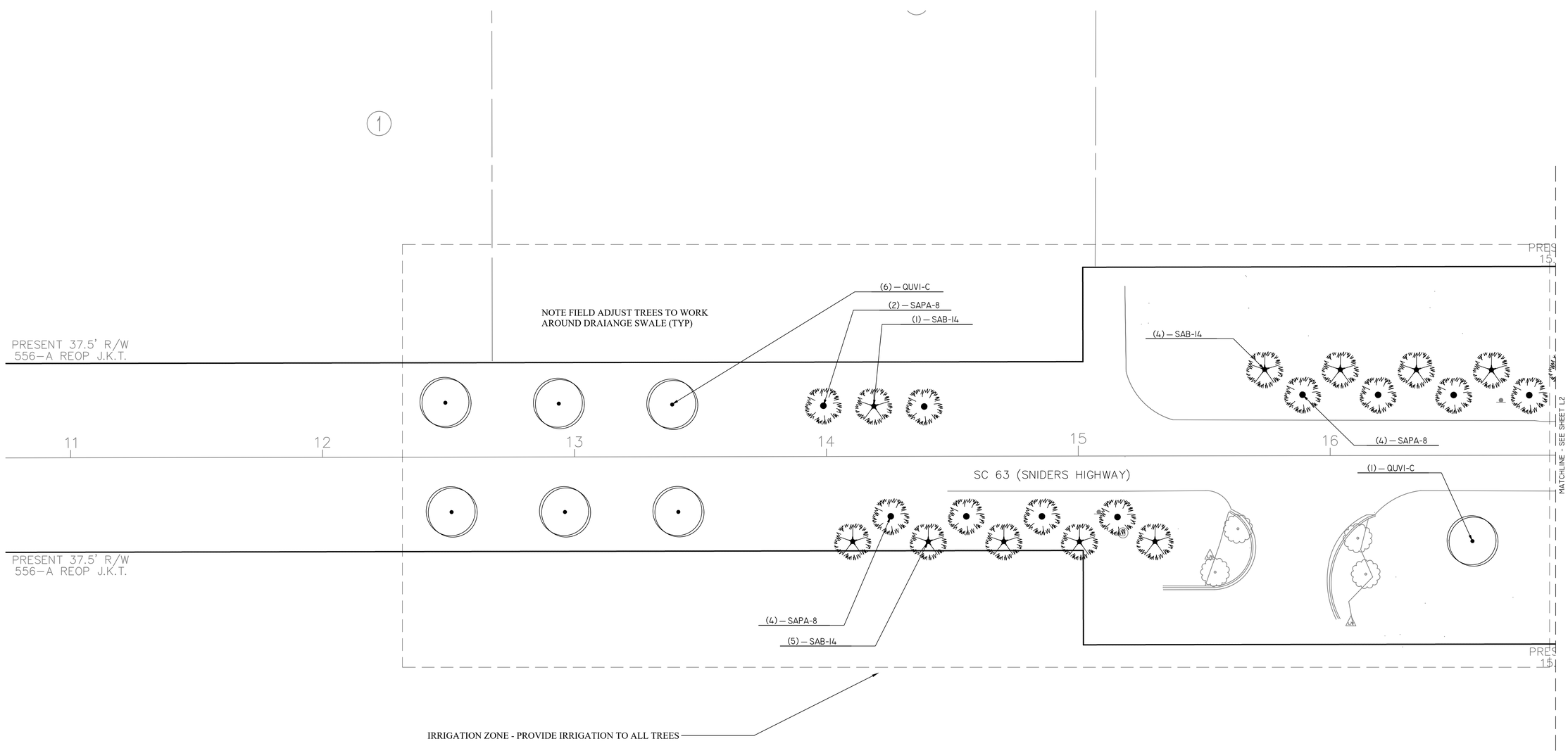

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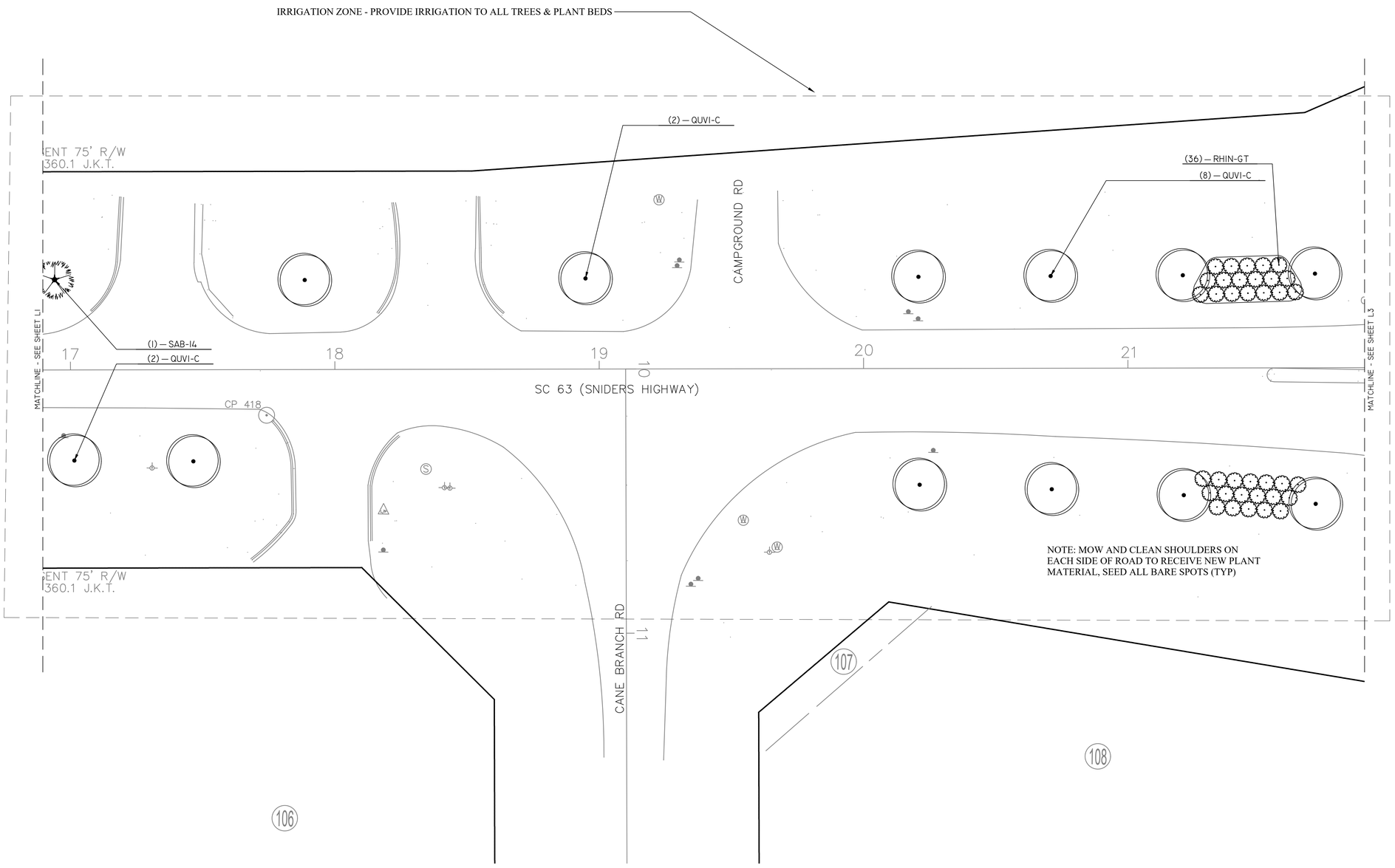

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I-95 BUSINESS LOOP PHASE 2 SOUTH

Walterboro, South Carolina

SOUTH CAROLINA LANDSCAPE ARCHITECT No. 276 REGISTERED

SOUTH CAROLINA NOLVI KNOX WOOD & PARTNERS, INC. No. C00000 CERTIFICATE OF AUTHORIZATION

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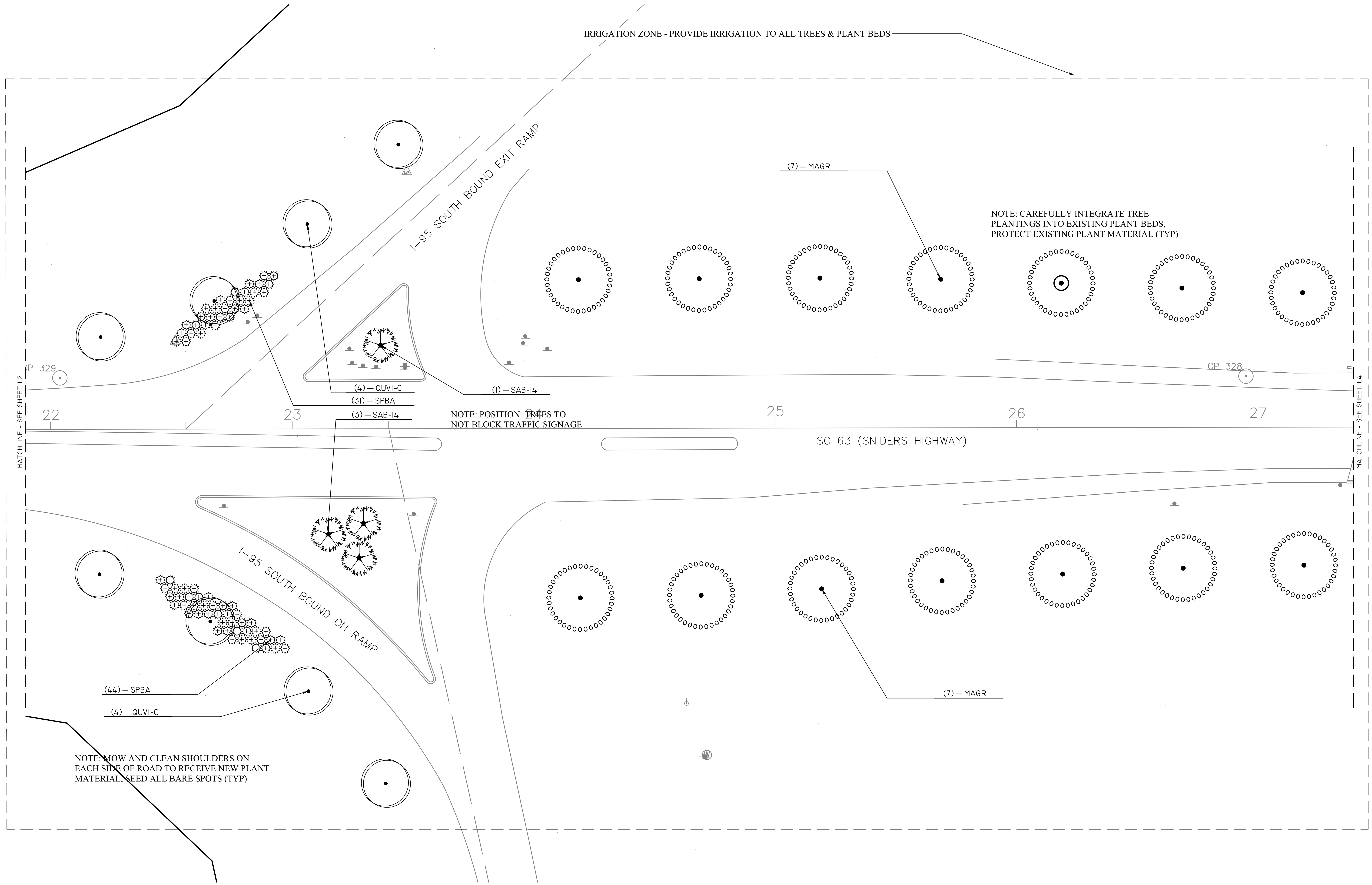
IRRIGATION ZONE - PROVIDE IRRIGATION TO ALL TREES & PLANT BEDS



NOTE: MOW AND CLEAN SHOULDERS ON EACH SIDE OF ROAD TO RECEIVE NEW PLANT MATERIAL, SEED ALL BARE SPOTS (TYP)

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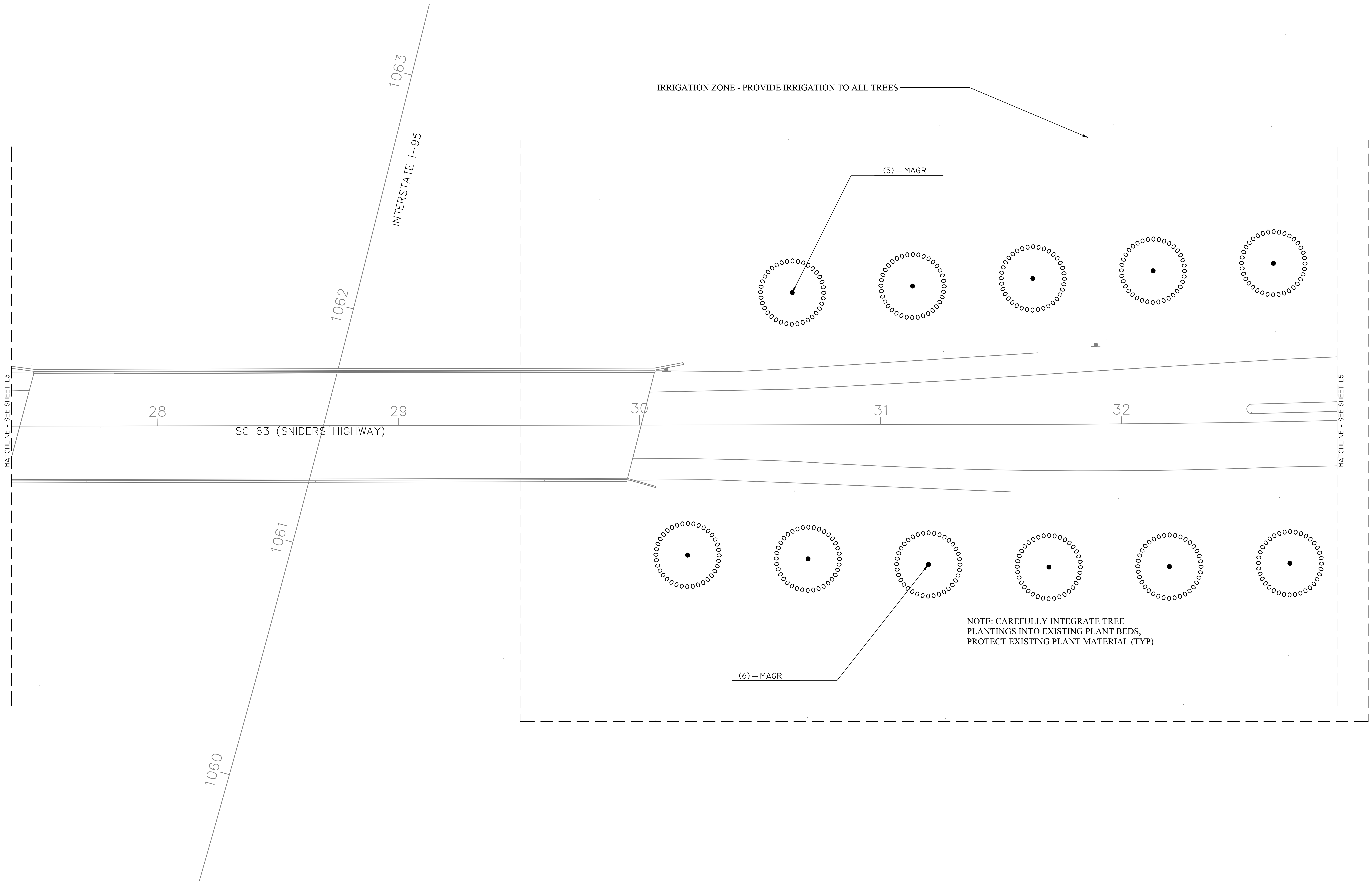

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I-95 NORTH BOUND ON RAMP

IRRIGATION ZONE - PROVIDE IRRIGATION TO ALL TREES & PLANT BEDS

(26) — SPBA

(8) — QUVI-C
(2) — MAGR
(6) — SAB-14

NOTE: MOW AND CLEAN SHOULDERS ON EACH SIDE OF ROAD TO RECEIVE NEW PLANT MATERIAL, SEED ALL BARE SPOTS (TYP)

(1) — QUVI-C

NOTE: POSITION TREES TO NOT BLOCK TRAFFIC SIGNAGE

(10) — RHIN-GT
(120) — LIMU
(18) — RHIN-GT
(212) — LIMU

SC 63 (SNIDERS HIGHWAY)

WAYFINDING SIGN, TYP.

MATCHLINE - SEE SHEET L4

MATCHLINE - SEE SHEET L6

CP 327

LADSON ST

(11) — RHIN-GT

(26) — RHIN-GT

(7) — QUVI-C

(44) — SPBA

I-95 NORTH BOUND EXIT RAMP

33 34 35 36 37 38 109 110

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Walterboro, South Carolina

SOUTH CAROLINA LANDSCAPE ARCHITECT No. 276 REGISTERED

SOUTH CAROLINA GENERAL CONTRACTOR CERTIFICATE OF WOOD & PARTNERS, INC. No. 0000000

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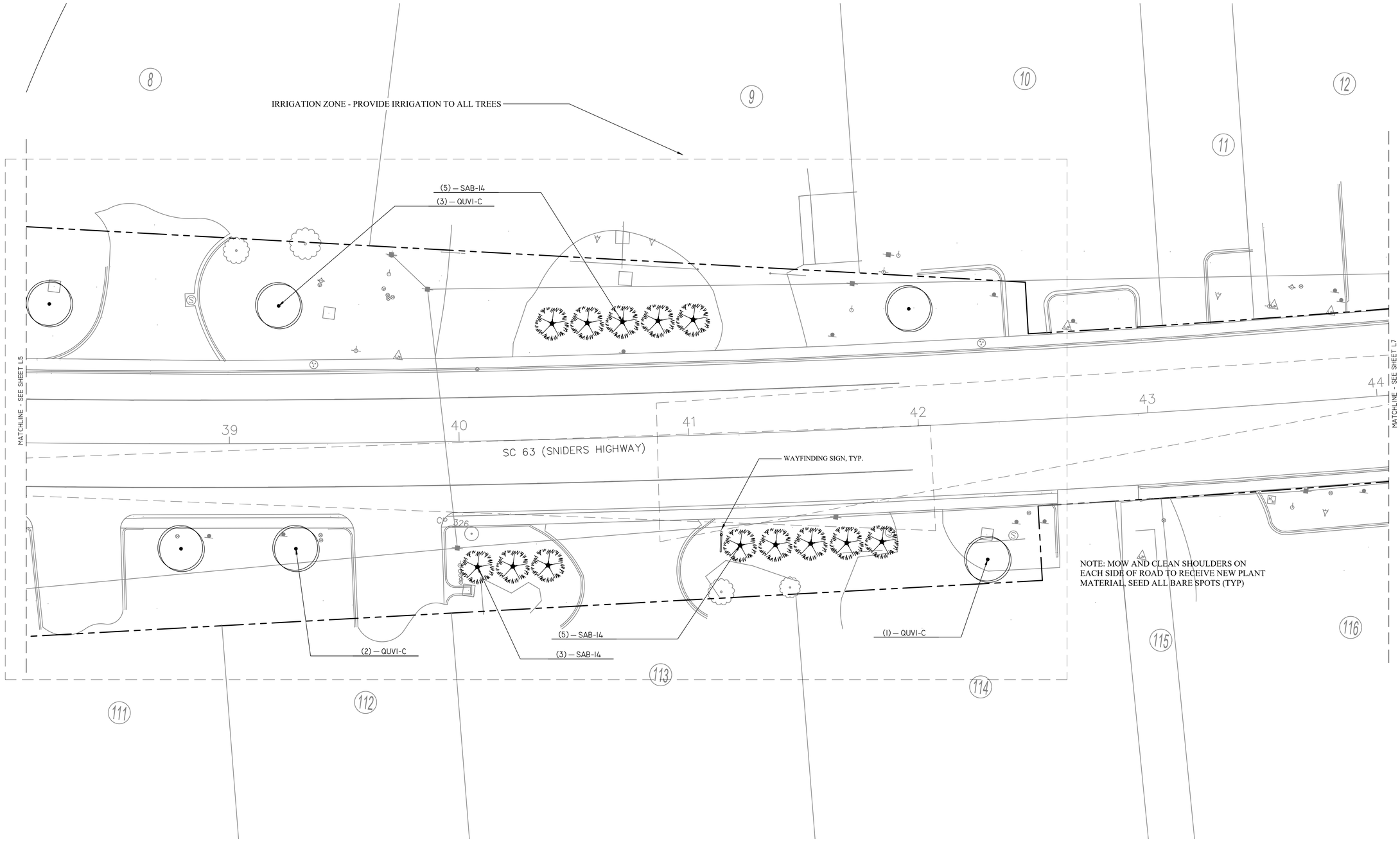
	S.C.	COLLETON				7	23



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I-95 BUSINESS LOOP PHASE 2 SOUTH

Walterboro, South Carolina

SOUTH CAROLINA LANDSCAPE ARCHITECT REGISTERED No. 276

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0 10' 20' 40' 60' 80'
SCALE: 1" = 20'

NORTH

SHEET NUMBER
L6

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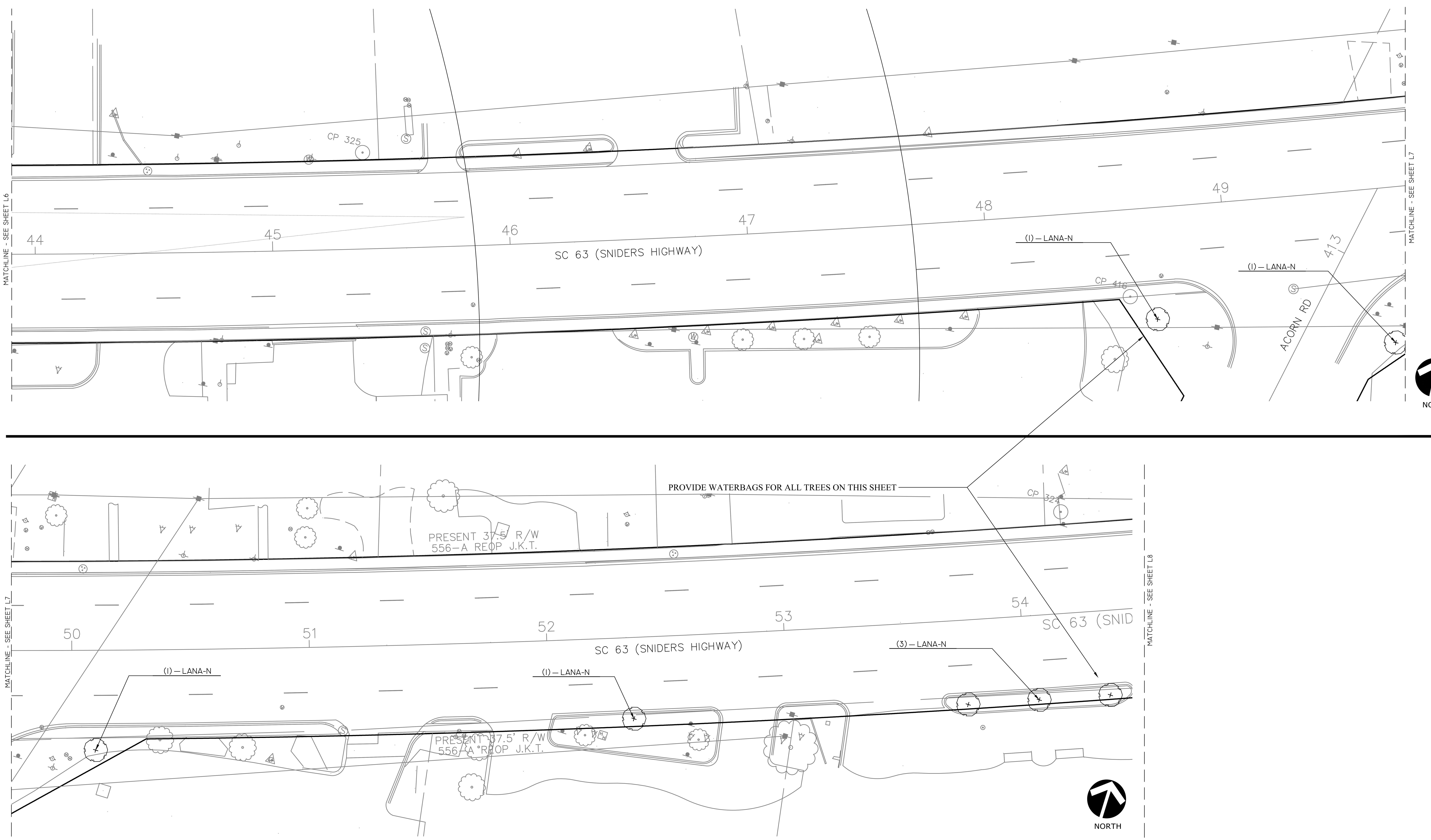
FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				8	23



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SHEET NUMBER
L7

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FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
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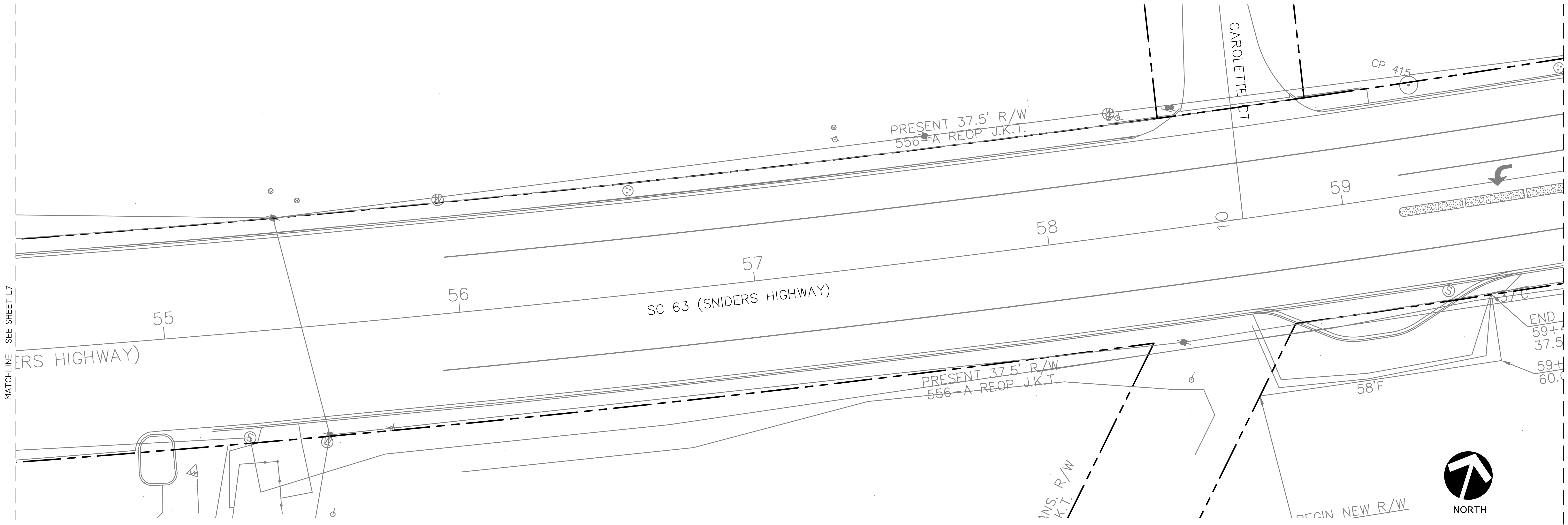

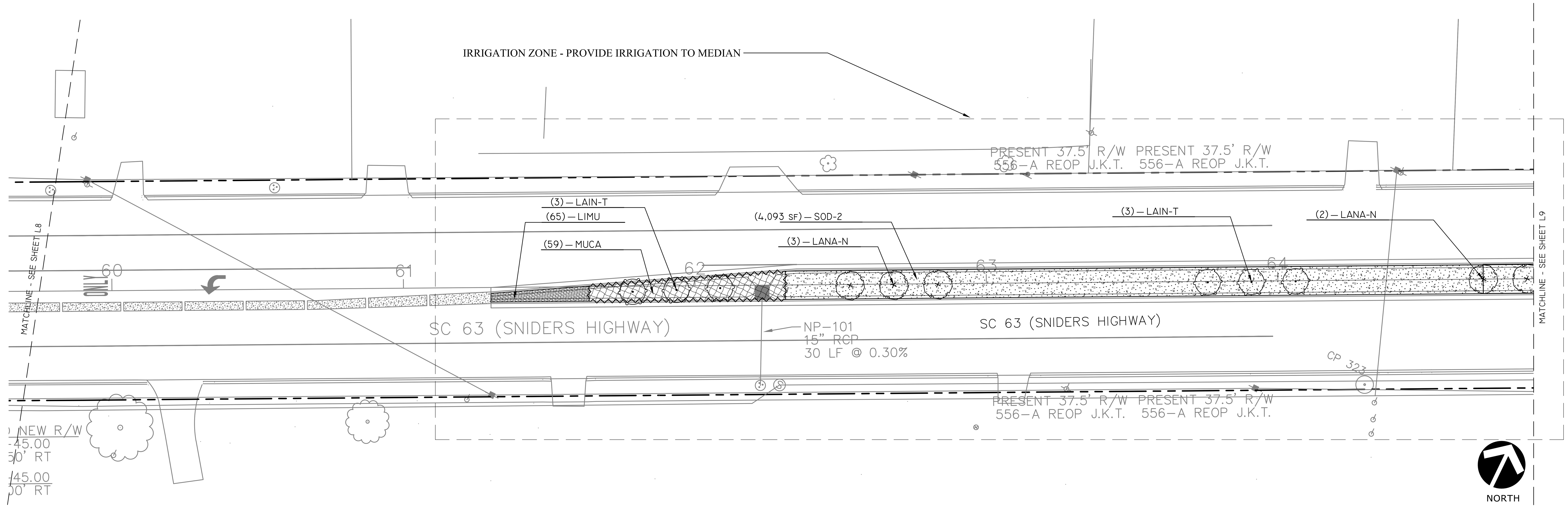

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SHEET NUMBER
L8

FED. RD. DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
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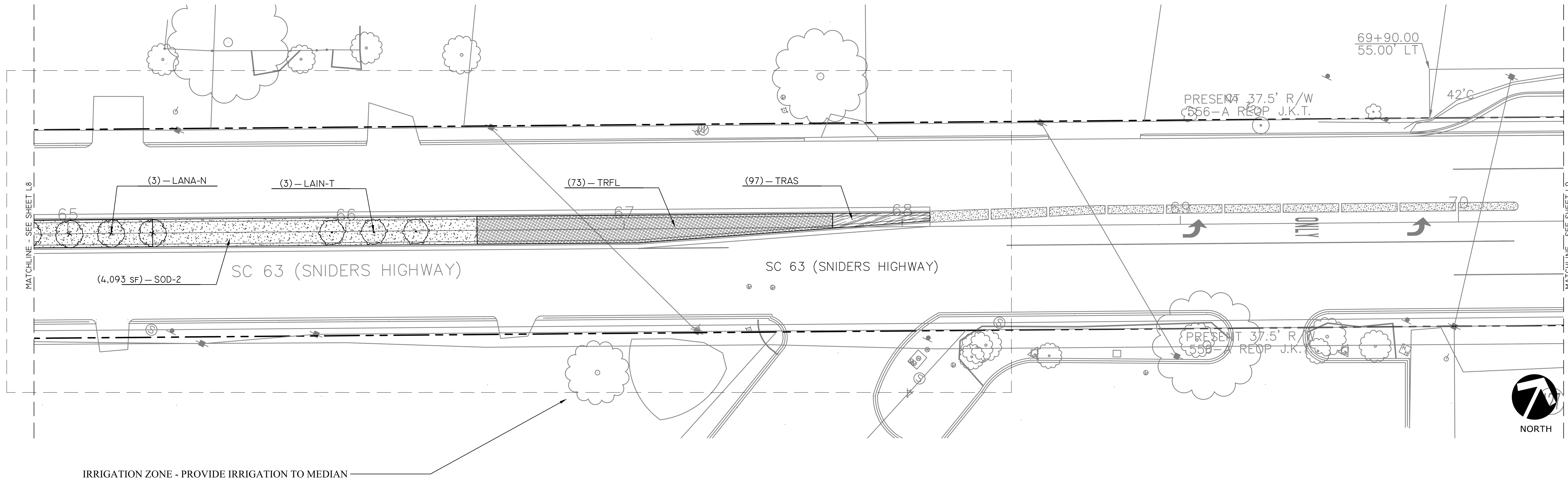

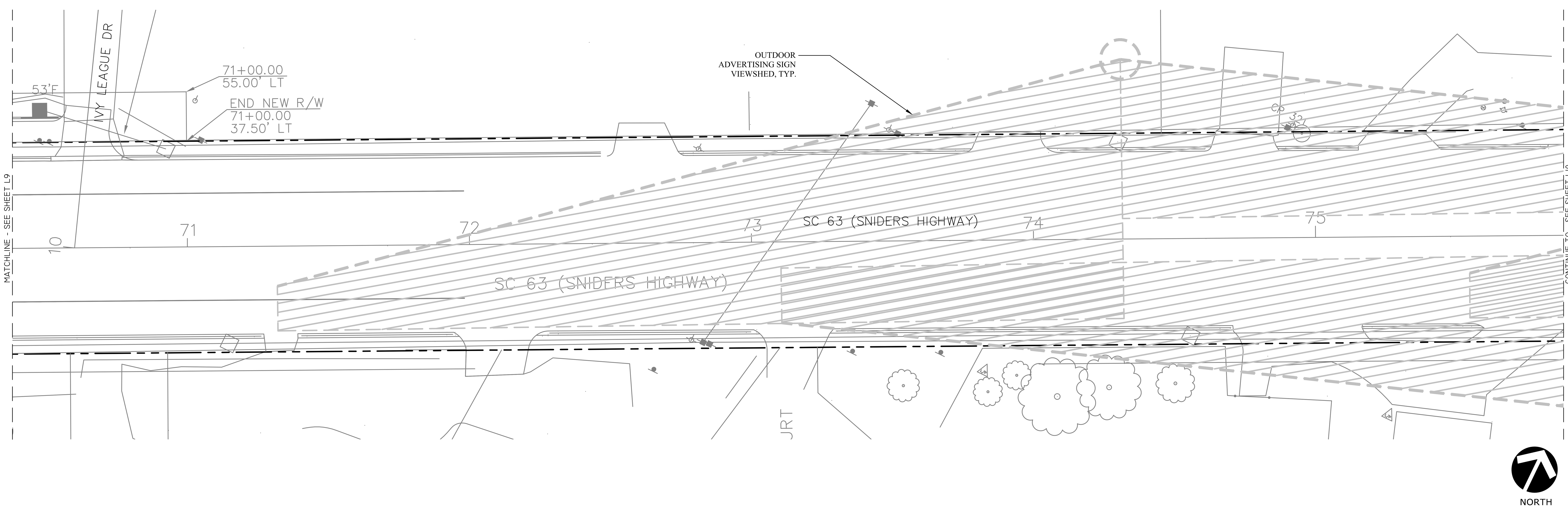

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FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
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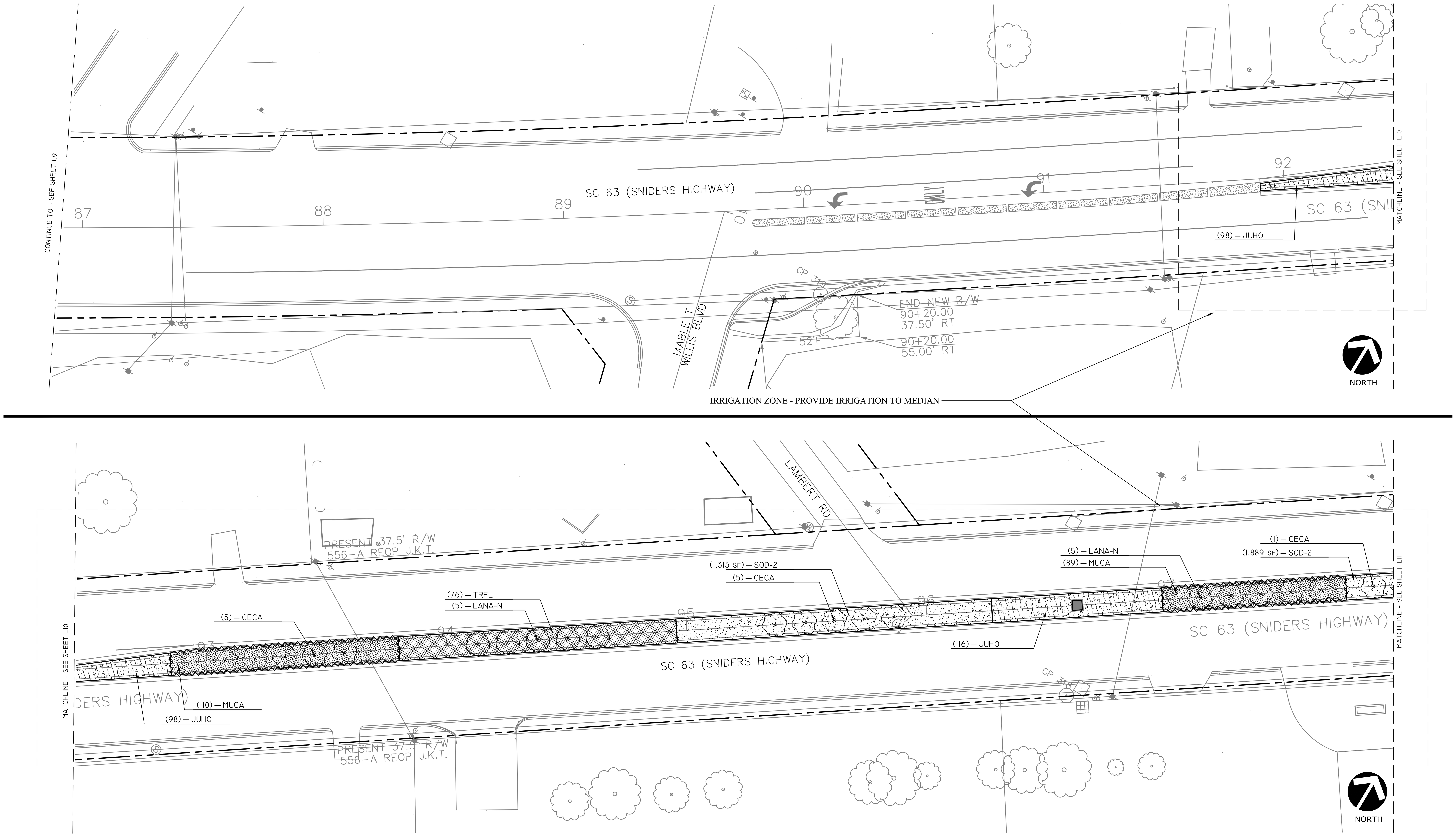

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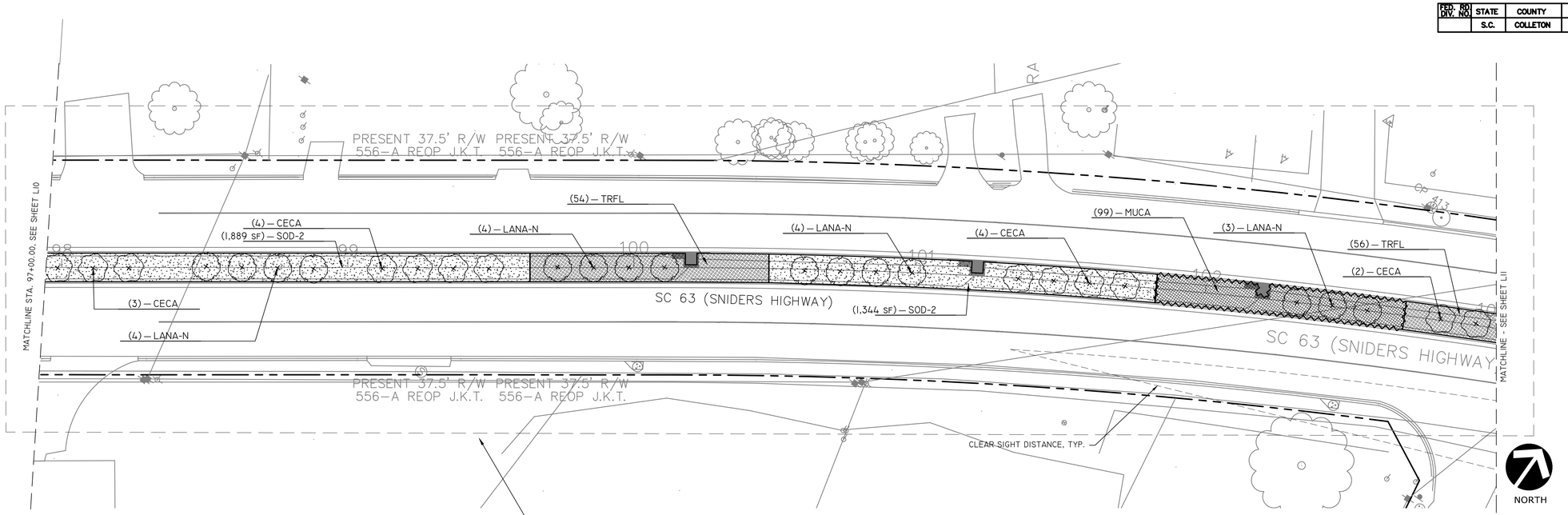
FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				12	23



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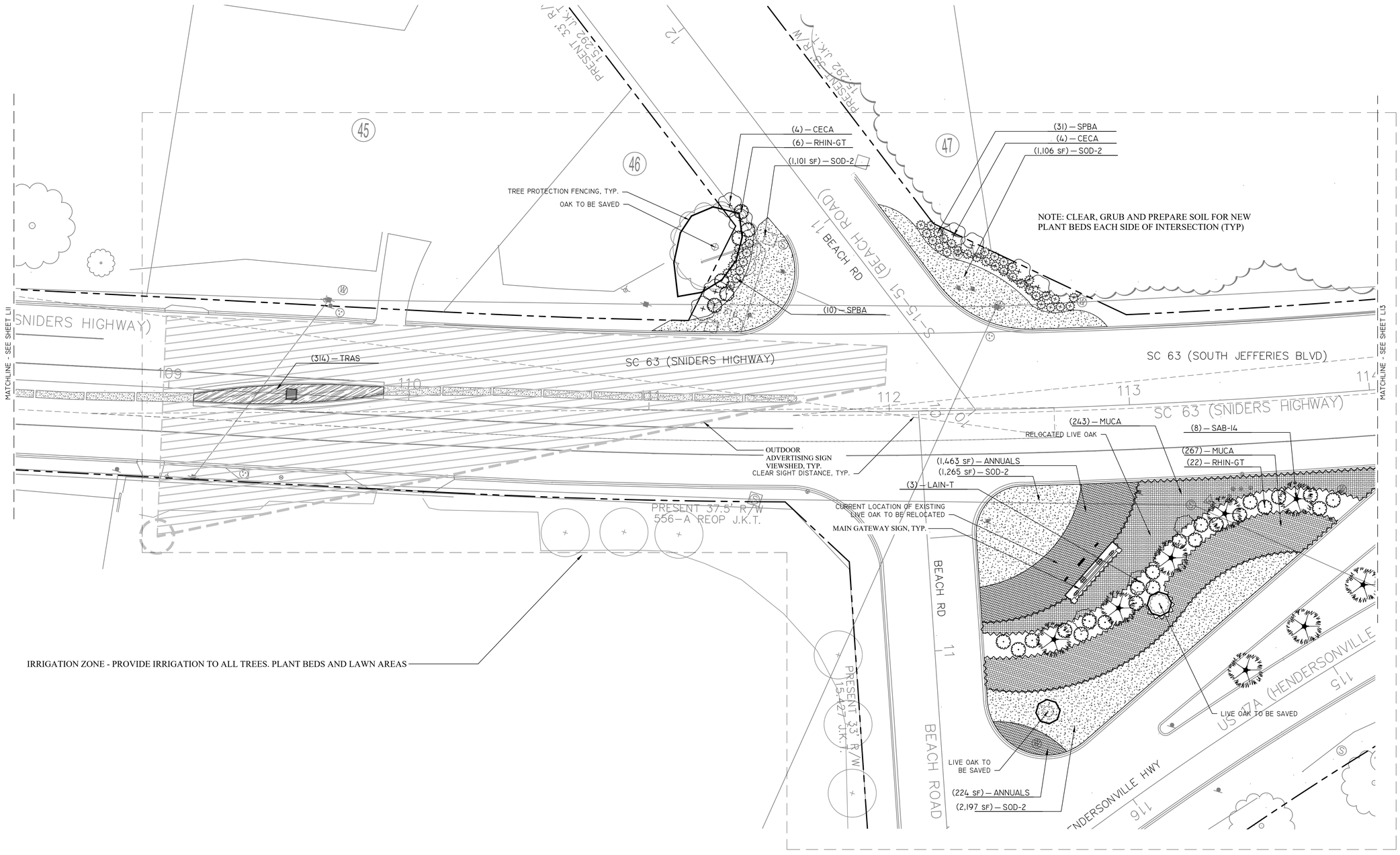
FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				13	23



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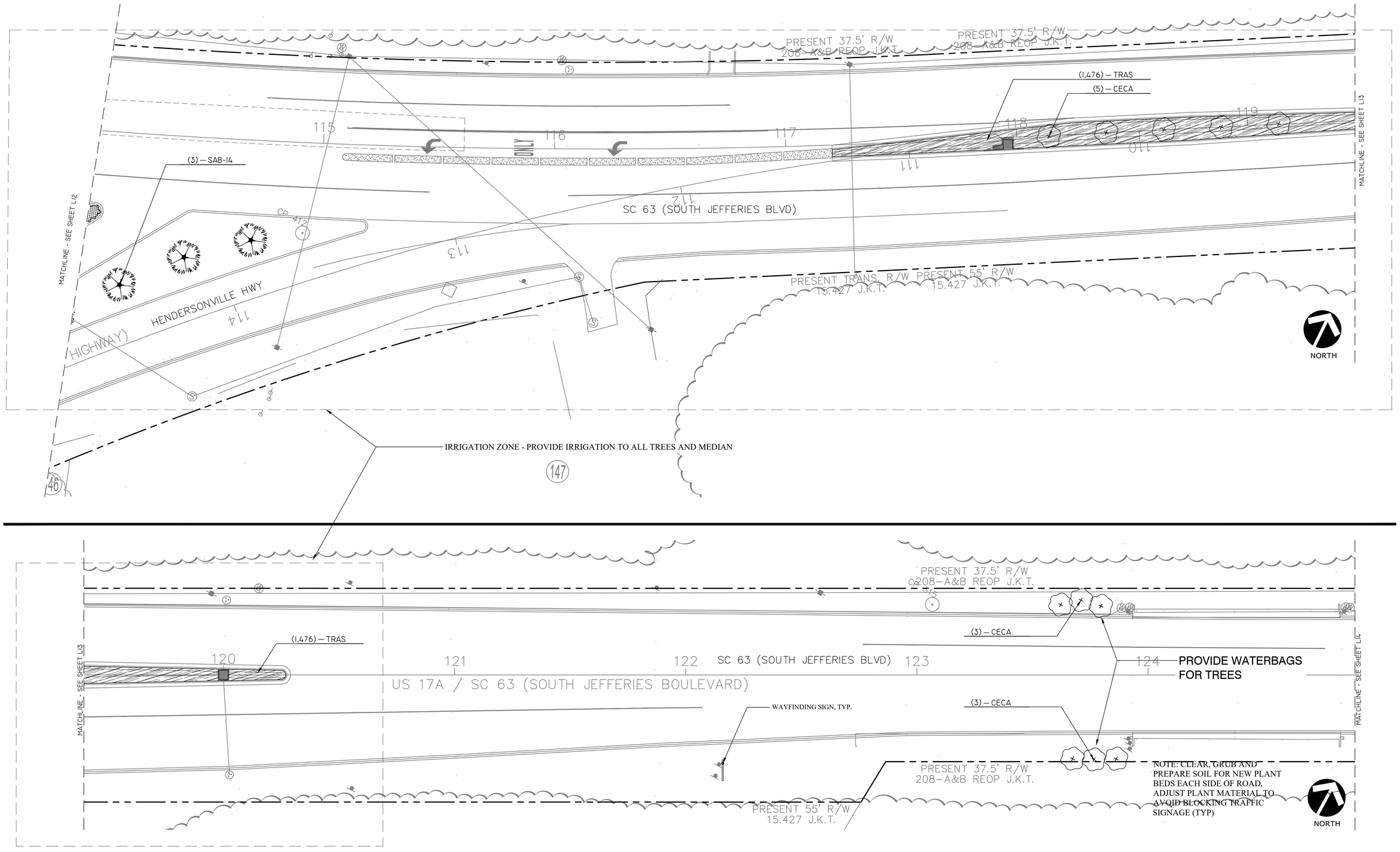
	S.C.	COLLETON				14	23



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SOUTH CAROLINA LANDSCAPE ARCHITECTURE REGISTERED No. 276 LANDSCAPE ARCHITECT

SOUTH CAROLINA WOOD & PARTNERS, INC. No. C00000 CERTIFICATE OF AUTHORIZATION

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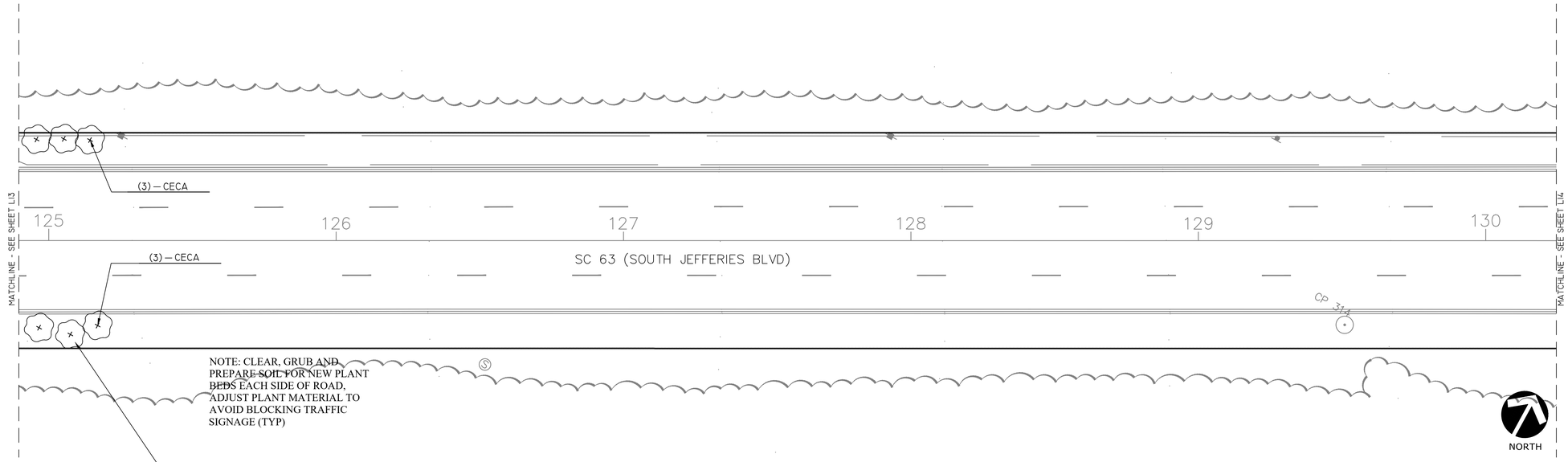

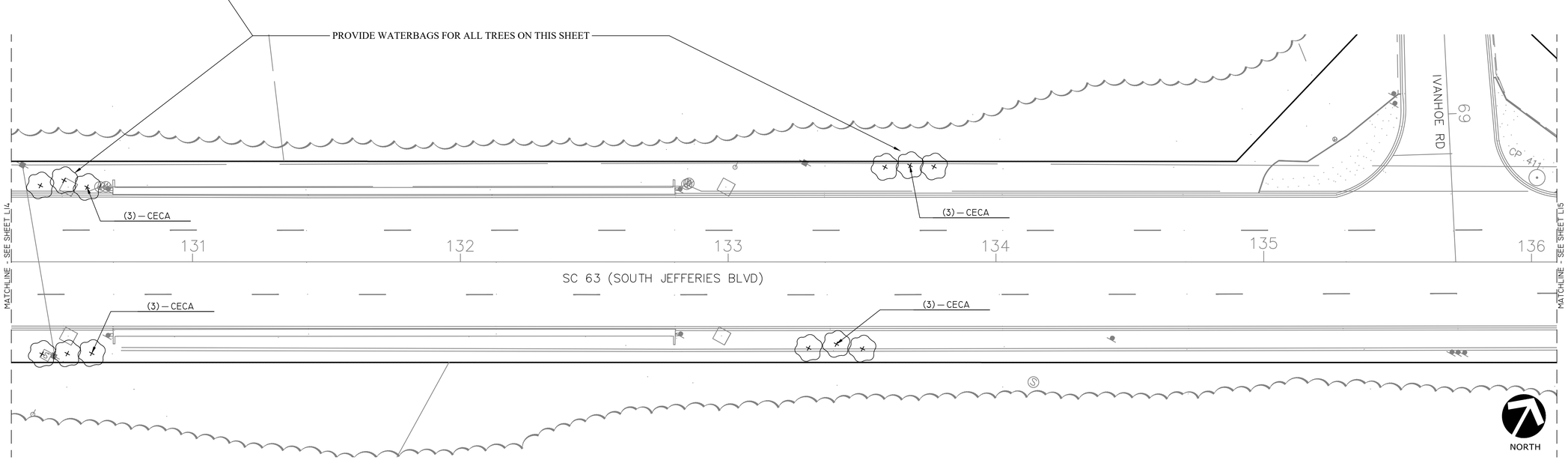

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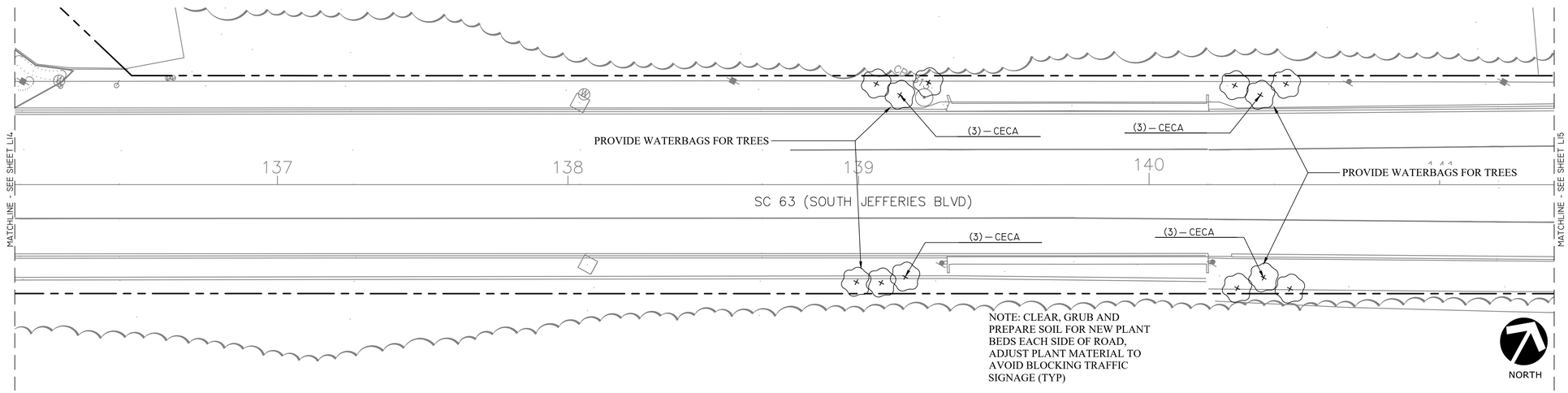
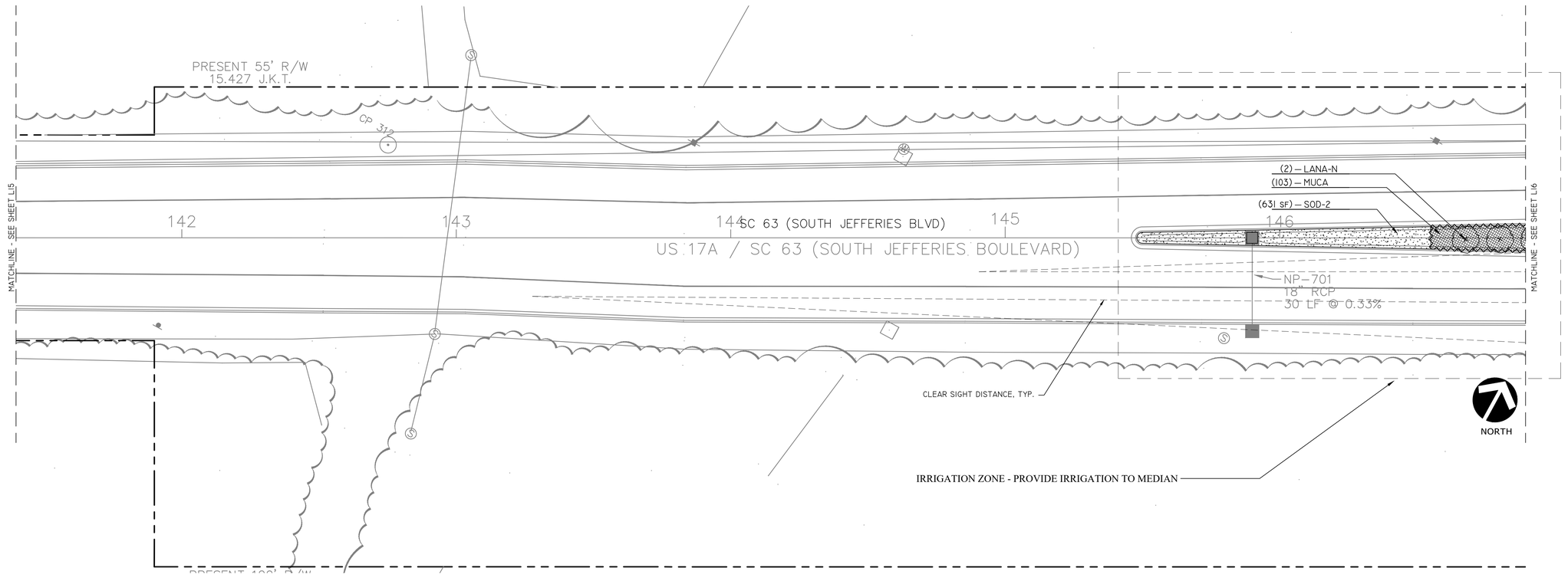
FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				16	23





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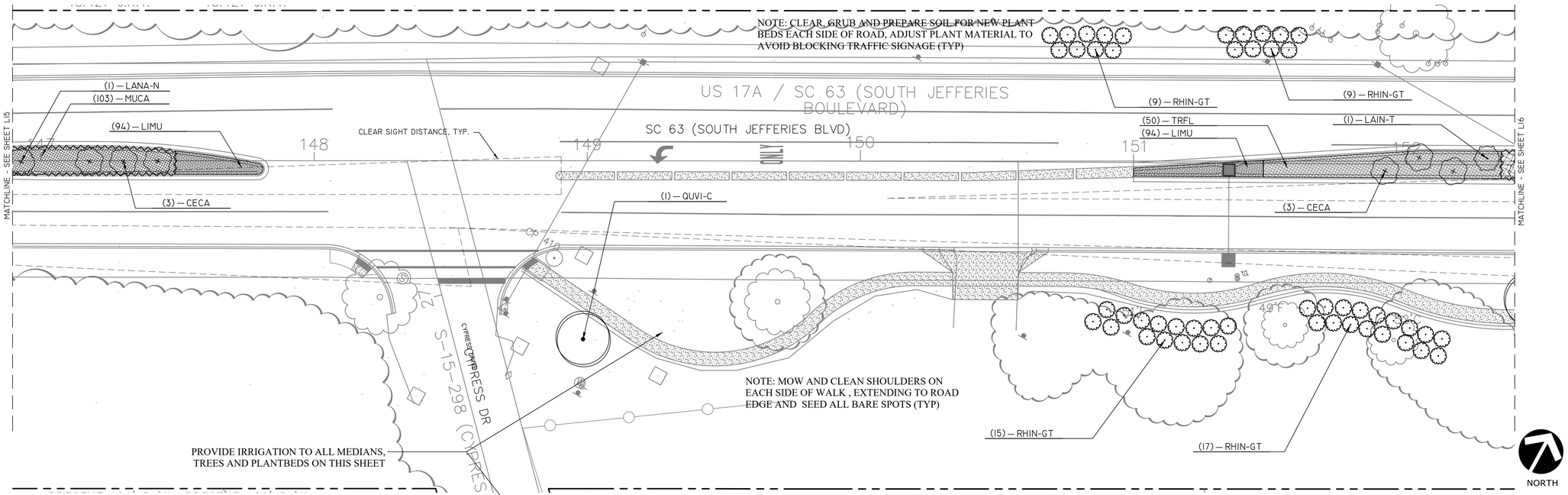
	S.C.	COLLETON				17	23



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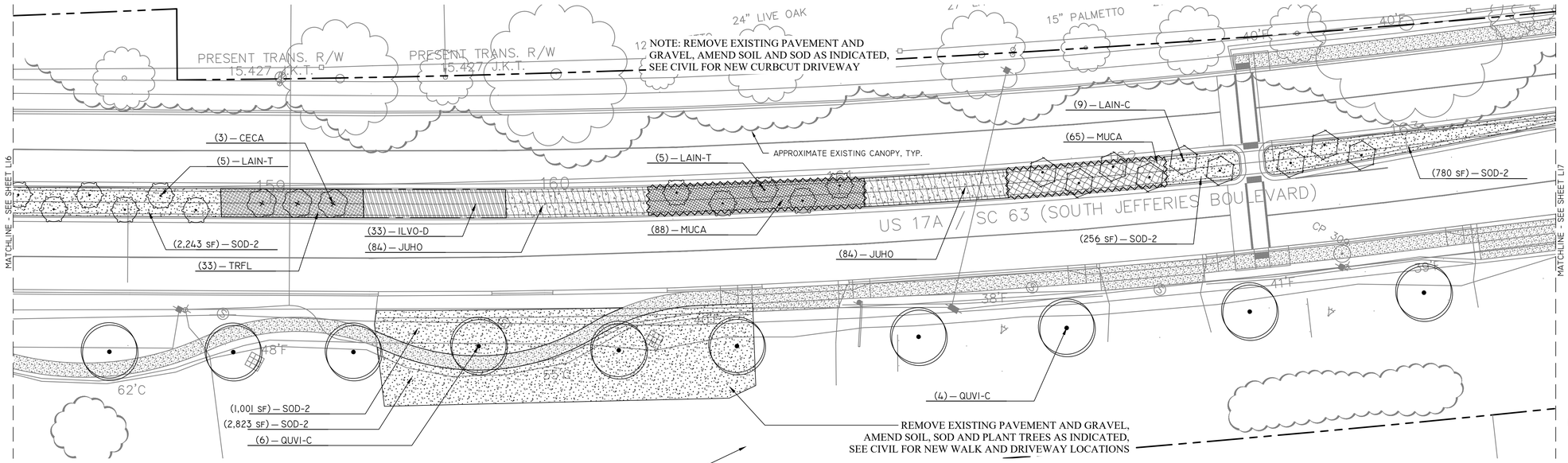

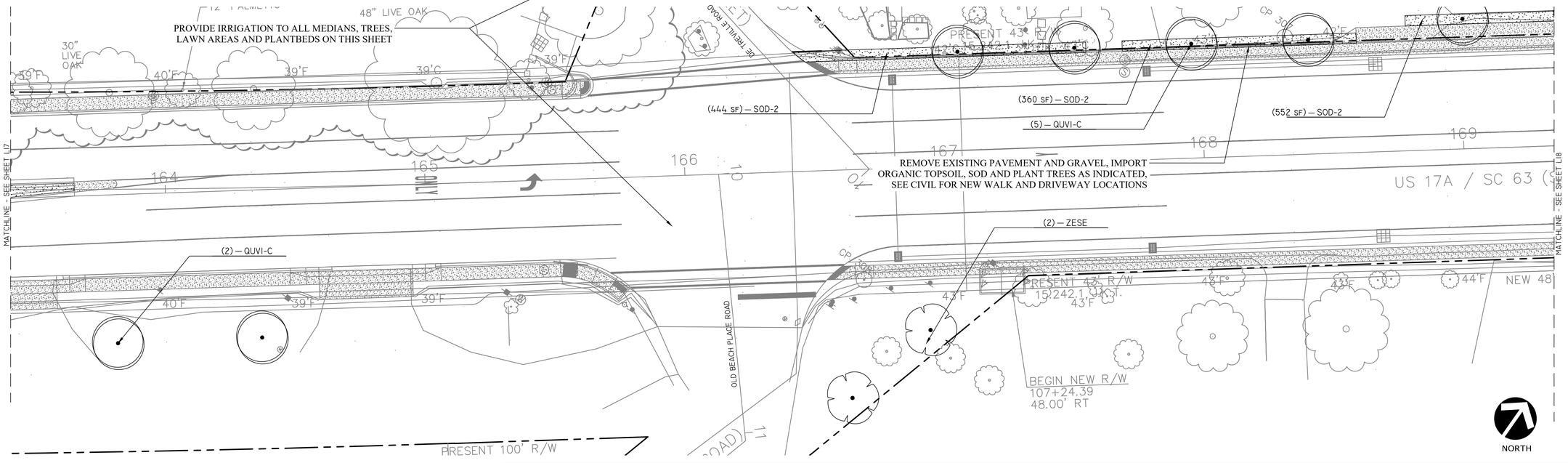

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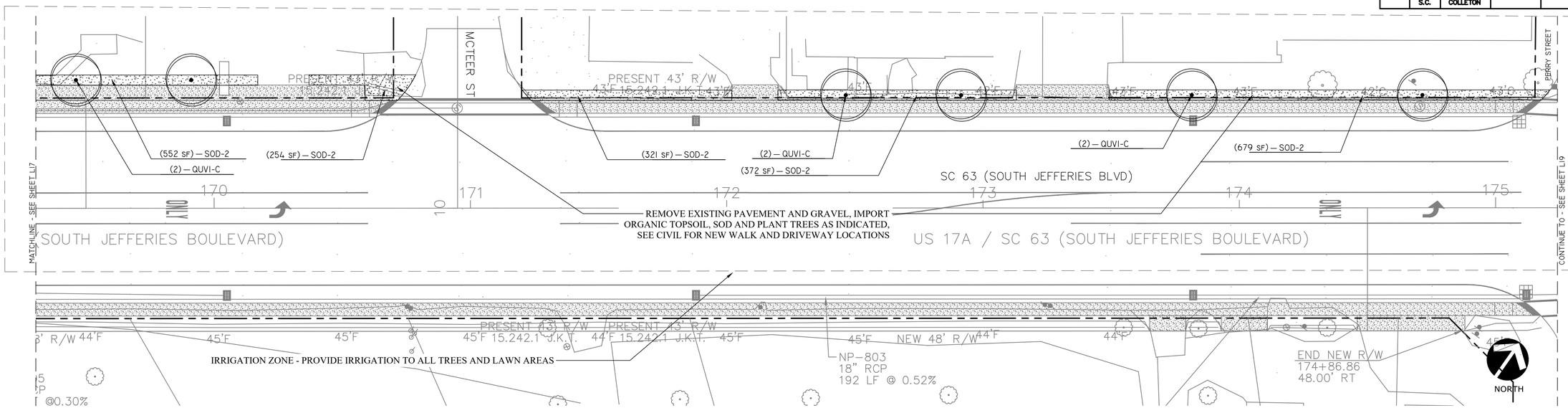
	S.C.	COLLETON				19	23



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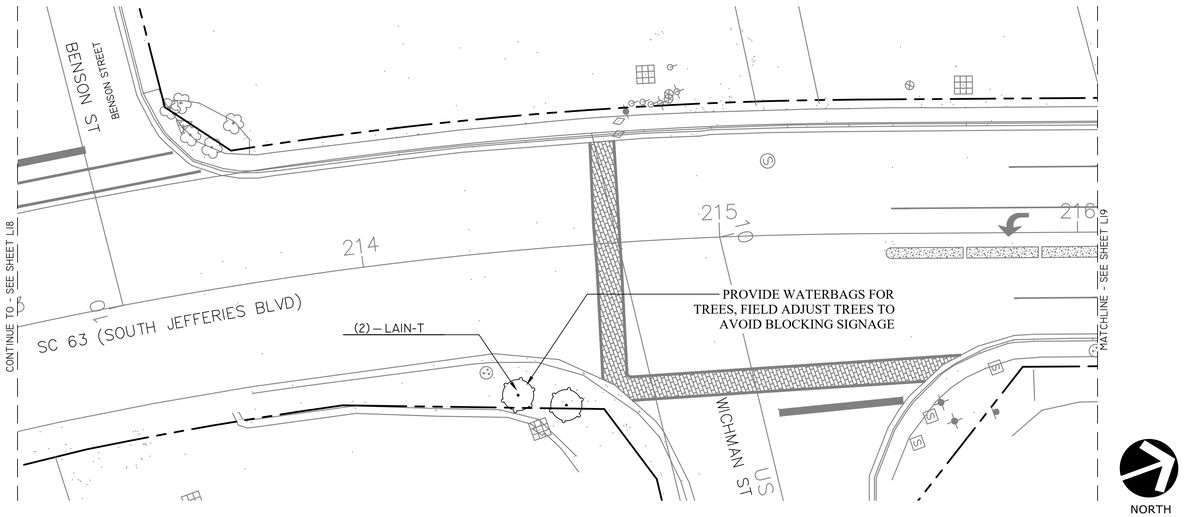

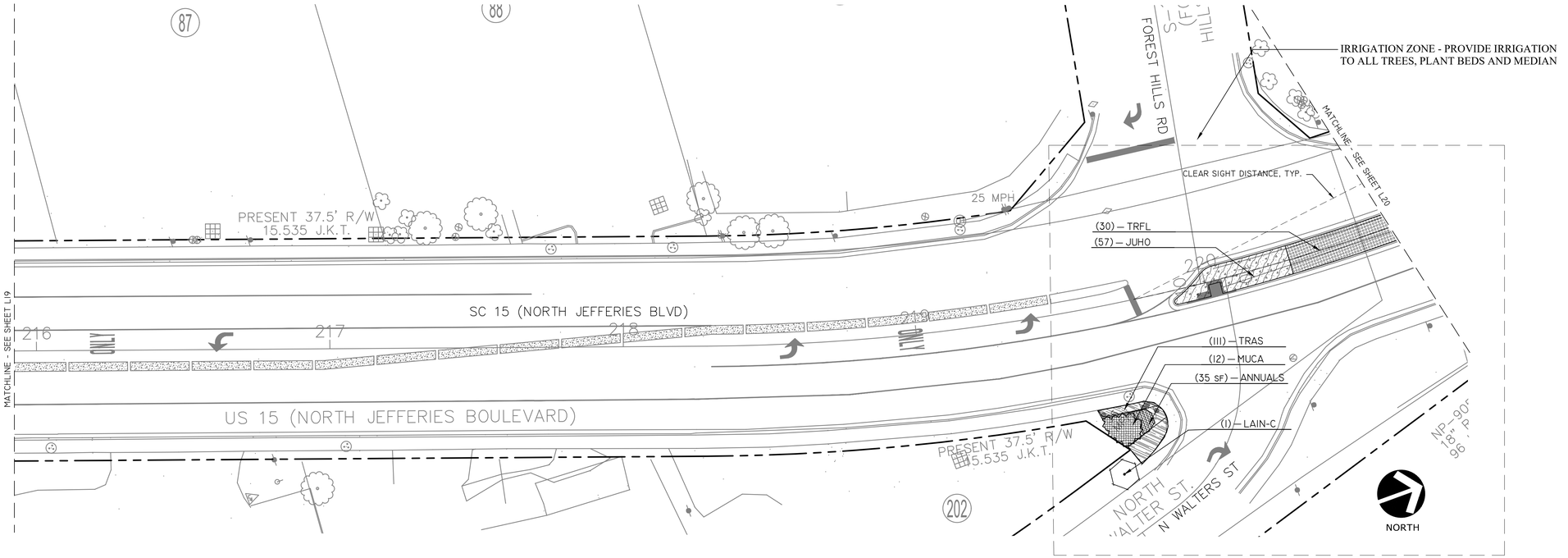

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0 10' 20' 40' 60' 80'
SCALE: 1" = 20'

SHEET NUMBER
LI9

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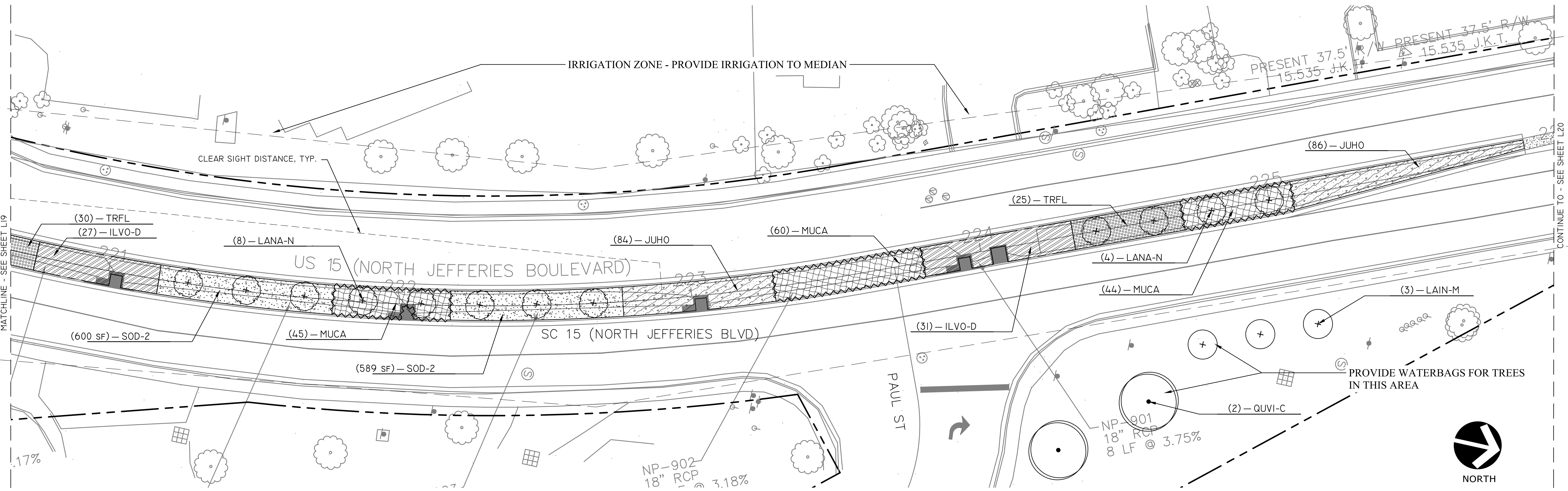
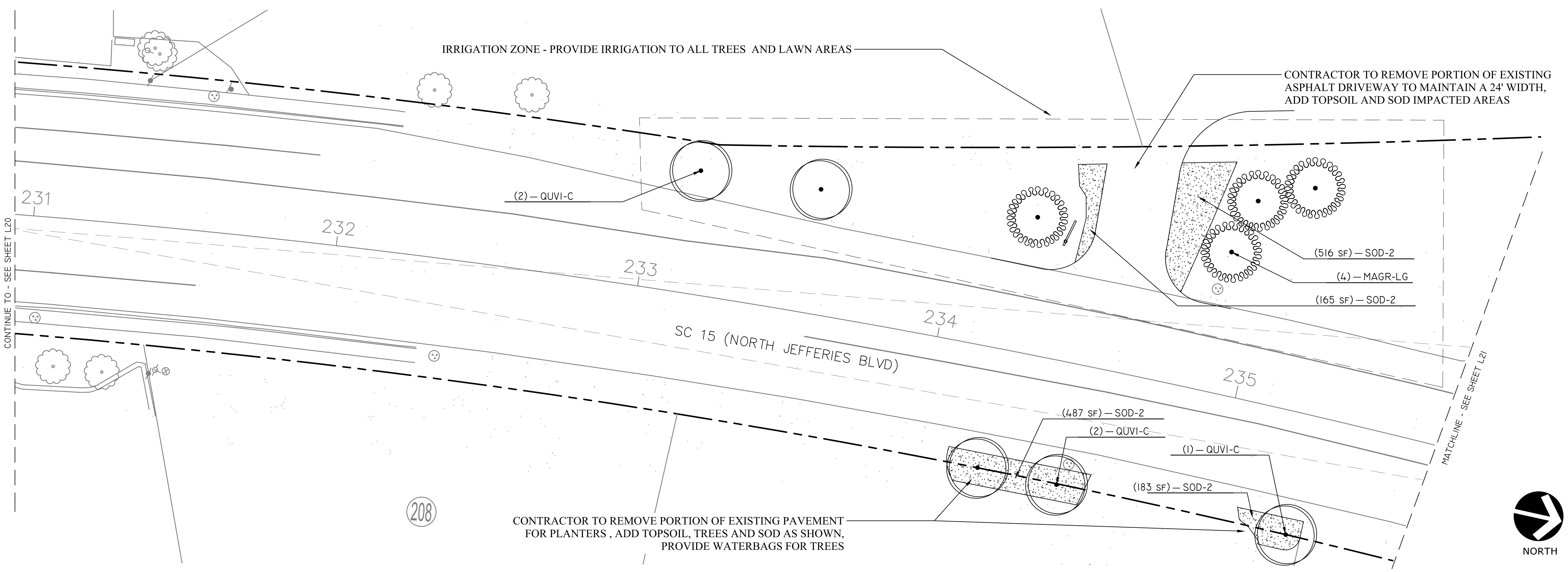
FED. RD. DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				21	23





PREPARED FOR: CITY OF WALTERBORO, SOUTH CAROLINA
CITY OF WALTERBORO, 242 HAMPTON STREET, WALTERBORO, SOUTH CAROLINA 29488

I-95 BUSINESS LOOP PHASE 2 SOUTH

Walterboro, South Carolina

SOUTH CAROLINA REGISTERED LANDSCAPE ARCHITECT No. 276

SOUTH CAROLINA WOOD & PARTNERS, INC. CERTIFICATE OF AUTHORIZATION

DGN: BB
R/W: TT
CHK: MB/TT

#	REVISION	DATE	BY

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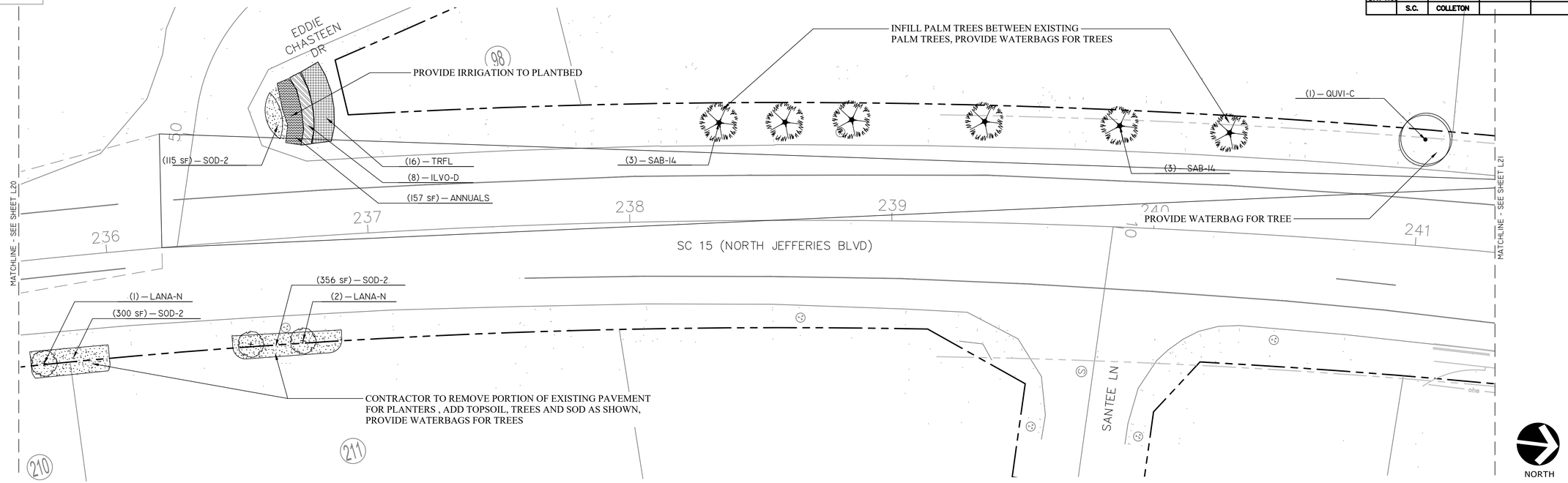
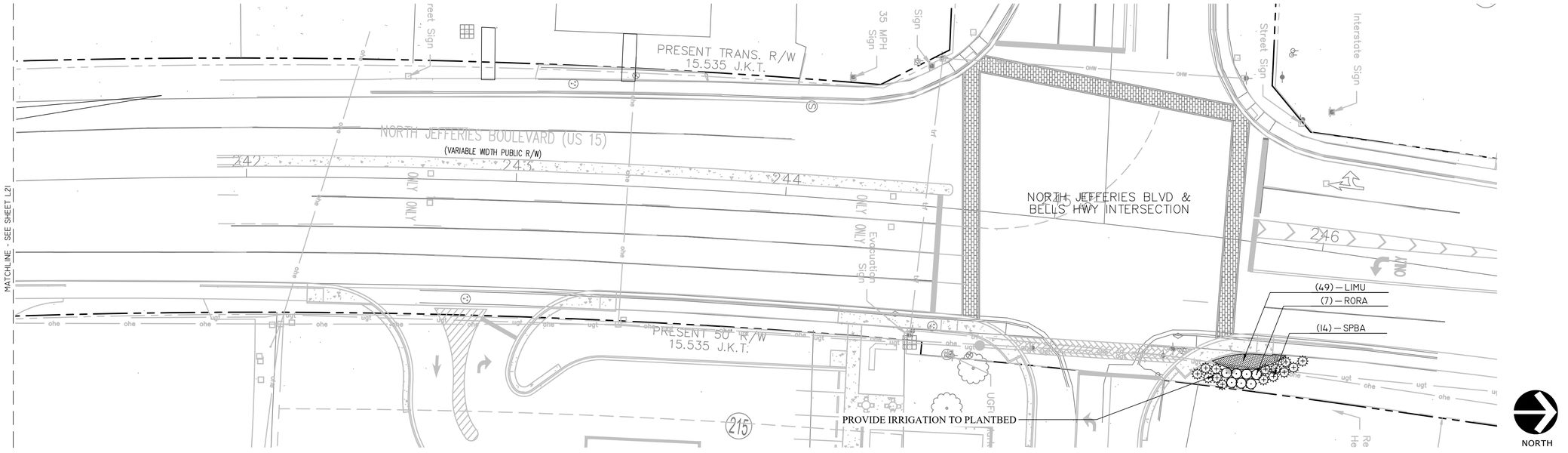
FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				22	23





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Walterboro, South Carolina

SOUTH CAROLINA LANDSCAPE ARCHITECT REGISTERED No. 276 WORK PACKAGE

SOUTH CAROLINA ENGINEERING CERTIFICATE OF AUTHORIZATION WOOD & PARTNERS, INC. No. C00000

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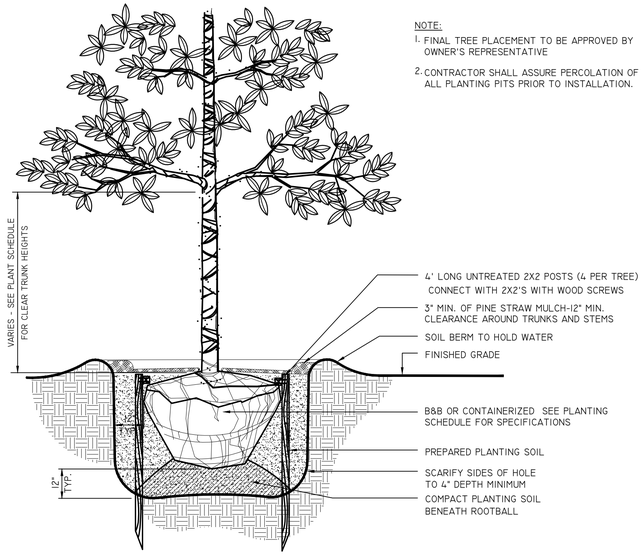
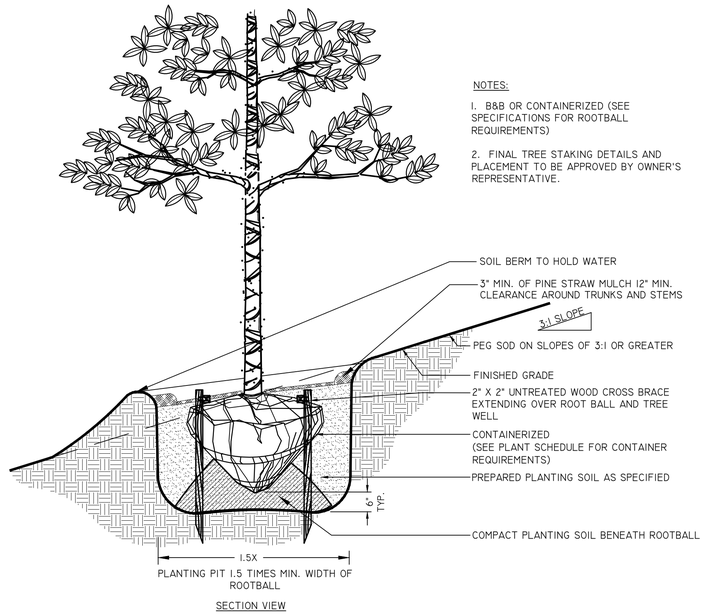
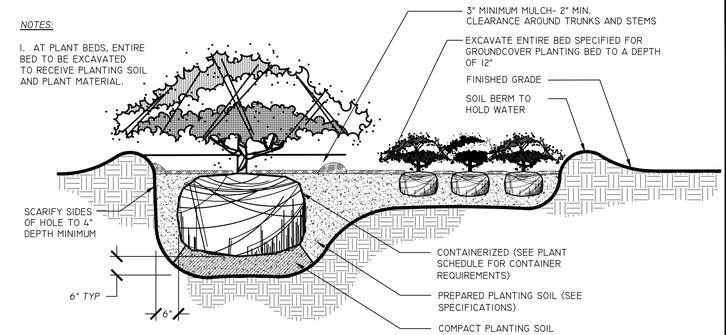
FED. RD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	S.C.	COLLETON				23	23



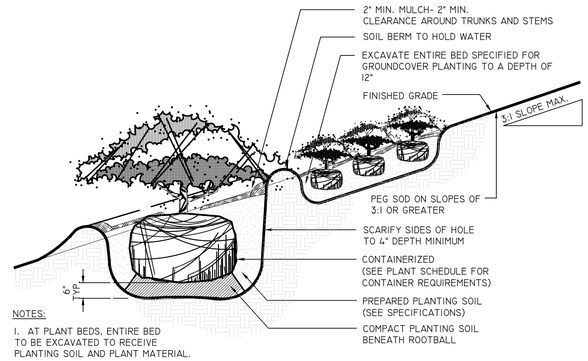
1 L23 SHADE TREE PLANTING
NOT TO SCALE



2 L23 SHADE TREE PLANTING ON SLOPE
NOT TO SCALE



3 L23 SHRUB PLANTING
NOT TO SCALE



4 L23 SHRUB PLANTING ON SLOPE
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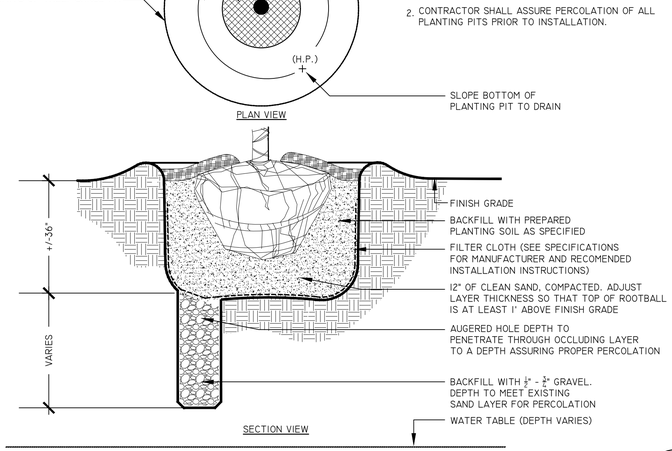
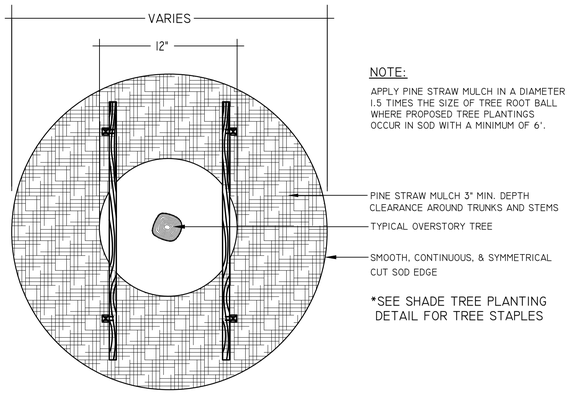
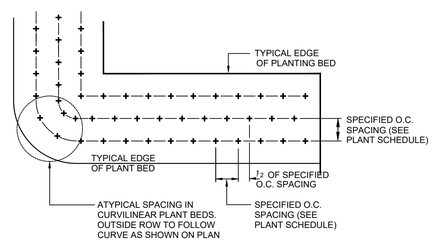


5 L23 PLANTING IN POOR SOILS
NOT TO SCALE



6 L23 TREE MULCH RING
NOT TO SCALE



7 L23 TYPICAL GROUNDCOVER SPACING
NOT TO SCALE

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