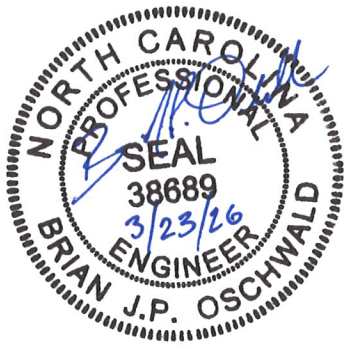
I-95 GRAVITY SEWER CROSSING AND PUMP STATION NO. 11 REPLACEMENT

TOWN OF SMITHFIELD
SMITHFIELD, NORTH CAROLINA



SUBJECT ADDENDUM NO. 1 MARCH 23, 2026

To the Plans and Specifications for:

I-95 Gravity Sewer Crossing and Pump Station No. 11 Replacement

Smithfield, N.C.

TO: PROSPECTIVE BIDDERS AND OTHER CONCERNED PARTIES

This ADDENDUM forms a part of the Contract Documents and modifies the original Bidding Documents as noted below. Bidders shall acknowledge receipt of the ADDENDUM in the space provided on the Bid Form. Failure to do so may subject the Bidder to Disqualification.

A. Bidding Requirements
   1. Pre-Bid Meeting Agenda is included in this Addenum.
   2. Pre-Bid Meeting Attendee List and Question/Answer is included in this Addendum.
   3. Section 00 31 32, Geotechnical Data
      a. Add this section to the Project Manual
   4. Section 00 31 32.10, Geotechnical Report
      a. Add this section and the attached geotechnical report, titled "NEW SEWER LINE CROSSING ON I-95 SOUTH SIDE OF US HIGHWAY 70 BUSINESS."
   5. Section 00 41 00, Bid Form
      a. Remove Bid Form section and replace with the Bid Form attached to this Addendum and has the text "Attachment to Addendum No. 1" in the Header.
   6. Section 01 22 00, Unit Prices
      a. Remove the Unit Price section and replace with the Unit Price attached to this Addendum and has the text "Attachment to Addendum No. 1" in the Header.

Bids will be received until 2:00 pm pm, April 2, 2026

FOR THE OWNER
THE WOOTEN COMPANY

BY _____
BRIAN J.P. OSCHWALD, P.E.

END OF DOCUMENT

Wooten
Meeting Agenda

120 N. Boylan Avenue
Raleigh, NC 27603
(919) 828-0531

Agenda For Pre-Bid Meeting

Town of Smithfield
I-95 Gravity Sewer Crossing and PS No. 11 Replacement Project
March 17, 2026 at 2:00 pm (Virtual)

1) Introductions

2) Sign In

- In the chat, please sign in with your name, company, phone number, and email.

3) Bid Date: Thursday April 2, 2026 at 2:00pm.

- In person at Department of Public Utilities, 230 Hospital Road, Smithfield, NC 27577.

4) Project Overview

- Base Bid
  - Demolition and replacement of PS No. 11
    - During construction, wastewater flow at PS No. 11 shall be maintained by the contractor by utilizing temporary bypass pumping.
  - Abandonment of existing 8-inch gravity sewer and installation of 16-inch gravity sewer from Ex. SSMH No. 2A to SSMH No. 7, totaling 1,153 LF, which includes 326 LF of 30" steel encasement with 16-inch gravity sewer by bore and jack under I-95

- Add Alternate No. 1
  - Installation of 16-inch gravity sewer from Ex. SSMH No. 2017 to Ex. SSMH No. 2A, totaling 309 LF of gravity sewer.
- Obtaining the Bid Documents
  - Contact Jen Acevedo (jacevedo@thewootencompany.com)
  - Wooten Plan Room
- Project Contacts
  - Town of Smithfield:
    - Ted Credle – Director of Public Utilities
  - Wooten:
    - Dennis Lassiter – Construction Administrator
    - TBD – Construction Observer

5) ARPA and Minority Participation Goals

- Section 00 43 16.11 – American Rescue Plan Act (ARPA) and State MBE/WBE Requirements
  - Davis-Bacon Act requirements

6) Basis of Bid

- Section 00 41 00 (Bid Form) describes the Basis of Bid – Unit Price Bid with Lump Sum Items for the Pump Stations.

7) Submittal of Bid

- In addition to the Bid Form, provide the documents requested in the Bidder's Checklist (Section 00 41 12).

8) Contract Times

- Review Section 00 52 00 - Agreement
- Base Bid:
    - 180 days for Substantial Completion
    - 210 days for Final Completion
- Add Alternate No. 1: no additional time

9) Permits

- NCDEQ – Fast Track Application for Sewer Extensions
- NCDWI – Construction Drawings and Project Manual approval
- NCDOT – Encroachment Agreement
    - Anticipate receiving the Encroachment Agreement by 3/25 and will include in an Addendum package

10) Funding: ARPA, administered through NCDWI

- Project is funded by American Rescue Plan Act (ARPA) and administered by North Carolina Division of Water Infrastructure (DWI). Follow DWI requirements listed in the Project Manual.
- Jason Robinson is the DWI contact.
    - jason.t.robinson@deq.nc.gov

11) Questions regarding this Contract

- Questions regarding the project can be faxed or emailed.
- Fax number is 919-834-3589.
- Email address is boschwald@thewootencompany.com. Please copy Jen Acevedo (email is above)

12) Addenda

- Addendum No. 1 will be issued on 3/19/2026 with sign in sheet from today's meeting and answering questions received.
- Final Addendum will be issued no later than 3/26/2025.
    - **Last day for questions is 3/25/2026**

13) Owner Comments

14) Contractor Questions/Comments

120 N. Boylan Avenue
Raleigh, NC 27603
(919) 828-0531

Pre-Bid Meeting – Attendee List and Question/Answer

Town of Smithfield
I-95 Gravity Sewer Crossing and Pump Station No. 11 Replacement
March 17, 2026 at 2:00 pm (Virtual)

1) Attendees:

Name	Firm	Phone #	Email
Brian Oschwald	The Wooten Company	919-828-0531 x883	boschwald@thewootencompany.com
Ryan Morgan	The Wooten Company	919-828-0531 x817	rmorgan@thewootencompany.com
Robert Ellis	T. A. Loving Company	(919) 583-3914	rellis@taloving.com
Adam Gross	Moffat Pipe, Inc.	(919) 295-4630	bids@moffatpipe.com
Bobbie Hales	Jymco Construction Company Inc.	919-202-5659	Michael Hair - michaelhair@jymco.net Barbi Wiginton- barbiwiginton@jymco.net Bobbie
Tim Hogan	JF Wilkerson	919-501-8597	Tim@jfwilkerson.com
Anup Patel	Home2 Suites	(980) 297-9512	anup@wintergreenhospitality.com
Ted Credle	Smithfield Utility Director	919-934-2116 x-1162	ted.credle@smithfield-nc.com
Bobbie Hales	Jymco Construction Company Inc.		bobbiehales@jymco.net
Shane Moore	Teraflex Group	760.636.8205	smoore@teraflexgroup.com

2) Questions and Answers:

1. Question: Bid Items 2 and 3 are the same. Can you clarify?
   Answer: The Bid Form has been updated and included in Addendum No. 1.

2. Questions: Do contractors need to coordinate construction activities with the hotel?
   Answer: Yes, Anup Patel is on the phone call and is representing hotel ownership. Coordinate work on the hotel property with Anup. A note has been added to Sheet C-1.01, which will be re-issued in Addendum No. 2.

3. Question: On Sheet C-1.02, a 4-foot ID manhole is labeled, but there is not a bid item for a 4-foot ID manhole. Can you clarify?
   Answer: The Bid Form has been updated and included in Addendum No. 1.

4. Question: On Sheet C-1.01, the drawings call for the existing pipe to be abandoned and grout filled. How is that paid for?
   Answer: See Section 01 22 00 Unit Prices, Paragraph 1.06.B.14 for pay item description.

5. Question: Does the engineer know if there is rock in the jack and bore section?
   Answer: Bid the project as you see it. The Town installed the existing sewer in ~2011. A geotechnical exploration report from a previous project, prepared by F&R and dated February 21, 2011, is included in Addendum No.1.

SECTION 00 31 32
GEOTECHNICAL DATA

PART 1 GENERAL

1.01 INVESTIGATION

A. Soil and subsurface investigations were conducted at the site, the results of which are to be found in the report issued by:
   1. Soil Consultant:
      Froehling & Robertson, Inc.
      310 Hubert Street
      Raleigh, NC 27603
      919-828-3441
   2. Report Title:
      New Sewer Line Crossing on I-95 South Side of US Highway 70 Business
      F&R Project No.: 66M-0193
      February 21, 2011

B. A copy of the report is appended.

C. Bidders are urged to examine soil investigation data and to make their own investigation of the site before bidding.

1.02 INTERPRETATION

A. Soil investigation data are provided only for information and the convenience of bidders. The Owner and Engineer disclaim any responsibility for the accuracy, true location, and extent of the soils investigation that has been prepared by others. They further disclaim responsibility for interpretation of that data by bidders, as in projecting soil-bearing values, rock profiles, soil stability, and the presence, level, and extent of underground water.

B. Soil investigation data are not part of the Contract Documents.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 00 31 32.10
GEOTECHNICAL REPORT

LOCATION TO INSERT PDF

OF

GEOTECHNICAL REPORT

END OF SECTION

FROEHLING & ROBERTSON, INC.

SOIL TEST BORING SUBMITTAL

NEW SEWER LINE CROSSING ON I-95
SOUTH SIDE OF US HIGHWAY 70 BUSINESS
SMITHFIELD, NORTH CAROLINA
F&R PROJECT NO. 66M-0193

Prepared for:

THE WOOTEN COMPANY
120 N. BOYLAN AVENUE
RALEIGH, NC 27603

FEBRUARY 21, 2011

SINCE 1881

FROEHLING & ROBERTSON, INC.
Engineering Stability Since 1881

310 Hubert Street
Raleigh, North Carolina 27603-2302
T 919.828.3441 I F 919.828.5751
NC License #F-0266

February 21, 2011

The Wooten Company
120 N. Boylan Avenue
Raleigh, North Carolina 27603

Attn.: Mr. Brian Johnson, P.E.

Re: **Soil Test Boring Submittal**
New Sewer Line Crossing on I-95
South Side of US Highway 70 Business
Smithfield, North Carolina
F&R Project No: 66M-0193

Dear Mr. Johnson:

Froehling & Robertson, Inc. (F&R) has performed the two soil test borings along the alignment of the new sewer line crossing on I-95 at the above referenced site. This work was performed in accordance with F&R's proposal dated January 19, 2011.

The purpose of drilling the soil test borings was to evaluate the subsurface conditions beneath the existing roadway for installation of the 8 inch diameter sewer line to be installed beneath I-95 and associated ramps along the south side of the U.S Highway 70 Business on the east side of Smithfield, North Carolina. The sewer line is to be installed in a 24" diameter steel encasement that is to be jacked and bored beneath I-95 and the entrance (south bound) and exit (north bound) ramps of I-95 at the US Highway 70 Business crossing as shown on the furnished Site Boring Plan.

METHOD OF EXPLORATION

In order to evaluate subsurface conditions, borings B-1 and B-2 were requested to be drilled along the edge of the entrance and exit ramps of I-95 on the south side of US Highway 70 along the alignment of the proposed sewer line at the approximate locations shown on the enclosed Site Boring Plan (see Figures 1). A third boring was initially requested to be drilled in the median

between the north and south bound lanes of I-95, but the NC DOT would not allow this boring to be drilled due to the high traffic conditions along I-95. Borings B-1 and B-2 were each drilled to a depth of 15 feet below existing grades or approximately 5 to 7 feet below the estimated bottom (EL 139.5 ±) of the 24 inch steel casing which will house the sewer line. The ground surface elevations at the boring locations were interpolated from the furnished drawing (see Figure 1) and should be considered approximate.

The test borings were advanced using 2 ¼" inside diameter (ID) hollow stem augers for borehole stabilization. Representative soil samples were obtained using a standard 2" outside diameter (OD) split barrel sampler in general accordance with ASTM D-1586, Penetration Test and Split Barrel Sampling of Soils (Standard Penetration Tests). The soil samples were returned to our laboratory and classified in general accordance with the Unified Soil Classification System (USCS), using visual manual identification procedures (ASTM D-2488).

A generalized subsurface profile has been prepared from the boring data as Figure 2 to this report to graphically illustrate the subsurface conditions encountered at the site. More detailed descriptions of the subsurface conditions at the individual boring locations are presented in the Test Boring Records attached to this report. It is noted that the strata breaks designated on the boring logs and the subsurface profile represent approximate boundaries between soil types. The transition from one soil type to another may be gradual or occur between soil samples.

Borings B-1 and B-2 encountered surface fill or possible fill that ranged in depth from approximately 4.5 to 6.5 feet below the ground surface. The surface fill typically consisted of loose silty sands (USCS SM) and soft to stiff silty, sandy clays (CL) and clayey fine sandy silts (ML) that exhibited standard penetration resistance values of 3 to 13 blows per foot (bpf).

Below the surface fill, coastal plain soils were encountered and consisted of firm to stiff moderate to highly plastic clayey soils (CH, CL-CH) that exhibited SPT values of 7 to 13 bpf. The moderate to highly plastic clays that were encountered extended to depths of approximately 8.5 to 14 feet below existing grades or approximately 0.5 feet or less (B-2) to 4 feet (B-1) below the indicated invert level of the pipe encasement. Medium dense to very loose clayey sands to relatively clean

sands (SC, SP, SP-SM) were encountered below the plastic clayey soils to the 15 foot termination depth of the borings. The underlying sands exhibited SPT values of 4 to 11 bpf.

Groundwater levels were recorded after a 24 hour stabilization period in temporary piezometers installed in the borings. The stabilized water levels were recorded at depths of approximately 8.0 and 5.3 feet below existing grades at borings B-1 and B-2, respectively, at the time of the exploration. These levels correspond to approximately 2 to 3 feet above the indicated bottom of the casing that will house the sewer line. Groundwater levels tend to fluctuate with seasonal and climatic variations, and can vary due to construction operations. Consequently, groundwater levels may be expected to vary from a few inches to a few feet from the observed levels at other times of the year.

CONCLUSIONS

The borings encountered generally stiff silty and sandy clayey native Coastal Plain soils (11 to 13 bpf) at and just above the indicated invert levels of the sewer casing that is to be jacked and bored beneath I-95 and connecting ramps. There was no rock encountered in the overburden fill and underlying native soils in either of the borings and we are unaware of the general presence of shallow rock/boulders in this Coastal Plain geologic region in which the project is located. As such, it is not anticipated that rock/boulders or weathered rock type materials would be encountered along the indicated alignment of sewer line. Although isolated zones of hard materials could be encountered, for conditions similar to those revealed in the borings, high consistency rock materials and/or boulders are not expected to be encountered along the proposed jack and bored casing levels.

It is noted that stabilized groundwater levels were encountered at heights of approximately 2 to 3 feet above the EL 139.5± casing invert level. Therefore, it is possible that some seepage could develop into the jacking and bore pits and as such, some groundwater control could be required.

TEMPORARY EXCAVATION RECOMMENDATIONS

Mass excavations and other excavations required for construction of this project must be performed in accordance with the United States Department of Labor, Occupational Safety and Health Administration (OSHA) guidelines (29 CFR 1926, Subpart P, Excavations) or other applicable jurisdictional codes for permissible temporary side-slope ratios and/or shoring requirements. The OSHA guidelines require daily inspections of excavations, adjacent areas and protective systems by a "competent person" for evidence of situations that could result in cave-ins, indications of failure of a protective system, or other hazardous conditions. All excavated soils, equipment, building supplies, etc., should be placed away from the edges of the excavation at a distance equaling or exceeding the depth of the excavation.

LIMITATIONS

This report has been prepared for the exclusive use of The Wooten Company for specific application to the referenced property in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made. These conclusions and recommendations do not reflect variations in subsurface conditions that could exist intermediate of the boring locations or in unexplored areas of the site. Should such variations become apparent during construction, we reserve the right to re-evaluate our conclusions and recommendations based upon on-site observations of the conditions. In the event changes are made in the proposed construction plans, the recommendations presented in this report shall not be considered valid unless reviewed by our firm and conclusions of this report modified or verified in writing. F&R should be afforded the opportunity to review the final project plans and specifications to determine that the recommendations presented in this report have been properly interpreted and implemented.

F&R appreciates being of service to you on this project. If you should have any questions regarding this report or need any additional assistance or information, please call us at your convenience.

Sincerely,

FROEHLING & ROBERTSON, INC.

NORTH CAROLINA PROFESSIONAL SEAL 9652 ENGINEER RALPH E. SANDERS

2/22/11

Ralph E. Sanders, P.E.
Chief Geotechnical Engineer

cc: Addressee (3)

Important Information About Your

Geotechnical Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

The following information is provided to help you manage your risks.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. *No one except you* should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one—not even you*—should apply the report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, *do not rely on a geotechnical engineering report* that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions *only* at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an *opinion* about subsurface conditions throughout the site. Actual subsurface conditions may differ—sometimes significantly—from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final,* because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.*

A Geotechnical Engineering Report Is Subject To Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, but recognize *that separating logs from the report can elevate risk.*

Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce such risks, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations", many of these provisions indicate where geotechnical engineers responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

Rely on Your Geotechnical Engineer for Additional Assistance

Membership in ASFE exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your ASFE-member geotechnical engineer for more information.

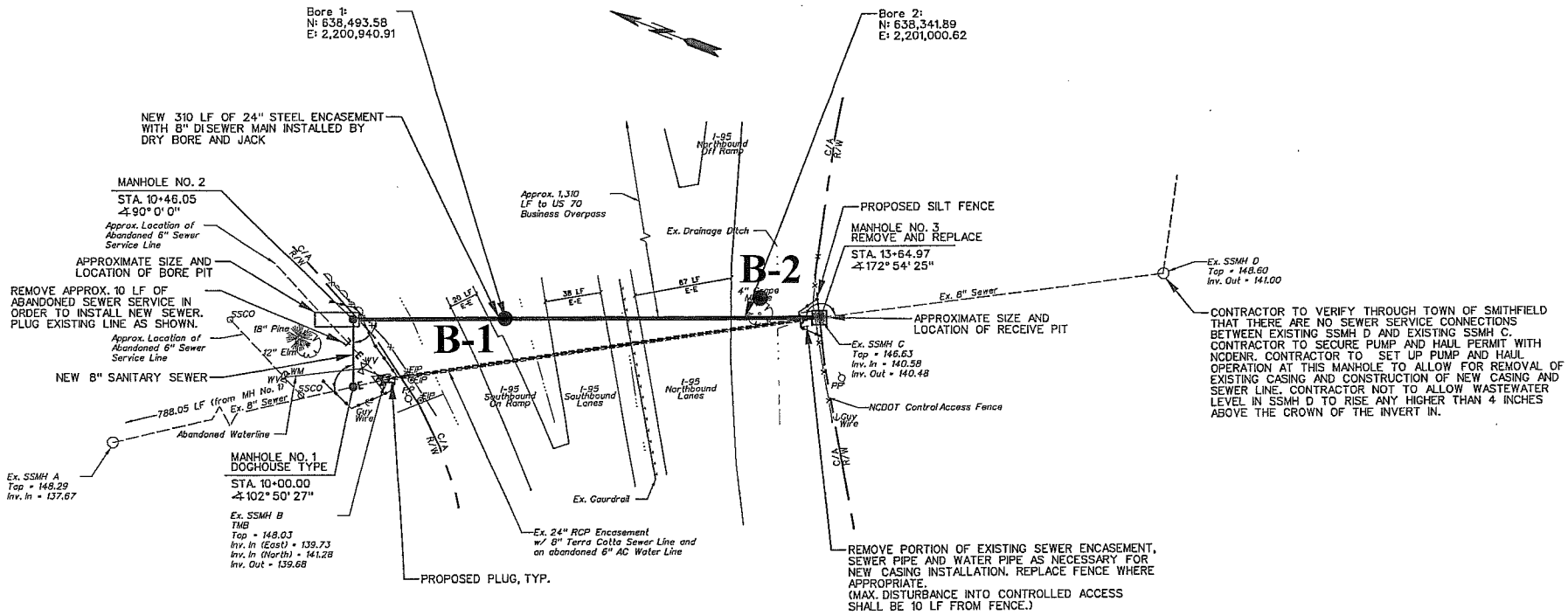
ASFE

8811 Colesville Road Suite G106 Silver Spring, MD 20910
Telephone: 301-565-2733 Facsimile: 301-589-2017
email: info@asfe.org www.asfe.org

IIGER1000.10M

APPENDIX I

FIGURES 1 & 2



BENCHMARK INFORMATION

TBM AT EXISTING SSMH B (TOP OF MH COVER)
N: 638,556.883
E: 2,200,871.255
ELEV.: 148.03

SINCE 1881
FROEHLING & ROBERTSON, INC.
Engineering • Environmental • Geotechnical
310 Hubert Street
Raleigh, North Carolina 27603-2302 | USA
T 919.828.3441 | F 919.828.5751
www.fandr.com

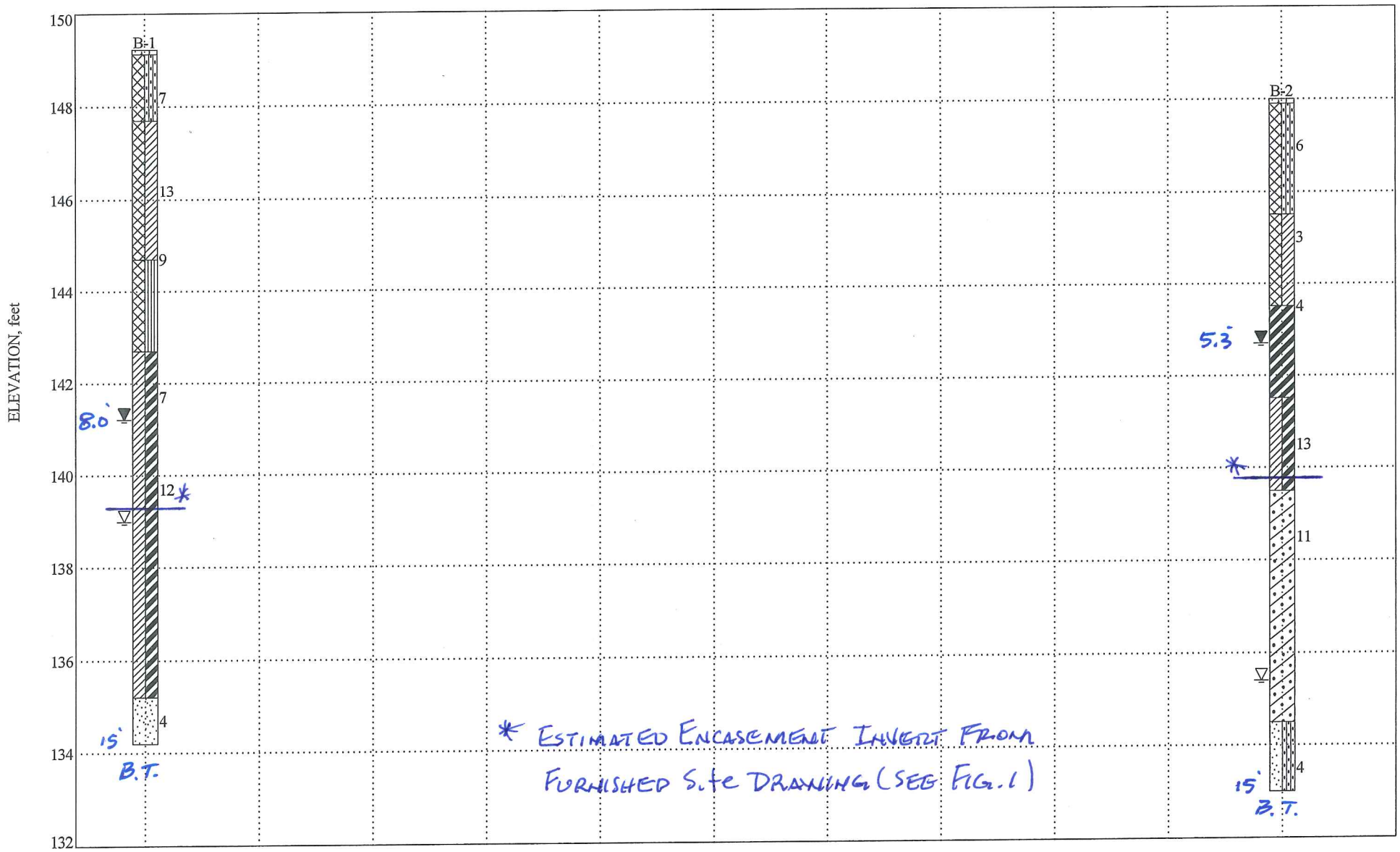
LEGEND

● Approximate F&R Boring Location

SCALE (FEET)
0 60' 120'
1"=120'

SITE BORING PLAN

CLIENT: The Wooten Company
PROJECT: New Sewer Line Crossing on I-95
LOCATION: South Side of US 70 Bus., Smithfield, North Carolina
F&R PROJECT No.: 66M-0193
DRAWN BY: D. Racey | CHECKED BY: R. Sanders, P.E.
DATE: February 2011 | SCALE: 1"=120'
FIGURE No.: 1



SINCE 1881

FROEHLING & ROBERTSON, INC.
ENGINEERING • ENVIRONMENTAL • GEOTECHNICAL

CLIENT :	The Wooten Company
PROJECT :	Sewer Line Crossing at I-95
LOCATION :	Smithfield, NC
DATE :	February 14, 2011

SUBSURFACE PROFILE FIGURE No. 2

SINCE F&R 1881

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

MAJOR DIVISION				TYPICAL NAMES
GRAVELS More than 50% of coarse fraction larger than No. 4 sieve	CLEAN GRAVEL (little or no fines)		GW	Well graded gravels
			GP	Poorly graded gravels
	GRAVELS with fines		GM	Silty gravels
			GC	Clayey gravels
SANDS More than 50% of coarse fraction smaller than No. 4 sieve	CLEAN SAND (little or no fines)		SW	Well graded sands
			SP	Poorly graded sands
	SAND with fines		SM	Silty sands, sand/silt mixtures
			SC	Clayey sands, sand/clay mixtures
SILTS AND CLAYS Liquid Limit is less than 50			ML	Inorganic silts, sandy and clayey silts with slightly plasticity
			CL	Sandy or silty clays of low to medium plasticity
			OL	Organic silts of low plasticity
SILTS AND CLAYS Liquid Limit is greater than 50			MH	Inorganic silts, sandy micaceous or clayey elastic silts
			CH	Inorganic clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity
HIGHLY ORGANIC SOILS			PT	Peat and other highly organic soils
MISCELLANEOUS MATERIALS				PWR (Partially Weathered Rock)
				Rock
				Asphalt
				ABC Stone
				Concrete
				Surficial Organic Soil

APPENDIX II

BORING LOGS

KEY TO SOIL CLASSIFICATION

Correlation of Penetration Resistance with Relative Density and Consistency

Sands and Gravels

No. of Blows, N	Relative Density
0 - 4	Very loose
4 - 10	Loose
10 - 30	Medium dense
30 - 50	Dense
Over 50	Very dense

Silts and Clays

No. of Blows, N	Consistency
0 - 2	Very soft
2 - 4	Soft
4 - 8	Firm
8 - 15	Stiff
15 - 30	Very stiff
30 - 50	Hard
Over 50	Very hard

Particle Size Identification (Unified Classification System)

Boulders:	Diameter exceeds 8 inches
Cobbles:	3 to 8 inches diameter
Gravel:	**Coarse** - 3/4 to 3 inches diameter **Fine** - 4.76 mm to 3/4 inch diameter
Sand:	**Coarse** - 2.0 mm to 4.76 mm diameter **Medium** - 0.42 mm to 2.0 mm diameter **Fine** - 0.074 mm to 0.42 mm diameter
Silt and Clay:	Less than 0.07 mm (particles cannot be seen with naked eye)

Modifiers

The modifiers provide our estimate of the amount of silt, clay or sand size particles in the soil sample.

Approximate Content	Modifiers
≤ 5%:	Trace
5% to 12%:	Slightly silty, slightly clayey, slightly sandy
12% to 30%:	Silty, clayey, sandy
30% to 50%:	Very silty, very clayey, very sandy

Field Moisture Description	
Saturated:	Usually liquid; very wet, usually from below the groundwater table
Wet:	Semisolid; requires drying to attain optimum moisture
Moist:	Solid; at or near optimum moisture
Dry:	Requires additional water to attain optimum moisture

BORING LOG

SINCE 1881

FROEHLING & ROBERTSON, INC.
ENGINEERING • ENVIRONMENTAL • GEOTECHNICAL

Report No.: **66M-0193** Date: **February 2011**

Client: **The Wooten Company**

Project: **Sewer Line Crossing at I-95, Smithfield, NC**

Boring No.: **B-1** **(1 of 1)** Total Depth **15.0'** Elev: **149.2*** Location: **See Site Boring Plan**

Type of Boring: **2.25" ID HSA** Started: **2/11/11** Completed: **2/11/11** Driller: **J. Gilchrist**

Elevation	Depth (feet)	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ ft)	REMARKS
-14.9	0.1	SURFICIAL ORGANIC SOILS	2-3-4	0.0	7	* Surface elevation interpolated from furnished site drawing.
		FILL: Loose, tan, moist, silty medium to fine SAND (SM).				
-223.8	1.5	FILL: Stiff, tan gray, moist to very moist, silty medium to fine sandy CLAY (CL).		1.5		GROUNDWATER DATA: Temporary hand-slotted PVC piezometer pipe installed to a depth of 15.0'.
			5-6-7	2.0	13	0 Hrs.: 10.2' inside piezometer
			3-4-5	3.5	9	24 Hrs.: 8.0' inside piezometer
-671.4	4.5	FILL: Stiff, dark gray, organic slightly clayey fine sandy SILT (ML).		5.0		
-969.8	6.5	COASTAL PLAIN: Firm to stiff, light gray, very moist, silty fine sandy CLAY (CL-CH).	3-3-4	6.5	7	
				8.0		
			3-5-7	8.5	12	
				10.0		
			3-2-2	13.5	4	
-2088.8	14.0	Very loose, light gray, saturated, slightly silty medium to fine SAND (SP).				
-2238.0	15.0	Boring Terminated at 15.0 feet.		15.0		

BORING LOG 66M-0193 BORELOGS.GPJ F&R.GDT 2/14/11

*Number of blows required for a 140 lb automatic hammer dropping 30" to drive 2" O.D., 1.375" I.D. split-spoon sampler in successive 6" increments. The sum of the second and third increments of penetration is termed the Standard Penetration Test value, "N".

BORING LOG

SINCE 1881

FROEHLING & ROBERTSON, INC.
ENGINEERING • ENVIRONMENTAL • GEOTECHNICAL

Report No.: **66M-0193** Date: **February 2011**

Client: **The Wooten Company**

Project: **Sewer Line Crossing at I-95, Smithfield, NC**

Boring No.: **B-2** **(1 of 1)** Total Depth **15.0'** Elev: **148*** Location: **See Site Boring Plan**

Type of Boring: **2.25" ID HSA** Started: **2/11/11** Completed: **2/11/11** Driller: **J. Gilchrist**

Elevation	Depth (feet)	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ ft)	REMARKS
-14.8	0.1	SURFICIAL ORGANIC SOILS	1-3-3	0.0		
		FILL: Loose, tan gray, slightly organic silty medium to fine SAND (SM).			6	* Surface elevation interpolated from furnished site drawing.
				1.5		GROUNDWATER DATA:
			WOH-WOH-3	2.0	3	Temporary hand-slotted PVC piezometer pipe installed to a depth of 15.0'.
-370.0	2.5	POSSIBLE FILL: Very soft, gray, very moist to wet, silty fine sandy CLAY (CL-CH).				0 Hrs.: 12.6' inside piezometer
			1-2-2	3.5	4	24 Hrs.: 5.3' inside piezometer
-666.0	4.5	COASTAL PLAIN: Soft, tan gray, very moist to wet, silty fine sandy CLAY (CH).		5.0		
-962.0	6.5	Stiff, tan gray, moist, slightly fine sandy silty CLAY (CL-CH).	4-6-7	6.5	13	
				8.0		
-1258.0	8.5	Medium dense, light gray, moist to very moist, silty clayey medium to fine SAND (SC).	3-5-6	8.5	11	
				10.0		
-1998.0	13.5	Very loose, gray, saturated, slightly silty medium to fine SAND (SP-SM).	3-1-3	13.5	4	
-2220.0	15.0	Boring Terminated at 15.0 feet.		15.0		

*Number of blows required for a 140 lb automatic hammer dropping 30" to drive 2" O.D., 1.375" I.D. split-spoon sampler in successive 6" increments. The sum of the second and third increments of penetration is termed the Standard Penetration Test value, "N".

BORING_LOG 66M-0193 BORELOGS.GPJ F&R.GDT 2/14/11

SINCE

1881

HQ: 3015 DUMBARTON ROAD RICHMOND, VIRGINIA 23228 T 804.264.2701 F 804.264.1202 www.fandr.com

VIRGINIA • NORTH CAROLINA • SOUTH CAROLINA • MARYLAND • DISTRICT OF COLUMBIA

BID FORM

Project: I-95 Gravity Sewer Crossing and Pump Station No. 11 Replacement

Bid From: _____ _____

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1 -- OWNER AND BIDDER

1.01 This Bid is submitted to:
Town of Smithfield
350 East Market Street
Smithfield, NC 27577

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 -- ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:
A. Required Bid security;
B. Evidence of authority to do business in the state of the Project;
C. Contractor's license number as evidence of Bidder's State Contractor's License;
D. In accordance with GS 64-26(a), Bidders shall submit the E-Verify Affidavit to document that the work authorization of their employees has been verified through E-Verify. The Affidavit shall also document that the Bidders subcontractors comply with E-Verify.

2.02 Submit the Bidder's Checklist as provided in the bidding documents with the bid submittal. The Checklist shall be completed and included as the first page of the submittal.

2.03 After the bid opening the Owner will consider all bids and alternates and determine the lowest responsible, responsive bidder. Upon notification of being the apparent low Bidder, the Bidder shall then file within 72 hours of the notification of being the apparent lowest bidder, the following:
A. Table B: Subcontract Solicitation List

ARTICLE 3 -- BASIS OF BID—UNIT PRICE BIDS

3.01 Unit Price Bids
A. Bidder will perform the following Work at the indicated unit prices for the Base Bid:

Item No.	Description	Unit	Est. Quantity	Unit Price	Bid Price
1	Mobilization (3% of Line Items 2-22)	LS	1		

2	16" C900 DR18 Gravity Sewer, Depth 0'-6'	LF	21		
3	16" C900 DR18 Gravity Sewer, Depth 6'-8'	LF	686		
4	16" C900 DR18 Gravity Sewer, Depth 8'-10'	LF	60		
5	Remove 8" Gravity Sewer, Replace with 12" C900 DR18 Gravity Sewer, Depth 8'-10'	LF	34		
6	30" Steel Encasement with 16" C900 DR18 Gravity Sewer by Dry Bore and Jack	LF	316		
7	30" Steel Encasement with 16" C900 DR18 Gravity Sewer by Open Cut	LF	70		
8	20" C900 DR18 Encasement Pipe with 12" C900 DR18 by Open Cut	LF	68		
9	4' ID Manhole, Depth 8'-10'	EA	1		
10	5' ID Manhole, Depth 6'-8'	EA	1		
11	5' ID Manhole with Spray-In Epoxy Liner, Depth 6'-8'	EA	3		
12	Remove Existing Manhole, Replace with 5' ID Manhole, Depth 8'-10'	EA	1		
13	Remove Manhole, Depth 6'-8'	EA	2		
14	Remove and Replace Segmental Block Retaining Wall at STA 3+23	LS	1		
15	Asphalt Pavement Patch (NCDOT)	SY	25		
16	Asphalt Pavement Patch (non NCDOT)	SY	175		
17	2" Asphalt Milling and Overlay with 2" S9.5C Asphalt	SY	50		
18	Pavement Striping	LF	50		
19	Temporary Bypass Pumping for Gravity Sewer Improvements and Pump Station Replacement	LS			
20	Demolition of Pump Station No. 11	LS	1		
21	Pump Station No. 11	LS	1		
22	Connect Existing 8" Force Main to SSMH No. 7	LS	1		

23	Allowance for Telemetry at PS No. 11	LS	1	$25,000	$25,000
24	Erosion Control	LS	1		
25	Traffic Control	LS	1		
				Total Cost for Base Bid	

3.02 Alternates: For the following Alternates as selected by the Owner for inclusion in the Project.

A. Add Alternate No. 1 - Gravity Sewer from SSMH #2017 to SSMH #2A

Item No.	Description	Unit	Est. Quantity	Unit Price	Bid Amount
1	16" DI Gravity Sewer, Depth 8'-10'	LF	207		
2	16" DI Gravity Sewer, Depth 10'-12'	LF	102		
3	5' ID Manhole, Depth 8'-10'	EA	1		
4	5' ID Manhole, Depth 10'-12'	EA	1		
5	Asphalt Pavement Patch (NCDOT)	SY	50		
6	Core Drill 16" Gravity Sewer into Existing Manhole	EA	1		
				Total Cost for Add Alternate No. 1	

ARTICLE 4 -- TIME OF COMPLETION

4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

4.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5 -- BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

5.01 Bid Acceptance Period

A. This Bid will remain subject to acceptance for 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 Instructions to Bidders

A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 Receipt of Addenda

A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

ARTILCLE 6 -- BIDDER'S REPRESENTATION AND CERTIFICATIONS

6.01 Bidder’s Representations

A. In submitting this Bid, Bidder represents the following:
   1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
   2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
   3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
   4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
   5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
   6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
   7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
   8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
   9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
   10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
   11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 Bidder's Certifications

A. The Bidder certifies the following:
   1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
   2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
   3. Bidder has not solicited or induced any individual or entity to refrain from bidding.

4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
   a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
   b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
   c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
   d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 7 - BID SUBMITTAL

7.01 Contractor's License

Number: _____

Classification: _____

Limitation: _____

Employer's Tax ID No: _____

7.02 BIDDER hereby submits this Bid as set forth above:

Bidder:

_____

(typed or printed name of organization)

By: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

Address for giving notices:

_____

_____

_____

Bidder's Contact:

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Phone: _____

Email: _____

Address:

_____

_____

END OF SECTION

SECTION 01 22 00
UNIT PRICES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Delineation of measurement and payment criteria applicable to Work performed under Contract by the unit price payment method.

1.02 FIELD MEASUREMENT

A. Take measurements and compute quantities for submittal of the monthly pay request unless specified otherwise in the measurement paragraphs as indicated in this Section.

1.03 CHANGE IN QUANTITIES

A. Increase in the quantity of a bid item above what is indicated in the Bid Form shall only be made by a Change Order as required by the Contract Documents.

B. A final adjusting Change Order shall be made for adjustment of the actual quantities installed prior to submittal of the final pay request.

1.04 GENERAL

A. Items with a "(X)" in the title of the following bid items represents the size or depth as indicated on the Bid Form.

B. Method of measurement for the individual Bid Items shall be as specified below.

C. Payment for each item shall be in accordance with the Contract Unit Price times the number of units installed in accordance with the Contract Documents.

D. Work for each bid item shall include, but not be limited to, the work listed below and the labor, materials, equipment, and services required and reasonably implied by the Contract Documents for a complete installation.

E. Payment descriptions for Lump Sum bid items are located in the following locin Section 01 11 00 - Summary of
   1. For Base Bid: Section 01 11 00 - Summary of Work
   2. For Alternates: Section 01 23 00 - Alternates
   3. For Allowances: Section 01 21 00 - Allowances

1.05 MOBILIZATION

A. Measurement shall not be made for this item.

B. Work shall include startup administrative cost including, but not limited to, mobilization, bonds, insurance, shop drawing submittal, project signage, and video and photographic records.

C. General office administration throughout the Project construction shall include, but not be limited to, pay requests, as-built documentation, coordination of Work with other entities as appropriate shall be icluded in the individual unit price items.

D. Bid Price for Mobilization shall not exceed 3 percent of the total bid. Half of the mobilization may be requested on the first pay request and the remainder on the second.

1.06 UTILITY PIPING

A. Measurement: Measure horizontally indicated on the Drawings for the various types and sizes of pipes installed.
   1. (X)-inch (material) Gravity Sewer, Depth (X)-(X) ft: Measure pipe from center to center of manholes. No deduction will be made for space occupied by manholes. Measure depth of pipe vertically from pipe invert to original grade as shown on the Drawings.
   2. Remove (X)-inch (material) Gravity Sewer, Replace with (X)-inch (material) Gravity Sewer, Depth(X)-(X) ft: Measure pipe from center to center of manholes. No deduction will be made for space occupied by manholes. Measure depth of pipe vertically from pipe invert to original grade as shown on the Drawings.
   3.

B. Work shall include, but not be limited to (unless specifically noted otherwise on the Bid Form and this specification Section), the following:
   1. Clearing and grubbing where necessary.
   2. Temporary removal and restoration or temporary support of, but not limited to, existing mail boxes, signs, fences, shrubs, plants (under 6 feet in height), guard rails, power and telephone poles.
   3. Excavating, shoring and bracing where required, dewatering as required, installing, backfilling (including Class I material as specified for the pipe bedding, haunching, and initial backfill).
   4. Installation of warning / identification tape over utilities.
   5. Installation of tracer wire on non-metallic utilities.
   6. Temporary support and protection of existing underground facilities.
   7. Pipe, concrete blocking and encasement, connection to existing piping, and fittings.
   8. Flushing and testing.
   9. Repair to damaged new and existing utilities.
   10. Repair to curb and gutter.
   11. Cutting and removal of existing paved surfaces. Patching of existing paved surfaces shall be paid as indicated in the paragraph, “Patching of Asphalt and Concrete Pavement.”
   12. Grade disturbed areas to original surface profile prior to seeding.
   13. Clean up and seeding.
   14. Remove or grout fill and cap existing sewer.
   15. Core drill existing manhole.

C. Payment: The first Application for Payment will be approved based on the utilities installed during the agreed upon payment period without testing. Subsequent Application for Payments shall not be approved by the Engineer unless utilities installed during the previous payment period have passed the specified tests and clean up and seeding is complete.

1.07 (X)-INCH STEEL ENCASEMENT PIPE BY BORE AND JACK WITH (CARRIER PIPE)

A. Measurement: Along the centerline of the various sizes of steel encasement pipes installed.

B. Work: Excavation and backfilling for bore pit, encasement pipe, and carrier pipe installed in encasement pipe with spacers and casing seals. Include costs for the provision of bonds, insurance and inspection fees required by the respective agency or authority in charge of inspection of the encasement pipe.

1.08 (X)-INCH STEEL ENCASEMENT PIPE BY OPEN CUT (CARRIER PIPE)

A. Measurement: Along the centerline of the various sizes of steel encasement pipes installed.

B. Work: Excavation and backfilling of trench, encasement pipe, and carrier pipe installed in encasement pipe with spacers and casing seals. Include costs for the provision of bonds, insurance and inspection fees required by the respective agency or authority in charge of inspection of the encasement pipe.

1.09 (X)-INCH C900 ENCASEMENT PIPE BY OPEN CUT (CARRIER PIPE)

A. Measurement: Along the centerline of the various sizes of steel encasement pipes installed.

B. Work: Excavation and backfilling of trench, encasement pipe, and carrier pipe installed in encasement pipe with spacers and casing seals. Include costs for the provision of bonds, insurance and inspection fees required by the respective agency or authority in charge of inspection of the encasement pipe.

1.10 (X) FT DIA. MANHOLE, DEPTH (X) –(X) FT

A. Measurement: By the number of various sizes and at the depth installed. Measure depths from manhole cover to lowest pipe invert.

B. Work: Excavating, backfilling, stone sub base, concrete sections as required for the depth, top adjusting rings, steps, pipe boots, and ring and cover.

1.11 (X) FT DIA. MANHOLE WITH SPRAY-IN EPOXY LINER, DEPTH (X) –(X) FT

A. Measurement: By the number of various sizes and at the depth installed. Measure depths from manhole cover to lowest pipe invert.

B. Work: Excavating, backfilling, stone sub base, concrete sections as required for the depth, spray-in epoxy liner, top adjusting rings, steps, pipe boots, and ring and cover.

1.12 REMOVE EXISTING MANHOLE, REPLACE WITH (X) FT DIA. MANHOLE, DEPTH (X) –(X) FT

A. Measurement: By the number of various sizes and at the depth installed. Measure depths from manhole cover to lowest pipe invert.

B. Work: Excavating, removing existing manhole, backfilling, stone sub base, concrete sections as required for the depth, top adjusting rings, steps, pipe boots, and ring and cover.

1.13 REMOVE MANHOLE, DEPTH (X) –(X) FT

A. Measurement: By the number of various sizes and at the depth installed. Measure depths from manhole cover to lowest pipe invert.

B. Work: Excavating, removing existing manhole, and backfilling.

1.14 REMOVE AND REPLACE SEGMENTAL BLOCK RETAINING WALL AT STA 3+23

A. Measurement: Lump Sum

B. Work: Removal, backfilling, stone or concrete sub base, segmental block, geotextile fabric, drainage pipe, and cap unit.

1.15 ASPHALT PAVEMENT PATCHING

A. Measurement: Measure by the square yard along centerline of pavement cut times the pipe OD plus two feet. Payment shall not be made for pavement repair required due to excessive open cut caused by Contractor.

B. Work: Backfilling, compacting, stone sub-base, asphalt at the depths as specified.

1.16 2" ASPHALT MILLING AND OVERLAY WITH 2" S9.5C ASPHALT

A. Measurement: Measure by the square yard.

B. Work: Milling to the depth specified on the Construction Drawings and overlay to the depth and asphalt type as specified on the Construction Drawings.

1.17 PAVEMENT STRIPING

A. Measure by the linear foot from the start of striping to the end for the following items:

B. Traffic Lane striping. For broken lines it shall be determined by the nominal length of a line multiplied by the number of lines in place.
   1. Centerline
   2. Edge of Travel Lane
   3. Parking.

C. Work shall include pavement preparation, layout, and application of striping material.

1.18 TEMPORARY BYPASS PUMPING FOR GRAVITY SEWER IMPROVEMENTS AND PUMP STATION REPLACEMENT

A. Measurement: Lump Sum

B. Work: Temporary bypass pumping for graivty sewer and pump station construction.

1.19 DEMOLITION OF PUMP STATION NO. 11

A. Measurement: Lump Sum

B. Work: Demolition of existing pump station, including, but not limited to, removal of existing pump station equipment, building, fence, gate, asphalt, yard hydrant, piping, concrete slab, suction lift pumps, valving and housing, removal of manhole, removal of existing force main, removal of power service to existing pump station, removal of existing wetwell, grading and preparation of pump station site for new pump station, and proper removal and disposal of debris from the site.

1.20 PUMP STATION NO. 11

A. Measurement: Measurement for one station installed.

B. Work: Complete installation including, but not limited to, the cost of wetwell, duplex pumps, spare pump, force main piping, valve vault, valves, hoist, flow meter, control panel, generator, electrical control and power wiring and conduits, site work (force main piping to SSMH #7, 6" water line relocation, including RJ fittings, water service to the pump station, water meter box, backflow preventor and hot box, yard hydrant, fencing, and electrical service), asphalt pavement, excavation, backfilling, compacting, start up, and testing.

1.21 CONNECT EXISTING 8" FORCE MAIN TO SSMH NO. 7

A. Measurement: Lump sum.

B. Work: Shall include extension and connection of existing 8" Becky Log Cabin Force main to SSMH No. 7, including equipment and all labor for the connection.

1.22 ALLOWANCE FOR TELEMETRY AT "X" PUMP STATION

A. Measurement: Not Applicable.

B. Work: An allowance has been established to provide compensation to the contractor for provision of providing telemetry at each pump station.

1.23 EROSION CONTROL

A. Measurement shall not be made for this item.

B. Payment for the erosion control shall be in accordance with the Contract lump sum price for the installation of erosion control measures as required by the Contract Documents. Payment shall be for the labor, material, equipment, and accessories required for a complete installation including, but not limited to, the cost of installing, maintaining, and removal of the individual erosion control devices. Erosion control devices shall include, but not be limited to, the following:
   1. Silt fence.
   2. Sedimentation basins.
   3. Temporary and permanent swales.
   4. Riprap.
   5. Inlet protection.

1.24 TRAFFIC CONTROL

A. Measurement shall not be made for this item.

B. Work: Provide traffic control including, but not limited to, traffic control equipment, flagman, signage, moving control devices, and establishing detours with Town and NC DOT.

C. Bid Price for Traffic Control may be invoiced monthly as a percentage of the work complete to date.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION