



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

June 10, 2026

Addendum No. 2

RE: Contract # C205160

WBS # 67168.3.1

STATE FUNDED

Forsyth County (Project BR-0168)

BRIDGE #330289 OVER US-52 ON SR-4000.

June 16, 2026 Letting

To Whom It May Concern:

Reference is made to the plans and proposal furnished to you on this project.

The following revision has been made to the Roadway plans.

Sheet No.	Revision
3D-3	Sheet revised to include CIPP lining

Please void the above listed sheet in your plans and staple the revised sheet thereto.

The following revisions have been made to the proposal.

Page No.	Revision
Proposal Cover	Note added that reads "Includes Addendum No. 2 Dated 06-10-2026".
Proposal Page	Engineer of Record seal and title updated.
Table of Contents	The UNIT SPECIAL PROVISION entitled PIPE REHABILITATION has been added.
R-54 thru (New)R-55	The PROJECT SPECIAL PROVISION entitled GROUTING HOST PIPE BEFORE LINING has been added.
MR-1 thru MR-8	The UNIT SPECIAL PROVISION entitled PIPE REHABILITATION has been added.

Please void the above listed pages in your proposal and staple the revised pages thereto.

Staple new page R-55 after revised page R-54 in your proposal.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
CONTRACT STANDARDS AND DEVELOPMENT
1591 MAIL SERVICE CENTER
RALEIGH, NC 27699-1591

Telephone: (919) 707-6900
Fax: (919) 250-4127
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
1020 BIRCH RIDGE DR.
RALEIGH, NC 27610

On the item sheets the following pay item revisions have been made:

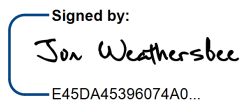
<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
0240-0331000000-E SP	HOST PIPE GROUTING	NEW ITEM	5 CY
0241-2473000000-N SP	DE-WATERING	NEW ITEM	2 EA
0242-2484000000-E SP	(18") PIPE REHABILITATION CIPP LINER	NEW ITEM	89 LF
0243-2484000000-E SP	(48") PIPE REHABILITATION CIPP LINER	NEW ITEM	285 LF
0244-2484000000-E SP	PRE INSTALLATION INSPECTION	NEW ITEM	374 LF

The Contractor's bid must include these pay item revisions.

The electronic bidding file has been updated to reflect these revisions. Please download the Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

The contract will be prepared accordingly.

Sincerely,

Signed by:

E45DA45396074A0...

Jon Weathersbee, PE
State Contract Officer

JHW/jcm
Attachments

cc: Mr. Wiley W. Jones III, PE
Mr. John P. Rhyne, PE
Mr. Ken Kennedy, PE
Mr. Malcolm Bell

Mr. Forrest Dungan, PE
Ms. Jaci Kincaid
Mr. Jon Weathersbee, PE
Project File (2)

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH, N.C.

PROPOSAL

INCLUDES ADDENDUM No. 2 DATED 06-10-2026

DATE AND TIME OF BID OPENING: **Jun 16, 2026 AT 02:00 PM**

CONTRACT ID C205160
WBS 67168.3.1

FEDERAL-AID NO. STATE FUNDED
COUNTY FORSYTH
T.I.P NO. BR-0168
MILES 0.365
ROUTE NO. SR-4000
LOCATION BRIDGE #330289 OVER US-52 ON SR-4000.

TYPE OF WORK GRADING, DRAINAGE, PAVING, SIGNALS, AND STRUCTURE.

NOTICE:

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$40,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

BIDS WILL BE RECEIVED AS SHOWN BELOW:

THIS IS A ROADWAY & STRUCTURE PROPOSAL

5% BID BOND OR BID DEPOSIT REQUIRED

**PROPOSAL FOR THE CONSTRUCTION OF
CONTRACT No. C205160 IN FORSYTH COUNTY, NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION,
RALEIGH, NORTH CAROLINA**

The Bidder has carefully examined the location of the proposed work to be known as Contract No. **C205160** has carefully examined the plans and specifications, which are acknowledged to be part of the proposal, the special provisions, the proposal, the form of contract, and the forms of contract payment bond and contract performance bond; and thoroughly understands the stipulations, requirements and provisions. The undersigned bidder agrees to bound upon his execution of the bid and subsequent award to him by the Board of Transportation in accordance with this proposal to provide the necessary contract payment bond and contract performance bond within fourteen days after the written notice of award is received by him. The undersigned Bidder further agrees to provide all necessary machinery, tools, labor, and other means of construction; and to do all the work and to furnish all materials, except as otherwise noted, necessary to perform and complete the said contract in accordance with the *2024 Standard Specifications for Roads and Structures* by the dates(s) specified in the Project Special Provisions and in accordance with the requirements of the Engineer, and at the unit or lump sum prices, as the case may be, for the various items given on the sheets contained herein.

The Bidder shall provide and furnish all the materials, machinery, implements, appliances and tools, and perform the work and required labor to construct and complete Contract No. **C205160** in **Forsyth County**, for the unit or lump sum prices, as the case may be, bid by the Bidder in his bid and according to the proposal, plans, and specifications prepared by said Department, which proposal, plans, and specifications show the details covering this project, and hereby become a part of this contract.

The published volume entitled *North Carolina Department of Transportation, Raleigh, Standard Specifications for Roads and Structures, January 2024* with all amendments and supplements thereto, is by reference incorporated into and made a part of this contract; that, except as herein modified, all the construction and work included in this contract is to be done in accordance with the specifications contained in said volume, and amendments and supplements thereto, under the direction of the Engineer.

If the proposal is accepted and the award is made, the contract is valid only when signed either by the Contract Officer or such other person as may be designated by the Secretary to sign for the Department of Transportation. The conditions and provisions herein cannot be changed except over the signature of the said Contract Officer.

The quantities shown in the itemized proposal for the project are considered to be approximate only and are given as the basis for comparison of bids. The Department of Transportation may increase or decrease the quantity of any item or portion of the work as may be deemed necessary or expedient.

An increase or decrease in the quantity of an item will not be regarded as sufficient ground for an increase or decrease in the unit prices, nor in the time allowed for the completion of the work, except as provided for the contract.

Accompanying this bid is a bid bond secured by a corporate surety, or certified check payable to the order of the Department of Transportation, for five percent of the total bid price, which deposit is to be forfeited as liquidated damages in case this bid is accepted and the Bidder shall fail to provide the required payment and performance bonds with the Department of Transportation, under the condition of this proposal, within 14 calendar days after the written notice of award is received by him, as provided in the *Standard Specifications*; otherwise said deposit will be returned to the Bidder.



State Contract Officer

Signed by:

Jonathan H. Weathersbee

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06/10/2026

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PROPOSAL ITEM SHEET

ITEM SHEET(S)

Page 16-25, Article 1642-5 MEASUREMENT AND PAYMENT, after line 9, delete and replace “___ Wattle Barrier” with “Wattle Barrier”.

Page 16-25, Article 1642-5 MEASUREMENT AND PAYMENT, after line 9, add the following:

Pay Item	Pay Unit
Coir Fiber Wattle	Linear Foot
Coir Fiber Wattle Barrier	Linear Foot

GROUTING HOST PIPE BEFORE LINING:

(1-16-18)(Rev. 1-21-25)

PSP

Description

Fill voids below and around the existing 48” culvert to be lined with CIPP, that have been found during cleaning and inspection, or are apparent by inverts perforated by corrosion either mid-pipe or at the ends.

Wherever pipe liners are used in pipes of sufficient size to gain access, fill voids before installing pipe liners.

Materials

Refer to Section 1003 of *Standard Specifications*.

Construction Methods

Prevent the flow of cementitious material and water from construction activities into waterways and drainage facilities. Follow provisions of the *NCDOT Best Management Practices for Construction and Maintenance Activities Manual* found on the Department’s website.

Install grout ports at locations directed by the Engineer. Install valves or removable plugs at grout ports. Probe at each grout port location. The probe must be at least 4 feet long, fit through the grout ports, and be rigid enough to sense probe refusal. Grout ports must be watertight. If authorized, you may screw grout ports in place or attach them by other methods. Do not weld grout ports to galvanized surfaces.

Where practicable, pump from downstream/downhill end of pipe toward upstream/uphill end of pipe. Pump grout into voids until it appears that all water and air has been ejected. Where possible, pump until grout escapes from adjacent, unplugged ports. Plug grout ports or close port valves as soon as pumping the grout ceases.

Utilize multiple grouting stages if necessary to close invert, annular, or joint perforations, as well as inject grout into remaining voids surrounding pipe.

Block or sandbag culvert ends to retain grout during grouting procedure. Remove sandbags or blockages after curing.

Finish grout that surcharges from perforations or cracks to a smooth surface.

The maximum injection pressure at the nozzle must not exceed 5 psi for fluid, unsanded grout mix. Pressure shall be monitored by a pressure gauge.

Monitor the culvert for deformation and cracks. If cracking occurs in a concrete culvert or lining, reduce the grout injection pressure. If deformation of the existing structure exceeds 1/2 inch at any location, reduce the injection pressure. Grouting in lifts may be required to prevent deformation.

Repair any permanent deformations or cracks resulting from your grouting work. Such work is incidental to grouting.

Measurement and Payment

Host Pipe Grouting will be measured and paid in cubic yards of slurry cement backfill that is installed. No payment will be made for slurry cement backfill that leaks through to the inside of the culvert or any other incidentals necessary to complete the work. No payment will be made for slurry cement backfill that is wasted, disposed of, or remaining on hand after completion of the work.

Payment will be made under:

Pay Item	Pay Unit
Host Pipe Grouting	Cubic Yard

PIPE REHABILITATION:

(11-2-22)(Rev. 1-21-25)(Rev. 9-19-25)

Description

Rehabilitate existing storm water pipes, or culverts by the method or methods specified at the designated locations described in the plans and this special provision.

Use pipe liner systems for rehabilitation that are on the NCDOT APL as subject to limitations for use as specified herein, by site-specific limitations for those locations listed in the contract, or limitations as shown on the NCDOT APL for the specific liner system. Review the contract to determine the method or methods that are permitted at each rehabilitation location.

Liners provided per this special provision shall be designed in accordance with the *NCDOT Pipe Liner Manual*. Hydraulic and Structural calculations shall be provided as part of the contract submittals.

Provide contract submittals as described in this special provision to the Engineer, Department's Materials and Tests Unit, and Department's Hydraulics Unit, a minimum of 10 days prior to start of installation for review and approval.

Materials

The following are liners available on the NCDOT APL and may be specified in the contract.

(A) Category A - Cured-In-Place Pipe (CIPP) liners

This liner lines an existing culvert by either pulling or inverting a resin-impregnated fabric tube and curing the tube in place. When CIPP liners are specified in the contract, the liner system supplied by the Contractor shall conform to the following requirements and be provided in contract submittals for review and approval:

- (1) Host pipe diameter ranges for which the product is applicable;
- (2) Indicate corrosion potential/acid reaction potential;
- (3) List cure method (e.g., UV, steam, hot water, etc.);
- (4) List typical, minimum, maximum application thicknesses;
- (5) Calculated minimum thickness of liner;
- (6) Designation of air or water inversion or pull-in-place method;
- (7) Maximum allowable pulling force;
- (8) Site specific cure time;
- (9) Minimum pressure to hold liner tight against the host pipe;
- (10) Maximum pressure to ensure liner does not sustain damage;
- (11) Maximum and minimum cure temperatures;
- (12) Post cure temperature to hold during cool down, as well as duration of cool down period;
- (13) Sample of temperature and pressure log to be used for monitoring the curing process;
- (14) Certification on manufacturer's letterhead indicating that the Contractor is approved by the fabric tube and resin manufacturer to perform CIPP installation work;

- (15) Material safety data sheets for all hazardous chemicals that will be used on the job site including resin, catalyst, cleaners, and repair agents;
- (16) List which of the following ASTM specifications that the installation will comply with;
- (17) Provide third party, independent lab test results that demonstrate compliance with the applicable specifications, and specifications referenced by those listed below (For example, there is no ASTM F1216 lab test. However, ASTM F1216 references ASTM D790 for flexural properties and ASTM D543 for chemical resistance. In the case of a proposed ASTM F1216-compliant installation, the submittal must include ASTM D790 and ASTM D543 lab test results.);
 - (a) ASTM F1216 for inverted CIPP
 - (b) ASTM F1743 for pulled-in-place CIPP
 - (c) ASTM F2019 for pulled-in-place GRP CIPP
 - (d) ASTM F2599 for sectional inverted CIPP (applies to pipe sections, not full length)
 - (e) ASTM F3541 for sectional repair CIPP; pushed or pulled in place
- (18) Long Term Modulus of Elasticity required for use in calculations = 150,000 psi. Third Party, Independent lab test results may be submitted by vendors or subcontractors to justify use of alternate Long Term Modulus of Elasticity in calculations. The value will be extrapolated from ASTM D2990, 10000-hour test, or will be 50% of the initial modulus value from ASTM D790. Design value of Long Term Modulus of Elasticity may be no greater than 50% of Initial Modulus of Elasticity. Tested value of 50% of Initial Modulus of Elasticity of samples taken during construction must be greater than or equal to value used in design equations;
- (19) Initial Modulus of Elasticity required for use in calculations = 300,000 psi. Third Party, Independent lab test results may be submitted by vendors or subcontractors to justify use of alternate Initial Modulus of Elasticity in calculations. The value will be from ASTM D790. Tested value of samples taken during construction must be greater than or equal to value used in design equations;
- (20) Long Term Flexural Strength required for use in calculations = 2250 psi. Third Party, Independent lab test results may be submitted by vendors or subcontractors to justify use of alternate Long Term Flexural Strength in calculations. The value will be extrapolated from ASTM D2990, 10000-hour test, or will be 50% of the initial flexural strength value from ASTM D790. Tested value of samples taken during construction must be greater than or equal to value used in design equations.

Construction Methods

For all categories the Contractor shall perform pre-installation inspection, pipe cleanout, grout host pipe, inlet and outlet sealing, dewatering, and submit a disposal plan as follows:

(A) Pre-Installation Inspection

Perform a pre-installation video inspection of pipe using NASSCO certified personnel. Place the camera that is mounted on a rubber tired or tracked pipe rover that allows for a 360-degree inspection at the centerline of the pipe. Inspection equipment shall be capable of measuring protrusions and obstructions of 1/2 inch or greater. Provide a pipe profile, on

which deflections that may affect the installation of the liner are located and noted. The inspection shall be performed in the presence of the Engineer, unless waived by the Engineer. Dewater the host pipe to the satisfaction of the Engineer, and in accordance with *NCDOT's Best Management Practices for Construction and Maintenance Activities*. A thorough culvert inspection is required to determine the number of existing "pipe to pipe" connections and the extent, if any, of obstruction removal and voids. Perform inspection by experienced personnel trained in locating breaks, obstacles, voids and service connections. Video inspections shall be clearly labeled on the media with the time, date, and location of the pipe inspected. Furnish a copy of the video inspection to the Engineer at least 10 days prior to the start of rehabilitative construction. In the event the Contractor's inspection shows the method of rehabilitation the Contractor has selected is no longer viable at that location as verified by the Engineer, select another allowable method, if specified, from those designated in the Designated Locations and Allowable Methods table found earlier in this special provision or as found elsewhere in the contract.

(B) Pipe Clean-out

Clear the existing pipe(s) designated for rehabilitation of any debris, sediment, protrusions greater than 1/2 inch in height, and any other potential obstructions prior to the start of rehabilitation efforts. Thoroughly clean and prepare the host pipe prior to the liner installation. Conform to the cleaning recommendations of the liner manufacturer, and any additional requirements of this special provision of which the more stringent shall apply. In the absence of manufacturer recommendations, submit the proposed method for cleaning and preparing the host pipe for the Engineer's review and acceptance at least 10 working days prior to beginning the work at that location.

(C) Grouting Host Pipe

Perform grouting work described in the contract, prior to pipe liner installation to fill voids in the soil around the existing host pipe. Grouting to fill voids in the soil around the host pipe is not included in the scope of pipe lining described by this special provision and will be paid for as found elsewhere in this contract.

Grouting the annular space between the liner and the host pipe when the liner does not fit snugly against the host pipe is incidental to the *Pipe Rehabilitation* pay item.

(D) Inlet & Outlet Sealing

All pipe liner installations shall be sealed to the host pipe at the terminal ends of the liner to prevent flow between the liner and host pipe.

(E) De-Watering

Install all pipe liners and grout in dry conditions. De-water by diverting, pumping, or bypassing any water flow through an existing pipe or drainage system prior to and during the lining process. The method of de-watering is to be determined by the Contractor but must be approved by the Engineer prior to implementing.

(F) Disposal Plan

Submit a disposal plan to the Engineer a minimum of 10 days prior to installation. The disposal plan shall indicate how by-products and waste are to be contained, captured, transported offsite, and disposed of in accordance with project permits and local, state and federal regulations. It shall be the Contractor's responsibility to report and take appropriate corrective actions to remediate any water quality alteration resulting from lining operations in accordance with project permits and applicable local, state or federal regulations. The cost for such remediation shall be at the Contractor's expense.

Category A – Cured-In-Place Pipe Liner Construction Methods

Fabricate and install the cured-in-place pipe liner system in such a manner as to result in a maintained full contact tight fit to the internal circumference of the host pipe for its entire length. The installation shall adhere to the cure times and temperatures stipulated in the manufacturer's recommended installation and cure specifications and the finished product shall be free of delamination, bubbling, rippling or other signs of installation failure.

Install per specification or standard practice for installation in accordance with (ASTM F1216 for inverted CIPP, or ASTM F1743 for pulled-in-place CIPP, or ASTM F2019 for pulled-in-place GRP CIPP, or ASTM F2599 for sectional inverted CIPP, or ASTM F3541 for sectional CIPP pushed or pulled in place unless otherwise approved by the Engineer).

Pulled-in-place liner installation must be accomplished without significant liner twisting, or stretching the liner greater than 1% of its original length during installation. At no time shall the pulling force, as measured by a Contractor-provided dynamometer or load cell, exceed that established by the liner manufacturer. For liner lengths greater than 100 feet, protect the pipe liner end using a device that uniformly distributes the applied load around the perimeter of the liner.

Curing for styrene-based, epoxy-based, and vinyl ester-based CIPP may be accomplished by water, steam or ultraviolet light and shall be in accordance with the liner manufacturer's recommendations.

Installation and curing requirements of pipe sections shall be in accordance with the manufacturer's recommendations for the specific product, as applicable. Furnish installation and curing requirements for the various flexible liners including individual components of the system, tube type (reinforced or non-reinforced), manufacturer name and type of resin including catalyst, volume of resin required to achieve proper impregnation and curing. All components of the systems shall be in accordance with manufacturer's recommendations for the specific system used, and all components shall include lot numbers and expiration dates.

Place an impermeable barrier immediately upstream and downstream of the host pipe, prior to liner insertion, to capture any possible raw resin spillage during installation and dispose of any materials in accordance with the submitted and approved disposal plan.

Where the pulled-in-place method of installation is used, install a semi-rigid plastic slip sheet over any interior portions of the host pipe that could tear the outer film or over any significant voids in the host pipe.

Reconnect the existing storm drain lateral connections immediately after the liner has been cured in place. Use robotic cutting devices to re-establish tie-ins in non-man accessible pipes.

Monitor temperature via a minimum of three thermocouples on the outer surface (interface between the host pipe and liner) of the liner (one each at the upstream and downstream ends and one approximately mid-length of the host pipe). Monitor pressure during inversion and curing, and maintain pressure between minimum and maximum allowable pressures as provided by the manufacturer. Log cure time-temperature and time-pressure data at 5-minute intervals and provide such information in a format acceptable to the Engineer for review and approval within 48 hours after completing the resin-curing process.

Thoroughly rinse the cured lined pipe with clean water prior to re-introducing flow.

Capture all cure water and/or steam condensate and rinse water and dispose of, in accordance with the submitted and approved disposal plan.

Within 21 days of completing the resin curing at a given culvert location, submit the test results from an ISO 17025 lab approved by the Engineer. The report must be signed by a representative of the independent testing lab. The report must include:

- (1) Thickness measurements as well as flexural strength and flexural modulus test results for field samples.
- (2) Description of the defects in the tested samples in terms of the effect on CIPP performance.

Make cured samples from the identical materials (tube, resin and catalyst) to be used for the CIPP. Identify each sample by date, contract number, drainage system number of the corresponding culvert, thickness, name of resin, and name of catalyst. The samples must be 6 by 16 inches in size, so that the testing lab can cut the sample into five pieces for testing. Comply with the following sampling procedures unless UV cured:

- (1) One sample will be made for each setup of the lining apparatus and tested for thickness and flexural properties. A setup is defined as the lining equipment being used to line one run of storm sewer with one continuous liner bag that undergoes one heating/curing/cooling cycle, which may contain multiple pipes and drainage structures in series.
- (2) Place one aluminum-plate clamped mold containing a flat plate sample, inside the downtube when heated circulated water is used, and in the silencer when steam is used during the resin curing period.
- (3) Seal each flat plate sample in a heavy-duty plastic envelope inside the mold.
- (4) Remove the cured flat plate sample after draining all of the moisture from the cured CIPP.

If UV cured, comply with field sampling procedures under ASTM F2019, Section 7: Recommended Inspection Practices.

Test the samples for flexural properties under ASTM D790, ASTM D5813, ASTM F1216, ASTM F1743, ASTM F2019, or ASTM F3541 as applicable unless otherwise approved by the Engineer. Verify that physical properties of the field samples comply with the minimum values under:

- (1) ASTM F1216, Table 1 (modified values), for heat cured polyester, vinyl ester, and epoxy resins. The flexural strength must be at least 5,000 psi. The flexural modulus must be at least 300,000 psi.
- (2) ASTM F2019, Table 1, for UV cured CIPP. The flexural strength must be at least 6,500 psi. The flexural modulus must be at least 725,000 psi. Comply with sampling and testing procedures under ASTM F2019, Section 7: Recommended Inspection Practices.

Test the samples for thickness. If heat cured, remove the film from the inner lining or preliner. If UV cured, remove the film from the inner and outer foil.

Measure the thickness of the liner at 3 spots on each deburred sample. Calculate the thickness as an average of the measurements.

If UV cured, comply with sampling and testing procedures under ASTM F2019, Section 7: Recommended Inspection Practices. If the culvert material is corrugated metal, measure the thickness at 3 spots that are along a line corresponding to the corrugation crests. Calculate the thickness as an average of at least 6 measurements.

CIPP may be rejected by the Engineer if any of the following occur:

- (1) Actual temperature and curing time and schedule do not comply with those shown in the authorized work plan;
- (2) Pressure deviates more than 1 psi from the required pressure;
- (3) At any time during installation the manufacturer's required minimum cool-down time or maximum cool-down rate is violated;
- (4) There are defects including:
 - (a) Concentrated ridges, including folds and wrinkles exceeding 8 percent of the CIPP diameter
 - (b) Dry spots
 - (c) Lifts
 - (d) Holes
 - (e) Tears
 - (f) Soft spots
 - (g) Blisters or bubbles however this does not include superficial bubbles in the inner plastic liner that do not penetrate into the felt
 - (h) Delaminations
 - (i) Gaps in the length of the CIPP
 - (j) Gaps or a loose fit between the exterior of the CIPP and the culvert
- (5) Test results indicate one of the following:
 - (a) If heat cured, the average of the test results for one prepared sample cut into pieces for testing does not have the specified modulus of elasticity, the specified flexural strength, nor either the specified modulus of elasticity or the specified flexural strength
 - (b) If UV cured, the average of the test results for one prepared sample cut into pieces for testing does not have the specified modulus of elasticity, the specified flexural strength, nor either the specified modulus of elasticity or the specified flexural strength
- (6) The liner thickness is less than the greater of either one of the following:

- (a) Specified thickness
- (b) Calculated minimum thickness shown in your authorized work plan
- (7) Materials and installation methods are not those shown in your authorized installation plan;
- (8) Defects are excessive or unrepairable;
- (9) CIPP is not continuous or does not fit tightly for the full length of the culvert;
- (10) If UV cured, and post installation inspections reveal signs of incomplete curing (dripping resin, etc.), trim liner obscuring uncured liner, re-wet, and re-cure with UV.

(G) Post Installation Inspection

In addition to the inspection performed by the Department, the Contractor shall perform two post-installation video inspections using NASSCO certified personnel. The first inspection shall take place between 90 and 100 calendar days after completion of installation for each culvert or system to a single outfall. The second inspection shall take place 30 calendar days prior to the end of the liner warranty period (5 years, secured by construction bond). The camera shall be situated at the centerline of the pipe, and shall be mounted on a rubber tired or tracked pipe rover that allows for a 360-degree inspection. Inspection equipment shall be capable of measuring protrusions and obstructions of 1/2 inch or greater. The inspection shall be performed in the presence of the Engineer. Dewater the host pipe to the satisfaction of the Engineer. Video inspections shall be clearly labeled on the media with the time, date, and location of the pipe inspected. A copy of the video inspection shall be furnished to the Engineer for review and approval prior to acceptance of the work.

The finished liner may be rejected if not continuous over its entire length and free from visual defects such as foreign inclusions, joint separation, cracks, insufficient liner thickness, material loss, roughness, deformation, dry spots, pinholes, insufficient bonding to host pipe, delamination, or other material or installation deficiencies as described herein.

(H) Remedies for rejection of liner

In the event the first post inspection of the installation reveals defects in localized areas of the liner pipe (comprising less than 20 percent of the pipe length) the localized defects shall be repaired as specified by the manufacturer. Where defects occur on 20 percent or more of the pipe length the defects shall be repaired, however, the Contractor will not be allowed to continue with his methodology of installation and/or the liner system used until he can demonstrate to the Engineer that he has remedied his operations to a sufficient level of quality as determined by the Engineer. All such remedial efforts shall be at the Contractor's expense. Further failure(s) to perform a proper installation may result in the disallowance of the use of that liner system and an adjustment in the cost or non-payment of the failed installations depending on the severity of the failure.

In the event the first post installation inspection is not conducted until all or most of the locations in the contract permitting this methodology have been performed, and the inspection reveals defects on 20 percent or more of the host pipe's length, then an adjustment in the cost or non-payment of the failed installations may be made by the Engineer depending on the severity of the failure.

In the event the second post inspection of the installation reveals defects, the Department may execute the option to call the construction bond to reimburse the Department for repairs or corrections, or to act as an adjustment in the cost, or both.

Measurement and Payment

Pre Installation Inspection will be measured and paid for as the actual number of linear feet of pipe inspected, including mobilization of equipment, and production of records incorporated into the completed and accepted work. Linear footage is not increased for multiple passes of inspection equipment through a length of pipe.

Pipe Rehabilitation will be measured and paid for as the actual number of linear feet of pipe for the size, and method that has been incorporated into the completed and accepted work. Note: At locations shown in the Contract where multiple methods are permitted, the Contractor may select any of the methods specified, however, if only one method is specified, this will be the only method permitted at that location. This price shall include post installation inspection, cleaning and preparation of the host pipe, furnishing and installing the liner, lateral reconnection, coupling and expansion devices, annular cement grout, design (if necessary) and shop drawing preparation, furnishing and installing liner and all components of the liner system, capturing any discharges or releases during installation or curing operations, furnishing any documentation or fees required for effluent or condensate disposal, all testing and sampling including furnishing reports and pre and post installation video inspections, waste disposal costs, excavation, sheeting, shoring, disposing of surplus and unsuitable material; backfilling and backfill material; compaction, restoring existing surfaces, and clearing debris and obstructions.

De-Watering will be measured and paid in units of each as the actual number of water diversions or bypasses required to complete pipe rehabilitation work. Each instance of *De-Watering* paid includes de-watering for pre-inspection, installation, post inspections, and remediation (if necessary). All materials, equipment, labor, or other resources required to de-watering a site shall be incidental to the unit cost for *De-Watering*.

Grouting the annular space between the liner and the host pipe is incidental to the *Pipe Rehabilitation* pay item when the liner is a type that does not fit snugly against the host pipe. Otherwise grouting the voids in the soil around the host pipe is not included in the scope of pipe lining described in this special provision and will be paid for as found elsewhere in this contract.

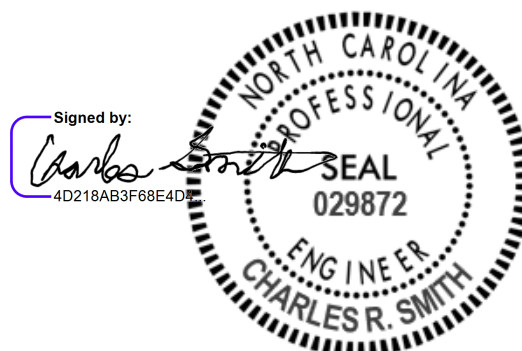
Payment will be made under:

Pay Item

Pre Installation Inspection
(18") Pipe Rehabilitation CIPP Liner
(48") Pipe Rehabilitation CIPP Liner
De-Watering

Pay Unit

Linear Foot
Linear Foot
Linear Foot
Each



06/10/2026

County: FORSYTH

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
ROADWAY ITEMS						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0050000000-E	226	SUPPLEMENTARY CLEARING & GRUBBING	1 ACR		
0004	0057000000-E	226	UNDERCUT EXCAVATION	450 CY		
0005	0063000000-N	SP	GRADING	Lump Sum	L.S.	
0006	0106000000-E	230	BORROW EXCAVATION	18,300 CY		
0007	0134000000-E	240	DRAINAGE DITCH EXCAVATION	60 CY		
0008	0195000000-E	265	SELECT GRANULAR MATERIAL	200 CY		
0009	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	200 SY		
0010	0199000000-E	SP	TEMPORARY SHORING	11,100 SF		
0011	0248000000-N	SP	GENERIC GRADING ITEM TYPE 2 BRIDGE APPROACH FILL, STATION 20+73.79 -L-	Lump Sum	L.S.	
0012	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	480 TON		
0013	0321000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	1,510 SY		
0014	0335200000-E	305	15" DRAINAGE PIPE	50 LF		
0015	0366000000-E	310	15" RC PIPE CULVERTS, CLASS III	280 LF		
0016	0378000000-E	310	24" RC PIPE CULVERTS, CLASS III	596 LF		
0017	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (60")	191 LF		

County: FORSYTH

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0018	0448000000-E	310	***** RC PIPE CULVERTS, CLASS IV (66")	125 LF		
0019	0448200000-E	310	15" RC PIPE CULVERTS, CLASS IV	2,579 LF		
0020	0448400000-E	310	24" RC PIPE CULVERTS, CLASS IV	236 LF		
0021	0448600000-E	310	36" RC PIPE CULVERTS, CLASS IV	460 LF		
0022	0973100000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B IN SOIL (48", 0.625")	139 LF		
0023	0973100000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B IN SOIL (66", 0.875")	109 LF		
0024	0973300000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B NOT IN SOIL (48", 0.625")	139 LF		
0025	0973300000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B NOT IN SOIL (66", 0.875")	109 LF		
0026	0995000000-E	340	PIPE REMOVAL	1,694 LF		
0027	1099500000-E	505	SHALLOW UNDERCUT	100 CY		
0028	1099700000-E	505	CLASS IV SUBGRADE STABILIZATION	200 TON		
0029	1112000000-E	505	GEOTEXTILE FOR SUBGRADE STABILIZATION	300 SY		
0030	1297000000-E	607	MILLING ASPHALT PAVEMENT, ***** DEPTH (1-1/2")	1,960 SY		
0031	1330000000-E	607	INCIDENTAL MILLING	7,410 SY		
0032	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	4,580 TON		
0033	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	3,980 TON		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0034	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	3,420 TON		
0035	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	600 TON		
0036	1577000000-E	620	POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX	15 TON		
0037	1839140000-E	661	ULTRA-THIN BONDED WEARING COURSE	290 TON		
0038	1891000000-E	SP	GENERIC PAVING ITEM FINE MILLING	8,260 SY		
0039	2022000000-E	815	SUBDRAIN EXCAVATION	45 CY		
0040	2026000000-E	815	GEOTEXTILE FOR SUBSURFACE DRAINS	200 SY		
0041	2036000000-E	815	SUBDRAIN COARSE AGGREGATE	34 CY		
0042	2044000000-E	815	6" PERFORATED SUBDRAIN PIPE	200 LF		
0043	2070000000-N	815	SUBDRAIN PIPE OUTLET	1 EA		
0044	2077000000-E	815	6" OUTLET PIPE	6 LF		
0045	2209000000-E	838	ENDWALLS	11 CY		
0046	2220000000-E	838	REINFORCED ENDWALLS	12 CY		
0047	2275000000-E	SP	FLOWABLE FILL	185 CY		
0048	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	46 EA		
0049	2297000000-E	840	MASONRY DRAINAGE STRUCTURES	37 CY		
0050	2308000000-E	840	MASONRY DRAINAGE STRUCTURES	25 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0051	2354200000-N	840	FRAME WITH GRATE, STD 840.24	3 EA		
0052	2364000000-N	840	FRAME WITH TWO GRATES, STD 840.16	3 EA		
0053	2365000000-N	840	FRAME WITH TWO GRATES, STD 840.22	4 EA		
0054	2366000000-N	840	FRAME WITH TWO GRATES, STD 840.24	8 EA		
0055	2367000000-N	840	FRAME WITH TWO GRATES, STD 840.29	1 EA		
0056	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	13 EA		
0057	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	14 EA		
0058	2396000000-N	840	FRAME WITH COVER, STD 840.54	2 EA		
0059	2549000000-E	846	2'-6" CONCRETE CURB & GUTTER	4,610 LF		
0060	2591000000-E	848	4" CONCRETE SIDEWALK	1,540 SY		
0061	2605000000-N	848	CONCRETE CURB RAMPS	27 EA		
0062	2655000000-E	852	5" MONOLITHIC CONCRETE ISLANDS (KEYED IN)	580 SY		
0063	3030000000-E	862	STEEL BEAM GUARDRAIL	500 LF		
0064	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	5 EA		
0065	3195000000-N	862	GUARDRAIL END UNITS, TYPE AT-1	1 EA		
0066	3215000000-N	862	GUARDRAIL ANCHOR UNITS, TYPE III	2 EA		
0067	3287000000-N	862	GUARDRAIL END UNITS, TYPE TL-3	2 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0068	3360000000-E	863	REMOVE EXISTING GUARDRAIL	465 LF		
0069	3389150000-N	862	TEMPORARY GUARDRAIL END UNITS, TYPE ***** (CAT-1)	1 EA		
0070	3389150000-N	862	TEMPORARY GUARDRAIL END UNITS, TYPE ***** (TL-3)	2 EA		
0071	3628000000-E	876	RIP RAP, CLASS I	275 TON		
0072	3649000000-E	876	RIP RAP, CLASS B	625 TON		
0073	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	3,975 SY		
0074	4048000000-E	902	REINFORCED CONCRETE SIGN FOUNDATIONS	1 CY		
0075	4054000000-E	902	PLAIN CONCRETE SIGN FOUNDATIONS	2 CY		
0076	4060000000-E	903	SUPPORTS, BREAKAWAY STEEL BEAM	1,282 LB		
0077	4066000000-E	903	SUPPORTS, SIMPLE STEEL BEAM	899 LB		
0078	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	909 LF		
0079	4096000000-N	904	SIGN ERECTION, TYPE D	1 EA		
0080	4102000000-N	904	SIGN ERECTION, TYPE E	47 EA		
0081	4108000000-N	904	SIGN ERECTION, TYPE F	4 EA		
0082	4110000000-N	904	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (A)	7 EA		
0083	4110000000-N	904	SIGN ERECTION, TYPE *** (GROUND MOUNTED) (B)	1 EA		

County: FORSYTH

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0084	4152000000-N	907	DISPOSAL OF SIGN SYSTEM, STEEL BEAM	1 EA		
0085	4155000000-N	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	42 EA		
0086	4360000000-N	SP	GENERIC SIGNING ITEM SUPPORTS, OMNI-DIRECTIONAL BREAKAWAY	8 EA		
0087	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	612 SF		
0088	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	350 SF		
0089	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	176 SF		
0090	4415000000-N	1115	FLASHING ARROW BOARD	4 EA		
0091	4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	6 EA		
0092	4423000000-N	SP	WORK ZONE DIGITAL SPEED LIMIT SIGNS	8 EA		
0093	4430000000-N	1130	DRUMS	186 EA		
0094	4434000000-N	1140	SEQUENTIAL FLASHING WARNING LIGHTS	30 EA		
0095	4445000000-E	1145	BARRICADES (TYPE III)	160 LF		
0096	4447000000-E	SP	PEDESTRIAN CHANNELIZING DEVICES	30 LF		
0097	4455000000-N	1150	FLAGGER	60 DAY		
0098	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	7 EA		
0099	4480000000-N	1165	TMA	4 EA		
0100	4485000000-E	1170	PORTABLE CONCRETE BARRIER	1,384 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0101	4490000000-E	1170	PORTABLE CONCRETE BARRIER (ANCHORED)	1,379 LF		
0102	4510000000-N	1190	LAW ENFORCEMENT	400 HR		
0103	4600000000-N	SP	GENERIC TRAFFIC CONTROL ITEM CONNECTED LANE CLOSURE SYSTEM	2 EA		
0104	4650000000-N	1251	TEMPORARY RAISED PAVEMENT MARKERS	170 EA		
0105	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	30,372 LF		
0106	4820000000-E	1205	PAINT PAVEMENT MARKING LINES (8")	2,481 LF		
0107	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	280 LF		
0108	4840000000-N	1205	PAINT PAVEMENT MARKING CHARACTER	24 EA		
0109	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	39 EA		
0110	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	10,000 LF		
0111	4860000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (8")	500 LF		
0112	4870000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (24")	100 LF		
0113	4875000000-N	1205	REMOVAL OF PAVEMENT MARKING SYMBOLS & CHARACTERS	20 EA		
0114	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM YIELD LINE INTEGRATED MULTIPOLYMER PAVEMENT MARKING (24", 90MILS)	60 LF		
0115	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM YIELD LINE PAINT PAVEMENT MARKING (24")	88 LF		
0116	4891000000-E	1205	GENERIC PAVEMENT MARKING ITEM INTEGRATED MULTIPOLYMER PAVEMENT MARKING LINES (24", 90 MILS)	150 LF		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0117	4891000000-E	1205	GENERIC PAVEMENT MARKING ITEM INTEGRATED MULTIPOLYMER PAVEMENT MARKING LINES (4", 90 MILS)	14,402.7 LF		
0118	4891000000-E	1205	GENERIC PAVEMENT MARKING ITEM INTEGRATED MULTIPOLYMER PAVEMENT MARKING LINES (8", 90 MILS)	4,864.1 LF		
0119	4892000000-N	1205	GENERIC PAVEMENT MARKING ITEM INTEGRATED MULTIPOLYMER PAVEMENT MARKING CHARACTERS (90 MILS)	4 EA		
0120	4892000000-N	1205	GENERIC PAVEMENT MARKING ITEM INTEGRATED MULTIPOLYMER PAVEMENT MARKING SYMBOLS (90 MILS)	46 EA		
0121	5255000000-N	1413	PORTABLE LIGHTING	Lump Sum	L.S.	
0122	6000000000-E	1605	TEMPORARY SILT FENCE	9,725 LF		
0123	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	780 TON		
0124	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	725 TON		
0125	6012000000-E	1610	SEDIMENT CONTROL STONE	965 TON		
0126	6015000000-E	1615	TEMPORARY MULCHING	18 ACR		
0127	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	1,000 LB		
0128	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEEDING	5 TON		
0129	6024000000-E	1622	TEMPORARY SLOPE DRAINS	200 LF		
0130	6029000000-E	SP	SAFETY FENCE	1,580 LF		
0131	6030000000-E	1630	SILT EXCAVATION	1,550 CY		
0132	6036000000-E	1631	MATTING FOR EROSION CONTROL	11,470 SY		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0133	6037000000-E	1629	COIR FIBER MAT	100 SY		
0134	6042000000-E	1632	1/4" HARDWARE CLOTH	1,430 LF		
0135	6070000000-N	1639	SPECIAL STILLING BASINS	8 EA		
0136	6071002000-E	1642	FLOCCULANT	225 LB		
0137	6071010000-E	1642	WATTLE	300 LF		
0138	6071013000-E	1642	WATTLE BARRIER	45 LF		
0139	6071030000-E	1640	COIR FIBER BAFFLE	60 LF		
0140	6084000000-E	1660	SEEDING & MULCHING	18 ACR		
0141	6087000000-E	1660	MOWING	9 ACR		
0142	6090000000-E	1661	SEED FOR REPAIR SEEDING	200 LB		
0143	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	0.5 TON		
0144	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	350 LB		
0145	6108000000-E	1665	FERTILIZER TOPDRESSING	10.5 TON		
0146	6111000000-E	SP	IMPERVIOUS DIKE	150 LF		
0147	6114500000-N	1667	SPECIALIZED HAND MOWING	10 MHR		
0148	6114800000-N	SP	MANUAL LITTER REMOVAL	7 MHR		
0149	6114900000-E	SP	LITTER DISPOSAL	1 TON		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0150	6117000000-N	1675	RESPONSE FOR EROSION CONTROL	75 EA		
0151	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	3 EA		
0152	6132000000-N	SP	GENERIC EROSION CONTROL ITEM PREFABRICATED CONCRETE WASHOUT	17 EA		
0153	7048500000-E	1705	PEDESTRIAN SIGNAL HEAD (16", 1 SECTION W/COUNTDOWN)	10 EA		
0154	7060000000-E	1705	SIGNAL CABLE	6,500 LF		
0155	7120000000-E	1705	VEHICLE SIGNAL HEAD (12", 3 SECTION)	29 EA		
0156	7132000000-E	1705	VEHICLE SIGNAL HEAD (12", 4 SECTION)	7 EA		
0157	7144000000-E	1705	VEHICLE SIGNAL HEAD (12", 5 SECTION)	1 EA		
0158	7264000000-E	1710	MESSENGER CABLE (3/8")	1,600 LF		
0159	7279000000-E	1715	TRACER WIRE	3,608.1 LF		
0160	7288000000-E	1715	PAVED TRENCHING (***** (1, 2"))	25 LF		
0161	7300000000-E	1715	UNPAVED TRENCHING (***** (1, 1"))	375 LF		
0162	7300000000-E	1715	UNPAVED TRENCHING (***** (1, 2"))	1,150.5 LF		
0163	7300000000-E	1715	UNPAVED TRENCHING (***** (2, 2"))	1,577.1 LF		
0164	7301000000-E	1715	DIRECTIONAL DRILL (***** (2, 2"))	2,057.5 LF		
0165	7312000000-N	1716	JUNCTION BOX (***** (SPECIAL OVERSIZED, 24" X 36" X 24"))	5 EA		
0166	7324000000-N	1716	JUNCTION BOX (STANDARD SIZE)	20 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0167	7348000000-N	1716	JUNCTION BOX (OVER-SIZED, HEAVY DUTY)	15 EA		
0168	7360000000-N	1720	WOOD POLE	6 EA		
0169	7372000000-N	1721	GUY ASSEMBLY	10 EA		
0170	7396000000-E	1722	1/2" RISER WITH WEATHERHEAD	6 EA		
0171	7408000000-E	1722	1" RISER WITH WEATHERHEAD	2 EA		
0172	7420000000-E	1722	2" RISER WITH WEATHERHEAD	5 EA		
0173	7432000000-E	1722	2" RISER WITH HEAT SHRINK TUBING	2 EA		
0174	7444000000-E	1725	INDUCTIVE LOOP SAWCUT	1,425 LF		
0175	7456100000-E	1726	LEAD-IN CABLE (14-2)	6,925 LF		
0176	7481000000-N	SP	SITE SURVEY	2 EA		
0177	7481200000-N	SP	LUMINAIRE ARM FOR VIDEO SYSTEM	6 EA		
0178	7481240000-N	SP	CAMERA WITHOUT INTERNAL LOOP EMULATOR PROCESSING UNIT	6 EA		
0179	7481260000-N	SP	EXTERNAL LOOP EMULATOR PROCESSING UNIT	2 EA		
0180	7516000000-E	1730	COMMUNICATIONS CABLE (** FIBER) (144)	3,142.1 LF		
0181	7516000000-E	1730	COMMUNICATIONS CABLE (** FIBER) (96)	3,142.1 LF		
0182	7528000000-E	1730	DROP CABLE	770 LF		
0183	7540000000-N	1731	SPLICE ENCLOSURE	5 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0184	7541000000-N	1731	MODIFY SPLICE ENCLOSURE	3 EA		
0185	7552000000-N	1731	INTERCONNECT CENTER	3 EA		
0186	7566000000-N	1733	DELINEATOR MARKER	20 EA		
0187	7575160000-E	1734	REMOVE EXISTING COMMUNICATIONS CABLE	4,705 LF		
0188	7575170000-E	1738	BACK PULL FIBER OPTIC CABLE	655 LF		
0189	7576000000-N	SP	METAL STRAIN SIGNAL POLE	4 EA		
0190	7588000000-N	SP	METAL POLE WITH SINGLE MAST ARM	1 EA		
0191	7590000000-N	SP	METAL POLE WITH DUAL MAST ARM	1 EA		
0192	7613000000-N	SP	SOIL TEST	7 EA		
0193	7614100000-E	SP	DRILLED PIER FOUNDATION	37.5 CY		
0194	7631000000-N	SP	MAST ARM WITH METAL POLE DESIGN	2 EA		
0195	7636000000-N	1745	SIGN FOR SIGNALS	26 EA		
0196	7642100000-N	1743	TYPE I POST WITH FOUNDATION	1 EA		
0197	7642200000-N	1743	TYPE II PEDESTAL WITH FOUNDATION	9 EA		
0198	7684000000-N	1750	SIGNAL CABINET FOUNDATION	2 EA		
0199	7744000000-N	1751	DETECTOR CARD (TYPE 170)	14 EA		
0200	7854000000-N	SP	CABINET WITHOUT CONTROLLER (*****) (BASE MOUNTED)	2 EA		

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Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0201	7901000000-N	1753	CABINET BASE EXTENDER	2 EA		
0202	7960000000-N	SP	METAL POLE FOUNDATION REMOVAL	3 EA		
0203	7972000000-N	SP	METAL POLE REMOVAL	3 EA		
0204	7980000000-N	SP	GENERIC SIGNAL ITEM 5/8" X 10' GROUNDING ELECTRODE	3 EA		
0205	7980000000-N	SP	GENERIC SIGNAL ITEM CCTV FIELD EQUIPMENT CABINET	1 EA		
0206	7980000000-N	SP	GENERIC SIGNAL ITEM CCTV METAL POLE (50')	1 EA		
0207	7980000000-N	SP	GENERIC SIGNAL ITEM DIGITAL CCTV CAMERA ASSEMBLY	1 EA		
0208	7980000000-N	SP	GENERIC SIGNAL ITEM EQUIPMENT CABINET DISCONNECT	1 EA		
0209	7980000000-N	SP	GENERIC SIGNAL ITEM ETHERNET EDGE SWITCH	1 EA		
0210	7980000000-N	SP	GENERIC SIGNAL ITEM INSTALL DEPARTMENT SUPPLIED 2070 CONTROLLER	2 EA		
0211	7980000000-N	SP	GENERIC SIGNAL ITEM MODIFY ELECTRICAL SERVICE	1 EA		
0212	7980000000-N	SP	GENERIC SIGNAL ITEM PORTABLE CCTV CAMERA ASSEMBLY	1 EA		
0213	7980000000-N	SP	GENERIC SIGNAL ITEM REMOVAL CCTV COMPONENTS	1 EA		
0214	7990000000-E	SP	GENERIC SIGNAL ITEM #4 SOLID BARE COPPER GROUNDING CONDUCTOR	30 LF		
0215	7990000000-E	SP	GENERIC SIGNAL ITEM 3-WIRE COPPER FEEDER CONDUCTORS	205 LF		
0216	7990000000-E	SP	GENERIC SIGNAL ITEM ETHERNET CABLE	50 LF		
0240	0331000000-E	SP	GENERIC DRAINAGE ITEM HOST PIPE GROUTING	5 CY		

County: FORSYTH

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0241	2473000000-N	SP	GENERIC DRAINAGE ITEM DE-WATERING	2 EA		
0242	2484000000-E	SP	GENERIC DRAINAGE ITEM 18" PIPE REHABILITATION CIPP LINER	89 LF		
0243	2484000000-E	SP	GENERIC DRAINAGE ITEM 48" PIPE REHABILITATION CIPP LINER	285 LF		
0244	2484000000-E	SP	GENERIC DRAINAGE ITEM PRE INSTALLATION INSPECTION	374 LF		
WALL ITEMS						
0217	8801000000-E	SP	MSE RETAINING WALL NO **** (1)	3,460 SF		
0218	8801000000-E	SP	MSE RETAINING WALL NO **** (2)	5,800 SF		
0219	8847000000-E	SP	GENERIC RETAINING WALL ITEM ARCHITECTURAL SURFACE TREATMENT	9,260 SF		
STRUCTURE ITEMS						
0220	8021000000-N	SP	REMOVAL OF EXISTING STRUCTURE AT STATION ***** (20+73.79 -L-)	Lump Sum	L.S.	
0221	8065000000-N	SP	ASBESTOS ASSESSMENT	Lump Sum	L.S.	
0222	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT NO ** AT STATION ***** (1, 20+73.79 -L-)	Lump Sum	L.S.	
0223	8121000000-N	412	UNCLASSIFIED STRUCTURE EXCAVATION AT STATION ***** (20+73.79 -L-)	Lump Sum	L.S.	
0224	8147000000-E	420	REINFORCED CONCRETE DECK SLAB	21,984 SF		
0225	8161000000-E	420	GROOVING BRIDGE FLOORS	21,498 SF		
0226	8182000000-E	420	CLASS A CONCRETE (BRIDGE)	490.7 CY		
0227	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ***** (20+73.79 -L-)	Lump Sum	L.S.	

County: FORSYTH

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0228	8217000000-E	425	REINFORCING STEEL (BRIDGE)	56,323 LB		
0229	8238000000-E	425	SPIRAL COLUMN REINFORCING STEEL (BRIDGE)	4,461 LB		
0230	8278000000-E	430	FIB *** PRESTRESSED CONCRETE GIRDERS (63")	2,811 LF		
0231	8328200000-E	450	PILE DRIVING EQUIPMENT SETUP FOR *** STEEL PILES (HP 12 X 53)	39 EA		
0232	8328200000-E	450	PILE DRIVING EQUIPMENT SETUP FOR *** STEEL PILES (HP 14 X 73)	40 EA		
0233	8364000000-E	450	HP 12 X 53 STEEL PILES	1,975 LF		
0234	8384000000-E	450	HP 14 X 73 STEEL PILES	1,200 LF		
0235	8475000000-E	460	TWO BAR METAL RAIL	458.06 LF		
0236	8517000000-E	460	1'-*** X ***** CONCRETE PARAPET (1'-2" X 3'-3 1/2")	474.4 LF		
0237	8531000000-E	462	4" SLOPE PROTECTION	56 SY		
0238	8657000000-N	430	ELASTOMERIC BEARINGS	Lump Sum	L.S.	
0239	8860000000-N	SP	GENERIC STRUCTURE ITEM STRIP SEAL EXPANSION JOINTS	Lump Sum	L.S.	

1034/Jun10/Q355554.86/D1212518725000/E244

Total Amount Of Bid For Entire Project :

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION		OFFSET		STRUCTURE NUMBER		TOP ELEVATION		INVERT ELEVATION		INVERT ELEVATION		S. MINIMUM REQUIRED SLOPE	Alternate Pipe (RCP, CSP, CAAP, HDPE, or PVC)								R. C. PIPE CLASS III								R. C. PIPE CLASS IV								DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PPP	DO NOT USE PVC	12								15								18								24								30								36								42								48																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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