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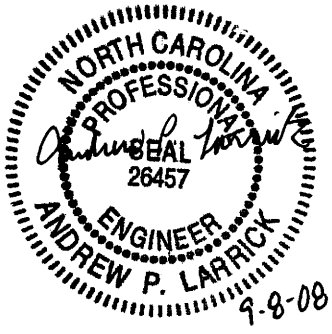
Project: B-2965
County: Edgecombe



PROJECT SPECIAL PROVISIONS
Utility Construction

I. GENERAL CONSTRUCTION REQUIREMENTS

Specifications:

The proposed utility construction shall meet the applicable requirements of the North Carolina Department of Transportation's "Standard Specifications for Roads and Structures" dated July 2006, and the following provisions.

The Contractor is herein forewarned as to the possibility of having to vary the depth of pipeline installation to achieve minimum clearance of existing or proposed utilities or storm drainage while maintaining the minimum cover specified (whether existing or proposed pipelines, conduits, cables, mains, and storm drainage are shown on the plans or not).

Water mains shall be laid at least 10 feet horizontally from existing or proposed sanitary sewers. Where the minimum horizontal separation between water and sewer mains cannot be achieved, or where water and sewer lines cross, the top of the sewer line shall be at least 18 inches below the bottom of the water line. In cases where water lines must cross underneath sewer lines, both the water and sewer lines shall be constructed of ferrous pipe, and tested in accordance with state regulations. Minimum separation between proposed water mains and existing or proposed storm sewers shall be at least 18 inches.

The Contractor shall locate all existing water and sewer services and relocate, connect, or reconnect as directed by the Engineer. New water and sewer services shall be installed as indicated on the plans and/or as directed by the Engineer.

Payment for the cutting and plugging of existing water and sewer lines to be abandoned shall be considered incidental to other pay items in the contract.

"Valves" as noted on the plans shall be resilient-seat type valves conforming to ANSI/AWWA C509.

Owner and Owner's Requirements:

The existing water and sewer facilities belong to both the Town of Tarboro and the Town of Princeville. Existing telephone facilities are owned by Embarq. The Contractor shall provide access for the owner's representatives during all phases of

construction. The owners shall be notified two weeks prior to commencement of any work and one week prior to service interruption.

For work involving the Town of Tarboro's facilities, the Contractor shall contact the Town of Tarboro Public Works Department at (252) 641-4235.

For work involving the Town of Princeville's facilities, the Contractor shall contact the Town of Princeville at (252) 823-1057.

For work involving Embarq's facilities, the Contractor shall contact Rod Medlin with Embarq at (252) 413-7711.

It shall be the Contractor's responsibility to notify customers affected by necessary shut downs of the existing water system at least 24 hours in advance.

After the installed pipe, fittings, valves, hydrants, corporation stops, and end plugs are inserted and secured, the pipeline shall be subjected to a hydrostatic pressure of 200 PSI for 2 hours by pumping the section full of clean water using an approved pressure pump. Cross connection for flushing and chlorination shall be made by means of a temporary connection from the supply pipe with an approved backflow prevention device. Taps for the cross connection piping shall be made to the portion of the existing water main that will be removed from service. The proposed water main shall be laid to within one pipe length of the point of final connection prior to flushing and testing. All flushing and chlorination work shall be performed in accordance with AWWA C651-99. All fittings, valves, and backflow prevention devices required for chlorination and testing shall be incidental to the cost of the proposed pipe being tested.

Any cracked, damaged, or defective pipe, fittings, valves, hydrants, or other attachments discovered as a result of the pressure test, shall be removed and replaced with sound material. The tests shall be repeated until test results are satisfactory.

After the pressure test is complete, the Contractor shall make a leakage test. Such leakage test shall last at least 2 hours at a pressure of 200 PSI.

The pressure test and leakage test may be performed concurrently.

All valves on the lines being sterilized shall be opened and closed several times during the chlorination period. The pipeline shall then be flushed with clean water until the residual chlorine is reduced to 1.0 ppm or at the same level as in the existing water mains. Samples of water shall be taken at representative points along the pipeline by the Contractor in approved containers and submitted to a certified testing laboratory for bacterial and chlorine content.

Connections made to the existing water system for the purpose of loading and testing new water mains shall also be large enough to provide adequate flushing velocity. Water mains 12" and larger will also require a hydrant (temporary if one is not designated) for the purpose of flushing the water main. This shall be considered incidental to other pay items in the contract.

Existing water meters, fire hydrants, and related appurtenances which are removed from service shall become property of the Contractor, and the Contractor shall properly dispose of these items. This shall be considered incidental to other pay items in the contract.

Prior to testing water and sewer facilities, the Contractor shall notify the respective utility owners so they can witness tests performed on their water and sewer facilities. Test results shall be provided to the utility owners for any tests involving their respective facilities.

The respective utility owners shall be notified in advance of any interruption of water service with ample time to make arrangements. Interruption of water service on main lines shall be limited to a maximum of four (4) hours or as approved by the Engineer.

Sequence of Construction for Proposed Water System Improvements on Sheet UC-4:

1) Install proposed water meter vault and proposed permanent water lines at the north side of the bridge, test, and place into service.

2) Core-drill concrete end walls at each end of existing bridge, install temporary 10" water lines, make connections, and place into service.

3) The above work shall be completed prior to beginning construction of the proposed bridge.

4) After proposed bridge is constructed and permanent water line is installed on new bridge and tested, make final connections on each side of bridge, and place into service.

*Note: A total of three (3) shut downs of the existing water system shall be allowed for the purpose of making necessary tie-ins. Each of these shut-downs shall be limited to four (4) hours in duration, and shall be performed during periods of low water system demand, between the hours of 11:00 pm and 5:00 am. Shut-downs shall be coordinated with the Town of Tarboro and the Town of Princeville.

Utility Locations Shown on the Plans:

The location, size, and type of material of the existing utilities shown on the plans are from the best available information. The Contractor will be responsible for determining the exact location, size, and type of material of the existing facilities necessary for the construction of the proposed utilities and to avoid damage to existing utilities.

COMPENSATION:

No direct payment will be made for utility construction work required by the preceding provisions, which are general requirements applying to utility construction, and all of the requirements stated will be considered incidental work, paid for at the contract unit prices of the various utility items included in the contract.

The Contractor should refer to lump sum pay item descriptions for proposed water line, sewer force main, and telephone conduits that will be attached to the proposed bridge. These pay item descriptions and details for the proposed attachments can be found in the structure plans and special provisions.

1. 8-INCH WATER METER AND METER VAULT:

The water meter and vault shall be installed in accordance with the applicable utility provisions herein, as shown on the utility plans, and/or as directed by the Engineer.

The water meter shall be a horizontal turbine type meter, and shall be designed for a typical operating range of 30 gpm - 3,500 gpm, a typical low flow measuring capability of at least 18 gpm (95% accuracy), a maximum continuous operation flow of at least 3,500 gpm, and a working pressure of at least 150 psi. The meter shall be constructed so that all components are accessible without removing the housing from the line.

The register shall be permanently sealed and use magnetic drive design, and shall include a straight reading, odometer-type, totalization display, a 360° test circle with center sweep hand, and a low flow (leak) detector. The water meters shall register in U.S. gallons, and shall be fitted with an "Itron" remote read transmitter which is compatible with the Town of Tarboro's automatic meter reading system.

The water meter shall conform to AWWA C701. The water meter shall be fabricated from approved materials throughout. The maincase shall be cast bronze. The water meter shall have ANSI Class 150 standard flanged ends. The water meter assembly shall have been approved by the Engineer.

An 8" diameter external strainer shall be provided on the inlet side of the meter. The strainer shall be fabricated from steel with a fusion-bonded epoxy coating, and shall

be rated for a working pressure of at least 150 psi. The strainer's screen shall be non-corrosive 304 stainless steel, with 1/4" perforations, and shall be removable without having to remove the strainer housing from the line. The strainer housing shall also have a drain plug. The strainer housing shall have standard flanged ends matching the water meter.

The meter vault shall meet the requirements of Section 1000 of the Standard Specifications. The meter vault shall have been approved by the Engineer. The meter vault shall be placed as shown on the utility plans and as directed by the Engineer.

The water meter and meter vault, installed in accordance with the plans and provisions herein and accepted, will be measured and paid for at the contract unit price for each "8-Inch Water Meter and Meter Vault". Such price and payment will be full compensation for all materials, labor, installation, testing, backfilling, vault, access hatch, meter, strainer, piping, fittings, valves, and incidentals necessary to complete the work as required.

2. ABANDON WATER METER VAULT:

The water meter and vault shall be abandoned in accordance with the applicable utility provisions herein, as shown on the utility plans, and/or as directed by the Engineer.

All water meter vaults in the construction area that will be abandoned shall have all connecting pipe plugged, all existing water meters and equipment shall be removed, the top of the vault removed to an elevation of 2 feet below subgrade or below the spring line, and the vault filled with select earth material properly tamped. Any vault that will have the connecting water pipe filled with cement grout shall also be filled with cement grout to the top of main pipe openings, elevated pipe openings excepted. Vaults with connecting pipe that do not require filling with cement grout shall be plugged in a manner acceptable to the Engineer before the vault is filled in with earth material.

The Town of Tarboro shall have the option of keeping any water meters or equipment removed from the existing meter vault. After the Contractor removes the existing water meters and equipment from the meter vault, the Contractor shall allow the Town of Tarboro to identify any meters or equipment that the Town desires to keep, and it shall be the responsibility of the Town to remove these meters and/or equipment from the project. Any existing meters or equipment that the Town does not reclaim shall become the property of the Contractor, and shall be properly disposed of by the Contractor.

The quantity of abandoned water meter vaults broken down, filled in, and accepted will be measured and paid for at the contract unit price per each for "Abandon Water

Meter Vault". Such prices and payments will be full compensation for removal and disposal of interior piping, valves, and equipment, plugging pipe openings, breaking down concrete structures, excavation, backfilling, and incidentals necessary to complete the work as required.

3. TEMPORARY 10-INCH WATER LINE:

Temporary 10-Inch Water Line shall be installed in accordance with the applicable utility provisions herein, as shown on the utility plans and/or as directed by the Engineer. Ductile iron restrained joint water pipe shall be used.

Ductile iron restrained joint water pipe shall be of the thickness class and pressure rating shown on the utility plans and shall conform to ANSI A21.51 (AWWA C151). Push-on joints for such pipe shall be in accordance with ANSI A21.11 (AWWA C111). Pipe thickness shall be designed in accordance with ANSI A21.50 (AWWA C150) and based on laying conditions and internal pressures as stated on the plans.

Cement mortar lining and seal coating for pipe shall be in accordance with ANSI A21.4 (AWWA C104). Bituminous outside coating shall be in accordance with ANSI A21.51 (AWWA C151).

The design of the restrained joint shall utilize a welded full-circumference restraining ring on the spigot end of the pipe, in conjunction with a locking ring that is placed on the backside of the restraining ring to lock the joint into place after the spigot is inserted into the bell end of the pipe joint. The restrained joint shall provide a positive locking system that permits deflection of the joint after assembly while maintaining uniform load distribution, but prevents the joint from separating under pressure. The design of the restrained joint shall provide for quick and easy disassembly should the need arise.

All ductile iron restrained joint water pipe shall be installed in accordance with laying condition Type 2 as stated in ANSI A21.51 (AWWA C151) unless otherwise shown on the plans or directed by the Engineer.

Temporary 10-Inch Water Line, installed in accordance with the plans and provisions herein and accepted, will be paid for at the contract unit price per Lump Sum for, "Temporary 10-Inch Water Line". Such prices and payments will be full compensation for all materials, including pipe accessories, excavation, backfilling, labor, installation, core-drilling existing bridge end walls, pressure testing, sterilization, connections to existing/proposed water lines on each side of the bridge, and incidentals necessary to complete the work as required.

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PROJECT: B-2965
COUNTY: Edgecombe

PROJECT SPECIAL PROVISIONS
Utility

UTILITIES BY OTHERS:

General:

The following utility companies have facilities that will be in conflict with the construction of this project:

A. Edgecombe-Martin EMC – Power
B. Town of Tarboro – Power
C. Embarq – Telephone
D. Suddenlink Cable – CATV
E. Piedmont Natural Gas – Gas

The conflicting facilities of these concerns will be adjusted prior to the date of availability, unless otherwise noted, and are therefore listed in these special provisions for the benefit of the Contractor. All utility work listed herein will be done by the utility owners. All utilities are shown on the plans from the best available information. For utility relocations, see the Utilities By Others Plans.

The Contractor's attention is directed to Article 105-8 of the Standard Specifications.

Utilities Requiring Adjustment:

A) Edgecombe-Martin EMC – Power

1. Contact is Mr. Ernie James, Phone: (252) 823-2171.
2. See Utilities By Others Plans for details.

B) Town of Tarboro – Power

1. Contact is Mr. Buddy Harrison, Phone: (252) 641-4224.
2. See Utilities By Others Plans for details.

C) Embarq – Telephone

1. After proposed telephone conduits are installed on the proposed bridge, and underground telephone conduits are installed from each side of the bridge to their respective points of termination, Embarq will install telephone cables through these conduits. See Utility Construction Plans, Utilities By Others Plans, and Structure Utility Attachment Plans for details. The new cables must be installed and placed into service before the existing telephone conduits and cables can be removed from the existing bridge. Embarq shall be given two (2) weeks notice prior to when they can begin work, and four (4) weeks to complete their work.
2. Contact is Mr. Rod Medlin, Phone: (252) 413-7711.
3. See Utilities By Others Plans for details.

D) Suddenlink Cable - CATV

1. Contact is Mr. Nathan Barnhill, Phone: 252) 792-9182.
2. See Utilities By Others plans for details.

E) Piedmont Natural Gas

1. Existing gas lines shown on the plans shall be adjusted as necessary. Where adjustments are necessary, Piedmont Natural Gas shall be given three (3) weeks notice prior to when they can begin work, and two (2) weeks to complete their work.
2. Contact is Mr. Bobby Gooding.
   Office Phone: (252) 824-7320 ext. 2504; Cell Phone: (252) 343-1817.
3. See Utilities by Others plans for details.