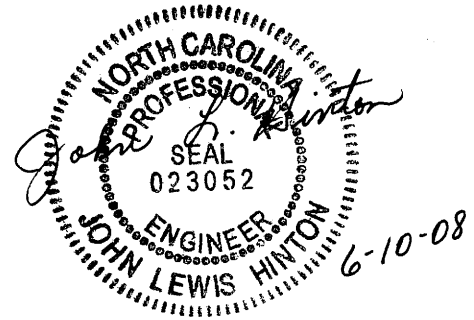




Project: B-4276 County: STANLY

PROJECT SPECIAL PROVISIONS
Utility Construction



I. GENERAL CONSTRUCTION REQUIREMENTS:

Specifications:

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

The Contractor shall be responsible for field verifying location, size, type and elevation of all underground utilities, as well as reconnecting any water and/or sanitary sewer services disturbed during construction, even if they are not shown on the plans. The water line shall be installed as to provide a minimum of 3 feet of coverage above the top of pipe from finished grade, unless shown differently on plans. The Contractor shall verify that all new water and sanitary sewer lines have ten (10') feet horizontal clearance between each other.

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

All gate valves 12" and smaller for the City of Albemarle shall be resilient-seat type valves conforming to ANSI/AWWA C-509. The direction of rotation of the handwheel or wrench nut to open the valve shall be to the left (counterclockwise) and be so marked.

Double strap tapping saddles shall be installed for all new/relocated service lines 1" and smaller in diameter.

All valve box covers and sanitary sewer manhole covers shall be cast to indicate "WATER" or "SEWER", as the case may be with the appropriate utility owner's special cover verbiage cast into the cover.

The Contractor shall submit his proposed method of anchoring to the Engineer for review and approval of restraining all pipe, pipe bends, valves and other related appurtenances. Anchoring will be the responsibility of the Contractor. Connecting to existing water mains may alter such lines to the extent that these

pipelines with existing pipe bends, valves and other related appurtenances may also require reaction blocking; this is also the responsibility of the Contractor.

Water lines and Valves:

The existing water lines belong to the the City of Albemarle. The Contractor shall provide access for the Owner's representatives to all phases of construction. Notify the Owners two weeks before commencement of any work and one week before service interruption. Interruption of water service on main lines shall be limited to a maximum of four (4) hours. Individual service connection interruptions shall be scheduled between regular working hours. Water services shall be restored within the same working day.

All valves shall be Resilient-Seat Gate Valves or Butterfly Valves unless otherwise indicated herein. All valves shall meet the specification as shown in the NCDOT Standard Specifications for Roads and Structures. All service lines shall be PE (Polyethylene), SDR 9.

Disinfecting shall be done in accordance with the AWWA C601-81 titled "Disinfecting Water Mains". Disinfecting shall be accomplished by use of a chlorine bearing compound of known chlorine content, prepared in solution form. The chlorine bearing compound shall be high test calcium hypochlorite (65-70% available chlorine). Compound shall be mixed with water until a proportion of one pound of compound is mixed with 7.5 gallons of water.

Solution shall be applied to the main through a rubber hose by gravity, siphonage, injection, or by a pump feeder. Solution shall be fed into the main at sufficient rate and carried throughout the main by water flow until a chlorine concentration of 50 parts per million is obtained throughout the main. Solution shall remain in the main long enough to destroy all non-spore formatting bacteria or a minimum of 24-hours. At the completion of the test, chlorine concentration shall be at least 25 parts per million.

After chlorination lines shall be flushed completely until water throughout the line is comparable to water throughout the system. Samples shall be taken from sampling taps on two consecutive days and must meet laboratory approval before putting into service. Should test samples fail, procedure must be repeated in accordance with ANSI/AWWA C601-81 or latest revision.

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 a period of 2 hours, by pumping the section full of clean water using an approved pressure pump.

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 and be approved by Owners. 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 chlorinating period. The pipeline shall then be flushed with clean water until the residual chlorine is reduced to less than 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 a certified testing laboratory and tested for chlorine residual and coliform bacteria.

The Contractor shall use only concrete thrust blocks for restraining purposes. The Contractor shall also use flare fittings for all service lines and not use compression fittings.

II. 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.

Owners and Owner's Requirements:

The existing water utilities belong to the City of Albemarle. The existing sewer utilities belong to the City of Albemarle. The Contractor shall provide access for the owner's representatives to all phases of construction. The owners shall be notified two weeks prior to commencement of any work and one week prior to service interruption.

Contacts:

City of Albemarle-Director of Public Utilities: Ernie Borders
(704) 984-9608

City of Albemarle - Fire Marshall: Brian Taylor (704) 984-9480

City of Albemarle - Fire Chief: Eddy McDaniel (704) 984-9477

City of Albemarle - Utility Services Coord.: Judy Redwine (704) 984-9609

City of ALBEMARLE

**Albemarle Water Resources Department
Approved Products Manufacturers
Water System Relocations for
The City of Albemarle
Water System**

- 1. Resilient Seat Gate Valves (6" through 12")
200 PSI Rating, AWWA C-500 and AWWA C-509:**
 - Mueller 2360 Series
 - Waterous

- 2. Butterfly Valves (16")**
 - Mueller
 - Waterous

- 3. Fire Hydrants:**
 - Mueller
 - Waterous

- 4. Corporation Stops:**
 - Mueller
 - Ford

- 5. PE Service Pipe:**
 - Polyethylene Pipe (PE) Water Tubing SDR 9

- 6. Water Meter (in Vault):**
 - Hersey
 - Badger
 - Neptune



Project: B-4276 County: STANLY

PROJECT SPECIAL PROVISIONS

Utilities by Others

GENERAL:

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

- A) **City of Albemarle Electric Department - Power (Distribution)**
Jerry Ford, P.E. (704) 523-6045
- B) **Windstream Concord Telephone – Telephone**
Jim Foley (704) 722-2822
- C) **Time Warner Cable – CATV (Fiber Optic)**
Kevin Davis (704) 378-2856
- D) **Stanly County – Water & Sewer**
Donna Davis (704) 986-3691

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 owner. All utilities are shown on the plans from the best available information.

The Contractor's attention is directed to Article 105-8 of the NCDOT "Standard Specifications For Roads and Structures" dated January 2006.

Utilities Requiring Adjustments:

- A) **City of Albemarle Electric Department - Power (Distribution)**
 - 1. All City of Albemarle Power work within the limits of this project shall be adjusted by the date of availability. See Utilities By Others Plans for details.
- B) **Windstream Concord Telephone - Telephone**
 - 1. All Windstream Telephone work within the limits of this project shall be adjusted by the date of availability. See Utilities By Others Plans for details.
- C) **Time Warner Cable - CATV**
 - 1. All Time Warner CATV work within the limits of this project shall be adjusted by the date of availability. See Utilities By Others Plans for details.

D) Stanly County - Water & Sewer

1. A new 6" force main sewer and 10" water line shall be installed as shown on the Utilities By Others plans by Stanly County. This work shall be completed by March 15, 2009. See Utilities By Others plans for details