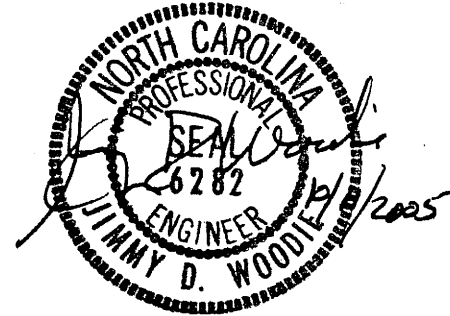


Project: U-3823 County: WILSON

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 January 2002, 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 ductile iron pipes shall be class 50 complying with the requirements of the City of Wilson Standard Specifications dated April 2005, unless otherwise indicated herein.

At approximately Station 100+85, 133 left, the Contractor shall be responsible for replacing the existing sanitary sewer manhole's concentric top with an eccentric top and rotating the opening away from the existing roadway.

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.

Water lines and Valves:

The existing utilities belong to the City of Wilson. The Contractor shall provide access for the Owner's representatives to all phases of construction. Notify the Owner's 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 six (6) 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 Ductile Iron Resilient Seat Gate Valves. All valves shall meet the specification as shown in the NCDOT Standard Specifications for Roads and Structures, Section 1036-7 and City of Wilson Standard Specifications dated April 2005.

Disinfecting and pressure testing shall be done in accordance with the current City of Wilson requirements and specifications.

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 be responsible for field verifying location, size, type and elevation of all underground utilities.

Gravity Sewer:

The City of Wilson shall be notified two weeks in advance before the Contractor begins work and one week in advance of any interruptions of sewer service with ample time to make arrangements. Contractor shall be aware that the sewer lines being relocated are inactive at this time.

All lines, manholes, and shall be installed at proper grade, alignment and location. All gravity sewer lines regardless of material will be tested by low

pressure air test and/or vacuum test. Services will be installed prior to the test and they will be tested along with the line. The line shall be pressurized to 4psi and stabilized. After stabilization the pressure will be lowered to 3.5psi and the inspector will determine the time it takes for the pressure to drop to 2.5psi. The allowable time of drop for a 12" diameter line is 1.8min/100ft of pipe. If the pressure remains between 3.5psi and 2.5psi for the test time, the lines are acceptable. If the line does not pass, check the installation of the lines and run the test again.

All manholes shall be tested after assembly and prior to backfilling using a vacuum tester manufactured by P.A. Glazier, MMVT inc. or approved equal by the City of Wilson. All lift holes shall be plugged with non-shrink grout. All pipes entering the manhole shall be plugged. All plugs shall be braced to keep plug from being drawn into manhole. The inside of the manhole shall be wet down with a soap and water solution which will visibly indicate areas of leakage after the test is performed. Test head shall be placed on or in the cone section and the seal inflated as per the manufacturer's specifications. A vacuum of 10 inches of mercury shall be drawn and the vacuum pump shut off. With the valve closed, the time it takes for the vacuum to drop to 9 inches shall be measured. The manhole shall pass if the time is greater than the values below:

Manhole Depth	Manhole Diameter		
	48"	60"	72"
10' or less	60sec	75sec	90sec
10' – 15'	75sec	90sec	105sec
Over 15'	90sec	105sec	120sec

If the manhole fails, necessary repairs shall be made using non-shrink grout while the vacuum is still being drawn than re-test until manhole is acceptable.

All lines shall be inspected for pipe deflection by pulling a mandrel through the lines. Deflection shall not exceed 5%. Mandrel must be 95% of the diameter of the pipe. Any appreciable infiltration will not be allowed with a maximum of 100 gallons per inch diameter per mile of pipe per 24 hours allowed.

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.

Owner and Owner's Requirements:

The existing water utilities belong to the City of Wilson. 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 Wilson – Water Resources: Barry Parks – 252-399-2374

City of Wilson – City Engineering: Gary Mills – 252-399-2465

1. Bedding Material:

Bedding material for utility lines shall be installed in accordance with the applicable utility provisions herein, as shown on the utility construction plans, and/or as directed by the Engineer.

Bedding material shall meet the requirements of Article 1016-3 of the Standard Specifications. Bedding material shall be installed in accordance with Articles 300-6 and 300-7 of the Standard Specifications.

Bedding material installed in accordance with the plans and provisions herein and accepted, will be measured and paid for at the contract unit price per ton for "Bedding Material, Utilities Class IV". Such prices and payments shall be full compensation for all materials, labor, equipment, compaction and shaping the bedding material in accordance with Article 300-4 of the Standard Specifications, and incidentals necessary to complete the work as required.



Project: U-3823 County: WILSON

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 Wilson – Natural Gas:
Joe Caster: 252-399-2431
- B) City of Wilson – Distribution Power:
George Cox: 252-399-2420
- C) City of Wilson – Water
Gary Mills: 252-399-2465
- D) Sprint – Telephone:
Eugene Scott: 252-246-1500
- E) Time Warner – CATV:
Alan Driver: 252-265-4170

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 2002.

Utilities Requiring Adjustments:

- A) City of Wilson – Natural Gas
 - 1. See Utilities By Others Plans for details.
- B) City of Wilson – Power (Distribution)
 - 1. City of Wilson will relocate their facilities with Time Warner CATV attached joint use to the proposed power poles of City of Wilson. All work shall be completed by May 1, 2006. See Utilities By Others Plans for details.
- C) City of Wilson – Water
 - 1. See Utilities By Others Plans for details.
- D) Sprint – Telephone
 - 1. All work shall be completed by May 1, 2006. See Utilities By Others Plans for details.
- E) Time Warner - CATV
 - 1. Time Warner CATV will relocate their facilities attached joint use to the City of Wilson proposed power poles. All work shall be completed by May 1, 2006. See Utilities by Others Plan for details.