

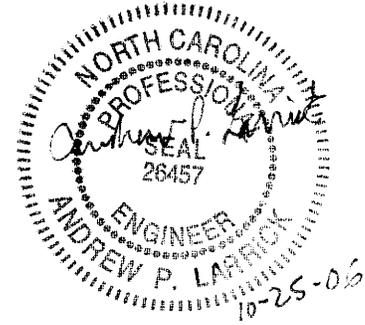
Prepared by:

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Project: U-3612
County: Guilford

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 January 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 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. Minimum separation between proposed water mains and existing or proposed storm sewers shall be at least 12 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.

"Gate 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 the City of Greensboro. 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. Contact City of Greensboro Service

Center at (336) 373-2033 or the City of Greensboro Water Resources Dept. Administration at (336) 373-2344.

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.

All work involving pipe restraint for connecting new water mains to the existing water mains shall be coordinated with the City of Greensboro water and sewer inspectors.

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.

City of Greensboro water and sewer inspectors shall witness all tests performed on their water and sewer facilities. All test results shall be provided to the City of Greensboro for their respective water and sewer facilities. Proposed water and sewer facilities shall be accepted by the City of Greensboro prior to being placed in service.

The 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.

Property owners who will be connected to the proposed sewer system shall also be notified two weeks prior to commencement of any work on their property and one week prior to service interruption.

After installation, proposed sewer lines shall be visually inspected using remote television cameras. The Contractor shall be responsible for performing these video inspections. City of Greensboro water and sewer inspectors shall be present during the video inspections, and a copy of the video tapes shall be given to the City of Greensboro for their records. Payment for video inspection of the sewer lines shall be incidental to other pay items in the contract.

Payment for Water Meters shall include the corporation stop, copper piping, meter box, and meter setter. Payment for this item does not include the actual water meter which will be installed at a later date by the City of Greensboro. Such prices and payments will be full compensation for all materials, excavation, labor, fittings, backfilling, and incidentals necessary to complete the work as required.

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.

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.

1. BREAK DOWN AND REBUILD EXISTING MANHOLE:

Manholes that will require rebuilding shall have the frame and cover removed, the manhole taper removed, and necessary manhole wall removed. Reconstruction shall include rebuilding manhole wall, manhole taper, and replacing frame and cover. All work shall meet the approval of the Engineer. Manhole construction shall conform to the applicable requirements of the Standard Specifications.

Payment for removing and replacing manhole frame and cover, removing and rebuilding manhole taper and removing and rebuilding manhole wall will be based on a unit price for each manhole.

The quantity of sewer manholes rebuilt and accepted will be measured and paid for at the contract unit price each for "Break Down and Rebuild Existing Manhole". Such price and payments will be full compensation for all labor, materials, breaking down manhole, new manhole construction, manhole pargetting, steps, excavation, backfilling, and incidentals necessary to complete the work as required.

2. BREAK DOWN AND FILL ABANDONED SEPTIC TANK

All existing septic tanks in the construction area that will be abandoned shall have all connecting sewer pipe plugged, the top of the tank removed to an elevation of 24" below subgrade or below the spring line, the sewage removed, and the septic tank filled with select earth material properly tamped. Septic tank pipes that do not require filling with cement grout shall be plugged in a manner acceptable to the Engineer before the septic tank is filled with earth material. All sewage shall be pumped out of the existing septic tank and properly disposed of as directed by the Engineer.

The quantity of abandoned septic tanks broken down, filled and abandoned will be measured and paid for at the contract unit price each for "Breakdown and Fill Abandoned Septic Tank". Such prices and payments will be full compensation for all materials, plugging pipe openings, breaking down septic tanks, excavation, backfilling, and incidentals necessary to complete the work as required.

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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. Duke Energy Corporation - Power
- C. BellSouth Telecommunications, Inc. - Telephone
- D. Piedmont Natural Gas - Gas
- E. Time Warner Cable - CATV

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) Duke Energy – Power

1. See Utilities By Others Plans for details.

B) BellSouth – Telephone

1. See Utilities By Others Plans for details.

C) Piedmont Natural Gas

1. Existing Piedmont Natural Gas lines shown on the plans shall be adjusted as necessary. If any adjustments are necessary, Piedmont Natural Gas shall be given a three (3) week notice prior to when they can begin work and seven days per location to complete their work. Contact person is Mike Stanley, telephone number: (336) 378-1831.
2. See Utilities by Others plans for details.

D) Time Warner - CATV

1. See Utilities By Others plans for details.