



Project: B-3854  
County: Haywood

**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.

Water mains shall be laid at least 10 feet laterally from existing or proposed sanitary sewers.

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).

The Contractor shall submit his proposed method of anchoring to the Engineer for review and approval prior to any applicable construction on the water mains and appurtenances. Such approval will not relieve the Contractor of his responsibility of properly anchoring the water mains. Tying into existing water mains may alter such lines to the extent that these pipelines with existing pipe bends, valves and related appurtenances may also require restrained retainer glands, or reaction backing; this shall also be the responsibility of the Contractor.

Owner and Owner's Requirements:

The existing utilities belong to Haywood County Water Department. 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.

The owners shall be notified in advance of any interruptions of water service with ample time to make arrangements. Interruption of water service on main lines shall be limited to a maximum of 8 hours unless approved by the Engineer.

## 1. HDPE WATER PIPE BY DIRECTIONAL BORE:

High Density Polyethylene (HDPE) Water Pipe to be installed by directional boring or drilling beneath Jonathan Creek. Install water pipe in accordance with the applicable utility provisions herein, as shown on the utility plans, and/or as directed by the Engineer.

HDPE Water Pipe is to be, SDR 9, 200 # WP and manufactured in accordance with ANSI /AWWA C906-90. HDPE Pipe materials shall be either PE 2406, PE 3406 or PE 3408 depending upon the required pressure class and dimension ratio (SDR) specified on the plans. Polyethylene plastic water pipe shall meet the requirements of the National Sanitation Foundation Seal of Approval for potable water.

Fuse onto each end of the HDPE water pipe a fitting that will connect to the PVC water pipe.

Drilling fluid to be bentonite slurry. Use admixtures suitable to the site conditions.

HDPE water pipe to be fused and tested prior to placement beneath the creek. Join pipe segments by cutting the ends square, heating and fusing under sufficient pressure to create a single length of pipe sufficient to complete installation in one continuous pulling operation. The pipe manufacturers listing of fusion parameters validated by appropriate testing and the parameters of the contractor's fusion system shall be submitted to the Resident Engineer prior to fusing of segments of HDPE water pipe into the pipe string. HDPE water pipe string to be tested to a hydrostatic pressure of 200 # WP in accordance with testing procedure outlined in section 1510 of the standard specifications prior to being placed beneath Jonathan Creek.

HDPE water pipe to be installed beneath Jonathan Creek by boring or drilling a small pilot hole along a parabolic arc beneath the creek. A minimum cover of 3 feet shall be maintained over the HDPE water pipe at all times. Enlarge the pilot hole by use of a reamer or reamers to the desired diameter. When the bored hole is of the diameter recommended by the pipe manufacturer for the HDPE water pipe, the contractor will pull the pipe string through the hole by the drill string. Cap the pipe string during the pulling operation. Pulling operation to incorporate a swivel connection to minimize torsional stress imposed upon the pipe string. Fully support the pipe string before and during pull back so that the pipe string will move freely without damage. HDPE Water Pipe installed by directional boring shall not be connected to existing pipe or fittings for one week from the time of installation to allow tensional stresses to relax. Contractor may elect to conduct reaming and pulling of the pipe string as one operation at the discretion of the engineer.

Drilling fluid to be re-circulated through use of a solids control system to remove spoil from drilling fluid surface returns. After cleaning, return the drilling fluid surface returns to the active system.

HDPE Water Pipe, installed in accordance with the plans and provisions herein and accepted, will be measured along the pipe from end to end, with no deductions for fittings or couplings, and paid for at the contract unit price per linear foot for " 8" HDPE Water Pipe, SDR 9 by Directional Bore ". Such prices and payments will be full compensation for furnishing all labor, equipment, material, couplings and fittings, reducers, excavation, installation, testing, backfilling, and incidentals necessary to complete the work as required.

08/23/2007

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## Utility

UTILITIES BY OTHERS:

## General:

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

- A) HAYWOOD EMC-POWER
- B) AT&T-TELEPHONE
- C) CAROLINA MOUNTAIN-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 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 Standard Specifications.

## Utilities Requiring Adjustment:

- A) Haywood EMC  
They will complete relocation of aerial power lines by the date of availability.  
See Utilities by Others Plans for details.
- B) AT&T of North Carolina  
They will relocate the telephone line and will complete by the date of availability.  
See Utilities By others plans for details.
- C) Carolina Mountain  
They will complete relocation of cable TV line by the date of availability.  
See Utilities By others plans for details.