



PROJECT SPECIAL PROVISIONS  
Utility Construction

Revise the *Standard Specifications for Roads and Structures*, July, 2006, as follows:

**Division 15**

**Utility Owners' Contact Information:**

**Page 15-1, Article 1500-2 Cooperation with the Utility Owner**, paragraph 2, add the following sentences:

There are multiple water and sewer lines on this project that belong to different utility companies. They are listed below with the appropriate contact person.

1. Harnett County owns a 20" water line, a portion of which is 24", on sheets UC-1, UC-2, and UC-3. Harnett County owns a 48" sewer line on sheet UC-3, and a 12" sewer line on sheets UC-3 and UC-4. The contact for Harnett County Public Utilities Department is Mr. Tim Payseur. He can be reached by telephone at (910) 893-7575, extension 3275.
2. The Town of Lillington owns an 8" force main sewer on sheets UC-2, UC-3, and UC-4, and all water and sewer lines on sheet UC-2 except for the 20" line belonging to the county. The contact person for the town for sewer is Mr. Randy Hazen, (910) 980-8086. The contact person for the town for water is Mr. Durwood Hudson, (910) 893-8086.

Before beginning work on any utility line owned by Harnett Count, the contractor shall contact Harnett County to schedule a preconstruction conference. The conference must be completed at least 2 days before beginning construction.

**Ductile Iron Sanitary Sewer Pipe:**

**Page 10-78, Subarticle 1034-4(A) Gravity Flow Sewer Pipe**, add the following paragraph:

Use pipe lined with a ceramic epoxy lining.

**48" Gravity Sewer Construction:**

Follow these additional requirements when constructing the 48" Gravity Sanitary Sewer.

All proposed manholes located on the 48" Gravity Sanitary Sewer shall use deflection bases designed for large diameter sewers. The risers shall be cylindrical, with eccentric cones.

Provide a design, to anchor the sewer and manholes to counteract buoyant forces on the manholes and pipe, to the Engineer for review and approval. The design shall be certified by a Licensed Engineer licensed to practice in North Carolina. The design shall neglect friction of the soil against the pipe wall or manholes and the weight of any soil over the pipe. The design shall place required ballast below the pipe. Any anchoring hardware and straps shall be stainless steel. For the manhole anchoring design, do not assume the addition of any soil beyond the existing ground elevation. Provide details for locking manhole sections together. Use a safety factor of 1.5 for this design.

All requirements in this section are incidental to the 48" Gravity Sanitary Sewer, Manhole, and Manhole Wall pay items.

**Sewer Bypass Pumping Requirements:**

All operations requiring blockage, rerouting, or bypass pumping of a sewer line shall be coordinated with the utility owner. The owner shall receive 48 hours notice of the scheduled start of any such operation. For Harnett County, the contact is Mr. Curtis Spears, HCDPU Collections Supervisor, (910) 893-7575 extension 4243.

Before beginning bypass pumping, the contractor shall provide plans to the Engineer for approval describing the operation, the equipment used, and the expected flows to be handled. For operations involving the 48" sewer owned by Harnett County, the contractor shall assume normal flow of 1.0 million gallons per day, with peak flows of 1.5 million gallons per day. Redundant pumps shall be provided. At least 48 hours of fuel for the operation shall be on-site and available for use at all times.

The bypass pumping operation shall be monitored at all times by a qualified operator. All problems and violations shall be reported immediately to the Engineer and to the utility owner.

All work performed and equipment and material provided in accordance with this provision is incidental to the construction of the utility line. No additional payment will be made.

**Force Sanitary Sewer Maintenance:**

The 6" Force Sanitary Sewer owned by the Town of Lillington may be in conflict with construction of the 72" drainage pipe at station 19+92 -NBL- and the removal of the culvert at station 20+36 -NBL-. The contractor shall maintain

service on this sewer during all phases of construction. If it is necessary to interrupt this main, the contractor shall coordinate with the Town of Lillington, and transport or dispose of the sewerage in a lawful manner. Replace any pipe removed during construction in kind and in the same alignment. Any work or materials required by this section is incidental to construction or removal of the drainage item. No additional payment will be made.

**Steel Pile Pier:**

Steel pile piers shall be furnished and installed as shown on the plans, as described in the provisions herein and in the contract and/or as directed by the Engineer.

Pier locations as shown on the plans shall be considered a guide only, with the final determination made at the time of construction by the Engineer. Pier spacing center to center will be shown on the plans, but all pier locations may be adjusted by the Engineer due to field conditions.

Piers will be placed parallel to the flow of the creek unless otherwise directed by the Engineer.

The work covered by this section consists of furnishing and driving piles, as indicated on the plans, the standard details, and as approved by the Engineer, in conformity with the specifications and to the bearing and penetration required.

Installation: General - The pilings shall be driven to obtain a bearing capacity of 10 tons based on the Standard Specifications and to a minimum depth of 10 feet in undisturbed earth below the bottom of the creek channel or existing ground when not adjacent to the creek. Steel pile piers shall be of the size and configuration noted on the utility construction plan sheets.

Piles Lengths: Full length piles shall be used where practicable and not more than 2 pieces (1 splice) of steel pile will be permitted in making up one full length pile unless approved by the Engineer. Splices, where necessary and approved by the Engineer, shall be made as to maintain the true alignment and position of the pile sections. Both pieces of a spliced pile shall be the same shape.

Splices should develop not less than 100 percent of the bending strength of the pile and not less than 100 percent of the axial load strength of the pile. All welded splices will be of butt weld type with back-up plates welded to the flanges and web of the steel piles. All welding of structural steel in the shop or in the field shall meet the requirements of the AWS and be done by qualified welders. Certification of welders and welds will be required by the Engineer in accordance with the AWS Code.

Painting Steel Piers: Unless otherwise directed, all steel in the piers shall have a coal tar epoxy coating consisting of two coats of coal tar epoxy as specified. All

surfaces of the steel to one foot below the disturbed ground shall receive the coating system and shall be thoroughly sand blasted prior to application to remove rust, dirt, grease, and other foreign material and to provide a clean surface to receive the coating. Each coat of paint shall be approved by the Engineer prior to application of the next coat. The total dry film thickness shall be at least 16 mils. Areas with coatings less than 16 mils shall be recoated as required to provide the specified film thickness.

Testing and Inspection: The Engineer will provide inspection and will determine bearing capacity of the driven piles. The Contractor shall submit the required hammer information as specified in the Standard Specifications to the Engineer.

Test piles which are not to be incorporated in the completed structure shall be removed to at least 2 feet below the surface of the ground or the stream bed, and the remaining hole backfilled with earth or other suitable material.

Pipe cradle shall be welded to steel plate as noted on the utility construction plan sheet details; spacing shall be sufficient to cradle pipe without lifting pipe from steel plate. Pipe cradle shall be welded to the steel piles. All welds shall be fillet welds and in conformance with the applicable AWS Structural Welding Code.

Straps and bolts shall be galvanized steel and straps shall be hot asphalt dipped. Straps shall be a 2" wide and ½" thick. Radius shall be ½ outside diameter of pipe.

Holes shall be drilled in strap and shall be 1/16" larger than bolt diameter. Bolts shall be ¾" diameter, 4" long, fully threaded, with flat washers top and bottom, and ¾" nuts. All steel shall be ASTM A36 steel.

Pipe cradles, straps, bolts, nuts and washers shall be considered incidental to steel pile piers.

Steel pile piers furnished and installed as required and accepted will be measured and paid for at the contract unit price per each for "Steel Pile Pier", such price and payments will be compensation in full for all materials, labor, equipment and incidentals necessary to complete the work.

**Pay Item**

Steel Pile Pier

**Pay Unit**

Each

**BREAK DOWN AND REBUILD 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 be approved by the Engineer.

Manhole construction shall also conform to the applicable requirements of Section 840 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 Manhole". Such price and payments will be full compensation for all labor, materials, breaking down manhole, new manhole construction, steps, excavation, backfilling, and incidentals necessary to complete the work as required.

<b>Pay Item</b>	<b>Pay Unit</b>
Break Down And Rebuild Manhole	Each

PROJECT: B-4138  
COUNTY: Harnett

PROJECT SPECIAL PROVISIONS

Utilities

UTILITY CONFLICTS:

General:

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

- A. Progress Energy
- B. CenturyLink
- C. Piedmont Natural Gas
- D. Time Warner Cable
- E. Harnett County

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.

The Contractor's attention is directed to Article 105.8 of the Standard Specifications.

Utilities Requiring Adjustment:

A. Progress Energy

1. See "Utilities By Others Plans" for utility conflicts. The poles at stations 35+64 -SBL- and 37+79 -SBL- will be placed before the availability of the project, and will remain in place during construction.
2. The contact for Progress Energy is Mr. J. B. Jones, telephone number (910) 206-1966.
3. All facilities will be relocated by August 31, 2010.

B. CenturyLink

1. See "Utilities By Others Plans" for utility conflicts.
2. The contact for CenturyLink is Mr. Kevin Godwin, telephone number (910) 366-2142.
3. After construction of proposed fill, bridge, and bridge conduit system, and before making any grade cuts in the vicinity of CenturyLink's existing conduit system, the contractor shall notify CenturyLink to begin work relocating their

PROJECT: B-4138

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cables. CenturyLink requires 4 weeks notice to begin work, and 9 weeks to complete work.

C. Piedmont Natural Gas

1. See "Utilities By Others Plans" for utility conflicts.
2. The contact for Piedmont Natural Gas is Mr. Bobby Gooding, telephone (919) 440-2380.
3. All facilities in the project limits will be abandoned by Date of Availability. All facilities will be relocated outside of the project limits.

D. Time Warner Cable

1. See "Utilities By Others Plans" for utility conflicts.
2. The contact for Time Warner Cable is Mr. Jack Crab, telephone number (910) 401-5034.
3. All facilities will be relocated by August 31, 2010.

E. Harnett County

1. See "Utilities By Others Plans" for utility conflicts.
2. The contact for Harnett County is Mr. Tim Payseur, telephone number (910) 893-7575, extension 3275.
3. All facilities will be relocated outside of project limits by Date of Availability.