



PROJECT SPECIAL PROVISIONS
Utility Construction

AM proposed utility construction shall meet the applicable requirements of the NC Department of Transportation's "Standard Specifications for Roads and Structures" dated January 2012. Division 15 of the Standard Specifications is revised as follows:

Page 15-1, Paragraph 4

Provide access for Department personnel and the owner's representatives to all phases of construction. Notify Department personnel and utility owner two weeks prior to commencement of any work and one week prior to service interruption. Keep utility owner's representatives informed of the work progress and provide opportunity for inspection of construction and testing. *The water and sewer lines on this project belong to Fayetteville PWC. The contact person for Fayetteville PWC is Mr. Joe Glass, PE and he can be reached by phone at (910)223-4740. Any work on these lines must be coordinated through the Engineer and the utility owner before beginning.*

Ductile iron water pipe shall be of the thickness and pressure rating class shown on the utility plans and shall conform to ANSI A21.51 (AWWA C151). Pipe shall be either mechanical joint or push-on-joint and installed with rubber gaskets in accordance with ANSI A21.11 (AWWA C111). All water pipe shall be provided and installed in accordance with Articles 1036 and 1510 of the Standard Specifications. All water pipe on this project shall be ductile iron unless otherwise specified on the utility construction plans.

Ductile iron sewer pipe shall meet the requirements of ANSI A21.51/AWWA C151. Nominal pipe laying length shall be 20 feet. Joints shall be mechanical joint or rubber ring gasket slip joint, each conforming to ANSA A21.11/AWWA C111. The pipe and fittings shall have an asphaltic exterior coating as specified in AWWA C151. Interior of the pipe joints and fittings shall be coated with ceramic epoxy to produce minimum dry film thickness of 40 mils.

All ductile iron sewer pipe shall be installed in accordance with laying condition Type 2 as stated in ANSI 21.51/AWWA C151, unless otherwise shown on the plans.

Ductile iron pipe fittings shall be installed in accordance with the applicable utility provisions herein, as shown on the utility plans and/or as directed by the Engineer.

Ductile iron bends and tees shall be in accordance with the applicable requirements of ANSI A21.10 (AWWA C110). Joints for such bends and tees shall be in accordance with ANSI A21.11 (AWWA C111) and be epoxy lined. All ductile iron pipe fittings shall have a minimum working pressure of 250 PSI.

Two-inch (2") water main pipe shall be manufactured using Grade 1 PVC compound material as defined in ASTM D-1784 and shall be SDR 21, pressure class 200 in accordance with ASTM D 2241. Fittings for 2" PVC shall be solvent weld Schedule 80 PVC and brass FIP x pack joint for PVC fittings shall be used to transition from PVC to brass. The pipe shall be plainly marked with the manufacturer's name, size material (PVC) type and grade or compound, NSF seal, pressure rating and reference to appropriate product standards.

Mechanical restraining systems shall not be used on PVC pipe.

For the purpose of identification of buried plastic or non-metallic pipes during future trenching or location, a continuous "detectable" identification wire shall be installed. The wire shall be a minimum 12 gauge, single strand, coated copper wire that is suitable for underground use. The wire shall be buried continuously along the pipe.

Valves on water mains that are being abandoned shall either be removed or closed and the top of the valve box removed and backfilled in accordance with NCDOT standards.

All one-inch water services being installed or relocated shall be provided with copper tubing. PE tubing or piping will not be used on this project. Copper water tubing shall be Type K, soft copper manufactured in accordance with ASTM B88. The minimum pressure rating for the copper water pipe shall be 655 PSI.

All water services being installed or relocated shall be one continuous run of pipe with no splices from the corporation stop to the meter. The water service does not include the water meter. Water meters shall be furnished and installed by PWC of Fayetteville.

Meter boxes shall be placed with the top of the meter box flush with finished grade of the project.

Relocation of water meters shall be done in accordance with NCDOT Standards and Specifications Section 1515 except that the Contractor shall use type K copper tubing. Relocated services shall be one continuous run of pipe with no splices from the corporation stop to the meter. Existing water meter shall be relocated and connected by Contractor. The Contractor shall also be responsible for re-connecting the meter to the customer's plumbing utilizing brass fittings.

COMPENSATION:

No direct payment will be made for 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.

ONE-INCH WATER SERVICE

One-inch water services are to be installed in accordance with PWC Standard Detail W.25 at the locations shown on the plans and/or as directed by the Engineer.

One-inch Water services shall consist of a new meter box, copper tubing, corporations, saddles, lock valves and applicable fittings. The quantity of new one-inch copper water services installed and accepted will be measured and paid for at the contract unit price per each for 'Generic Utility Item 1" Water Service'. Such price and payment will be full compensation for all labor, materials, equipment, excavation, installing, backfilling and incidentals necessary to complete the work as required.

TWO-INCH WATER SERVICE

Two-inch water services are to be installed in accordance with PWC Standard Details W.5 and W.15B at the locations shown on the plans and/or as directed by the Engineer.

Two-inch Water services shall consist of a new meter box, coppersetter with bypass, two-inch SDR21 pipe, tapping saddles, ball valves and applicable fittings.

The quantity of new two-inch SDR21 water services installed and accepted will be measured and paid for at the contract unit price per each for 'Generic Utility Item 2" Water Service'. Such price and payment will be full compensation for all labor, materials, equipment, excavation, installing, backfilling and incidentals necessary to complete the work as required.

FOUR-INCH WATER SERVICE

Four-inch water services are to be installed in accordance with PWC Standards at the locations shown on the plans and/or as directed by the Engineer.

Four-inch Water services shall consist of a new meter vault and bypass, 4" restrained joint ductile iron pipe, 4" gate valves, tees, and applicable fittings.

The quantity of new four-inch ductile iron water services installed and accepted will be measured and paid for at the contract unit price per each for 'Generic Utility Item 4" Water Service'. Such price and payment will be full compensation for all labor, materials, equipment, excavation, installing, backfilling and incidentals necessary to complete the work as required.

RESTRAINED JOINT DUCTILE IRON WATER LINE

Restrained Joint Ductile Iron Water Line shall be installed in accordance with the applicable utility provisions herein, as shown on the utility plans and/or as directed by the Engineer.

Restrained Joint Ductile Iron Water Line shall be pressure class as shown on the utility plans and shall conform to ANSI A21.51 (AWWA C151). All joints for such pipe shall be in accordance with ANSI A21.11 (AWWA C111). Pipe thickness shall be in accordance with ANSI A21.50 (AWWA C150) and based on laying conditions and internal pressures stated on the plans. Mega-lugs and field lock gaskets are acceptable means of restraint on water main sizes 12" and smaller.

Cement mortar lining and seal coating for pipe shall be in accordance with ANSI A21.4 (AWWA C104). Bituminous outside coating shall be in accordance with ANSI A21.51 (AWWA C151).

Restrained Joint Ductile Iron Water Line, 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 and valves, and paid for at the contract unit price per linear foot for, '____' Restrained Joint Ductile Iron Water Line". Such prices and payments will be full compensation for all materials, excavation, equipment, labor, installation, backfilling and incidentals necessary to complete the work as required.

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) Fayetteville PWC – Power (Distribution)
- B) CenturyLink – Telephone
- C) Time Warner - CATV
- D) Piedmont Natural Gas

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) Fayetteville PWC - Power (Distribution)
Contact Information: Mr. David Willis (910) 223-4518
 - 1) See Utilities by Others Plans.
 - 2) Fayetteville PWC will be completed with the relocations of their power distribution facilities by October 1, 2012.
- B) CenturyLink – Telephone
Contact Information: Mr. Kevin Godwin (910) 366-2142
 - 1) See Utilities by Others Plans.
 - 2) CenturyLink will be completed with the relocation of their buried telephone facilities by August 31, 2012.
- C) Time Warner – CATV
Contact Information: Mr. Tony Mlynski (910) 303-2266

- 1) See Utilities by Others Plans.
- 2) All aerial CATV lines will be in joint use with Fayetteville PWC. The contractor shall allow Time Warner two months after Fayetteville PWC has completed their power line relocations to install their proposed aerial CATV lines.

D) Piedmont Natural Gas

Contact Information: Mr. Bob Hayes (910) 321-2900

- 1) See Utilities by Others Plans.
- 2) All of Piedmont's gas lines throughout project will remain in place to be adjusted as necessary. The contractor shall give Piedmont Natural Gas two weeks notice and allow them two weeks to make the necessary adjustments at each conflict location.

NOTE: All other utilities will remain in place and will be adjusted as necessary.