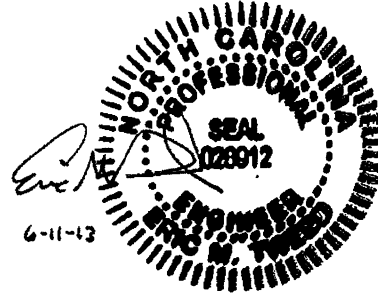
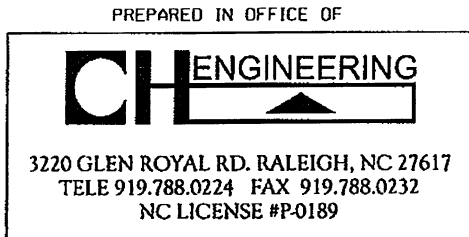


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County: Cabarrus

PROJECT SPECIAL PROVISIONS
Utility Construction



June 11, 2013

PROJECT SPECIAL PROVISIONS
Utility Construction

Revise the 2012 Standard Specifications as follows:

Utility Owner's Contact Information:

Page 15-1; Sub-article 1500-2 Cooperation with the Utility Owner, paragraph 2, add the following sentences:

The utility owner for the 12" water line crossing at MP 360+1248 is the City of Concord. The contact person is Sue Hyde and she can be reached by phone at (704) 920-5401.

The utility owner for the 30" sewer crossing at MP 361+0565 is the Water and Sewer Authority of Cabarrus County. The contact person is Tom Bach and he can be reached by phone at (704) 786-1783

Tunnel Liner Plate

- A. Tunnel liner plates shall be galvanized and bituminous coated and shall conform to current American Railway engineering and Maintenance of Way Association Specification Chapter 1, Part 4, Section 4.16.
- B. Tunnel liner plates are to be a minimum of 12 gage and shall be fabricated from structural quality, hot-rolled, carbon-steel sheets or plates conforming to ASTM Specification A 569.
- C. Extension of existing tunnel liner will be by open cut and tunnel liner will be assembled around existing carrier pipe. Provide #57 stone base beneath tunnel liner for

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support since typical compaction methods cannot be utilized. Only complete plates shall be installed.

Encasement Pipe

A. Encasement pipe shall be from hot rolled carbon steel meeting ASTM A252/ Grade 2 specifications with a yield strength of 35,000 psi. The encasement shall be as approved by NCR specifications. Diameter for extension is 24" and required thickness of casing 0.375" thick.

Replace 12" PVC with 12" DIP

A. Replacement of PVC water pipe will require taking section of pipe out of service using existing valves. Section of pipe between valves shall be pumped out to avoid excessive wetness in working trench. Upon completion of installation of new DIP, the line shall be refilled and chlorinated for the pressure and chlorination tests.

B. DIP shall meet ANSI A21.51/AWWA C151. Contractor may use restrained joint methods to fit pipe between existing vertical bend and existing DIP to be extended. If existing bends are found to be all by restrained joint methods and without concrete blocking, then the Contractor shall use restrained joint DIP.

C. Testing and Sterilization shall be performed according to Section 1510-3(B) of the NCDOT 2012 Standard Specifications except that:

D. **Page 15-6, Sub-article 1510-3 (B), Testing and Sterilization:**
change the allowable leakage formula to:

$$W = LD\sqrt{P} \div 148,000$$

E. **Page 15-6, Sub-article 1510-3 (B) Line 32, Testing and Sterilization, seventh paragraph:**

delete the words "may be performed concurrently or" and replace with "shall be performed".

Measurement and Payment:

Tunnel liner plate shall be measured and paid for by linear foot of "54" Tunnel Liner Plates". Payment will be inclusive of all materials, work, equipment and incidentals to successfully complete the work.



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PROJECT SPECIAL PROVISIONS
 Utility Construction

2013-APR-08

All proposed utility construction shall meet the applicable requirements (including, but not limited to: Division 15; Section 1034; and Section 1036) 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 2 of Article 1500-2

Provide access for Department personnel and the owner's representatives to all phases of construction. Notify Department personnel and the utility owner two weeks before commencement of any work and one week before service interruption. Keep utility owner's representatives informed of work progress and provide opportunity for inspection of construction and testing. *There is one water line on this project that belongs to the utility company listed below with their contact person.*

1. *Town of Harrisburg. The contact person for the Town of Harrisburg is Mr. Derek Slocum, and he can be reached by phone at 704-455-0728.*

Any work on these utility lines, especially the operation of any valves, must be coordinated through the Engineer and the utility owner before initiating said work.

Page 15-2, Paragraph 3 of Article 1500-7

Provide As-Built plans of the installed utility. The plans shall include notations of the size and type of material installed, coordinates of utility controls, and horizontal and vertical locations of the piping. Provide 2 copies to the Utility Owner and 2 copies to the Engineer. *Provide the Utility Owner with 2 copies of surveyed As-Builts of the utility system constructed.*

Page 15-6, Article 1510-3 (B), Line 21 and Leakage Formula

than the following amount when pressurized at 200 +/- 5 psi for 2 hours *in accordance with AWWA C605,*

$$W = LD(\sqrt{P}) \div 148,000$$

Page 15-6, Article 1510-3 (B), paragraph beginning with Line 28

Sterilize water lines according to section .1003 of the Rules Governing Public Water Supply Sections and AWWA 651. Provide certified bacteriological and contaminant test results from a state approved or state certified testing laboratory in accordance with

Project: P-5208C
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NCDENR requirements. Operate all valves and controls to assure thorough sterilization.

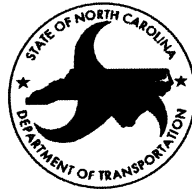
Page 15-6, Article 1510-3 (B), Line 36

according to AWWA C651 Sections 4.6 and 4.7 and section 4.4.3, the Continuous Feed Method. Chlorine solution shall start at 50 PPM and maintain a level of at least 10 PPM for the 24-hour process. If chlorine level falls below 10 PPM, then the disinfection needs to be repeated for another 24 hours.

**UTILITY CONSTRUCTION
PROJECT SPECIAL PROVISIONS
NCDOT PROJECT: P-5208G, WBS 50000.3.STR01T4A**

**NCRR/NS MAINLINE RAILROAD FROM
MILLBROOK ROAD (SR 1182, MP 365.5) TO NORTH
OF NEWELL-HICKORY GROVE ROAD (SR 2853, MP 370.0)**

**CABARRUS & MECKLENBURG COUNTIES
NCDOT DIVISION 10**



**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES AND ENCROACHMENTS ENGINEERING UNIT
1555 MAIL SERVICE CENTER
RALEIGH, NC 27699-1555**

April 12, 2013

Prepared By:

AECOM

**701 Corporate Center Drive, Suite 475
Raleigh, NC 27607-5238
PROJECT NO. 60268940**

PROJECT SPECIAL PROVISIONS**Utility Construction****GENERAL CONSTRUCTION REQUIREMENTS:**

The proposed utility construction shall meet the applicable requirements of the NC Department of Transportation's "Standard Specifications for Roads and Structures" dated January 2012, and the details as shown on the plans, as outlined in the following provisions, or as directed by the Engineer. All work performed shall also be in accordance with North Carolina Railroad Specifications NCR 101, 102 and 103.

Owner and Owner's Requirements:

The existing water and sewer mains to be relocated are owned by the Town of Harrisburg and Charlotte-Mecklenburg Utilities. The Contractor shall provide access for the owners' 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. Only authorized personnel of the owners shall operate valves in the existing water distribution system.

SPECIFICATIONS:**I. Tunnel Liner Plate:**

The structural steel tunnel liner plates shall be the lap seam type (as approved for use within railroad right-of-way) fabricated to permit assembly of a continuous steel support system. Tunnel liner plates shall be fabricated from hot rolled, carbon steel sheets or plates conforming to the specifications of ASTM A-569.

Liner plates shall be galvanized in accordance with AASHTO M167 and fully bituminous coated in accordance with AASHTO M140. All hardware necessary to the tunnel liner installation shall be hot-dip galvanized in accordance with ASTM A-153 prior to bituminous coating application. Hardware shall conform to ASTM specification A-307, Grade A.

The minimum mechanical properties of the flat steel plate before cold forming used for the tunnel liner shall be:

- a. Minimum Tensile Strength of Liner Plates: 42,000 psi.
- b. Minimum Yield Strength of Liner Plates: 28,000 psi
- c. Elongation, 2-inches = 30 percent
- d. Moment of inertia shall be 0.042 inches to the 4th power per inch of width for four flange 12 gage liner plate.

II. Split Encasement Pipe:

The split encasement pipe shall be (as approved for use within railroad right-of-way) fabricated to permit assembly of a continuous steel support system for the affected utility. Split encasement pipe shall be fabricated from hot rolled carbon Steel, meeting ASTM A252/ Grade 2 specifications with yield strength of 35,000 psi and a diameter and wall thickness as noted on the drawings.

MEASUREMENT AND PAYMENT:**I. Tunnel Liner Plate:**

The tunnel liner plate will be measured and paid for per linear foot of 60" tunnel liner plates installed. Payment will be inclusive of all work, materials, and equipment to include, but not limited to, excavation, stone, installation and backfill.

II. Split Encasement Pipe:

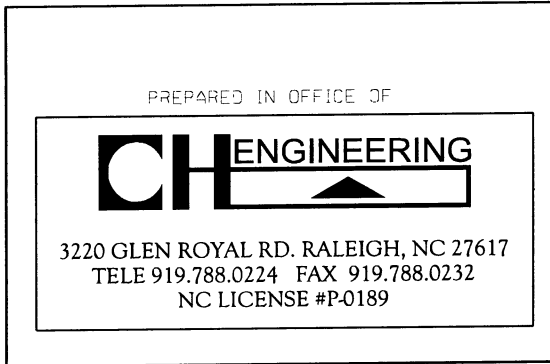
The split encasement pipe will be measured and paid for per linear foot of split encasement of specified diameter and thickness installed. Payment will be inclusive of all work, materials, and equipment to include, but not limited to, excavation, stone, installation, spiders, and backfill.

End of Utility Special Provisions.

Project: P-5208A

Cabarrus County:

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) Duke Energy - Aerial Electric Power - contact: Jim Carlson 704-395-4393

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:

See UbO plans

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) PSNC Energy
- B) Windstream
- C) PNG

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) PSNC Energy
Mr. Michael Coleman
800A Gaston Road
Gastonia, NC 28056
(704) 810-3210
Mcoleman2@scana.com

- Sheet 4 – Sta. 10326+50
PSNC Energy has a 4" steel line that will be abandoned by September 1, 2013

- B) Windstream
James Foley
187 Buffalo Ave.
Concord, NC 28025
(704) 722-2822
james.foley@windstream.com

- Sheet 9 – Sta. 10399+35
Windstream has a copper line that will be abandoned by October 1, 2013
- Sheet 12 – Sta. 10440+10
Windstream has a copper line that has been determined to not be in conflict with the proposed ditch cut.
- The contractor should notify Windstream before grading in the area.

Project: P-5208C

Cabarrus County:

PROJECT SPECIAL PROVISIONS

Utilities by Others

C) PNG

Robert Barrett

5601 Cannon Drive

Monroe, NC 28110

(704) 282-8477

Robert.barrett@piedmontng.com

- Sheet 16 – Sta. 10489+15
PNG has a 16” & 30” steel gas lines and power line that have been determined to not be in conflict with the proposed ditch cut.
- The contractor should notify PNG before grading in area.

**UTILITIES BY OTHERS
PROJECT SPECIAL PROVISIONS
NCDOT PROJECT: P-5208G, WBS 50000.3.STR01T4A**

**NCRR/NS MAINLINE RAILROAD FROM
MILLBROOK ROAD (SR 1182, MP 365.5) TO NORTH
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**CABARRUS & MECKLENBURG COUNTIES
NCDOT DIVISION 10**



**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES AND ENCROACHMENTS ENGINEERING UNIT
1555 MAIL SERVICE CENTER
RALEIGH, NC 27699-1555**

June 5, 2013

Prepared By:

AECOM

**701 Corporate Center Drive, Suite 475
Raleigh, NC 27607-5238
PROJECT NO. 60268940**

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County: Cabarrus/Mecklenburg
Project: P-5208G

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) Duke Energy – Power Distribution**
- B) Windstream Lexicom – Telecommunications**
- C) AT& T - Telecommunications**
- D) Piedmont Natural Gas – 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 or his Contractor. 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) Duke Energy – Power Distribution**
 - See Utilities by Others Plans for details. All work to be completed by date of availability.
 - Contact Mr. Jim Carlson @ 704-395-4393

B) Windstream Lexicom – Telecommunications

- See Utilities by Others Plans for details. All work to be completed by date of availability.
- Contact Mr. Jim Foley @ 704-722-2822 for Cabarrus Co.
- Contact Mr. Daniel Honeycutt @ 704-849-1358 for Mecklenburg Co.

C) AT&T – Telecommunications

- See Utilities by Others Plans for details. All work to be completed by date of availability.
- Contact Mr. Danny Carter @ 704-424-1427

D) Piedmont Natural Gas – Natural Gas

- See Utilities by Others Plans for details. All work to be completed by date of availability.
- Contact Mr. James Graham @ 704-363-9235 for Distribution
- Contact Mr. Aaron Weldon @ 704-731-4153 for Transmission