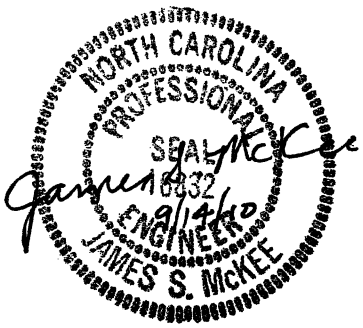

PROJECT SPECIAL PROVISIONS

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, the City of Raleigh Standard Water and Sewer Details of the City's Public Utilities Handbook dated 2005, and the following provisions:

Owner and Owner's Requirements:

The existing utilities belong to the City of Raleigh. The Contractor shall provide access for the owner's representatives to all phases of construction. The owner's shall be notified two weeks prior to commencement of any work and one week prior to service interruption. The Contractor must call the Public Utilities Construction Inspections at 250-2744 and give the location, project name, individual's name, company name, start date and indicate if it involves water relocations.

Interruption of water service on main lines shall be limited to a maximum of 4 hours unless approved by the Engineer.

Valve Operations:

No valve in the existing City of Raleigh system shall be operated without following the procedure outlined below. Failure to comply with these requirements shall be grounds for suspension of pipe-laying operations until written assurances can be obtained from a company official that such noncompliance will not occur again. The Contractor should be aware that the City of Raleigh regards violations of these requirements as justifying punitive measures.

Notification procedures are as follows:

a. The Contractor shall notify the City of Raleigh Public Utilities Department's Maintenance Division at 250-2737 in order to request the operation of any valves. At least forty-eight hours notice should be given to the Public Utilities Department, and at least twenty-four hours notice must be given to each consumer affected by a water cut-off. The Contractor is responsible for notifying the affected consumers. All valve operations shall be done by a Public Utilities Department valve crew or by the City's inspector for a particular project. It is illegal for anyone other than a City of Raleigh

employee to operate on an existing water main valve, unless accompanied by a City of Raleigh employee.

b. The Contractor shall provide the following information when calling for the Water Distribution Division valve operation:

(1)Name of person calling
(2)Name of company;
(3)Telephone number of company;
(4)Location of valve and map number if available;
(5)Reason for requesting operating and whether to be closed or open;
(6)Time valve to be opened or closed, and
(7)Approximate time water line to be out of service.

c. Each time a Contractor needs a valve operated, he/she shall again secure permission, following the steps outlined.

d. System valves shall be defined as any valve, which has main pressure against either gate face. Newly installed tapping valves and control valves to networks not yet accepted for service are considered as system valves. Valves within a network still under construction are not considered as system valves.

In case of an emergency, the Contractor shall be allowed to take such steps with the valves and hydrants as are necessary for the protection of life and property. Notification must be made after a break in a 4 inch or larger water main, or where ruptured smaller lines are causing property damage. After an emergency valve operation, the Contractor shall notify the Maintenance Division and give the details for that operation.

Hydrants shall not be operated without following the above procedures relative to requesting operating permission and reporting emergency use of hydrant.

Construction Water:

The City of Raleigh Public Utilities Department does not provide free or otherwise unmetered construction water for any construction project. Hydrant meters may only be moved with express written permission of the Public Utilities Department. In residential areas hydrant meters may only be used for the filling of swimming pools unless prior approval of the Public Utilities Department. Contractors are responsible for adequate construction water for their job sites in one of the following approved manners:

a. Apply for permanent water service connection at the Inspections Department Permit Office, 4th floor, Raleigh Municipal Building, 222 West Hargett Street, (890-3450). Sufficient lead-time (6 weeks) should be provided for all new service taps and all fees must be paid in full prior to the work order being authorized.

b. Apply in person with the Public Utilities Meters Division Office, 3304 Lake Woodard Drive, for rental of a hydrant meter. There are a limited number of these meters and they are reserved in advance by contacting the Meter Division (250-2797). A deposit is required along with a per month rental fee per account plus the cost of the water used, at the outside City rate. Hydrant meters are read in 100 cubic feet (ccf). There is a minimum rental fee and an administration fee for billing and closing an account. A service charge is charged when accounts are closed. Customers are responsible for notifying the Meters Division if the meter is not registering usage. The following information is required:

(1) Meter location;
(2) Billing address, telephone number, responsible party name, and federal tax id#;
(3) Location of hydrant;
(4) Water to be used for;
(5) Duration of use and frequency of meter reading,
(6) Meters must be brought to the Utilities Operations Center for monthly reading.

c. Upon application approval, the City shall install hydrant meters and approved backflow prevention Devices on the fire hydrant requested by the customer, but acceptable to the City, within three (3) business days of the application and deposit being received.

d. Hydrant meters accounts are billed monthly. Failure to report usage in a timely manner for billing or accounts that are not paid in full will result in the loss of water service and the closing of the account with the City.

e. Hydrant meters will only be set when the temperature is over 35 degrees. Damage to meters from cold weather or abuse will be charged to the customers.

f. Hydrant meters used for long term use shall be returned at the end of every one year block for inspection.

g. Upon completion of hydrant usage, deposits shall be refunded to customers within 30 days provided the following has occurred:

1 Hydrant meter and backflow device have been returned in good condition, with no excessive wear nor damage.

2. All outstanding water usage charges and rental charges for the meter and backflow device have been paid in full by the customer.

h. The cut off to apply for new accounts is 3:00 PM each business day.

i. It is a violation of the City Code to establish a direct connection to a fire hydrant to fill a tank or tank vehicle. It is also illegal to use a RP or Double detector check valve on a domestic or fireline service for temporary water service. Violations of the City Code will result in loss of service, fines, and other measures as specified by the code.

j. Continued use of a hydrant meter, when usage readings are not being registered is considered theft of City water and subject to civil penalties of $500.00/day. It is the responsibility of the customer to notify the Meters Division at 250-2737 when the meter is not registering/recording the water usage properly.

k. Hydrant meters and backflow assemblies approved for use in this program is the property of the City of Raleigh Utilities Department. Failure to return the hydrant meter and backflow preventor at the end of the rental period will be considered theft of City property and prosecuted to the fullest extent of the law.

Note: Individuals caught using water unmetered and/or unauthorized by the Public Utilities Department will be prosecuted to the fullest extent of the law.

Relocating Fire Hydrants:

The Contractor shall relocate fire hydrants where shown on the plans using the existing valve and tee connection.

Setting Hydrants:

Specific directions are required for the setting of all hydrants. In streets where paving is proposed in the near future, the Contractor will be given line and grade stakes for hydrants. It is mandatory for the Contractor to preserve these stakes for the inspector to verify that the hydrant was set correctly In areas where paving is not anticipated in the near future, hydrants shall be set according to the inspector's directions. When fire hydrants are installed behind guardrails the breakaway flange will be flush with top of the guardrail. In general, hydrants shall be located in a manner to provide complete accessibility and minimize possibility of damage from vehicles or injury to pedestrians.

Hydrant installation shall be as shown in details and will be rodded from the main to the hydrant with a maximum one rod coupling. When hydrants are used as blow-offs assemblies, the valves shall be rodded to a thrust block. Restraining rods and accessories shall be "hot dipped" galvanized.

Before a hydrant is set, all dirt and foreign matter shall be removed from the interior of the hydrant.

Hydrants shall be bagged, to indicate "out of service", until all testing is complete and the mains are placed in service. Bags shall be large enough to cover entire hydrant and shall be black in color. Bags shall be secured with duct tape at the base of the hydrant and shall be removed immediately after the hydrants are placed in service.

Interior Linings for Force Mains, Sewer Mains, Interceptors, and Sewer Service Pipe

All force mains, gravity interceptors, and fittings shall be lined with an amine cured novalac ceramic epoxy containing at least 20% by volume of ceramic quartz pigment. The lining material shall have a permeability rating of zero when tested in accordance with Method A - ASTM E96-66, Procedure A with test duration of 30 days. The lining shall be applied by a competent firm with a successful history of applying linings to the interior of ductile iron pipe and fittings. Within 8 hours of surface preparation, the interior of the pipe shall receive 40 mils nominal DFT. No lining shall take place when the substrate or ambient temperature is below 40° F. The surface shall also be dry and dust free. The lining shall not be used on the faces of the flanges (if applicable).

Due to the tolerances involved, the gasket area and spigot end up to 6-inches back from the end of the spigot end must be coated with 6 mils nominal, 10 mils maximum of ceramic epoxy lining material. The Joint Compound shall be applied by brush to ensure coverage. Care should be taken that the Joint Compound is smooth without excess buildup in the gasket seat or on the spigot ends. Coating of the gasket seat and spigot ends shall be done after the application of the lining.

The number of coats of lining material applied and the touch up and repair of the lining shall be as recommended by the manufacturer. The pipe manufacturer shall provide a certification attesting that the application meets or exceeds the requirements of these specifications.

Sealed As Built Plans:

Certified surveyed "As built" plans and profiles, sealed by a Professional Land Surveyor, shall be furnished to the Public Utilities Department, by the Engineer who inspects the utility installation, upon completion and acceptance of the public main by the City and completion of private systems. The surveyed "as built" plans shall have North Carolina Geodetic Survey grid coordinates to all meter boxes, valves, manholes, and mains along with the depth information. The water permit number information must also be included. Surveyed "As built" plans of installed utilities shall be furnished to the City prior to issuance of the letter of acceptance. All service stubs shall be shown on the surveyed "as built" plans.

Certified surveyed "As builts" should be provided in a digital format. The digital file of utilities needs to show the overall water and sewer system layout along with the property of subdivision boundaries and connecting manhole. The water distribution system drawings should show mains sizes, material, hydrants, valves, blow-off assemblies, and any other relevant information (blackflow preventers, air release valves, etc.). The digital file should be delivered in DXF format. If this is not possible, then, DWG, DGN, and SHP are also acceptable formats.

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 thee various utility items included in the contract.

The location, size, and type 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 material of the existing facilities necessary for the construction of the proposed utilities and to avoid damage to existing facilities.

Flowable Fill:

This work shall consist of furnishing and placing ready-mixed or volumetric mixed flowable fill for use in filling voids under pipe invert as specified in the plans or as directed by the Engineer

Flowable fill shall meet the requirements of Subarticles 340-2 and 1000-7 of the Standard Specifications.

Pipe invert subsurface voids shall be flat/smooth on the bottom of the pipe when construction is complete and shall be approved by the Engineer. Backfill shall not be placed on flowable fill prior to final set or hardening as determined by the Engineer.

The quantity of flowable fill placed and accepted will be measured and paid for at the contract unit price per cubic yard for "Flowable Fill". Such price and payment will be full compensation for all work covered by this special provision including but not limited to the mix design, furnishing, hauling, labor, placing the flowable fill, containing the flowable fill, and incidentals necessary to complete the work as required.

County: Wake
Project: R-2814B
Date: 10/13/10
12/20/10 (Rev)
2/11/11 (Rev)

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) Progress Energy-Transmission
B) Progress Energy – Distribution
C) Wake EMC – Transmission
D) Wake EMC – Distribution
E) Century Link – Telephone
F) AT&T – Telephone
G) Windstream – Telephone
H) Time Warner Cable – Cable Television
I) PSNC – Gas
J) Wake County Public School System/City of Raleigh

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.

A) Progress Energy – Transmission

1) Progress Energy will replace a tower that carries a 500kV transmission facility at approximate station –L- 48+00, 220' left of center line. This tower replacement will provide the necessary 40' vertical clearance over the proposed roadway.

2) Progress Energy will replace the tower at the location shown on the Utility by Others Plans beginning in April 2011 with a completion of May 16, 2011.

3) Contact Person for Progress Energy – Transmission is Mr. Jamie Loy at telephone (919) 546-6034.

B) Progress Energy – Distribution

1) Rolesville Road (-Y3-): Progress Energy has an aerial three phase line with joint-use attachments that will be relocated inside PUE on the west side of Rolesville Road.

Century Farm Road (-Y4-): Progress Energy has an aerial single phase line that will be relocated/adjusted within the existing right of way or Progress Energy easements.

Pulleytown Road (-Y5-): Progress Energy has an aerial single phase line with joint-use attachments that will be relocated within the proposed PUE on the west side of Pulleytown Road.

2) Progress Energy will relocate its electric distribution facilities within the project limits at the locations shown on the Utilities by Others Plans prior to project availability.

3) Contact for Progress Energy – Distribution is Mr. JB Jones at telephone (919) 481-6153.

C) Wake EMC – Transmission

1) Wake EMC will relocate three structures that carry a 69kV transmission line crossing at station –L- 274+00. This aerial relocation will provide a 38.4' minimum vertical clearance over the proposed roadway. Please note that box culverts will be constructed under this line.

2) Wake EMC will relocate their facilities at the location shown on the Utility by Others Plans beginning in April 2011 with a completion by May 16, 2011.

3) Contact Person for Wake EMC – Transmission is Mr. Tony Pearce at telephone (919) 821-1410.

D) Wake EMC - Distribution

1) US 401/Louisbury Road (-L-): Wake EMC has a service feed crossing the main line at L-23+00 will be adjusted (raised) as necessary.

Jonesville Road (-Y2-): Wake EMC has an aerial three phase power line that parallels the south side of Jonesville Road inside an existing easement that moves away from the roadway. Three poles are located inside the proposed construction limits and will be relocated to the east side of Jonesville Road.

US 401 Bypass (-L-)/ NC 96 (-Y7-): Wake EMC has aerial cross-country facilities paralleling new construction beginning at Station: 270+00 and tying into US 401 at Station 280+00 that will be relocated to serve Parcel 54. In addition, Wake EMC has an aerial three phase power line that parallels US 401 right of center line until reaching NC 96 where it continues left of center line beyond the project limits that will be relocated inside the proposed right of way, back of slope. Wake EMC's also has an aerial three phase power line paralleling NC 96 right of center line that will be relocated within the proposed PUE on the south side of NC 96.

2) Wake EMC-Distribution will relocate its electric distribution facilities within the project limits at the locations shown on the Utilities by Others Plans prior to project availability excluding the relocations along US 401 and NC 96 which has a completion date scheduled for April 8, 2011.

3) Contact Person for Wake EMC – Distribution is Mr. Tony Pearce at telephone (919) 821-1410.

E) CenturyLink – Telephone

1) Rolesville Road (-Y3-)/Century Farm Road (-Y4-): CenturyLink has an aerial 200 pair copper cable and a buried 200 pair cable paralleling the north side that will be replaced with one 400 pair cable buried inside the proposed right of way along the east side of Rolesville Road. In addition, CenturyLink has an existing 50 pair cable paralleling Century Farm Road that will remain in place and be adjusted as necessary. A proposed 50 pair cable will be installed along the realigned Century Farm Road as well.

Pulleytown Road (-Y5-): CenturyLink has a 50 pair and a 200 pair cable along the south side that will be abandoned and replaced with one 300 pair cable inside the proposed right of way paralleling Pulleytown.

US 401(-L-)/NC 96 (-Y7-): CenturyLink will replace a 100 pair cable paralleling US 401 from Station : 270+00 to 279+40 where they will begin to install a 25 pair cable to Station 297+00 tying into their existing facilities. From this point forward CenturyLink will adjust their facilities as necessary. Along NC 96, CenturyLink will abandon their 100 and 200 pair cables and install one 400 pair from Station 11+50 left to Station 17+00 and tie into their existing. A 25 pair cable will be replaced, in kind, from Station –L- 316+00 to the Station 322+00.

2) CenturyLink will relocate their facilities as shown on the Utility by Others Plans when the contractor is near completion of grading along the main line and each Y-line and request a three week notice and four weeks to complete the work at each location.

3) Contact Person for Century Link is Mr. Darrel Clemans at telephone (919) 554-5270.

F) AT&T Telephone

1) US 401 (-L-)/Louisbury Road: AT&T has existing buried facilities paralleling the east bound lane of US 401 that will be abandoned in place. A new installation paralleling the north bound lane, 3' inside existing right of way, will take place throughout the project limits. In addition, AT&T has a buried line paralleling Louisbury Road's north bound lane that will remain in place. The proposed installation will tie into the existing facilities at Station: L- 20+60 30' right of center line.

2) AT&T's relocation for R-2814B was previously submitted under the R-2814A project. AT&T construction is scheduled to begin in November 2010 as shown on the Utility by Others Plans and will be completed prior to the date of availability.

3) Contact Person for AT&T is Mr. Alva Nichols at telephone (919) 785-7758

G) Windstream – Telephone

1) US 401 (-L-): Windstream owns an aerial line that is attached to Wake EMC's power facilities that parallels the west side of US 401 from –L- 16+30 to –Y1-16+00 that will not be in conflict with the proposed construction.

2) Contact Person for Windstream is Mr. Stephen Bowman at telephone (919) 774-8292

H) Time Warner Cable – Cable Television

1) Louisbury Road: Time Warner Cable has an existing aerial line attached to Wake EMC's facilities that parallel US 401 left of centerline that will not be in conflict with the proposed construction. In addition, Time Warner Cable has one buried fiber on the south and one copper on the north of Louisbury that will remain in place until reaching –L- 18+00 where their existing facilities will be abandoned in place and a new fiber and copper will be bored under US 401 Bypass to an existing pole located at Station 18+00, 100' left of center line.

Jonesville Road (-Y2-): Time Warner Cable has a buried copper facility on the south side of Jonesville Road that will be abandoned in place with new facilities attached to the proposed Wake EMC pole line from beginning of the construction to Station 27+53 left of center. Time Warner will then cross Jonesville Road and tie into their existing facilities.

Rolesville Road (-Y3-)/Century Farm Road (-Y4-): Time Warner Cable has an aerial copper and fiber line attached to Progress Energy's pole line that will be relocated with Progress Energy. Time Warner Cable designed but did not install an aerial attachment to Progress Energy's pole line along Century Farm Road. If this line is installed prior to construction, TWC will follow Progress Energy's relocation design.

Pulleytown Road (-Y5-): Time Warner Cable has a buried copper and fiber line paralleling the south side of Pulleytown Road that will be abandoned in place with new facilities attached to the proposed Progress Energy pole line.

US 401 (-L-)/Creek Pine Drive: Time Warner Cable has a buried fiber paralleling US 401 from the beginning of the project limits to Creek Pine Drive (west side) that will remain in place and be adjusted as necessary. In addition, Time Warner has a copper facility that will be abandoned from approximate station: Y6- 14+90 to its ending point at approximate station: Y6- 17+20 where it crosses US 401 and ties into a pedestal. This line will be relocated inside the proposed right to approximate station 18+00 then crossing Y6 and existing US 401 to an existing pedestal.

2) Time Warner Cable will relocate their joint-use aerial and buried facilities at the locations shown on the Utilities by Others Plans prior to project availability.

3) Contact Person for Time Warner Cable is Mr. Tommy Roberts at telephone (919) 920-7409.

I) PSNC – Gas

1) Jonesville Road (-Y2-): PSNC has an 8" plastic gas main that ends just inside of the construction limits that will be adjusted to avoid the proposed culvert. PSNC will continue this 8" plastic gas main throughout the project limits along the west side of Jonesville Road.

   Rolesville Road (-Y3-): PSNC has an 8" plastic gas main that parallels Rolesville Road inside existing right of way. PSNC plans to relocate their existing facilities five feet inside the proposed right of way along the east side.

2) PSNC will relocate their facilities at the locations shown on the Utilities by Others Plans prior to project availability with exception to the proposed culvert on Jonesville Road where they will adjust as necessary.

3) Contact Person for PSNC is Mr. Chris Norcross at telephone (919) 367-2702.

J) Wake County Public School System/City of Raleigh

1) Rolesville Road (-Y3-): The City of Raleigh has an existing 12" ductile iron water line that ends just inside of the construction limits. The City and Wake County Public School System will tie into this existing line and continue a new 12" ductile iron water line throughout the project limits inside the proposed right of way along the east side.

2) Wake County Public School System and the City of Raleigh will install the water line as the location shown on the Utilities by Others Plans prior to project availability.

3) Contact person for Wake County Public School System is Mr. Donnie Parker (Project Director) at (919) 856-8273. Contact person for the City of Raleigh is Thomas Sharpe (City Inspector) at (919) 857-4540.