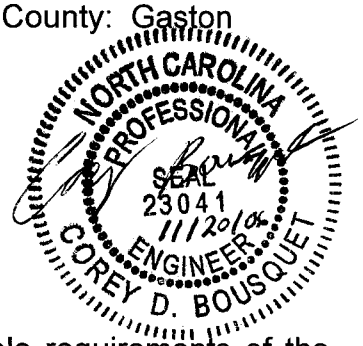
Project: U-2408
County: Gaston



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 January 2002, City of Gastonia Standard Specifications & Details and the following provisions.

Water mains shall be laid at least 3.05 m 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 force main sewer construction. Such approval will not relieve the Contractor of his responsibility of properly anchoring the force main sewers.

Owner and Owner's Requirements:

The existing utilities belong to the City of Gastonia. 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. Only authorized personnel of the City shall operate valves in the existing distribution system.

PIPE LAYING:

At the start of construction, any existing valves to be used as isolation valves to the new project lines, shall be visually inspected by the inspector, contractor, and as necessary by Utility Department representative. Any leaks shall be repaired or isolation construction method used.

Each joint of pipe shall be laid according to manufactures recommendations and in accordance with latest revision of AWWA C-600 for Ductile Iron and Cast Iron Pipe, and AWWA C-900 for PVC. The nominal allowable deflection for all the

pipes listed shall be 1/2 of the manufacturer's recommended maximum deflection per joint. The Engineer may vary from this policy when prudent.

Competent pipe layers shall be required for pipe installation.

The Contractor shall plug all pipe ends, at the end of each days work.

Where rock is encountered, the rock shall be excavated a minimum of 150 mm below the pipe grade and the cut shall be backfilled to grade with an approved earth material.

The proposed water and sewer lines were designed to be installed across the Y lines by open cut, but in extreme circumstances where traffic cannot be maintained along the Y lines steel encasement pipes by boring and jacking for 400mm, 600mm and 750mm were included in this contract. Sewer line A may need to be bored and jacked under NC 275.

Hydrostatic Tests

The Contractor shall provide all necessary equipment and tests.

After the pipe has been laid and partially backfilled and before any service taps have been made, the newly laid pipe and appurtenances shall be subject to a hydrostatic pressure and leakage test.

The test pressure shall be 1380 KPa. No test shall be made for at least 36 hours after the last concrete thrust or reaction block has been cast with standard cement. The duration of the test shall be two hours, unless otherwise directed by the City Engineer.

Each section of the pipeline shall be slowly filled with water and the specified test pressure shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Engineer. The Contractor shall furnish the pump, pipe connections, and all necessary apparatus. The Contractor shall also furnish the necessary personnel to administer the test under the inspection of the Engineer or his representative.

During the filling of the pipe and before the application of the specified test pressure, all air shall be expelled from the pipeline. Additional corporation stops/curb stops may be necessary to expel trapped air. During the test, all pipe, fittings, valves, hydrants, and couplings shall be carefully examined for leakage.

Pressure in the new water line shall be maintained within 34.5 KPa of the test pressure. The test pressure shall be maintained for at least two hours, after which the pressure of the line shall be measured and logged by Engineer. Any water added to maintain the test pressure shall be logged by the Engineer. If this pressure is less than the required test pressure, the Contractor shall add measured amounts of water until the line is brought back to the test pressure.

The amount of water added shall then be compared to the allowable leakage values from the Standard Specification. Any joint or section of pipe that is not within the allowable value shall be rejected and shall be replaced or repaired and the test shall then be repeated until the results are satisfactory.
NOTE: When testing against closed metal-seated valves, an additional leakage per closed valve or 0.0014 L/hr/mm of nominal valve size will be allowed.

Sterilization of Completed Lines

The Contractor, before any new pipe is placed into service, shall fill, disinfect, and have the line tested as per AWWA C-651, latest revision. The lines shall be filled slowly to eliminate any possibilities of backflow or contamination of the existing lines with the high CL_2 content water. Isolation valves on the system shall be covered with stone (or tagged) to restrain any accidental opening and consequently cross contamination. To fill, only one valve shall be open at any given time. If proper technique is not demonstrated by the Contractor, the Engineer may require him to isolate his new construction and fill and test with a cross-connection control device as approved by the Engineer, see AWWA C-651 optional Sec. 4.8. If isolation is required, then the subsequent final tie-in shall be a sanitary tie-in as described in AWWA C-651, Section 9. No additional compensation will be allowed for these isolation requirements.

The Contractor shall disinfect the line by the addition and thorough dispersion of a chlorine solution in concentrations sufficient to produce a chlorine residual of at least 100 ppm in the water throughout the distribution system. This solution must remain in the lines for at least 24 hours, after which the chlorine residual shall be at least 10 ppm. Then the lines are to be flushed by the Contractor and bacteriological samples taken by the City Inspector. No water shall be turned on for public use until the City gives sterilization approval.

NEW LINE SAMPLING PROCEDURES

A complete sample event consists of a preliminary and final sample. The Water Treatment Plant Laboratory should be advised 24 hours prior to the sampling as to the number of samples and approximate time the samples will be delivered. Sampling should be scheduled to allow delivery of samples to the laboratory no later than 2:30 p.m. Monday through Thursday. The newline analysis is not finalized until the bacteriological results are completed which requires 48-hour incubation period. Results warranting line approval cannot be determined before completion of all analysis. All Contractor inquires as to testing results will be referred to the Engineering Division

Pre-Test Requirements:
The line should be flushed at a velocity of 1.22m/sec for a sufficient time (depending on line size) to insure complete flushing prior to preliminary sampling, see flushing requirements in the table below.

DISINFECTION FLUSHING REQUIREMENTS

PIPE DIAMETERS IN MILLIMETERS	LITERS OF BLEACH PER 30.48 M OF PIPE	FLOWRATE NEEDED FOR 1.22 M/SECFLUSH
50mm	0.19 LITERS	148.30 Liters/Min.
150mm	1.85 LITERS	1334.32 Liters/Min
200mm	3.29 LITERS	2372.02 Liters/Min
250mm	5.15 LITERS	3706.34 Liters/Min
300mm	7.42 LITERS	5337.28 Liters/Min
400mm	13.17 LITERS	9488.10 Liters/Min

Preliminary sampling should be scheduled to prevent lines "sitting" over the weekend then obtaining final samples on Monday.

The following test procedures shall be incorporated in conjunction with the above:

1) A City Construction Inspector must be present to operate existing valves when flushing or filling a new line. Contractor shall give the Engineer two weeks notice prior to beginning any work or testing which will require operation of any valves. The Engineer will contact the City of Gastonia to schedule the City Inspector.

2) Liquid Bleach (industrial strength, 15% free CL2) shall be used as the disinfectant. Lines should not be disinfected with HTH due to problems with HTH not fully going into solution, resulting in high turbidities and elevated pH.

3) After flushing the disinfecting solution from new lines, the inspector shall take samples (for chemical analysis) from both the new water lines and the City maintained lines being used as a water source. After samples are collected for a chemical analysis the new line is to be left idle for a minimum of 24 hours. After the 24-hour period, samples shall again be collected from the new line and the City maintained lines for chemical and bacteriological analysis. These samples will be analyzed to determine if the new line has been adequately disinfected.

4) All chemical and bacteriological samples must be delivered to the City lab (by the inspector) no later than 2:30 p.m., Monday-Thursday.

5) All new lines shall be flushed at a velocity of 1.22 meters per second for sufficient time to discharge a minimum of 2 times the total volume of the entire line. Additional flushing may be required as deemed necessary by the field engineers.

The responsibilities of sample collection will be shared between Construction Inspections and the City Lab. Construction Inspections will coordinate and collect the initial set of samples for each segment of new water lines; the City Lab will collect the follow-up samples.

If the test results are not acceptable, the Contractor shall repeat sterilization and retest lines.

The City reserves the right to make any tests on the system by City employees as may be deemed necessary by the Engineer.

Temporary Plugs

The Contractor shall seal off all exposed ends of pipe before terminating work at anytime. At the end of each days work or at any time the pipe laying operation is stopped or delayed, the Contractor shall provide a watertight seal at all exposed ends of pipe or fittings.

Progress of Pipe Line Construction

The work shall proceed in a systematic manner so that a minimum of inconvenience will result to the public in the course of construction. It is therefore, necessary to confine operations to as small a length of work area per crew as is practical. Normally, the trenching equipment shall not be farther than 61 meters ahead of each pipe laying crew or such distance as necessary to provide maximum safety. Backfill the trench so no section of properly laid pipe is left uncovered longer than is absolutely necessary. The safety conditions of open excavations shall be the Contractor's responsibility. Completely backfill and cleanup after each section of pipe shall been inspected and approved.

Abandonment and Shutdown of Existing Operations of Utilities, Tie-ins, Rodding/Blocking Verification

The Contractor shall supply all necessary labor, equipment, and materials to plug and abandon in place the existing water distribution system as indicated on the project plans.

Continuous operation of the City's existing water system is of critical importance.

Connection to existing services or utilities, or other work that requires the temporary shutdown of any existing operations or utilities shall be planned in detail with appropriate scheduling of the work and coordinated with the Engineer. The approved scheduled for shutdown or restart shall be indicated on the Contractor's Progress Schedule, and advance notice shall be given in order that the customer and the Engineer may witness the shutdown, tie-in, and start-up.

The testing, acceptance, tap and mainline tie-overs shall be coordinated so as to minimize any disruptions in service.

All materials and equipment (including emergency equipment) necessary to expedite the tie-in shall be on hand prior to the shutdown of existing services or utilities.

The Contractor shall be responsible to verify any and all rodding/blocking prior to the removal of items including but not limited to plugs, caps, and fire hydrants. The valves isolating these appurtenances are to be rodded to the associated tee/deadman, or temporary blocking will be required prior to removal of the items so mentioned. When necessary or expedient, the Contractor shall provide such temporary blocking. Temporary blocking is limited in scope and should be used for only short periods, normally less than one (1) day.

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 the various utility items included in the contract.

1. BEDDING MATERIAL:

Bedding material for utility lines shall be installed in accordance with the applicable utility provisions herein, as shown on the utility construction plans, and/or as directed by the Engineer.

Bedding material shall meet the requirements of Article 1016-3 of the Standard Specifications. Bedding material shall be installed in accordance with Articles 300-6 and 300-7 of the Standard Specifications.

Bedding material installed in accordance with the plans and provisions herein and accepted, will be measured and paid for at the contract unit price per metric ton for "Bedding Material, Utilities Class _____". Such prices and payments shall be full compensation for all materials, labor, equipment, compaction, and shaping the bedding material in accordance with Article 300-4 of the Standard Specifications, and incidentals necessary to complete the work as required.

2. RELOCATE EXISTING 50MM WATER METER & METER VAULT:

The existing water meters with new meter vaults that are to be relocated shall be installed at the locations shown on the utility plans, and/or as directed by the Engineer.

The relocation of water meters shall consist of the removal and installation of the existing water meter, values, and bypass at the appropriate location with a new meter vault. Any pipe or fittings necessary to complete the work will be considered incidental.

All work shall be in accordance with the applicable plumbing codes, as shown on the plans, and as directed by the Engineer.

The vault shall be precast concrete and shall meet the requirements of Section 1077 of the Standard Specifications. The vault shall be HS-20 traffic bearing. Plans shall be submitted as required by Section 1077 with all calculations and drawings signed by a registered Professional Engineer. The vault shall be provided with double leaf access door. The access door and frame shall be aluminum with anchor flange, drain channels, and neoprene gasket. The door leaf shall be 1/4" thick diamond plate, HS-20 load rated, open to 90° and lock automatically in this position, and the door shall be equipped with recessed locking capability.

Vault steps shall be in accordance with Standard 840.66, ASTM C-478 and current OSHA regulations. In addition to the testing requirements of ASTM C-478 each step installed in precast vaults will be tested to resist a 1000 lbs. pullout. The vault manufacturer will furnish certification of the test, date of rest, and results.

After the existing water meter assemblies are relocated to new meter vaults, the existing meter vaults to be abandoned shall be removed and disposed of properly.

The water meter assembly with new meter vault, installed in accordance with plans and provisions herein and accepted, will be measured and paid for at the contract unit price per each for "Relocate Existing 50MM Water Meter & Meter Vault". Such prices and payments will be full compensation for all materials, relocation of existing water meter, new meter vault, equipment, excavation, pressure testing, labor, installation, backfilling, and incidentals necessary to complete the work as required.

3. REMOVE EXISTING WATER METER

The existing water meters shall be removed at the connection to the existing service piping and stockpiled in an area accessible by truck or as directed by the Engineer.

After the water meters are removed and stockpiled, the Contractor shall contact the owner and arrange for city maintenance forces to receive and remove the water meters from the jobsite.

The quantity of water meters removed, stockpiled, and accepted, will be measured and paid for at the contract unit price per each for "Remove Existing Water Meter". Such price and payment will be full compensation for all labor, excavation, removal, stockpiling, and incidentals necessary to complete the work as required.

4. FLAP VALVE

The flap valve shall be installed in accordance with the City of Gastonia specifications and details. The type flap valve shall meet the approval of the City of Gastonia prior to installation.

The flap valve shall have a cast iron body and cover. The seat, disc ring, hinge and cotter pins shall be brass. The flange connection shall conform to ANSI 125 lbs. template.

The flap valve, installed in accordance with the plans and provisions herein and accepted, will be paid for at the contract unit price per each for "150mm Flap Valve". Such prices and payments will be full compensation for furnishing all labor, equipment, materials, and incidentals to complete the work as required.

5. RELOCATE EXISTING SANITARY SEWER CLEAN-OUT

The work of this provision consists of furnishing and installing sanitary sewer clean-outs at the new Rights-of-Way line in accordance with the applicable utility provisions herein, as shown on the utility plans, and/or as directed by the Engineer, and to extend existing sewer services to the new clean-outs.

The quantity of sanitary sewer clean-outs furnished and installed as required and accepted will be measured and paid for at the contract unit price per each for "Relocate Existing Sanitary Sewer Clean-out". Such prices and payments will be compensation in full for all labor, excavation, Class B concrete, pipe, water tight plugs, sewer pipe fittings, transition couplings, backfilling, and incidentals necessary to complete the work.

6. CUT-IN SANITARY SEWER CLEAN-OUT

The work of this provision consists of furnishing and installing sanitary sewer clean-outs into existing sewer service lines at the new Rights-of-Way line in accordance with the applicable utility provisions herein, as shown on the utility plans, and/or as directed by the Engineer.

The quantity of sanitary sewer clean-outs furnished and installed as required and accepted will be measured and paid for at the contract unit price per each for "Cut-in Sanitary Sewer Clean-out". Such prices and payments will be compensation in full for all labor, excavation, Class B concrete, pipe, water tight plugs, sewer pipe fittings, transition couplings, backfilling, and incidentals necessary to complete the work.

7. TRANSITION COUPLING

The work of this provision consists of furnishing and installing transition couplings to join sanitary sewer pipe of different types together or for joining plain ends of sanitary sewer pipe when transitioning from new pipe to old pipe.

The quantity of transition couplings furnished and installed as required and accepted will be measured and paid for at the contract unit price per each for "___mm Transition Coupling (__ to __)." Such prices and payments will be compensation in full for all materials, labor, equipment, excavation and backfill, and incidentals necessary to complete the work.

8. LINESTOP ASSEMBLY:

Linestop Assembly shall be installed in accordance with the applicable utility provisions herein, as shown on the plans, and/or directed by the Engineer.

The Linestop assembly shall consist of 1-400mm tapping sleeve and the line stop equipment.

The linestop equipment shall be supplied by the contractor as a means to shut down one side of the 400mm water line to cut in a 90 degree bend.

Tapping sleeves placed on the pipe to remain in service shall be plugged and capped with a blind flange when no longer in service. Plugs and caps for special closure shall be rated for 1.38 Mpa.

Tapping sleeves shall be carbon steel and shall be pressure rated at 1.38Mpa. Tapping sleeves shall be split sleeve type. The outlet shall be 68kg flange. The tapping sleeve shall be coated with a bituminous or epoxy coating. The contractor shall verify the type material, size, etc. of the existing pipe to be tapped prior to ordering the sleeves.

The quantity of linestops, installed in accordance with the plans and provisions herein and accepted, will be measured and paid for at the contract unit price per each for "400mm Linestop Assembly". Such prices and payments will be full compensation for all materials, labor, excavations, installation, sterilization, pressure testing, with the necessary extension pieces, fittings, backfilling, and incidentals necessary to complete the work as required.

9. STEEL ENCASEMENT PIPE BY BORING AND JACK NOT IN SOIL:

Steel encasement pipe shall be installed in accordance with the applicable utility provisions herein, as shown on the utility plans, and/or as directed by the Engineer. Steel encasement pipe may be of the following types: - spiral welded steel pipe in accordance with ASTM A211; circular black or galvanized steel pipe in accordance with ASTM A53 or A589; high strength smooth wall steel casing in

accordance with API-5L, Grade B, or other grades; or other steel pipe of acceptable quality and meeting the approval of the Engineer.

Steel encasement pipe shall be installed with leak proof joints. The joints shall be butt-welded by a certified welder using approved techniques and materials.

Steel encasement pipe installed under roadway pavement by methods other than opening the pavement shall be by simultaneous boring and jacking. Larger pipe may be installed by pushing the casing pipe through a bored hole provided all voids around the casing are grouted with mortar at 0.345 MPa under the supervision of the Engineer.

Simultaneous boring and jacking of casing under pavement shall be as follows: The pipe shall be installed by a special rig designed to bore and push or jack the casing on a controlled grade and line under the pavement in a continuous operation. As the dry boring operation progresses, each new section of casing shall be butt-welded to the section previously jacked into place. The boring auger shall not be of a greater diameter than the outside diameter of the casing.

The carrier pipe shall be installed inside the encasement pipe by use of spiders to support the carrier pipe from deflection. Spiders shall be placed 600mm from each end of the casing and subsequent spiders spaced at 3.05m intervals. Spiders shall be sized to raise the carrier pipe bells above the encasement pipe and to restrict excessive radial movement. Spiders shall be securely attached to the carrier pipe and shall be approved by the Engineer.

Spiders shall consist of a two piece shell made from T-304 stainless steel of a minimum 14-gauge thickness. Each shell section shall have one bolt flange formed with ribs for added strength and one hook and eye section for added shear strength. Each connecting flange shall have a minimum of three 8mm T-304 stainless steel bolts. The shell shall be lined with a ribbed PVC extrusion with a retaining section that overlaps the edges of the shell and prevents slippage. Bearing surfaces (runners) shall be ultra high molecular weight polymer for abrasion resistance and a low coefficient of friction. The runners shall be attached to support structures (risers) at appropriate positions to properly support the carrier within the casing and to ease installation. The riser section and bolt heads shall be TIG welded for strength. Risers shall be made of T-304 stainless steel of a minimum of 10 gauge. All risers over 150mm in height shall be reinforced and MIG welded to the shell.

After the carrier pipe is installed and tested, the ends of the encasement pipe shall be plugged or capped with concrete, brick or other approved materials. The plug or cap shall have a 25mm diameter weep hole at the bottom to facilitate drainage of the encasement pipe.

Steel encasement pipe, installed in accordance with the plans and provisions herein and accepted, will be measured along the pipe from end to end and paid for at the contract unit price per linear meter for "___ mm Steel Encasement

Pipe, ___mm Thick, by Boring and Jacking Not In Soil". Such prices and payments will be full compensation for all materials, excavation, equipment, labor, installation, grouting, backfilling, and incidentals necessary to complete the work as required.

10. STEEL ENCASEMENT PIPE BY BORING AND JACK IN SOIL:

Steel encasement pipe shall be installed in accordance with the applicable utility provisions herein, as shown on the utility plans, and/or as directed by the Engineer. Steel encasement pipe may be of the following types: - spiral welded steel pipe in accordance with ASTM A211; circular black or galvanized steel pipe in accordance with ASTM A53 or A589; high strength smooth wall steel casing in accordance with API-5L, Grade B, or other grades; or other steel pipe of acceptable quality and meeting the approval of the Engineer.

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Simultaneous boring and jacking of casing under pavement shall be as follows: The pipe shall be installed by a special rig designed to bore and push or jack the casing on a controlled grade and line under the pavement in a continuous operation. As the dry boring operation progresses, each new section of casing shall be butt-welded to the section previously jacked into place. The boring auger shall not be of a greater diameter than the outside diameter of the casing.

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and bolt heads shall be TIG welded for strength. Risers shall be made of T-304 stainless steel of a minimum of 10 gauge. All risers over 150mm in height shall be reinforced and MIG welded to the shell.

After the carrier pipe is installed and tested, the ends of the encasement pipe shall be plugged or capped with concrete, brick or other approved materials. The plug or cap shall have a 25mm diameter weep hole at the bottom to facilitate drainage of the encasement pipe.

Steel encasement pipe, installed in accordance with the plans and provisions herein and accepted, will be measured along the pipe from end to end and paid for at the contract unit price per linear meter for "___ mm Steel Encasement Pipe, ___mm Thick, by Boring and Jacking In Soil". Such prices and payments will be full compensation for all materials, excavation, equipment, labor, installation, grouting, backfilling, and incidentals necessary to complete the work as required.

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Williams

Transcontinental Gas Pipe Line Corporation

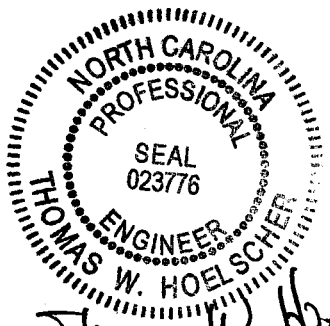
Job 1: Removal of Approximately 35 feet of 36-Inch, .406" W.T.
Casing from 30-Inch, Main Line "A" Pipeline between SS 683+23 and SS 683+58
and Repair Powercrete Coating Damaged During Casing Removal
at NC Highway 274 in Gaston County, North Carolina

Job 2: Removal of Approximately 35 feet of 42-Inch, .375" W.T.
Casing from 36-Inch, Main Line "B" Pipeline between SS 684+57 and SS 684+92
and Repair Powercrete Coating Damaged During Casing Removal
at NC Highway 274 in Gaston County, North Carolina

Job 3: Removal of Approximately 35 feet of 42-Inch, .562" W.T.
Casing from 36-Inch, Main Line "C" Pipeline between SS 687+30 and SS 687+65
and Recoat 36-Inch, Main Line "C" from SS 687+30 to 687+65
at NC Highway 274 in Gaston County, North Carolina

NC HWY 274 CASING REMOVAL

PIN 46400



Thomas W. Hoelscher
5/11/06

2005 CONSTRUCTION

TRANSCONTINENTAL GAS PIPE LINE CORPORATION

REMOVE PIPELINE CASINGS FOR 30" MAIN LINE "A", 36" MAIN LINE "B" AND 36" MAIN LINE "C" AT NC HIGHWAY 274

GASTON COUNTY, NORTH CAROLINA

JOB DESCRIPTION AND SPECIFICATIONS

INDEX

1.0 Scope of Work

The work to be performed by a Company-approved Contractor through the NC Department of Transportation's contract for this project, State Project 8.1811201 (U-2408), will consist of the removal of three sections of pipeline casing at Company's existing crossing of NC Highway 274 in Gaston County, North Carolina. The existing casing lengths are approximately as follows: 30" Main Line "A" (35 ft. of 36" casing), 36" Main Line "B" (35 ft. of 42" casing) and 42" Main Line "C" (35 ft. of 42" casing). Casing lengths provided are subject to verification of the portions of casings removed during the previous NCDOT Purchase Order Phase of this project. The casing removals will be performed in a manner that will expose only one pipeline at a time and will require recoating of one or more of the pipelines.

All pipeline construction activities will be performed in Company's existing Right of Way unless NCDOT has acquired temporary utility adjustment workspace. Contractor shall be responsible for all necessary landowner notifications and any permits required to perform the work. Contractor shall be aware that all of Company's high-pressure gas pipelines will be in service during the time of casing removal. All activity in the pipeline right of way will be subject to the requirements of WGP-Transco's Encroachment Specifications. (copy attached)

A Pre-Job Meeting will be held between Company, Contractor and NCDOT entities at a mutually acceptable location. Various topics will be discussed including, but not limited to, safety, environmental concerns, right of way and workspace, notifications to agencies and other general items.

1.1 Pipeline Permits

Company will require permits for the proposed casing removal and recoat operations. The permits are needed to comply with Department of Transportation – Office of Pipeline Safety and Federal Energy Regulatory Commission regulations. The permits include a Soil Erosion and Sediment Control Plan, an Environmental Impact Statement excerpt, a Cultural Resources study and a Threatened & Endangered Species report. Company will review NCDOT copies of these items and determine if they meet its requirements. Company will separately pursue areas of deficiency required to satisfy its permit obligations.

1.2 Pipeline Excavation

Contractor shall provide all labor, equipment, materials and supervision necessary to complete the following work:

A. Main Line "A" 36" Casing:

Excavate and expose 36" Main Line "A" casing from approximate Survey Station 683+23 to 683+58 and provide the ditch width necessary to accommodate welding and recoat operations. The minimum ditch clearances required will be 2 feet below the pipe and 3 feet to each side for a total ditch width of 9 feet at the bottom of ditch. Machine excavation will be permitted up to 1 foot of the pipeline casing. Hand excavation will be required within 1 foot of the casing.

B. **Main Line "B" 42" Casing:**

Excavate and expose 42" Main Line "B" casing from approximate Survey Station 684+57 to 684+92 and provide the ditch width necessary to accommodate welding and recoat operations. The minimum ditch clearances required will be 2 feet below the pipe and 3 feet to each side for a total ditch width of 9.5 feet at the bottom of ditch. Machine excavation will be permitted up to 1 foot of the pipeline casing. Hand excavation will be required within 1 foot of the casing.

C. **Main Line "C" 42" Casing:**

Excavate and expose 42" Main Line "C" casing from approximate Survey Station 687+30 to 687+65 and provide the ditch width necessary to accommodate welding and recoat operations. The minimum ditch clearances required will be 2 feet below the pipe and 3 feet to each side for a total ditch width of 9.5 feet at the bottom of ditch. Machine excavation will be permitted up to 1 foot of the pipeline casing. Hand excavation will be required within 1 foot of the casing.

Contractor will make every effort to avoid Company's existing cathodic protection facilities, part of which is a 1.5 inch diameter steel conduit with a 1/0 copper cable located 10' to 12' southeasterly of and approximately parallel to 36" Main Line "C". The conduit and cable is shown on the project drawings with the symbol "---C---". Company will locate and mark the cable prior to the start of excavation activity. Company Inspector will notify WGP-Transco Pipeline Integrity personnel in the event that the cable is exposed during excavation activities. Company will repair the cable should it be damaged during the course of work. Company will also remove the existing anode flex junction box (approx. Station 683+34) and pole-mounted rectifier (approx. Station 683+96) and store off site for Company installation prior to backfilling operations. Company will extend the existing 1/0 copper cable(s) to the new right of way limits for connection to the relocated junction box and rectifier identified above. Contractor will remove and dispose of the abandoned cathodic protection facilities as shown on project drawings.

All other details regarding excavation shall be governed by Specification Article 20.05.00.03, Onshore Pipeline Construction, Section 5 Ditching, Item 5.2 Existing Pipelines. Contractor shall be responsible for all One Call notifications before beginning any work. Existing pipelines shall be probed, located and staked by Company personnel prior to the start of any excavation. A Company pipeline inspector will be required during any excavation activity in the vicinity of Company's facilities.

1.3 Casing Removal

Contractor shall provide all labor, equipment, materials and supervision necessary to complete the following work:

All casings shall be removed by a qualified Contractor welder under the direct inspection of a Company welding inspector. The casings shall be removed by cutting with an oxygen-acetylene torch unless Company approves an alternate method prior to the work. Disposal of removed casing materials shall be the responsibility of the Contractor.

1.4 Pipeline Recoat

Contractor shall provide all labor, equipment, materials and supervision necessary to complete the following work:

A. 36" Main Line "C":

After removal of casing, Main Line "C" will be recoated per Specification Article 15.03.11.07 Pipeline Protective Coatings for Recoating In Situ (In the Ditch) Field Joints, Tie Ins and Repairs. The total project recoat section is to extend from Survey Stations 686+13 to 688+13 to ensure that future coating operations will not impact the new highway right of way. Verification of the portion of recoat conducted during the NCDOT Purchase Order Phase of this project will be required. It is estimated that 60 feet of pipeline can be blasted, coated and backfilled per specification standards with appropriate curing temperatures and a 10-hour work period. The existing coating is probably an asphalt-base coating with a small concentration of asbestos. A confirmation dig will be conducted by Company prior to the NCDOT's bidding of the project to identify the type of coating and to test for asbestos content. A Company coating inspector will be required on site during all recoat operations.

1.5 Pipeline Powercrete Coating Repair

Contractor shall provide all labor, equipment, materials and supervision necessary to complete the following work:

A. 30" Main Line "A" and 36" Main Line "B":

After removal of casings, Main Lines "A" and "B" will be inspected for damage to the Powercrete coating. Pieces broken or dislodged by the casing removal process shall be repaired per Specification Article 15.03.11.07 Pipeline Protective Coatings for Recoating In Situ (In the Ditch) Field Joints, Tie Ins and Repairs. Shielding of the Powercrete coating during casing removal is recommended to lessen the opportunity for damage. A Company coating inspector will be required on site during all coating repair operations.

1.6 As-Built Survey

Company shall provide all labor, equipment, materials and supervision necessary to complete the following work:

A. 30" Main Line "A" and 36" Main Lines "B" and "C":

Prior to backfilling, as-built horizontal and vertical survey data shall be recorded for each pipeline, especially 36" Main Line "C". Contractor shall ensure safe access to the pipelines for the gathering of survey data. The data shall be referenced to the Company project drawings with data discrepancies provided to Company in writing on the referenced drawings and/or in field survey books. The beginning and ending survey stations of the removed casings shall also be provided. Company will employ a contract survey party or use Company personnel to gather and record the appropriate survey data.

1.7 Pipeline Backfill

Contractor shall provide all labor, equipment, materials and supervision necessary to complete the following work:

A. <u>30" Main Line "A" and 36" Main Lines "B" and "C":</u>

After recoat operations, each excavated pipeline shall be backfilled per Specification Article 20.05.00.03, Onshore Pipeline Construction, Section 12 Padding, Backfill and Trench Breakers and Item 13.2 Open-Cut Crossings under Section 13 Road, Railroad and Foreign Line and Utility Crossings. Backfill requirements specific to the NCDOT shall be at the direction of NCDOT personnel or the Highway General Contractor, as authorized. A Company pipeline inspector will be required on site during all backfill operations.

1.8 Clean Up and Pipeline Markers

The applicable provisions of Article 20.05.00.03, Onshore Pipeline Construction, Section 18 Clean Up, Items 18.1 General and 18.2 Pipeline Markers shall be incorporated into the work as warranted. Contractor equipment, materials and construction debris shall be removed from the pipeline construction work area. New pipeline markers, which will be provided by Company, shall be installed on both sides of the widened NC Hwy. 274 at the highway right of way limits.

1.9 Equipment Weight Restrictions

During backfilling and roadway construction operations, equipment axle loads shall be monitored to ensure that individual pipeline combined internal and external stresses do not exceed 62% of SMYS (Specified Minimum Yield Stress). Contractor shall submit a list of equipment that will be used to work over the pipelines. Equipment stress analyses will be performed by Company to ensure the safe external loading of the pipelines.

1.10 Pipeline Inspection

Excavation, casing removal, recoat and backfill operations on Company's pipeline facilities shall be monitored by on-site Company inspection personnel any time work is being performed. Three inspectors will be required for excavation / backfill, welding and recoat operations respectively. Company inspectors shall monitor the work to ensure that it complies with the required Company drawings and specifications. Deficiencies in procedures or workmanship by the Contractor shall be communicated to the on-site NCDOT inspector who will immediately instruct the highway General Contractor or Contractor regarding stoppage of work.

1.11 Payment

The gas pipeline casings for 30" Main Line "A", 36" Main Line "B" and 36" Main Line "C" shall be removed in accordance with the plans and provisions herein and accepted, and will be measured and paid for by lump sum for "WGP-Transco / Removal of Pipeline Casings ". Such payment will be full compensation for the removal of pipeline casings, excavation, labor, pipeline recoating, pipeline coating repair, backfilling, compaction, cleanup, installation of pipeline markers and incidentals necessary to complete the work as required.

Further details of the above referenced casing removal and recoating work are provided in **Items 2.0** and **3.0**.

2.0 Drawings

Contractor shall refer to the following Company drawings for details regarding the scope of work:

A. **<u>30" Main Line "A":</u>**

1. Existing Plan and Profile, Dwg. No. 26-17-50 / 68340

2. 2001 Permit Drawing, Dwg. No. 26-07-50 / 68341-A

B. **<u>36" Main Line "B":</u>**

1. Existing Plan and Profile, Dwg. No. 26-17-50 / 68474

2. 2001 Permit Drawing, Dwg. No. 26-07-50 / 68416-B

C. **<u>36" Main Line "C":</u>**

1. Existing Plan and Profile, Dwg. No. 26-17-50 / 68749

D. **<u>Cathodic Protection Facilities</u>:**

1. Typical Excavations and Cable Location, Dwg. No.

2. As-Built Groundbed Addition, Dwg. No. 26-25-50 / B-68397

3. As-Built 1½" Conduit Crossing, Dwg. No. 26-25-50 / A-68208

3.0 Specifications

Contractor shall refer to the following Company specifications for details regarding the scope of work:

1. Article 20.05.00.03, Onshore Pipeline Construction

   a. Section 5 Ditching, Item 5.2 Existing Pipelines

   b. Section 12 Padding, Backfill and Trench Breakers

   c. Section 13 Road, Railroad and Foreign Line and Utility Crossings, Item 13.2 Open-Cut Crossings

   d. Section 18 Clean Up,
      Item 18.1 General (applicable provisions)
      Item 18.2 Pipeline Markers

2. Article 15.03.11.07 Pipeline Protective Coatings for Recoating In Situ (In the Ditch) Field Joints, Tie Ins and Repairs

   a. Sections 1 through 11

4.0 Company-Approved Contractor List

Flint Construction
272 Hurricane Shoals Road
Lawrenceville, GA 30046
Attn: James Eaves, (770) 963-0185

Sunland Construction
2532 Aymond Street
Eunice, LA 70535
Attn: Craig Meier, 800 299-6295 / (318) 546-0241

Bradford Brothers
11712 Statesville Road
Huntersville, NC 28078

Attn: Dee Bradford, (704) 875-1341

Hall Contracting Corp.
6415 Lakeview Road
Charlotte, NC 28269
Attn: Michael Hall, (704) 598-0818

Tepsco L.P.
421 Bayou Drive
Channelview, TX
Attn: Bobby Brown, (832) 323-0153

5.0 Company Personnel Contact List

Division Office – Charlottesville, VA

Ron Gray, Sr. Engineer	(434) 964-2125
Bill Deaton, Sr. Engineer	(434) 964-2104
Tom Hoelscher, Mgr. Ops. Technical Support	(434) 964-2102

District 150 – Mooresville, NC

Mark Doss, District Manager	(704) 892-7631
Kenny Brotherton, Asst. District Manager	(704) 892-7631
Dewain Tabor, R/W Specialist	(704) 892-7631

District 160 – Reidsville, NC

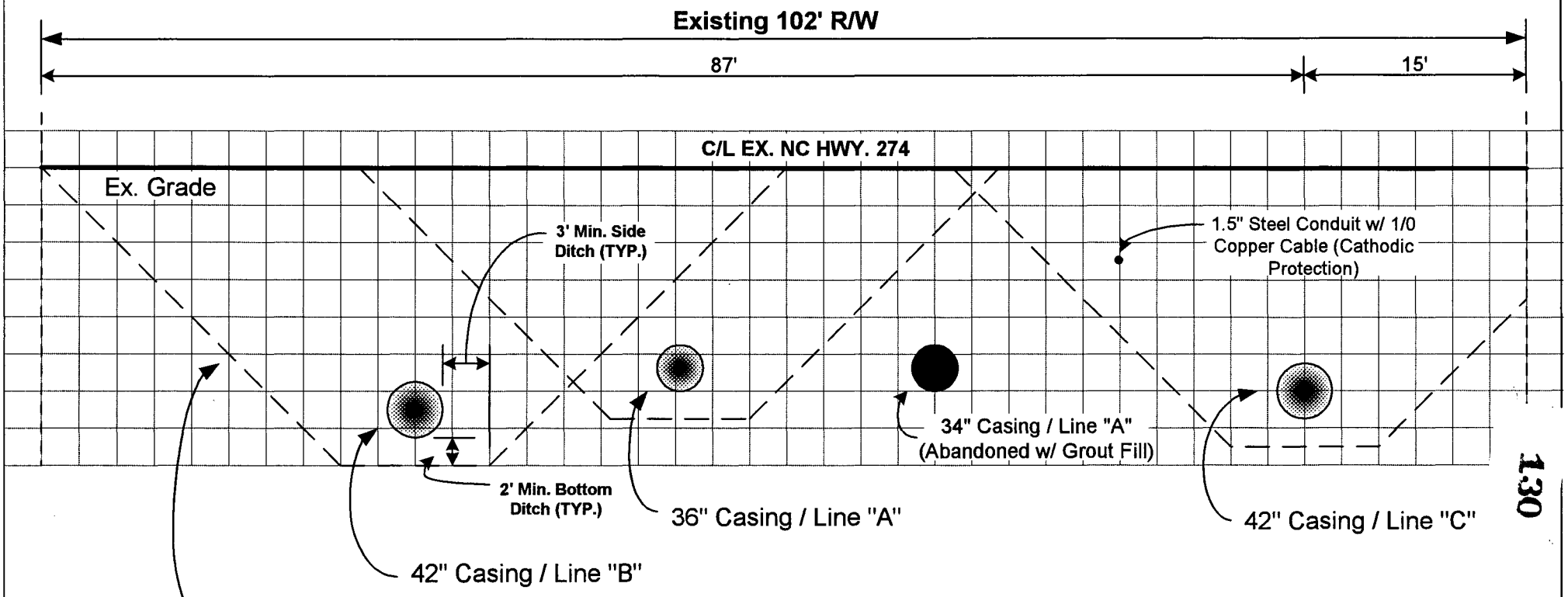
Kris Bonner, Sr. Specialist	(336) 951-2251

Questions:

Ron Gray – Project Leader
Bill Deaton – Pipeline Integrity / Coatings
Dewain Tabor – Pipeline Inspection
Kris Bonner – Welding / Casing Removal

NC HWY. 274 CASING REMOVAL

M.P. 1259.59, M/L "A" STATION 683+40



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SECTION

* (Approx. NCDOT Sta. 22+50)

APPROX. SCALE: 1" = 10'

* PROJECT STATION ESTIMATED FROM SHEET 12 / U-2408 (11/27/02)

NOTE:
PROFILE DATA SHOWN IS APPROXIMATED FROM PROJECT DRAWINGS AND IS SUBJECT TO FIELD VERIFICATION.

NO.	REVISION	DATE

TITLE

PROPOSED CASING REMOVAL
NC HWY. 274 EXPANSION
MAIN LINES "A", "B" AND "C" - DISTRICT 150
GASTON COUNTY, NORTH CAROLINA

APPROVED BY: Ronald E. Gray		DATE: 7/16/04
DRAWN BY: REG	CHECKED BY: REG	DATE: 7/16/04
PROJECT NO. (S): 46400	SCALE: 1" = 10'	FILENAME / DWG. NO.: 150HWY274.VSD

GASTON COUNTY, NORTH CAROLINA

656+27 BEGIN ANODEFLEX

656+72 ℄

669+85 SWITCH ANODEFLEX FROM MAIN LINES "A" & "B" TO "A" & "C" WITH #2 JUMPER OVER "A"

670+69 ℄
672+40 ANODEFLEX TO ANODEFLEX SPLICE
674+00 ANODEFLEX TO ANODEFLEX SPLICE
674+61 P.I. Δ 9°25' RT.

675+88 P.I. Δ 7°50' RT.

682+08 ℄ PVT. RD.
682+96 ANODEFLEX "500" TO " ANODEFLEX "1500"
682+33 POWER & TEL. LINE
683+16 ℄ S.R. 1384
683+34 R/W. & ANODEFLEX "1500".
#2 & 1/0 DUMMY IN JUNCTION BOX
683+68 ℄ STATE HWY. NO. 274 (GASTONIA HWY.)
683+89 TEL. CABLE
683+96 R/W

684+23 #2 TO ANODEFLEX "500"
684+73 R/W
685+15 ANODEFLEX "500" TO #2
685+27 TEL. LINE
685+84 ℄ NORFOLK SOUTHERN R.R.
686+19 TEL. CABLE (31' OVER)
686+26 POWER LINE
686+74 ℄ NORFOLK SOUTHERN SPUR
686+82 R/W
687+43 POWER LINE
687+99 ℄ DRIVE (30' W.)
689+78 P.I. Δ 8°18' LT.

690+56 FENCE

690+61 P.I. Δ 2°30' LT.

694+73 P.I. Δ 14°29' RT.

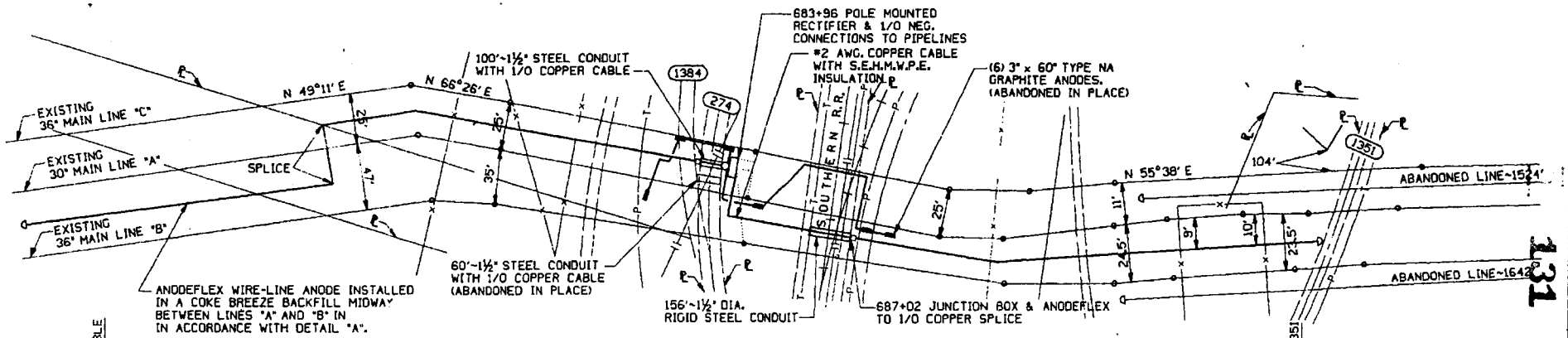
695+13 P.I. Δ 14°29' LT.
697+10 FENCE & GATE

698+21 P.I. Δ 0°18' LT.
700+15 FENCE & GATE

700+56 P.I. Δ 5°51' LT.

701+55 R/W & END ANODEFLEX
702+15 ℄ STATE HWY. NO. 1351 (18' W. BLK. TOP) (INDUSTRIAL PARK ROAD)

702+54 TEL. & POWER LINE
702+56 R/W



ETHEL C. GAMBLE (44)

NELLIE RUSSELL (45)

STATE HWY. NO. 274 (45.3)

H.W. GAMBLE (45.4)

FLOYD T. BATES, et ux (45.4.0)

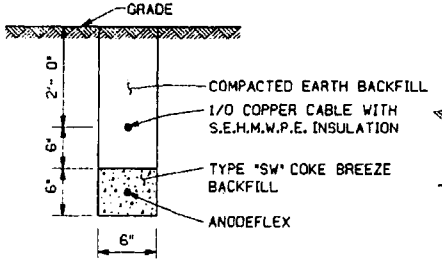
JAMES L. GAMBLE, et ux (45.4.1)

SOUTHERN RAILWAY COMPANY (45.5)

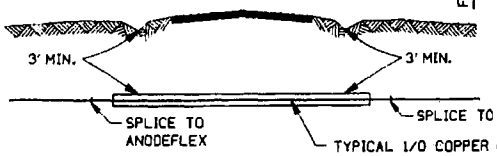
GASTONIA INDUSTRIAL REALTY CORPORATION (46A)

KANE REALTY CORPORATION (46B)

UNIT NO. 145-3-8



DETAIL "A"
N.T.S.



DETAIL "B"
N.T.S.

TYPICAL 1/0 COPPER CABLE WITH S.E.H.M.W.P.E. INSULATION IN 1½" DIA. RIGID STEEL CONDUIT. BORED A MINIMUM OF 36" BELOW BOTTOM OF DITCHES.

NOTES:
1. NO. 10 TW TEST STATION WIRE INSTALLED AT 1/0 CABLE CONNECTION TO PIPE.
2. ZINC REFERENCE WITH NO. 10 TW TEST WIRE INSTALLED AT EACH 1/0 CONNECTION TO PIPELINE.

THIS DWG. SUPERCEDES DWG. NO. 26-25-50/B-68396

ALIGNMENT SHEET — 26-0100/NC-4-5
Reference Drawing — Dwg. No.

Transcontinental Gas Pipe Line Corporation
A Transco Energy company
Engineering Department — Houston, Texas

AS-BUILT
GROUNDBED ADDITION
AT MAIN LINE M.P. 1259.596
GASTON COUNTY, NORTH CAROLINA

Drawn By BAO	Date 07/13/92	Approved By	Date
Checked By	Date 7-15-92		
Approved By	Date 7-15-92	Approved By	Engineer
W.O. No. 5083.06	Scale NONE	DWG. NO.	26-25-50 / B-68397
Approved By	Sheet 1 of 1		

Revision — By — Date

ZF1:[054.011]B68397001.DGN

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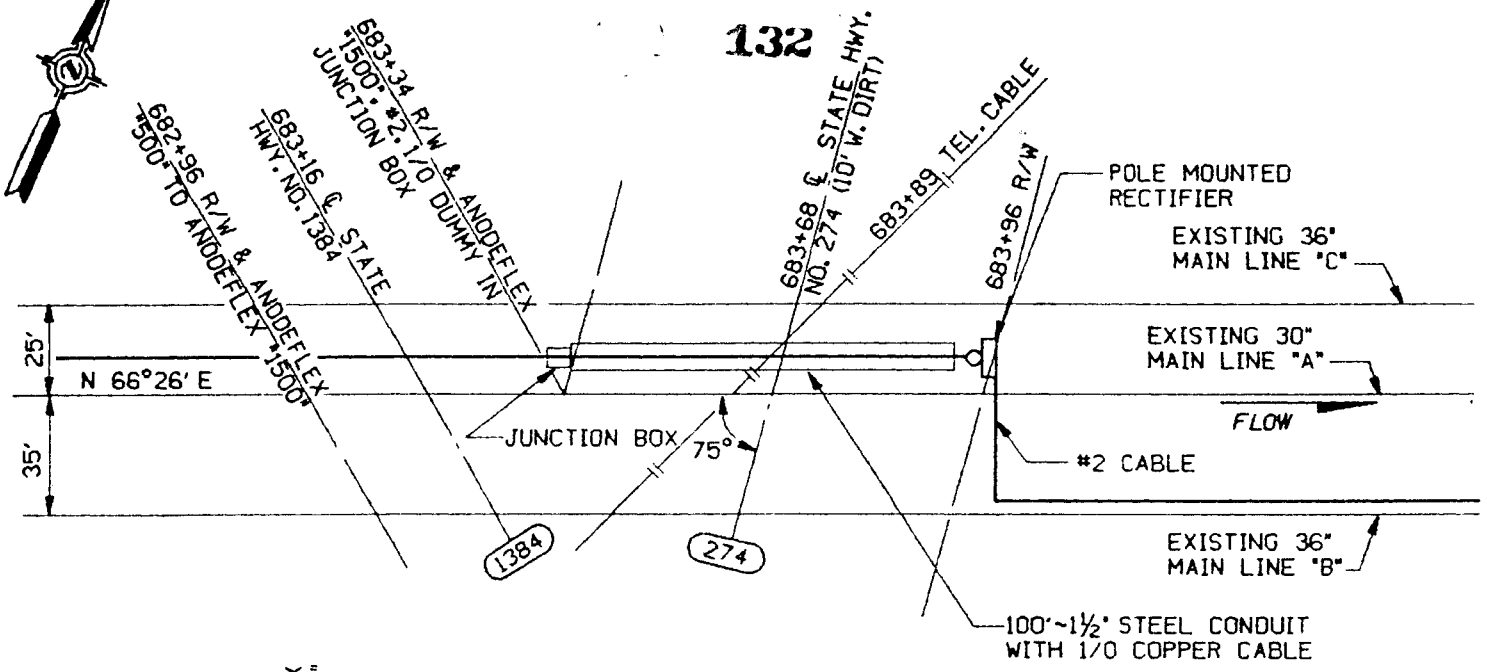
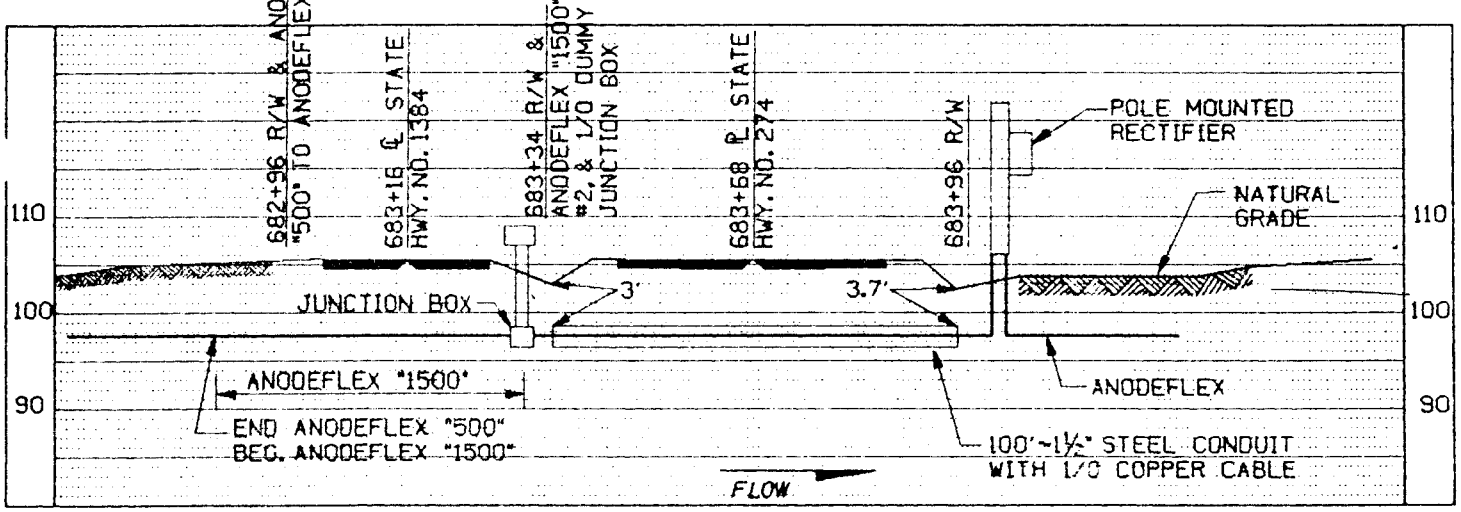
GASTON COUNTY, NORTH CAROLINA



PLAN

Scale: NONE



ELEV. = 100.00' (ASSUMED)

PROFILE

Scale: NONE

ROUTE MAP	26-50-0100/RM-G-001
CATHODIC PROTECTION	26-25-50/B-68397
Reference Drawing	Dwg. No.

Transcontinental Gas Pipe Line Corporation
A Transco Energy company
Engineering Department
Houston, Texas

AS-BUILT 1½" CONDUIT CROSSING
STATE HIGHWAY NO. 274
GASTON COUNTY, NORTH CAROLINA

Drawn By BAO	Date 07/13/92	Approved By JLP	Date 7-13-92
Checked By ZMB	Date 7-15-92		
Approved By Drafting	Date 7-15-92	Approved By	Engineer
W.O. No. 5083.06	Scale NONE	DWG. NO.	26-25-50 A-68208
Approved By Design	Sheet 1 of 1		

By / Revision / Date / No.

PROJECT: U-2408
COUNTY: GASTON

PROJECT SPECIAL PROVISIONS
UTILITIES BY OTHERS

UTILITY CONFLICTS:

GENERAL:

THE FOLLOWING UTILITY COMPANIES HAVE FACILITIES THAT WILL BE IN CONFLICT WITH THE CONSTRUCTION OF THIS PROJECT:

A. CITY OF GASTONIA ELECTRIC DEPARTMENT
B. DUKE ENERGY
C. TIME WARNER CABLE
D. BELL SOUTH TELECOMMUNICATIONS
E. PSNC ENERGY
F. BESSEMER CITY GAS DEPARTMENT

THE CONFLICTING FACILITIES OF THESE CONCERNS WILL BE ADJUSTED BY THE DATES, AS NOTED BELOW, AND THEREFORE ARE LISTED IN THESE SPECIAL PROVISIONS FOR THE BENEFIT OF THE CONTRACTOR. ALL UTILITY WORK LISTED HEREIN WILL BE PERFORMED 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 PROVISIONS.

UTILITIES REQUIRING ADJUSTMENT:

NOTE: THE FOLLOWING UTILITIES WILL BE RELOCATED BY THE DATES LISTED BELOW. ALL AERIAL FACILITIES WILL MAINTAIN A MINIMUM OF EIGHT FEET OF VERTICAL CLEARANCE OVER ALL OVERHEAD STRUCTURES.

A. CITY OF GASTONIA ELECTRIC DEPARTMENT

1. THE EXISTING OVERHEAD POWER LINES OWNED BY THE CITY OF GASTONIA WILL BE RELOCATED BY THE DATE OF AVAILIBILITY. THE CONTACT PERSON FOR THE CITY OF GASTONIA ELECTRIC DEPARTMENT IS ED MILLER, TELEPHONE NUMBER (704) 866-6013.

B. DUKE ENERGY

1. THE EXISTING OVERHEAD POWER LINES OWNED BY DUKE POWER WILL BE RELOCATED BY THE DATE OF AVAILIBILITY. THE CONTACT PERSON FOR DUKE POWER IS PETE GOVE, TELEPHONE NUMBER (704) 382-747.

C. TIME WARNER CABLE

1. THE FACILITIES OWNED BY TIME WARNER CABLE WILL BE RELOCATED BY THE DATE OF AVAILIBILITY. THE CONTACT PERSON FOR TIME WARNER CABLE IS BILL GARNER, TELEPHONE NUMBER (704) 671-6114.

D. BELLSOUTH TELECOMMUNICATIONS

1. THE FACILITIES OWNED BY BELLSOUTH WILL BE RELOCATED BY THE DATE OF AVAILIBILITY. THE CONTACT PERSON FOR BELL SOUTH IS GEORGE ADAMS, TELEPHONE NUMBER (704) 868-8580.

E. PSNC ENERGY

1. ALL PSNC ENERGY FACILITIES WILL REMAIN IN PLACE AND BE ADJUSTED AS NECESSARY THROUGHOUT THE LIFE OF THE PROJECT. AREAS REMAINING IN PLACE AND REQUIRING ADJUSTMENT WILL REQUIRE ONE WEEK ADVANCE NOTICE AND TWO WEEKS TO COMPLETE THE WORK AT EACH SITE. THE PROPOSED GAS MAIN BETWEEN –L- STA. 41+00 TO –L- STA. 42+00, -L- STA. 49+00 TO –L- STA. 51+00, -L- STA. 51+40 TO –L- STA. 52+60, AND –L- STA. 53+40 TO –L- STA. 55+40 WILL REQUIRE, AFTER THE COMPLETION OF ROUGH GRADING, TWO WEEKS ADVANCE NOTICE AND TWO WEEKS TO COMPLETE WORK AT EACH SITE. CLOSE COORDINATION WILL BE REQUIRED BETWEEN THE CONTRACTOR AND PSNC ENERGY. THE CONTACT PERSON FOR PSNC ENERGY IS MIKE COLEMAN, TELEPHONE NUMBER (704) 810-3210.

F. BESSEMER CITY GAS DEPARTMENT

1. BESSEMER CITY GAS FACILITIES WILL REMAIN IN PLACE AND BE ADJUSTED AS NECESSARY THROUGHOUT THE LIFE OF THE PROJECT. AREAS REQUIRING ADJUSTMENT WILL REQUIRE ONE WEEK ADVANCE NOTICE AND ONE WEEK TO COMPLETE THE WORK AT EACH SITE. CLOSE COORDINATION WILL BE REQUIRED BETWEEN THE CONTRACTOR AND BESSEMER CITY GAS DEPARTMENT. THE CONTACT PERSON FOR BESSEMER CITY GAS IS CHARLES BOYD, TELEPHONE NUMBER (704) 629-6773.