

CONTRACT DOCUMENTS FOR:

**NATURAL GAS MAIN RELOCATION
S.R. 293/KINGSTON HIGHWAY AT
DYKES CREEK 0015544
CARTERSVILLE PROJECT NO. CP-21-001**



City of Cartersville
G A S S Y S T E M

P.O. Box 1390 • 155 Old Mill Road • Cartersville, Georgia 30120
Telephone: 770-387-5642 • Fax: 770-387-5638 • www.cityofcartersville.org

ADVERTISEMENT FOR BID

**NATURAL GAS MAIN RELOCATION
S.R. 293/KINGSTON HIGHWAY AT
DYKES CREEK 0015544
CARTERSVILLE PROJECT NO. CP-21-001**

Sealed proposals will be received by the City of Cartersville Gas System in the Gas System offices located at 155 Old Mill Road, Cartersville, Georgia 30120 until:

THURSDAY, AUGUST, 31, 2023 AT 12:00 NOON, LOCAL TIME

for the furnishing of all materials, labor, tools, skill, equipment and incidentals unless noted otherwise for the construction of the project entitled:

**NATURAL GAS MAIN RELOCATION
S.R. 293/KINGSTON HIGHWAY AT
DYKES CREEK 0015544**

at which time and place the proposal will be publicly opened and read aloud.

Proposals received after the designated time will not be considered.

The principal items of construction are:

1,470 L.F. - 8-5/8" O.D.-.219" W.T. F.B.E. Coated, ERW X42/X52 Steel Line Pipe
300 L.F. - 8-5/8" O.D.-.322" W.T. F.B.E. Dual Coated, ERW X42/X52 Steel Line Pipe
380 L.F. - 8" Directional Bore
2 Ea. - 8" Stopper Fitting w/Outlet, ANSI Class 300, 740# W.P. ¹

¹The normal operating pressure of the existing high pressure system is 300 psig.

Bidders shall be aware that most of the materials for the construction of this project will be furnished by the City of Cartersville as called for in the specifications.

Bidders shall be aware that this project includes an alternate bid for solid rock directional bore.

Bidders shall further be aware that this project is under the jurisdiction of a Force Account Agreement between the Owner and the Georgia Department of Transportation and all requirements, conditions and standards thereof shall apply to this project including daily work summaries known as Form DOT 8465.

All anticipated federal, state, or local permits and anticipated rights of way and easements required for the project have been obtained.

Bidders must subscribe to the Municipal Gas Authority of Georgia's Subscribed Regulatory Compliance Service (SRCS) and be a member in good standing with up to date Operator Qualification records in accordance with the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 192 and Part 199. All covered tasks associated with the construction of this project shall be performed in accordance with the Operator Qualification Program subscribed to by the Bidder in accordance with the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 192 and Part 199.

Bidders must subscribe to the Municipal Gas Authority of Georgia's Subscribed Regulatory Compliance Service (SRCS) and be a member in good standing with up to date alcohol misuse plan records meeting the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 199 *Drug and alcohol testing*.

Bidders must subscribe to the Municipal Gas Authority of Georgia's Subscribed Regulatory Compliance Service (SRCS) and be a member in good standing with up to date anti-drug plan records meeting the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 199 *Drug and alcohol testing*.

Bidders must subscribe to the Municipal Gas Authority of Georgia's Subscribed Regulatory Compliance Service (SRCS) and be a member in good standing with up to date welder qualification records meeting the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 192 and API Standard 1104 *Welding of Pipelines and Related Facilities*, Latest Edition incorporated by reference in the Code of Federal Regulations.

Bidders shall inform themselves of and comply with all conditions and specifications contained in the bid package, contract, related documents and State and Federal Law.

The successful bidder must comply with O.C.G.A. §36-84-1.

The successful bidder must also comply with O.C.G.A. §50-36-1 et. Seq. and O.C.G.A. §13-10-91 et. Seq. and DOL Rule 300-10-1-.02. Proposals received without a properly prepared and notarized affidavit specific to this project attesting to the requirements of the Laws and provided in the Contract Documents will not be considered.

Bidders shall inform themselves concerning Georgia Laws and comply with the same. Bidders shall hold a current utility contractor license issued by the State of Georgia Construction Industry Licensing Board and shall have in their employment on a full-time basis a person who holds a valid utility manager certificate issued by the Division of Utility Contractors.

Plans, specifications and contract documents are open to public inspection at the City of Cartersville Gas System offices located at 155 Old Mill Road, Cartersville, Georgia

30120. The Gas System offices may be contacted by telephone at 770.387.5642 or by mail at P.O. Box 1390, Cartersville, Georgia 30120.

Plans, specifications and contract documents may be obtained from the City of Cartersville Gas System upon deposit of \$100.00 per set. No refund will be made. Potential bidders may download a copy of the contract plans, specifications and contract documents electronically in Acrobat PDF format at no charge by visiting the Bids & RFP's page located at the City of Cartersville's official website at <https://www.cityofcartersville.org/>.

One Contract shall be awarded covering all work and the maximum time for completion shall not exceed 30 consecutive calendar days from the starting date specified in the Notice to Proceed. Bidders must agree to pay as liquidated damages the sum of \$200.00 per each consecutive calendar day thereafter. Due consideration will be given to delivery of materials in specifying starting date.

The successful bidder will be furnished, free of charge, three sets of plans and specifications.

Bids must be accompanied by a Certified Check or Bid Bond in an amount equal to not less than five percent (5%) of the bid to be considered.

No bid may be withdrawn after the scheduled closing time for receiving bids for a period of sixty (60) days.

The Owner reserves the right to accept or reject in whole or in part any or all bids and to waive formalities and re-advertise.

CITY OF CARTERSVILLE, GEORGIA

BY _____
Michael Dickson, Gas System Director

SECTION 0100 – INFORMATION FOR BIDDERS

0101 RECEIPT AND OPENING OF BIDS

The CITY OF CARTERSVILLE, GEORGIA (*hereinafter called the Owner*), invites bids on the form attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at the NATURAL GAS SYSTEM OFFICES, 155 OLD MILL ROAD, CARTERSVILLE, GEORGIA 30120 until THURSDAY, AUGUST, 31, 2023 AT 12:00 NOON, LOCAL TIME and then at said office publicly opened and read aloud. The envelope containing the bids must be sealed and designated as the bid for the construction of the project entitled:

NATURAL GAS MAIN RELOCATION
S.R. 293/KINGSTON HIGHWAY AT
DYKES CREEK 0015544
CARTERSVILLE PROJECT NO. CP-21-001

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities to reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 60 days after the actual date of the opening thereof.

0102 PREPARATION OF BID

Each bid must be submitted on the prescribed form. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and numerals for unit prices and numerals only for total amounts. In case of discrepancies, words will take precedence over numerals and unit prices will take precedence over totals.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, their address, their utility contractor license number, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in the bid form. Any bid which is not properly prepared and accompanied by required certifications, plans and programs may be rejected by the Owner. Any bid not bearing the bidder's current utility contractor license number issued by the

State of Georgia Construction Industry Licensing Board may not be considered by the Owner.

0103 TELEGRAPHIC MODIFICATION

Any bidder may modify his bid by telegraphic communication at any time prior to the scheduled closing time for receipt of bids, provided such telegraphic communication is received by the Owner prior to the closing time, and, provided further, the Owner is satisfied that a written confirmation of the telegraphic modification over the signature of the bidder was mailed prior to the closing time. If written confirmation is not received within two days from the closing time, no consideration will be given to the telegraphic modification.

0104 QUALIFICATIONS OF BIDDERS

The Owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. By submission of his Bid, the Bidder acknowledges the right of the Owner to make such investigations, to contact references and utilize this information as a basis of determining award of the contract. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.

Written information pertaining to the Bidder's qualifications may be requested by the Owner. Failure of the Bidder to provide such information within fifteen days of notification will be grounds for disqualification.

0105 BID SECURITY

Each bid must be accompanied by a certified check or bid bond prepared on the form of bid bond attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of 5% of the bid. Such certified checks or bid bonds will be returned to all except the three lowest bidders within three days after the opening of bids, and the remaining certified checks or bid bonds will be returned promptly after the Owner and the accepted bidder have executed the contracts, or, if no award has been made within 60 days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as he has not been notified of the acceptance of his bid.

0106 LIQUIDATED DAMAGES AND FAILURE TO ENTER INTO CONTRACT

The successful bidder, upon his failure or refusal to execute and deliver the contract and bonds required within 10 days after he has received notice of the acceptance of his bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid.

0107 TIME OF COMPLETION AND LIQUIDATED DAMAGES

Bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within 30 consecutive calendar days thereafter. Bidders must agree also to pay as liquidated damages the sum of \$200.00 per each consecutive calendar day thereafter.

0108 CONDITION OF WORK

Each bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his obligation to furnish all material and labor necessary to carry out the provisions of his contract. Insofar as possible the Contractor, in carrying out his work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor.

0109 ADDENDA AND INTERPRETATIONS

Oral interpretations of the meaning of plans, specifications or other contract documents shall not be binding over written material.

Every request for such interpretation should be in writing addressed to City of Cartersville Gas System, P.O. Box 1390, Cartersville, Georgia 30120 and to be given consideration must be received at least ten days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications, which, will be mailed to all prospective bidders. Failure of any bidder to receive any such addendum or interpretations shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.

0110 SECURITY FOR FAITHFUL PERFORMANCE

Simultaneously with his delivery of the executed contract, the Contractor shall furnish a surety bond or bonds as security for faithful performance of his contract and for the payment of all persons performing labor on the project under this contract, and furnishing materials in connection with his contract, as specified in

the General Conditions included herein. Surety companies executing Bonds must appear on the Treasury Department's most current list (*Circular 570 as amended*) and be authorized to transact business in the state where the project is located.

0111 POWER OF ATTORNEY

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

0112 NOTICE OF SPECIAL CONDITIONS

Attention is particularly called to those parts of the contract documents and specifications which are identified subsequently under Special Conditions.

0113 LAWS AND REGULATIONS

The bidders' attention is directed to the fact that all applicable federal and state laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

0114 METHOD OF AWARD

If the Contract is awarded, it will be awarded to the lowest Bidder whose evaluation by Owner indicates to Owner that the award will be in the best interests of the project. The Owner shall have complete discretion in making this determination and may consider factors such as, but not limited to the following:

- 0114.01 Unit bid prices of various items as they relate to total bid price.
- 0114.02 Proximity of the Bidder's permanent place of business as it may relate to Bidder's responsiveness in carrying out the contract.
- 0114.03 Litigation record of the Bidder.
- 0114.04 Satisfactory completion of similar projects.
- 0114.05 Resources pertaining to management, personnel and equipment.
- 0114.06 Financial history, credit rating and current resources.

0115 OBLIGATION OF BIDDER

At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (*including all addenda*). The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect to his bid.

0116 CORRELATION AND INTENT OF DOCUMENTS

The contract documents are complementary, and what is called for by one shall be as binding as if called for by all.

The intent of the documents is to describe in detail all construction entailed in this project. The contractor will furnish all labor, materials, equipment, transportation, tools and appurtenances such as may be reasonably required under the terms of the contract to make each part of the work complete.

The drawings are intended to conform and agree with the specifications. If, however, discrepancies occur, the Owners will decide which shall govern. Special specifications stated on the drawings govern that particular piece of construction and have equal weight and importance as the printed specifications. In the event of any discrepancies between the drawings and the figures written thereon, the figures are to be taken as correct.

0117 CLAIMS

The Owner reserves the right to refuse to issue any voucher and to direct that no payment shall be made the contractor in the case they have reason to believe that said contractor has neglected or failed to pay any subcontractor, material dealer, worker or employee for work performed on or about the project including work as set forth in these specifications, until the Owner is satisfied that such subcontractors, material dealers, worker, or employees have been fully paid. However this provision shall not obligate the Owner to intervene in any claim.

0118 ORDER OF WORK

The work shall be started at such points as the Owner shall designate and shall be prosecuted in the order he directs. This applies to both location and items of construction.

0119 SUBCONTRACTS

If required by the Owner, the apparent Successful Bidder, and any other Bidder so

requested, will within seven days after the day of the Bid opening submit to Owner a list of all Subcontractors and other persons and organizations (*including those who are to furnish the principal items of material and equipment*) proposed for those portions of the Work as to which such identification is so required. If the Owner, after due investigation, has reasonable objection to any proposed Subcontractor, other person or organization, may, before giving the Notice of Award, request the apparent Successful Bidder to submit an acceptable substitute without an increase in Bid price. If the apparent Successful Bidder declines to make any such substitution, the contract shall not be awarded to such Bidder, but his declining to make any such substitution will not constitute grounds for sacrificing his Bid Security. Any Subcontractor, other person or organization so listed and to whom the Owner does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner.

0120 TIMELY EXECUTION

When the Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by at least five unsigned counterparts of the Agreement and all other Contract Documents. Within ten days thereafter, the Contractor shall sign and deliver at least five counterparts of the Agreement to Owner with all other Contract Documents attached. Thereafter, the Owner will deliver two fully signed counterparts to Contractor.

0121 STATE LICENSING REQUIREMENTS

Bidder shall hold a current utility contractor license issued by the State of Georgia Construction Industry Licensing Board and shall bear the current license number on the outside of his bid envelope. Each bidder must also have in his employment on a full-time basis a person or persons who holds a valid utility manager certificate issued by the Division of Utility Contractors. Such utility manager shall oversee the utility contracting work of all the employees and shall be actually engaged in the performance of the business of the bidder. No portion of this contract may be constructed or erected unless a certified utility manager or certified utility foreman is present at the job site of such construction. No person may be employed as a utility foreman unless that person holds a valid utility foreman certificate issued by the Division of Utility Contractors.

Upon request of the Owner, the bidder must provide copies of his current utility contractor license and copies of the valid certification of his utility manager and, if present at the job site of such construction, utility foreman.

0122 EMPLOYEE ALCOHOL MISUSE PLAN

Bidder shall maintain and implement a written alcohol misuse plan meeting the

requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 199 *Drug and alcohol testing*. A copy of the written alcohol misuse plan as called for in Section 0400 of the specifications must be submitted with the bid proposal. Proposals received without a copy of the bidder's written alcohol misuse plan will not be considered unless a copy of the bidder's current plan has been previously accepted by and is currently on file with the City of Cartersville Gas System.

0123 EMPLOYEE ANTI-DRUG PLAN

Bidder shall maintain and implement a written anti-drug plan meeting the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 199 *Drug and alcohol testing*. A copy of the written anti-drug plan as called for in Section 0400 of the specifications must be submitted with the bid proposal. Proposals received without a copy of the bidder's written anti-drug plan will not be considered unless a copy of the bidder's current plan has been previously accepted by and is currently on file with the City of Cartersville Gas System.

0124 OPERATOR QUALIFICATION

Bidders must subscribe to the Municipal Gas Authority of Georgia's Subscribed Regulatory Compliance Service (SRCS) and be a member in good standing with up to date Operator Qualification records in accordance with the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 192 and Part 199. All covered tasks associated with the construction of this project shall be performed in accordance with the Operator Qualification Program subscribed to by the Bidder in accordance with the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 192 and Part 199.

0125 CONTRACTOR'S WORK AUTHORIZATION CERTIFICATION

Bidder's shall comply with O.C.G.A. 13-10-91 and DOL Rule 300-10-1-.02 whereas all qualifying contractors and sub-contractors performing work within the State of Georgia on a contract with a public employer must register and participate in a federal work authorization program. Proposals received without a properly prepared and notarized affidavit specific to this project attesting to these requirements and provided in the Contract Documents will not be considered.

0126 VERIFICATION OF LAWFUL PRESENCE WITHIN UNITED STATES

Bidders shall comply with O.C.G.A. 50-36-1 verifying the bidder's lawful presence in the United States. Proposals received without a properly prepared and notarized

affidavit specific to this project attesting to this requirement and provided in the
Contract Documents will not be considered.

..... END OF SECTION

SECTION 0200 – BID PROPOSAL

BID BOND
(Five Percent of Bid)

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned _____

_____ of the City of _____ State of _____ and County of _____

as Principal and _____

as Surety, are hereby held and firmly bound unto the CITY OF CARTERSVILLE,
GEORGIA as Owner in the penal sum of _____

Dollars (\$_____) for the payment of which, well and truly to be made,

we hereby jointly and severally bind ourselves, our heirs, executors, administrators,
successors and assigns.

Signed this _____ day of _____, _____.

The condition of the above obligation is such that whereas the Principal has submitted to
the CITY OF CARTERSVILLE, GEORGIA a certain bid attached hereto and hereby made
a part hereof to enter into a contract in writing for the construction of the project entitled:

NATURAL GAS MAIN RELOCATION
S.R. 293/KINGSTON HIGHWAY AT
DYKES CREEK 0015544
CARTERSVILLE PROJECT NO. CP-21-001

NOW, THEREFORE,

- (a) If said bid shall be rejected or in the alternate,
- (b) If said bid shall be accepted and the Principal shall execute and deliver a contract
in the Form of Contract attached hereto (*properly completed in accordance with
said bid*) and shall furnish a bond for his faithful performance of said contract and
for the payment of all persons performing labor or furnishing materials in
connection therewith, and shall in all other respects perform the agreement created

0200-1

BID BOND
(Continued)

by the acceptance of said bid, then this obligation shall be void; otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bids, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Witness As To Principal

Principal

By _____ SEAL

Witness As To Surety

Surety

Address

By _____ SEAL
Attorney-in-Fact

BID PROPOSAL

Place _____
Date _____

Proposal of _____ (*hereinafter called*
"Bidder") a contractor organized and existing under the laws of the City of _____
State of _____ and County of _____, * an individual, a
corporation, or a partnership doing business as _____
_____.

TO: CITY OF CARTERSVILLE, GEORGIA
(*Hereinafter called "Owner"*)

Gentlemen:

The Bidder in compliance with your invitation for bids for the construction of NATURAL GAS MAIN RELOCATION, S.R. 293/KINGSTON HIGHWAY AT DYKES CREEK, CARTERSVILLE PROJECT NO. CP-21-001 having examined the plans and specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the contract documents, within the time set forth herein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under this contract, of which this proposal is a part.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within 30 consecutive calendar days thereafter as stipulated in the specifications. Bidder further agrees to pay as liquidated damages the sum of \$200.00 for each consecutive calendar day thereafter as hereinafter provided in the General Conditions under "Time of Completion and Liquidated Damages."

Bidder acknowledges receipt of the following addenda:

*Strike out inapplicable terms

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BID PROPOSAL

ITEM NO.	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	TOTAL AMOUNT
1.	8-5/8" O.D.-.219" W.T. F.B.E. Coated, ERW X42/X52 Steel Line Pipe (Installation Labor Only) (Line Pipe Provided by Owner)	1,470	L.F.	\$ _____ Numerals	\$ _____ Numerals
				Words (Unit Price Only)	
2.	8-5/8" O.D.-.322" W.T. F.B.E. Dual Coated, ERW X42/X52 Steel Line Pipe (Installation Labor Only) (Line Pipe Provided by Owner)	300	L.F.	\$ _____ Numerals	\$ _____ Numerals
				Words (Unit Price Only)	
3.	3/4" IPS-.113" W.T., F.B.E. Coated, SMLS B Steel Line Pipe (Installation Labor Only) (Line Pipe Provided by Owner)	150	L.F.	\$ _____ Numerals	\$ _____ Numerals
				Words (Unit Price Only)	
4.	8" Directional Bore (Sta. 105+66.90 to Sta. 109+45.56) (Bore Only) (Soil Bore)	380	L.F.	\$ _____ Numerals	\$ _____ Numerals
				Words (Unit Price Only)	
5.	8" Stopper Fitting w/Outlet, ANSI Class 300, 740# W.P. (Stopper Fitting Provided By Owner)	2	Ea.	\$ _____ Numerals	\$ _____ Numerals
				Words (Unit Price Only)	
6.	8" Line Valve Assembly, ANSI Class 300, 740# W.P. (Line Valve Provided By Owner)	1	Ea.	\$ _____ Numerals	\$ _____ Numerals
				Words (Unit Price Only)	



BID PROPOSAL

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
7.	3/4" Service Tee, 1200# W.P.	4	Ea.	\$ _____ Numerals	\$ _____ Numerals
				Words (Unit Price Only)	
8.	Connection to Existing 3/4" Steel	4	Ea.	\$ _____ Numerals	\$ _____ Numerals
				Words (Unit Price Only)	
9.	Farm Tap Assembly (Assembly Provided by Owner)	2	Ea.	\$ _____ Numerals	\$ _____ Numerals
				Words (Unit Price Only)	
10.	Silt Fence Type "C"	1,060	L.F.	\$ _____ Numerals	\$ _____ Numerals
				Words (Unit Price Only)	
11.	Pavement Removed and Replaced	15	S.Y.	\$ _____ Numerals	\$ _____ Numerals
				Words (Unit Price Only)	
12.	Purge and Abandon In Place/Removal	1,900	L.F.	\$ _____ Numerals	\$ _____ Numerals
				Words (Unit Price Only)	

BID PROPOSAL

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
13.	Temporary Grassing	4,000	S.Y.	\$ <u> </u> Numerals	\$ <u> </u> Numerals
				<u>Words (Unit Price Only)</u>	
14.	Permanent Grassing	4,000	S.Y.	\$ <u> </u> Numerals	\$ <u> </u> Numerals
				<u>Words (Unit Price Only)</u>	
15.	Solid Rock Excavation	170	C.Y.	\$ <u> </u> Numerals	\$ <u> </u> Numerals
				<u>Words (Unit Price Only)</u>	
TOTAL BID PROPOSAL \$				<u> </u> Numerals	
				<u> </u> Words	

BID PROPOSAL

ITEM NO.	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	TOTAL AMOUNT
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Additional price bid for Bid Item No. 4 if solid rock is encountered during boring operation.
Price bid shall be the total price bid for solid rock bore less price bid for soil bore.

1.	8" Solid Rock Directional Bore (Bore Only) (Price Differential from Soil Bore) (Adder)	380	L.F.	\$ _____ Numerals	\$ _____ Numerals
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Words (Unit Price)

TOTAL BID PROPOSAL W/ROCK BORE \$ _____
(Total Bid Proposal + Price Differential for Solid
Rock Directional Bore) Numerals

Words

BID PROPOSAL
(Continued)

Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.

The above prices shall include all labor, materials, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids.

The undersigned further agrees that, in case of failure on his part to execute said contract and bond within ten (10) days after the award thereof, the check or bond accompanying his bid and the money payable thereon shall become the property of the Owner; otherwise, the check or bond accompanying this proposal shall be returned to the Bidder.

The Bidder declares that he understands that the quantities shown on the proposal are subject to adjustment by either increase or decrease, and that should the quantities of any of the items of work be increased, the undersigned proposes to do the additional work at the unit prices stated herein; and should the quantities be decreased, he also understands that payment will be made on actual quantities at the unit price bid and will make no claim for anticipated profits for any decrease in the quantities and that actual quantities will be determined upon completion of work, at which time adjustment will be made to the contract amount by direct increase or decrease.

Attached hereto is a bid bond or certified check on the _____ of _____ in the amount of _____ according to conditions under "Information For Bidders" and the provisions therein.

The full name and residence of persons or parties interested in the foregoing bids, as principals, are named as follows:

0200-4

BID PROPOSAL
(Continued)

Dated at:

The ____ day of _____, ____

Principal

By _____ SEAL

0200-5

CONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm, or corporation which is contracting with City of Cartersville has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with City of Cartersville, contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the City of Cartersville at the time the subcontractor(s) is retained to perform such service.

The undersigned Contractor is using and will continue to use the federal work authorization program throughout the contract period.

EEV/Basic Pilot Program* User Identification Number

BY: Authorized Officer or Agent
(Contractor Name)

Date

Title of Authorized Officer or Agent of Contractor

Printed Name of Authorized Officer or Agent

Personally appeared before the undersigned
who after being duly sworn, deposes and says that
the facts stated in the above affidavit are true.

This _____ day of _____, _____.

Notary Public: _____ SEAL

My Commission Expires: _____,

_____ County, Georgia

*As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is the "EEV/Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

0200-6

SUBCONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with _____ (name of contractor) on behalf of City of Cartersville has registered with and is participating in federal work authorization program being* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

The undersigned subcontractor is using and will continues to use the federal work authorization program throughout the contract period.

EEV/Basic Pilot Program* User Identification Number

BY: Authorized Officer or Agent
(Contractor Name)

Date

Title of Authorized Officer or Agent of Contractor

Printed Name of Authorized Officer or Agent

Personally appeared before the undersigned
who after being duly sworn, deposes and says that
the facts stated in the above affidavit are true.

This _____ day of _____, _____.

Notary Public: _____ SEAL

My Commission Expires: _____,

_____ County, Georgia

*As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is the "EEV/Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

0200-7

AFFIDAVIT VERIFYING STATUS FOR CITY OF CARTERSVILLE BENEFIT APPLICATION

By executing this affidavit under oath, as an applicant for a City of Cartersville, Georgia Occupation Tax Certificate, Alcohol License or other public benefits as referenced in O.C.G.A. Section 50-36-1, I am stating the following with respect to my application for a City of Cartersville, Georgia Occupational Tax Certificate, Alcohol License or other public benefit (circle one) for

[Name of natural person applying on behalf of individual, business, corporation, partnership, or other private entity]

[Name of business, corporation, partnership]

- 1) _____ I am a United States citizen
- 2) _____ I am a legal permanent resident 18 years of age or older or I am an otherwise qualified alien or non-immigrant under the Federal Immigration and Nationality Act 18 years of age or older and lawfully present in the United States.*

In making the above representation under oath, I understand that any person who knowingly and willfully makes a false, fictitious, or fraudulent statement or representation in an affidavit shall be guilty of a violation of Code Section 16-10-20 of the Official Code of Georgia.

Signature of Applicant

Date

Personally appeared before the undersigned
who after being duly sworn, deposes and says that
the facts stated in the above affidavit are true.

Printed Name

*

Alien Registration number for non-citizens

This _____ day of _____, _____.

Notary Public: _____ SEAL

My Commission Expires: _____.

County, Georgia

*Note: O.C.G.A. § 50-36-1(e)(2) requires that aliens under the federal Immigration and Nationality Act, Title 8 U.S.C., as amended, provide their alien registration number. Because legal permanent residents are included in the federal definition of "alien", legal permanent residents must also provide their alien registration number. Qualified aliens that do not have an alien registration number may supply another identifying number below:

0200-8

AFFIDAVIT VERIFYING STATUS FOR CITY OF CARTERSVILLE BENEFIT APPLICATION FOR SUBCONTRACTOR

By executing this affidavit under oath, as an applicant for a City of Cartersville, Georgia Occupation Tax Certificate, Alcohol License or other public benefits as referenced in O.C.G.A. Section 50-36-1, I am stating the following with respect to my application for a City of Cartersville, Georgia Occupational Tax Certificate, Alcohol License or other public benefit (circle one) for

[Name of natural person applying on behalf of individual, business, corporation, partnership, or other private entity]

[Name of business, corporation, partnership]

- 1) _____ I am a United States citizen
- 2) _____ I am a legal permanent resident 18 years of age or older or I am an otherwise qualified alien or non-immigrant under the Federal Immigration and Nationality Act 18 years of age or older and lawfully present in the United States.*

In making the above representation under oath, I understand that any person who knowingly and willfully makes a false, fictitious, or fraudulent statement or representation in an affidavit shall be guilty of a violation of Code Section 16-10-20 of the Official Code of Georgia.

Signature of Applicant

Date

Personally appeared before the undersigned
who after being duly sworn, deposes and says that
the facts stated in the above affidavit are true.

Printed Name

*

Alien Registration number for non-citizens

This _____ day of _____, _____.

Notary Public: _____ SEAL

My Commission Expires: _____.

_____ County, Georgia

*Note: O.C.G.A. § 50-36-1(e)(2) requires that aliens under the federal Immigration and Nationality Act, Title 8 U.S.C., as amended, provide their alien registration number. Because legal permanent residents are included in the federal definition of "alien", legal permanent residents must also provide their alien registration number. Qualified aliens that do not have an alien registration number may supply another identifying number below:

0200-9



City of Cartersville
G A S S Y S T E M

P.O. Box 1390 • 155 Old Mill Road • Cartersville, Georgia 30120
Telephone: 770-387-5642 • Fax: 770-387-5638 • www.cityofcartersville.org

CONSTRUCTION PAYMENT BOND

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (*Name and Address*):

OWNER (*Name and Address*):

CITY OF CARTERSVILLE
P.O. BOX 1390
CARTERSVILLE, GEORGIA 30120

CONSTRUCTION CONTRACT:

Date: _____

Amount: _____

Description (*Name and location*):

NATURAL GAS MAIN RELOCATION
S.R. 293/KINGSTON HIGHWAY AT
DYKES CREEK 0015544
CARTERSVILLE PROJECT NO. CP-21-001

SURETY (*Name and Principal place of Business*):

BOND:

Date: _____

Amount: _____

Bond Number: _____

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner and for the use and protection of all subcontractors and persons supplying labor, materials, machinery, and equipment in the prosecution of the Work involved in this Construction Contract.

2. With respect to the Owner, this obligation shall be null and void if the Contractor:

0200-10

CONSTRUCTION PAYMENT BOND
(Continued)

1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and
2. Defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity whose claim, demand, lien or suit is for payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (*at the address described in Paragraph 11*) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.
3. With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.
4. The Surety shall have no obligations to Claimant unless the Claimant has substantially complied with the requirements of O.C.G.A. 36-82-104 by giving the notices provided for therein. Each Claimant failing to substantially comply with said Code Section shall be deemed to have waived the protection of the payment bond. No Claimant shall file an action for payment against the Owner, Contractor or Surety, except in accordance with this section.
 - 4.1. Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (*at the address described in Paragraph 12*) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
 - 4.2. Claimants who do not have a direct contract with the Contractor:
 1. Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
 2. Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and
 3. Not having been paid within the above 30 days, have sent a written notice to the Surety (*at the address described in Paragraph 12*) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.
5. If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.

CONSTRUCTION PAYMENT BOND
(Continued)

6. When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:

- 6.1. Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and that basis for challenging any amounts that are disputed.
- 6.2. Pay or arrange for payment of any undisputed amounts.

7. The Surety's total obligation shall not exceed the amount of this Bond and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

8. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

9. The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

11. No suit or action on this bond shall be instituted by a Claimant after expiration of one (1) year from the completion of the contract and the acceptance of the work by the public entity responsible therefor.

12. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on this Bond.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in the Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory

CONSTRUCTION PAYMENT BOND
(Continued)

bond and not as a common law bond.

14. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. DEFINITIONS

- 15.1. Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.
- 15.2. Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
- 15.3. Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

CONTRACTOR AS PRINCIPAL

Company: _____

_____ (Corp. Seal)

Signature: _____

Name and Title: _____

SURETY

Company: _____

_____ (Corp. Seal)

Signature: _____

Name and Title: _____

CONSTRUCTION PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR *(Name and Address):*

OWNER *(Name and Address):*

CITY OF CARTERSVILLE
P.O. BOX 1390
CARTERSVILLE, GEORGIA 30120

CONSTRUCTION CONTRACT:

Date: _____

Amount: _____

Description *(Name and location):*

NATURAL GAS MAIN RELOCATION
S.R. 293/KINGSTON HIGHWAY AT
DYKES CREEK 0015544
CARTERSVILLE PROJECT NO. CP-21-001

SURETY *(Name and Principal place of Business):*

BOND:

Date: _____

Amount: _____

Bond number: _____

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided

CONSTRUCTION PERFORMANCE BOND
(Continued)

in Subparagraph 3.1.

3. If there is no Owner Default, the Surety's obligation under this Bond shall arise after:
 - 3.1. The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below, that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and
 - 3.2. The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.
4. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 4.1. Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or
 - 4.2. Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or
 - 4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or
 - 4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:
 1. After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender

CONSTRUCTION PERFORMANCE BOND
(Continued)

- payment therefore to the Owner; or
2. Deny liability in whole or in part and notify the Owner citing reasons therefor.
5. If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
6. After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:
- 6.1. The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 6.2. Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and
 - 6.3. Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
7. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, or successors.
8. The Surety hereby waives notice of any change, including changes of time to the Construction Contract or to related subcontracts, purchase orders and other obligations.
9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and

CONSTRUCTION PERFORMANCE BOND
(Continued)

shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

- 12.1. Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
- 12.2. Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
- 12.3. Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.
- 12.4. Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

***** Signatories Next Page *****

CONTRACTOR AS PRINCIPAL

Company: _____

(Corp. Seal)

Signature: _____

Name and Title: _____

SURETY

Company: _____

(Corp. Seal)

Signature: _____

Name and Title: _____

CONTRACT

THIS AGREEMENT made this the _____ day of _____, _____, by
and between the CITY OF CARTERSVILLE, GEORGIA, hereinafter called "Owner", and
CONTRACTOR a contractor doing business as an individual, a partnership, a corporation
or a limited liability company* of the City of LINDALE, County of FLOYD, and State of
GEORGIA hereinafter called "Contractor".

WITNESSETH: That for and in consideration of the payments and agreements
hereinafter mentioned, to be made and performed by the Owner, the Contractor hereby
agrees to commence and complete the construction of the project entitled:

NATURAL GAS MAIN RELOCATION
S.R. 293/KINGSTON HIGHWAY AT
DYKES CREEK 0015544
CARTERSVILLE PROJECT NO. CP-21-001

hereinafter called the "Project", for the sum of _____ & 00/100
Dollars (\$0,000.00) and all extra work in connection therewith, under the terms as stated
in the Contract Documents, and at his (*its or their*) own proper cost and expense to furnish
all materials, supplies, machinery, equipment, tools, superintendence, labor, insurance
and other accessories and services necessary to complete the said project in accordance
with the conditions and prices stated in the proposal, the General Conditions of the
Contract, the specifications and contract documents therefore as prepared by the Owner
and as enumerated in Paragraph 2 of the General Conditions, all of which are made a
part hereof and collectively constitute the Contract.

The Contractor hereby agrees to commence work under this contract on or before a date
to be specified in a written "Notice to Proceed" of the Owner and to fully complete the
project within 30 consecutive calendar days thereafter as stipulated in the specifications.
The Contractor further agrees to pay as liquidated damages the sum of \$200.00 for each
consecutive calendar day thereafter as hereinafter provided in the General Conditions
under "Time of Completion and Liquidated Damages."

The Contractor hereby further agrees to comply with the requirements of O.C.G.A. §50-
36-1 et. Seq. and O.C.G.A. §13-10-91 et. Seq.

*Strike out inapplicable terms.

CONTRACT
(Continued)

The Owner agrees to pay the Contractor in current funds for the performance of the contract, subject to additions and deductions as provided in the General Conditions of the Contract, and to make payments on account thereof as provided in "Payments to Contractor," of the General Conditions.

IN WITNESS WHEREOF, the parties to those presents have executed this contract in five (5) counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

ATTEST:

CITY OF CARTERSVILLE, GEORGIA

City Clerk

By: _____ SEAL

Witness

Title

ATTEST:

CONTRACTOR

Secretary

By: _____ SEAL

Witness

Title

Secretary of Owner should attest. If Contractor is corporation, secretary should attest.

Give proper title of each person executing contract.

0200-20



City of Cartersville
G A S S Y S T E M
P.O. Box 1390 • 155 Old Mill Road • Cartersville, Georgia 30120
Telephone: 770-387-5642 • Fax: 770-387-5638 • www.cityofcartersville.org

CERTIFICATION OF OWNER'S ATTORNEY

I, the undersigned _____, the duly authorized and acting legal representative of the CITY OF CARTERSVILLE, GEORGIA, do hereby certify as follows:

I have examined the attached contract(s) and any applicable performance and payment bond(s) and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements appears on its face to have been duly executed by the proper parties thereto acting through their duly authorized representatives; that from such document said representatives appear to have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements appear to constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions, and provisions thereof.

Date: _____

SECTION 0300 - GENERAL CONDITIONS

0301 CONTRACT AND CONTRACT DOCUMENTS

The Contract Documents as hereinafter enumerated in Paragraph 2 of the General Conditions, shall form this Contract and the provisions thereof shall be as binding upon the parties hereto as if they were fully set forth. The Table of Contents, Titles, Headings, Running Headlines and Marginal Notes contained herein and in said documents are solely to facilitate reference to various provisions of the Contract Documents and in no way effect, limit or cast light on the interpretation of the provisions to which they refer.

0302 DEFINITIONS

The following terms as used in this contract are respectively defined as follows:

- 0302.01 Contractor - A person, firm or corporation with whom the contract is made by the Owner.
- 0302.02 Contract Documents - The Contract Documents are composed of the Advertisement for Bids; Instructions to Bidders; Form of Proposal, General Conditions, Supplementary Conditions, Detail Specifications, Form of Contract, Form of Bond(s), Addenda and the drawings including all changes incorporated herein before their execution.
- 0302.03 Project Representative - Refers to the authorized representative of the Owner, who is assigned to the site or any part thereof.
- 0302.04 Owner - The party of the First Part in the accompanying Contract, and meaning the CITY OF CARTERSVILLE, GEORGIA.
- 0302.05 Subcontractor - A person, firm or corporation supplying labor and materials or only labor for work at the site of the project for, and under separate contract or agreement with the contractor for performance of a part of the work at the site.
- 0302.06 Work on (at) the Project - Work to be performed at the location of the project, including the transportation of materials and supplies to or from the location of the project by employees of the Contractor and any Subcontractor.

0303 CORRELATION AND INTENT OF DOCUMENTS

The contract documents are complementary, and what is called for by any one shall be as binding as if called for by all.

0303.01 The intent of the documents is to describe all construction entailed in this project. The contractor will furnish all labor and materials, equipment, transportation, tools and appurtenances such as may be reasonably required under the terms of the contract to make each part of the work complete.

0303.02 The Drawings are intended to conform and agree with the Specifications; if, however, discrepancies occur, the Owner will decide which shall govern. Special specifications stated on the Drawings govern that particular piece of construction and have equal weight and importance as the printed specifications. In the event of any discrepancies between the Drawings and the figures written thereon, the figures are to be taken as correct.

0304 ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS

0304.01 The Contractor will be furnished additional instructions and detail drawings as necessary to carry out the work included in the contract. The additional drawings and instructions thus supplied to the Contractor will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof. The Contractor shall carry out the work in accordance with the additional detail drawings and instructions.

0304.02 The Contractor and the Owner will prepare jointly (a) a schedule, fixing the dates at which special detail drawings will be required, such drawings, if any, to be furnished by the Owner in accordance with said schedule, and (b) a schedule fixing the respective dates for the submission of shop drawings, the beginning of manufacture, testing and installation of materials, supplies, and equipment, and the completion of the various parts of the work; each such schedule to be subject to change from time to time in accordance with the progress of the work.

0305 SHOP OR SETTING DRAWINGS

The Contractor shall submit promptly to the Owner six (6) copies of each shop or setting drawing prepared in accordance with the schedule predetermined as aforesaid. After examination of such drawings by the Owner and the return thereof, the Contractor shall make such corrections to the drawings as have been indicated and shall furnish the Owner with two corrected copies. If requested by the Owner, the Contractor must furnish additional copies. Regardless of corrections made in or approval given to such drawings by the Owner, the Contractor shall nevertheless be responsible for the accuracy of such drawings and for their conformity to the Plans and Specifications at the time he furnishes such drawings.

0306 MATERIALS, SERVICES AND FACILITIES

0306.01 It is understood that except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, superintendence, temporary construction of every nature, and all other services and facilities of every nature whatsoever necessary to execute, complete, and deliver the work within the specified time.

0306.02 Any work necessary to be performed by the Contractor to complete the project on time after regular working hours, on Sundays or Legal Holidays, shall be performed without additional expense to the Owner.

0307 CONTRACTOR'S TITLE TO MATERIALS

No materials or supplies for the work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him in the work, free from all liens, claims and/or encumbrances.

0308 MATERIALS FURNISHED BY THE CONTRACTOR

All materials used in the work including equipment shall be new and unused materials of a reputable U.S. Manufacturer conforming to the applicable requirements of the Specifications, and no materials shall be used in the work until they have been approved by the Owner. The Contractor shall furnish all materials necessary except as otherwise specifically noted or specified.

0309 INSPECTION AND TESTING OF MATERIALS

All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards. The laboratory or inspection agency shall be selected by the Owner. Materials of construction, particularly those upon which the strength and durability of the structure may depend, shall be subject to inspection and testing to establish conformance with specifications and suitability for uses intended.

0310 "OR EQUAL" CLAUSE

Whenever a material, article or piece of equipment is identified on the plans or in the specifications by reference to manufacturer's or vendor's names, trade names, catalogue numbers, etc., it is intended merely to establish a standard; and any material, article, or equipment of other manufacturers and vendors which will

perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or equipment so proposed, is in the opinion of the Owner, of equal substance and function. It shall not be purchased or installed by the Contractor without the Owner's written approval.

0311 PATENTS

- 0311.01 The Contractor shall hold and save the Owner and its officers, agents, servants, and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the contract, including its use by the Owner, unless otherwise specifically stipulated in the Contract Documents.
- 0311.02 License and/or Royalty Fees for the use of a process which is authorized by the Owner of the project must be reasonable, and paid to the holder of the patent, or his authorized licensee, direct by the Owner and not by or through the Contractor.
- 0311.03 If the Contractor uses any design, device or materials covered by letters, patent or copyright, he shall provide for such use by suitable agreement with the Owner of such patented or copyrighted design, device or material. It is mutually agreed and understood, that, without exception, arising from the use of such design, device, or materials or in any way involved in the work, the Contractor and/or his Sureties shall indemnify and save harmless the Owner of the project from all claims for infringement by the reason of the use of such patented or copyrighted design, device or materials or any trademark or copyright in connection with work agreed to be performed under this contract and shall indemnify the Owner for any cost, expense or damage which it may be obliged to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

0312 SURVEYS, PERMITS AND REGULATIONS

- 0312.01 Unless otherwise expressly provided for in the Specifications, the Owner will furnish to the Contractor any control alignment and bench mark data from previous engineering surveys.
- 0312.02 The Contractor shall procure and pay all permits, licenses and approvals necessary for the execution of his contract. The Contractor shall comply with all laws, ordinances, rules, orders, and regulations relating to performance of the work, the protection of adjacent property, and the maintenance of passageways, guard fences or other protective facilities.

0313 LINES AND GRADES

- 0313.01 Bench marks and referenced horizontal control points will be shown on the plans.
- 0313.02 Construction staking will be done by the Contractor at no additional cost to the Owner.
- 0313.03 The Contractor shall furnish all necessary materials and competent personnel and shall be responsible for the adequacy and accuracy of construction staking.
- 0313.04 The Contractor shall furnish the Owner with an accurate record of the location of all underground pipes and other structures and any changes from plans during construction.

0314 CONTRACTOR'S OBLIGATIONS

- 0314.01 The Contractor shall and will, in good workmanlike manner do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract, within the time herein specified, in accordance with the plans and drawings covered by this contract, any and all supplemental plans and drawings and in accordance with the directions of the Owner as given from time to time during the progress of the work. He shall furnish, erect, maintain and remove such construction plant and such temporary works as may be required. He alone shall be responsible for the safety, efficiency and adequacy of his plant, appliances, and methods, and for any damage which may result from their failure of their improper construction, maintenance or operation.
- 0314.02 The Contractor shall observe, comply with and be subject to all terms, conditions, requirements, and limitations of the Contract and specifications and shall do, carry on, and complete the entire work to the satisfaction of the Owner.

0315 CONTRACTOR'S RESPONSIBILITY

The Contractor shall be responsible for all material and work until they are finally accepted by the Owner and shall repair at his own expense any damage that they sustain before their final acceptance. The Contractor shall be responsible for all damages caused by him of whatever nature and must settle all claims arising from such damage without cost to the Owner; he shall act as defendant in, and bear the

expense of each and every suit of any and every nature which may be brought against him or the Owner, by reason of, or connected with the work under the Contract. Should any claim arise, the Owner may hold back sufficient money to meet said claims or until the Contractor has satisfied the Owner that all claims against him as the result of his work have been adjusted. He must also show that there are no claims or liens whatsoever outstanding at the completion of his contract before final payment is made.

0316 WEATHER CONDITIONS

In the event of temporary suspension of work, or during inclement weather, or whenever the Owner shall direct, the Contractor will, and will cause his subcontractors to protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Owner, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his subcontractors so to protect his work, such materials shall be removed and replaced at the expense of the Contractor.

0317 SAFETY PROVISIONS

0317.01 The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (*PL 91-596*) and under Sec.107 of the Contract Work Hours and Safety Standards Act (*PL 91-54*).

0317.02 The Contractor shall be responsible for the Safety, efficiency and adequacy of his plant, appliances and methods, and for any damage which may result from their failure of their improper construction, maintenance and operation.

0317.03 The Contractor shall employ, when necessary, watchmen on the work and shall, when necessary, erect and maintain such strong and suitable barriers and such light as will effectually prevent the happening of any accident to health, limb or property.

0318 USE OF EXPLOSIVES

When the use of explosives is necessary for the prosecution of the work, the contractor shall use the utmost care not to endanger life or property, and whenever directed or otherwise indicated, the number and size of the charges shall be reduced. The contractor shall notify the proper representatives of any public service corporation, any company, or any individual at least eight (8) hours in advance of any blasting which may endanger his or their property on, along, or adjacent to the site of the work. All explosives shall be stored in a secure manner and all storage places shall be marked clearly "DANGEROUS EXPLOSIVES", and

shall be in care of competent watchmen at all times.

0319 SANITARY PROVISIONS

The Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees as may be necessary to comply with the regulations of the State Board of Health and all local ordinances. No nuisance will be permitted.

0320 PUBLIC CONVENIENCE AND SAFETY

Materials stored at the site of the work shall be so placed and the work shall, at all times, be so conducted as to cause no greater obstruction to traffic than is considered permissible by the Owner. No roadway shall be closed or opened except by express permission of the Owner and the Contractor's proper notification of local fire and police departments. Precaution shall be exercised at all times for the protection of persons and property. The safety provisions of applicable laws, building and construction codes shall be observed. Machinery, equipment and other hazards shall be guarded in accordance with the safety provisions of the manual of Accident Prevention in Construction, published by the Associated General Contractors of America to extent that such provisions are not in contravention of applicable laws.

0321 PROTECTION OF WORK AND PROPERTY - EMERGENCY

The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this contract. He shall at all times safely guard and protect his own work, and that of adjacent property from damage. The Contractor shall replace or make good any such damage, loss or injury unless such be caused directly by errors contained in the contract or by the Owner, or his duly authorized representative.

0321.01 In case of an emergency which threatens loss or injury of property, and/or safety of life, the Contractor will be allowed to act, without previous instructions from the Owner in a diligent manner. He shall notify the Owner immediately thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Owner for approval.

0321.02 Where the Contractor has not taken action but has notified the Owner of an emergency threatening injury to persons or damage to the work or any adjoining property, he shall act as instructed or authorized by the Owner.

0321.03 The amount of reimbursement claimed by the Contractor on account of any emergency action shall be determined in the manner provided in Paragraph

0327 of the General Conditions.

0322 INSPECTION

The authorized representatives and agents of the Owner shall be permitted to observe all work, materials, payrolls, records of personnel, invoices of materials and other relevant data and records.

0323 REPORTS, RECORDS AND DATA

The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the Owner may request concerning work performed or to be performed under this contract.

0324 SUPERINTENDENCE BY CONTRACTOR

At the site of the work, the Contractor shall employ a construction superintendent or foreman who shall have full authority to act for the Contractor. It is understood that such representative shall be acceptable to the Owner and shall be one who can be continued in that capacity for the particular job involved unless he ceases to be on the Contractor's payroll.

0325 COMPETENT LABOR

0325.01 The Contractor shall employ only competent and skilled workers on the project. The Contractor shall have a competent superintendent or foreman present at all times when the work is in progress and with authority to receive orders and execute the work.

0325.02 The Contractor shall, upon demand from the Owner, immediately remove any superintendent, foreman or worker whom the Owner may consider incompetent or undesirable.

0326 CONSTRUCTION EQUIPMENT

The Contractor shall provide all necessary equipment in good repair for the expeditious construction of the work. Any equipment not adapted for the work, in such repair as to be dangerous to the project or workers, shall not be used.

0327 CHANGES IN THE WORK

0327.01 Without invalidating the Agreement, the Owner may, at any time or from time to time, order additions, deletions or revisions in the Work; these will

be authorized by Change Orders. Upon receipt of a Change Order, the Contractor will proceed with the Work involved. All such Work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made as provided in Paragraph 0328. A Change Order signed by the Contractor indicates his agreement therewith.

- 0327.02 The Owner may authorize minor changes or alterations in the Work not involving extra cost and not inconsistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order. If the Contractor believes that any Field Order authorized by the Owner entitles him to an increase in the Contract Price or extension of Contract Time, he shall inform the Owner in writing of the amount of increased price or time associated with the Field Order, and he shall include reference to appropriate contract documents supporting the basis for the claim, and he shall not proceed with the work in question until a written decision has been rendered by the Owner.
- 0327.03 Any changes or additional work performed by the Contractor without authorization of a Change Order will not entitle him to an increase in the Contract Price or an extension of the Contract Time, except in the case of an emergency.
- 0327.04 It is the Contractor's responsibility to notify his surety of any changes affecting the general scope of the Work or change in the Contract Price and the amount of the applicable bonds shall be adjusted accordingly. The Contractor will furnish proof of such adjustment to the Owner.
- 0327.05 The term Change Order is defined as a written order to the Contractor signed by the Owner which authorizes a change in the work or the contract price or the contract time issued after execution of the Agreement.
- 0327.06 The Contract Price constitutes the total compensation payable to the Contractor for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by the Contractor shall be at his expense without changing the Contract Price, except where authorized by Change Order.

0328 CHANGE IN CONTRACT PRICE

- 0328.01 The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

- 0328.01.1 Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved.
- 0328.01.2 By mutual acceptance of a lump sum *(which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 0327.04.2.1)*.
- 0328.01.3 On the basis of the Cost of the Work *(determined as provided in Paragraphs 0327.04 and 0327.05)* plus a Contractor's Fee for overhead and profit *(determined as provided in Paragraphs 0327.4 and 0327.05)*.
- 0328.02 The term Cost of the Work means the sum of all costs necessarily incurred and paid by the Contractor in the proper performance of the Work. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in Paragraph 0327.03.
- 0328.02.1 Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing work after regular working hours, on Sunday or legal holidays shall be included in the above to the extent authorized by Owner.
- 0328.02.2 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and manufacturers' field services required in connection therewith.
- 0328.02.3 Payments made by Contractor to the Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from Subcontractors acceptable to him and shall deliver such Bids to Owner who will then determine which Bids will be accepted.

- 0328.02.4 Costs of special consultants (*including, but not limited to, engineers, architects, testing laboratories, surveyors, lawyers, and accountants*) employed for services specifically related to the Work.
- 0328.02.5 Supplemental costs including the following:
- 0328.02.5.1 The proportion of necessary transportation, traveling and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - 0328.02.5.2 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workmen, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of Contractor.
 - 0328.02.5.3 Rentals of all construction equipment and machinery and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner and the costs of transportation, loading, unloading, installation, dismantling and removal thereof - all in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.
 - 0328.02.5.4 Sales, use or similar taxes related to the Work, and for which Contractor is liable, imposed by any governmental authority.
 - 0328.02.5.5 Deposits lost for causes other than Contractor's negligence, royalty payments and fees for permits and licenses. Costs for permits and licenses must be shown as a separate item.
 - 0328.02.5.6 Losses, damages and expenses, not compensated by insurance or otherwise, sustained by Contractor in connection with the execution of, and to, the Work, provided they have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's Fee.
 - 0328.02.5.7 The cost of utilities, fuel and sanitary facilities at the site.

0328.02.5.8 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

0328.02.5.9 Cost of premiums for additional Bonds and Insurance required because of changes in the Work.

0328.03 The term Cost of the Work shall not include any of the following:

0328.03.1 Payroll costs and other compensation of Contractor's officers, executives, principals (*of partnership and sole proprietorships*), general managers, engineers, architects, estimators, lawyers, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by Contractor whether at the site or in his principal or a branch office for general administration of the Work and not specifically included in the schedule referred to in subparagraph 0327.02.1 - all of which are to be considered administrative costs covered by the Contractor's Fee.

0328.03.2 Expenses of Contractor's principal and branch offices other than his office at the site.

0328.03.3 Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

0328.03.4 Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective work, disposal of materials or equipment wrongly supplied and making good any damage to property.

0328.03.5 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 0327.04.

0328.04 The Contractor's Fee which shall be allowed to Contractor for his overhead and profit shall be determined as follows:

0328.04.1 a mutually acceptable firm fixed price; or if none can be agreed upon.

0328.04.2 a fee based on the following percentages of the various portions of the Cost of the Work.

0328.04.2.1 for costs incurred under paragraphs 0327.02.1 and 0328.02.2, the Contractor's Fee shall be fifteen percent.

0328.04.2.2 for costs incurred under paragraph 0328.02.3, the Contractor's Fee shall be five percent; and if a subcontract is on the basis of Cost of the Work Plus a Fee, the maximum allowable to Contractor on account of overhead and profit of all Subcontractors shall be fifteen percent;

0328.04.2.3 no fee shall be payable on the basis of costs itemized under paragraphs 0327.02.4, 0327.02.5, and 0327.03;

0328.04.2.4 the amount of credit to be allowed by Contractor to Owner for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in Contractor's Fee by an amount equal to ten percent of the net decrease; and

0328.04.2.5 when both additions and credits are involved in any one change, the adjustment in Contractor's Fee shall be computed on the basis of the net change in accordance with paragraphs 0327.04.2.1 through 0328.04.2.4, inclusive.

0328.05 Whenever the cost of any Work is to be determined pursuant to Paragraph 0327.02 or 0327.03. Contractor will submit in form acceptable to Owner an itemized cost breakdown together with supporting data.

0329 CHANGE OF THE CONTRACT TIME

The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to Owner within ten days of the occurrence of the event giving rise to the claim. Notice of the extent of the claim with supporting data shall be delivered within forty-five days of such occurrence unless Owner allows an additional period of time to ascertain more accurate data. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order.

0329.01 The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of CONTRACTOR if he makes a claim therefor as provided in Paragraph 0327.01. Such delays shall include, but not be restricted to, acts or neglect by any separate contractor employed by Owner, fires, floods, labor disputes, epidemics, abnormal weather conditions, or acts of God.

0329.02 All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Paragraph 0328 shall not exclude recovery for damages *(including compensation for additional professional*

services) for delay by either party.

0330 CORRECTION OF WORK

All work, all materials, whether incorporated in the work or not, all processes of manufacture, and all methods of construction shall be at all times and places subject to the review of the Owner who shall be the final judge of the quality and suitability of the work, material, processes of manufacture and methods of construction for the purposed for which they are used. Should they fail too meet his approval, they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the Contractor at his own expense. Rejected material shall immediately be removed from the site. If, in the opinion of the Engineer, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the Contract Documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as in the judgment of the Engineer shall be equitable. It is not intended that the Engineer should be liable for the Contractor's performance of the work nor for safety during construction.

0331 EXISTING UNDERGROUND UTILITIES AND STRUCTURES

- 0331.01 The Owners and/or operators of private or public utilities shall have access to such utility at all times, for the installation, maintenance, adjustment, repair and operation of said utility. No extra compensation will be allowed because of the delay or interference caused by such work.
- 0331.02 In preparing the plan drawings there has not been an all-inclusive search for identifying existing underground utilities. Therefore any information pertaining to existing utilities is provided only for preliminary purposes and implies no guarantee as to accuracy or completeness. Prior to blasting or excavation the Contractor is responsible for contacting all utility owners in the area. Specifically, the Contractor shall contact the "one-call notification center" 72 hours in advance of blasting or excavation as required by Georgia Law.
- 0331.03 Wherever existing utilities are encountered which conflict in actual position and location with the proposed work, the Contractor shall promptly notify the Owner for resolution of the conflict.
- 0331.04 Temporary supports, beams or bridging for utilities shall be left in place during backfill operations unless otherwise directed by the Owner.
- 0331.05 All costs in connection with supporting, protecting, relocating, removal, repair of damage, restoration and other work on affected existing utilities

and other existing underground structures whether or not they are shown on the plans, not borne by the Owner or Owners of the utilities, shall be borne by the Contractor. No separate payment will be made for any work performed as herein above specified unless otherwise stated in the proposal as a separate payment item. All costs in connection therewith shall be included in the contract price for the item to which the work pertains.

- 0331.06 The Contractor shall be solely and directly responsible to the Owner and/or other operator of such utility properties for any damage, injury, expense, loss, inconvenience or delay, or for any suits, actions, claims of any character brought on account of any injuries or damages which may result from the carrying out of the work.

0332 SUBSURFACE CONDITIONS FOUND DIFFERENT

Should the Contractor encounter sub-surface and/or latent conditions at the site materially differing from those shown on the plans or indicated in the specifications, he shall immediately give notice to the Owner of such conditions before they are disturbed. The Owner will thereupon promptly investigate the conditions, and if he finds that they materially differ from those shown on the plans or indicated in the specifications, he will at once make such changes in the plans and/or specifications as he may find necessary, any increase or decrease of cost resulting from such changes to be adjusted in the manner provided in Paragraph 0326 of the General Conditions.

0333 CLAIMS FOR EXTRA WORK

No claim for extra work or cost shall be allowed unless the same was one in pursuance of a written order of the Owner and approved by the Owner, as aforesaid, and the claim presented with the first estimate after the changed or extra work is done. When work is performed under the terms of Subparagraph 0326 of the General Conditions, the Contractor shall furnish satisfactory bills, payrolls and vouchers covering all items of cost and when requested by the Owner, give the Owner access to accounts relating thereto.

0334 RIGHT OF THE OWNER TO TERMINATE CONTRACT

In the event that any of the provisions of this contract are violated by the Contractor or by any of his Subcontractors, the Owner may serve written notice upon the Contractor and the surety of its intention to terminate the contract, such notices to contain the reasons for such intention to terminate the contract, and unless within ten (10) days after the serving of such notice upon the Contractor such violation or delay shall cease and satisfactory arrangement of correction be made, the contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event

of any such termination the Owner shall immediately serve notice thereof upon the Surety and the Contractor and the Surety shall have the right to take over and perform the contract; provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the Owner may take over the work and prosecute the same to completion by contract or by force account for the account and at the expense of the Contractor and the Contractor and his Surety shall be liable to the Owner for any excess cost occasioned the Owner thereby, and in such event the Owner may take possession of and utilize in completing the work, such materials, appliances and plant as may be on the site of the work and necessary therefor.

0335 CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES

Immediately after execution and delivery of the contract, and before the first partial payment is made, the Contractor shall deliver to the Owner an estimated construction progress schedule in form satisfactory to the Owner showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the contract documents and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the progress schedule. The Contractor shall also furnish on forms to be supplied by the Owner, (a) a detailed estimate giving a complete breakdown of the contract price and (b) periodic itemized estimate of work done for the purpose of making partial payments thereon. The costs employed in making up any of these schedules will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the contract price.

0336 PAYMENTS TO CONTRACTORS

0336.01 No later than thirty (30) days after submittal of a progress payment request the Owner shall make a progress payment to the Contractor on the basis of a duly certified and approved estimate of the work performed during the preceding calendar month under this contract, but to insure the proper performance of this contract, the Owner shall retain ten percent (10%) of the amount of each estimate until final completion and acceptance of all work covered by this contract. Provided, that the Contractor shall submit his estimate not later than the first day of the month; provided, further, that the Owner at any time after fifty percent (50%) of the work has been completed, if it finds that satisfactory progress is being made, *may* reduce the retainage to 5%.

0336.02 Where a project is under the jurisdiction of a Force Account Agreement between the Owner and the Georgia Department of Transportation, the Contractor shall maintain a *daily* report of the amount of completed work as

shown in the bid proposal. A copy of the accepted report appears in Appendix A at the end of this section and may be reproduced for use on this project. The Contractor's representative shall certify by signature that the report is accurate on behalf of the Contractor for the Owner (*shown as "Utility" on the report*). The Project Engineer representing the Georgia Department of Transportation shall certify by signature that the report is accurate for the "State". A copy of each days report properly certified as required by this part shall accompany each progress payment request by the Contractor. The quantity of work completed shown on the progress payment request *must* be supported by an equal quantity shown on the daily report for that progress payment period. Payment requested for quantities of work not supported by a properly certified daily report(s) may *not* be recommended for payment by the Owner.

- 0336.03 In preparing estimates, the material delivered on the site and preparatory work done may be taken into consideration. Where a project is under the jurisdiction of a Force Account Agreement between the Owner and the Georgia Department of Transportation, however, material delivered on the site and preparatory work done may *not* be taken into consideration.
- 0336.04 All material and work covered by partial payments made shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of materials and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the right of the Owner to require the fulfillment of all of the terms of the contract.
- 0336.05 The Contractor agrees that he will indemnify and save the Owner harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, material men, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary incurred in the furtherance of the performance of this contract. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If the Contractor fails to do so, then the Owner may, after having served written notice on the said Contractor, either pay unpaid bills, of which the Owner has written notice, direct, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed, in accordance with the terms of this contract, but in no event shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor or his Surety. In paying any unpaid bills of the Contractor, the Owner shall be

deemed the agent of the Contractor, and any payment so made by the Owner shall be considered as a payment made under the contract by the Owner to the Contractor and the Owner shall not be liable to the Contractor for any such payments made in good faith.

- 0336.06 If at any time the Owner shall determine that the amount of work completed at that time is lagging behind the expired contract time by more than 20 percent, the Owner may determine that the Contractor is not faithfully performing on the contract and therefore the Owner may elect to withhold all monies and refrain from making any additional payments to the Contractor until such time as the Owner determines the work to be progressing satisfactorily.

0337 ACCEPTANCE AND FINAL PAYMENT

When the project provided for under this contract shall have been completed by the Contractor, and all parts of the work have been approved by the Owner according to the contract, the Owner shall, within ten (10) days unless otherwise provided, make final inspection and advise the Contractor as to preparing a final estimate, showing the value of work as soon as the necessary measurements and computations can be made, all prior certificates or estimates upon which payments have been being made are approximately only, and subject to correction in the final payment. The amount of the final estimates, less any sums that may have been deducted or retained under the provisions of this contract, will be paid to the Contractor within sixty (60) days after approval by the Owner, provided that the contractor has properly maintained and operated the project as specified under these specifications, and provided, that he has furnished to the Owner a sworn affidavit to the effect that all bills are paid and no suits are pending in connection with the work done or labor and material furnished under this contract. A sample affidavit appears at the end of this section to be considered as an example of an acceptable affidavit.

0338 PAYMENTS BY CONTRACTORS

The Contractor shall pay (a) for all transportation and utility services not later than the 20th day of the calendar month following that in which such services are rendered, (b) for all materials, tools, and other expendable equipment to the extent of 90 percent of the cost thereof, not later than the 20th day of the calendar month following that in which such materials, tools and equipment are delivered at the site of the project, and the balance of the cost thereof not later than the 30th day following the completion of that part of the work in or on which such materials, tools and equipment are incorporated or used, and (c) to each of his Subcontractors, not later than the 5th day following each payment to the Contractor, the respective amounts allowed the Contractor on account of the work performed by his

Subcontractors to the extent of each Subcontractor's interest therein.

0339 CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE

0339.01 The Contractor shall not commence work under this Contract until he has obtained all the insurance required under this paragraph and such insurance has been reviewed by the Owner, nor shall the Contractor allow any Subcontractor to commence work on his subcontract until the insurance has been so obtained and reviewed.

0339.01.1 Contractor's Liability Insurance: Contractor shall purchase and maintain such comprehensive general liability and other insurance as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the work and Contractor's other obligations under the Contract Documents, whether such performance is indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

0339.01.1.1 Claims under workers' or workmen's compensation, disability benefits and other similar employees benefit acts;

0339.01.1.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

0339.01.1.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

0339.01.1.4 Claims for damages insured by personal injury liability coverage which are sustained (i) by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or (ii) by any other person for any other reason.

0339.01.1.5 Claims for damages, other than to the work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom; and

0339.01.1.6 Claims for damages because of bodily injury or death of any person or property damage arising out of the Ownership, maintenance or use of any motor vehicle.

The insurance required by this paragraph shall include the specific coverages and be written for not less than the limits of liability and coverages provided in these specifications, or required by law, whichever is greater. The comprehensive general liability insurance

shall include completed operations insurance. All such insurance shall contain a provision that the coverage afforded will not be cancelled, materially changed or renewal refused until at least thirty days prior written notice has been given to Owner and Engineer. All such insurance shall remain in effect until final payment and at all times thereafter when Contractor may be correcting, removing or replacing defective work. In addition, Contractor shall maintain such completed operations insurance for at least one year after final payment and furnish Owner with evidence of continuation of such insurance at final payment. Renewal certificates shall be sent to the Owner 30 days prior to the expiration date of any policy required herein.

0339.02 Contractual Liability Insurance: The comprehensive general liability insurance required by paragraph 0339.01.1 will include contractual liability insurance applicable to Contractor's obligations under separate contract and subcontracting.

0339.03 Unless otherwise provided in these Supplementary Conditions, Contractor shall purchase and maintain property insurance upon the work at the site to the full insurable value thereof (*subject to such deductible amounts as may be provided in these supplementary conditions or required by law*). This insurance shall include the interest of Owner, Contractor and Subcontractors in the work, shall provide "all risk" insurance for physical loss and damage including but not limited to fire, lightning, windstorms, hail, smoke, explosion, riot, aircraft, vehicles, falling objects, flood, earthquake, theft, vandalism, malicious mischief, collapse, water damage and other perils, and shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (*including fees and charges of engineers, architects, attorneys and other professionals*). If not covered under the "all risk" insurance or otherwise provided in these Supplementary Conditions, Contractor shall purchase and maintain similar property insurance on portions of the work stored on and off the site or in transit when such portions of the work are to be included in an Application for Payment. The policies of insurance required to be purchased and maintained by Contractor in accordance with paragraphs c and d shall contain a provision that the coverage afforded will not be cancelled, materially changed or renewal refused until at least thirty days prior written notice has been given to the Owner.

0339.04 Contractor shall purchase and maintain such boiler and machinery insurance as may be required by these Supplementary Conditions or by law. This insurance shall include the interest of Owners, Contractor and

Subcontractors in the work and shall provide coverage for all installed and functional mechanical equipment for the full replacement value of the equipment.

- 0339.05 Owner shall not be responsible for purchasing and maintaining any property insurance to protect the interests of Contractor or Subcontractors in the work to the extent of any deductible amounts that are provided in the supplemental conditions. If Contractor wishes property insurance coverage within the limits of such amounts, Contractor may purchase and maintain it at his own expense.
- 0339.06 If Owner has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by Contractor in accordance with paragraphs 0339.01.1. through 0339.01.1.4., Owner will notify Contractor thereof within ten days of the date of delivery of such certificates, to Owner. Contractor will provide to the Owner such additional information in respect of insurance provided by him as Owner may reasonably request. The right of the Owner to review and comment on Certificates of Insurance is not intended to relieve the Contractor of his responsibility to provide insurance coverage as specified nor to relieve the Contractor of his liability for any claims which might arise.
- 0339.07 Partial Utilization - Property Insurance: If Owner finds it necessary to occupy or use a portion or portions of the work prior to Substantial Completion of all the work, such use or occupancy may be accomplished provided that no such use or occupancy shall commence before the insurers providing the property insurance have acknowledged notice thereof and in writing effected the changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be cancelled or lapse on account of any such partial use or occupancy.
- 0339.08 The Contractor shall carry and maintain Combined Excess Liability (*Umbrella*) Insurance for a limit of not less than the following:
- | | |
|------------------|-------------|
| Each Occurrence: | \$3,000,000 |
| Aggregate: | \$3,000,000 |
- 0339.09 The limits of liability for the insurance required by paragraph 36.1.1. of the General Conditions shall provide coverage for not less than the following amounts or greater where required by law:

For claims under paragraph 0339.01.1.1. and 0339.01.1.2., Worker's Compensation:

State	Statutory
Federal	Statutory
Employer's Liability – Each Accident:	\$1,000,000
Employer's Liability – Disease – Each Employee:	\$1,000,000
Employer's Liability – Disease – Policy Limit:	\$1,000,000

If the Contractor chooses to maintain a policy with a maximum of the state mandated amounts of \$100,000 per accident, \$100,000 for disease per employee and a disease policy limit of \$500,000, the Contract required minimum of \$1,000,000 can be achieved by the excess liability policy required by paragraph 0338.08 above.

For claims under 0339.01.1.1. through 0339.01.1.5. (*General Liability*),

General Liability Provided Per Occurrence

Each Occurrence (Bodily and Property Damage Included):	\$1,000,000
Fire Damage (<i>Any One Fire</i>):	\$50,000
Medical Expense (<i>Any One Person</i>):	\$5,000
Personal and Adv Injury, With Employment Exclusion Deleted:	\$1,000,000
General Aggregate (<i>Per Project</i>):	\$2,000,000
Products and Completed Operations Aggregate:	\$1,000,000

Notes: Property Damage Liability Insurance will provide explosion, collapse and underground hazard coverages where applicable. Each detonation of blasting shall be considered a single occurrence. General Liability shall include Contractual Liability as stipulated in Paragraph 0339.02. above.

For claims under 0339.01.1.6., Comprehensive Automobile Liability:

Combined Single Limit Per Occurrence, For Any and All Autos, Including Bodily Injury and Property Damage:	\$1,000,000
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0339.10 Scope of Insurance and Special Hazards - The amounts stated in subparagraph 0338.09. above are minimum amounts of insurance to be carried. The Contractor shall carry such additional insurance as may be

required to provide adequate protection of the Contractor and his Subcontractors, respectively, against any and all damage claims which may arise from operations under this Contract, whether such operations be by the insured or by anyone directly or indirectly employed by his and, also, against any of the special hazards which may be encountered in the performance of this Contract.

Where the scope of work involves crossing of a railway and/or railway rights-of-way, Contractor shall be required to furnish railway with a Railroad Protective Liability Insurance Policy naming railway as the named insured and issued to the Contractor with a combined single limit of \$2,000,000 for all damages arising out of bodily injury, death, property damage liability and physical damage to property liability per occurrence with an aggregate limit of \$6,000,000.

Where the scope of work involves work or construction within right-of-ways or easements of Georgia Power Company, Contractor shall be required to furnish Georgia Power Company liability insurance coverage naming Georgia Power Company as the name insured and issued to the Contractor with an amount of no less than \$2,000,000 per occurrence for bodily injury and property damage which arise out of or result from the Contractor's operations under this Contract.

0339.11 Certificate Holder should read:

CITY OF CARTERSVILLE
P.O. BOX 1390
CARTERSVILLE, GEORGIA 30120

0339.12 Insurance company must have an A.M. Best Rating of A-6 or higher. Insurance company must be licensed to do business by the Georgia Secretary of State. Insurance company must be authorized to do business in the State of Georgia by the Georgia Insurance Department.

0340 CONTRACT SECURITY

The Contractor shall furnish a Construction Performance Bond in an amount at least equal to one hundred percent (100%) of the contract prices as security for the faithful performance of this contract and also a Construction Payment Bond in an amount at least equal to one hundred percent (100%) of the contract price or in a penal sum not less than that prescribed by State, Territorial or local law, as security for the payment of all persons performing labor on the project under this contract and furnishing materials in connection with this contract. The performance

bond and the payment bond may be in one or in separate instruments in accordance with local law.

0341 ADDITIONAL OR SUBSTITUTE BOND

If at any time the Owner for justifiable cause shall be or become dissatisfied with any Surety or Sureties, then upon the Construction Performance or Payment Bonds, the Contractor shall within five (5) days after notice from the Owner to do so, substitute an acceptable bond (*or bonds*) in such form and sum and signed by such other Surety or Sureties as may be satisfactory to the Owner. The premiums on such bond shall be paid by the Contractor. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished such an acceptable bond to the Owner.

0342 LIEN

Neither the final payment nor any part of the retained percentage will become due until the Contractor, if required, shall furnish the Owner a complete release from any liens which may arise out of this contract, or receipts in full in lieu thereof, and if required in either case, an affidavit that insofar as he has knowledge or information, the release and receipts include all materials, for which a lien might be filed. The Contractor may, if any Subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Owner to indemnify it against any lien. If a lien shall remain unsatisfied after all payments are made, then the Contractor shall refund to the Owner all monies which the latter may be compelled to pay in discharging such lien, including all incidental costs and attorney's fees.

0343 ASSIGNMENTS

The Contractor shall not assign the whole or any part of this contract or any money due to or to become due hereunder without written consent of the Owner. In case the Contractor assigns all or part of any money due or to become due under this contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assigned in and to any money due or to become due to the Contractor shall be subject to prior liens of all persons, firms and corporations for services rendered or materials supplied for the performance of the work called for in this contract.

0344 MUTUAL RESPONSIBILITY OF CONTRACTORS

If through acts of neglect on the part of the Contractor, any other Contractor or subcontractor, shall suffer loss or damage on the work, the Contractor agrees to settle with such other Contractor or subcontractor by agreement or arbitration, if such other contractor or subcontractor will so settle. If such other Contractor or

subcontractor shall assert any claim against the Owner on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor, who shall indemnify and save harmless the Owner against any such claim.

0345 COORDINATION WITH OTHER CONTRACTORS

The Contractor shall coordinate his operations with those of other contractors. Cooperation will be required in the arrangement for the storage of materials and in the detailed execution of the work. The Contractor, including his Subcontractors shall keep informed of the progress and the detail work of other Contractors and shall notify the Owner immediately of lack of progress or defective workmanship on the part of other contractors. Failure of a Contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by him of the status of the work as being satisfactory for proper coordination with his own work.

0346 SUBCONTRACTING

The Contractor shall utilize the service of specialty subcontractor on those parts of the work which, under normal contracting practices, are performed by specialty Subcontractors. Provided - that if the Owner shall determine that the specialty work in question has been customarily performed by the Contractor's own organization and that such organization is presently competent to perform such work, the Contractor shall be permitted to do so. Provided, further - that if the Owner shall determine that the performance of any specialty work by specialty Subcontractors will result in materially increased costs or inordinate delays, the requirements of this paragraph shall not apply.

- 0346.01 The Contractor shall not be allowed to award work to any subcontractor prior to written approval of the Owner, which approval will not be given until the Contractor submits to the Owner, a written statement concerning the proposed award to the subcontractor, which statement shall contain such information as the Owner may require.
- 0346.02 The Contractor shall be as fully responsible to the Owner for the acts and omissions of his Subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.
- 0346.03 The Contractor shall cause appropriate provisions to be inserted in all Subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the General Conditions and other contract documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the

Owner may exercise over the Contractor under any provision of the Contract Documents.

0346.04 Nothing contained in this Contract shall create any contractual relation between any Subcontractor and the Owner.

0347 USE OF PREMISES AND REMOVAL OF DEBRIS

The Contractor expressly undertakes at his own expense:

0347.01 To take every precaution against injuries to persons or damage to property;

0347.02 To store his apparatus, materials, supplies and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other Contractors;

0347.03 To place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work.

0347.04 To clean up frequently all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance;

0347.05 Before final payment to remove all surplus material, false work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations, and to put the site in a neat orderly condition;

0347.06 To effect all cutting, fitting or patching of his work required to make the same to conform to the plans and specifications and, except with the consent of the Engineer, not to cut or otherwise alter the work of any other Contractor.

0348 QUANTITIES OF ESTIMATE

Wherever the estimated quantities of work to be done and materials to be furnished under this contract are shown in any of the documents including the proposal, they are given for use in comparing bids and the right is especially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the Owner to complete the work contemplated by this Contract, and such increase or diminution shall in no way vitiate this Contract, nor shall any such increase or diminution give cause for claims or liability for damages.

0349 RIGHTS-OF-WAY AND SUSPENSION OF WORK

The Owner shall furnish all land and rights-of-way necessary for the carrying out of this Contract and the completion of the work herein contemplated and will use due diligence in acquiring said land and rights-of-way as speedily as possible. But it is possible that all lands and rights-of-way may not be obtained as herein contemplated before construction begins, in which event the Contractor shall begin his work upon such land and rights-of-way as the Owner may have previously acquired, and no claim for damages whatsoever will be allowed by reason of the delay in obtaining the remaining lands and rights-of-way. Should the Owner be prevented or enjoined from proceeding with the work, or from authorizing its prosecution, either before or after the commencement, by reason of any litigation, or by reason of its inability to procure any lands or rights-of-way for the said work, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay, or, to withdraw from the contract except by consent of the Owner, but time for completion of the work will be extended to such time as the Owner determines will compensate for the time lost by such delay, such determination to be set forth in writing.

0350 GUARANTY

- 0350.01 All structures erected under this contract shall be fully guaranteed by the Contractor for a period of one year from the date of final inspection and acceptance by the Owner. This guarantee shall cover any and all defects in workmanship or materials that may develop in this specified time, and any failure in such workmanship or materials shall be repaired or replaced to the satisfaction of the Owner by the Contractor at his own expense.
- 0350.02 All equipment of whatever nature incorporated in the work covered by this contract shall carry the same guarantee as outlined above for construction. Failure of any equipment or part thereof within the specified time shall be corrected to the satisfaction of the Owner, at the Contractor's expense. This guarantee does not apply to manufacturing defects of equipment furnished by the Owner.
- 0350.03 It is the intent of these specifications that all pipe lines, both underground and above ground, together with all appurtenances attached thereto, under this contract, shall be classified as structures.
- 0350.04 Neither the final certificate of payment nor any provision in the contract documents nor partial or entire occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the contract documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship.

0351 CONFLICTING CONDITIONS

Any provisions in any of the contract documents which may be in conflict or inconsistent with any of the paragraphs in these General Conditions shall be void to the extent of such conflict or inconsistency.

0352 NOTICE AND SERVICE THEREOF

Any notice to any Contractor from the Owner relative to any part of this contract shall be in writing and considered delivered and the service thereof completed, when said notice is posted, by certified or registered mail, to the said Contractor at his last given address, or delivered in person to the said Contractor or his authorized representative on the work.

0353 PROVISIONS REQUIRED BY LAW DEEMED INSERTED

Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion or correction.

0354 SUSPENSION OF WORK

Should the Owner be prevented or enjoined from proceeding with work either before or after the start of construction by reason of any litigation or other reason beyond the control of the Owner, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay; but time for completion of the work will be extended to such reasonable time as the Owner may determine will compensate for time lost by such delay with such determination to be set forth in writing.

0355 MAINTENANCE OPERATIONS

The Contractor shall schedule and execute his work so as to avoid interruption of existing services or operations, public or private. The Contractor will use every precaution to prevent damage of any existing facility, and in the event of damage will, at no expense to the Owner, repair and otherwise make good any damage to facilities resulting from his operations in connection with the contract. The Contractor will take whatever measures necessary to accurately determine the exact location of existing underground facilities prior to commencing construction.

0356 MAINTENANCE

The Contractor will be required to maintain all work done by him in a first-class condition for sixty (60) days after the same has been completed as a whole, and the Owner has notified the Contractor in writing that the work has been finished to their satisfaction. The retained percentage will not be due or payable to the Contractor until the 60-day maintenance period is up.

0357 PROTECTION AND RESTORATION OF PROPERTY

- 0357.01 The Contractor shall not enter upon private property for any purpose without first obtaining permission, and he shall use every precaution necessary to prevent damage or injury to any public or private property, trees, fences, monuments, underground structures, etc., on and adjacent to the site of the work. He shall protect carefully, from disturbance or damage, all land monuments and property marks until an authorized agent has witnessed or otherwise referenced their location, and shall not remove them until directed.
- 0357.02 Except as specifically provided in the Contract Documents, the Contractor shall not do any work that would affect any railway track, pipeline, telephone, telegraph, or electric or transmission line, or other structure nor enter upon the right-of-way or other lands appurtenant thereto, until authority therefore has been secured from the proper parties. The Contractor shall not be entitled to any extension of time or any extra compensation on account of any postponement, interference, or delay resulting from his requirement, except as specifically provided in the contract.
- 0357.03 The Contractor shall be responsible for all damage or injury to property of any character resulting from any act, omission, neglect, or misconduct in his manner or method of executing said work, or due to his nonexecution of said work, or at any time due to defective work or materials, and he shall not be released from said responsibility until the work shall have been completed and accepted.
- 0357.04 When or where any direct or indirect damage or injury is done to public or private property by, or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof on the part of the Contractor, he shall restore at his own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring, as may be directed, or he shall make good such damage or injury in an acceptable manner.

0358 RESPONSIBILITY FOR DAMAGE CLAIMS

The Contractor shall be responsible for all injury or damage of any kind resulting from his work, to persons or property. The Contractor hereby assumes the obligation to indemnify and save harmless the Owner including associates, agents and representatives, from every expense, liability, or payment arising out of or through injury to any person or persons including death and loss of services, or damage to property, regardless of who may be the Owner of the property, suffered through any cause whatsoever in the construction work involved in the contract and to defend on their behalf any suit brought against them arising from any such cause.

0359 USE AND OCCUPANCY PRIOR TO ACCEPTANCE BY OWNER

0359.01 The Contractor agrees to the use and occupancy of a portion or unit of the project before formal acceptance by the Owner, provided the Owner:

0359.01.1 Secures written consent of the Contractor except in the event, in the opinion of the Owner, the Contractor is chargeable with unwarranted delay in completing the contract requirements;

0359.01.2 Secures consent of the Surety;

0359.01.3 Secures endorsement from the insurance carrier(s) permitting occupancy of the building or use of the project during the remaining period of construction; or

0359.01.4 When the project consists of more than one building, and one of the buildings is occupied, secures permanent fire and extended coverage insurance, including a permit from the insurance carrier to complete construction.

0360 INTEREST OF FEDERAL, STATE OR LOCAL OFFICIALS

No Federal, State or Local official shall be admitted to any share or part of this contract or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

0361 OTHER PROHIBITED INTERESTS

No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of

the project, shall become directly or indirectly interested personally in this contract or in any part hereof. No officer, employee, architect, attorney, engineer or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

0362 USE OF CHEMICALS

All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, must show approval of either E.P.A., or U.S.D.A. Use of all such chemicals and disposal of residues shall be in strict conformance with instructions.

0363 MAINTENANCE OF TRAFFIC

0363.01 Traffic is to be maintained on all roads and streets which must be crossed by lines. If the open-cut method is used, two separate cuts must be made leaving one lane open to traffic at all times.

0363.02 The Contractor shall notify the Owner and the appropriate department of transportation prior to performing any work which disrupts normal flow of traffic, and shall utilize appropriate warning signs, flagmen and other procedures necessary to ensure safety and minimize inconvenience to the public.

0364 SPECIAL HAZARDS

The Contractor's and his Subcontractor's Public Liability and Property Damage Insurance shall provide adequate protection against the following special hazards: Excavation, shoring, underpinning, blasting, and explosion to the extent to which such risks are present.

0365 OWNER'S DIRECTIONS REGARDING WORK PARTIALLY COMPLETED

The Owner may direct that any section or part of the project considered to be in serviceable condition be placed in use or operation, even though not entirely completed. Such use or operation shall not be held to be an acceptance of the work, or section thereof, so placed in operation, or a waiver of any of the provisions of the Contract Documents.

0366 OWNER'S EXAMINATION OF WORK COMPLETED

At the request of the Owner, the Contractor shall, at any time before final acceptance of the work, remove, or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the Specifications. Should the work thus exposed or examined prove acceptable, the uncovering or removing, and the replacing or making good of the parts removed, shall be paid for as Extra Work, but should the work so exposed or examined prove unacceptable, the uncovering or removing, and the restoration shall be at the Contractor's expense.

0367 EROSION AND SEDIMENT CONTROL

Care shall be exercised in grading operations to minimize erosion. Temporary sediment control structures will be erected at the Owner's direction where necessary. Also Contractor shall comply with the State of Georgia and any applicable local Regulations for erosion control.

0368 ACCEPTANCE OF FINAL PAYMENT CONSTITUTES RELEASE

The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act and neglect of the Owner and others relating to or arising out of this work. No payment, however, final or otherwise, shall operate to release the Contractor or his sureties from any obligations under this contract or the Construction Performance and Payment Bond.

0369 OWNER'S RIGHT TO SUSPEND WORK

The Owner shall have the authority to suspend the work, wholly or in part as he may deem necessary because of conditions unsuitable for proper prosecution of the work or failure on the part of the Contractor to carry out the provisions or to meet the specified requirements. The Contractor shall not suspend operations without the Owner's permission.

0370 TIME FOR COMPLETION AND LIQUIDATED DAMAGES

- 0370.01 It is hereby understood and mutually agreed, by and between the Contractor and the Owner, that the date of beginning and the time for completion as specified in the contract of the work to be done hereunder are ESSENTIAL CONDITIONS of this contract; and it is further mutually understood and agreed that the work embraced in this contract shall be commenced on a date to be specified in the "NOTICE TO PROCEED."

- 0370.02 The Contractor agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.
- 0370.03 If the said Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part consideration for the awarding of this contract, to pay to the Owner the amount specified in the contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the contract for completing the work.
- 0370.04 The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would sustain and said amount shall be retained from time to time by the Owner from current periodical estimates.
- 0370.05 It is further agreed that time is of the essence of each and every portion of this contract and of the specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where, under the contract, an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this contract. Provided, that the Contractor shall not be charged with liquidated damages or any excess cost when the Owner determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the Owner; provided, further, that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due:
- 0370.05.1 To any preference, priority or allocation order duly issued by the Government;
- 0370.05.2 To unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another contractor in the performance of a contract with the Owner, fires,

floods, epidemics, quarantine restrictions, strikes, freight embargoes,
and severe weather; and

0370.05.3 To any delays of Subcontractors or suppliers occasioned by any of the
causes specified in subsections 0369.05.1 and 0369.05.2 of this
article.

0370.06 Provided, further, that the Contractor shall, within ten (10) days from the
beginning of such delay, unless the Owner shall grant a further period of
time prior to the date of final settlement of the contract, notify the Owner, in
writing, of the causes of the delay, who shall ascertain the facts and extent
of the delay, and notify the Contractor within a reasonable time of its
decision in this matter.

..... END OF SECTION

SECTION 0300: APPENDIX A

AFFIDAVIT FOR FINAL PAYMENT AND RELEASE OF LIENS

STATE OF: _____

COUNTY OF: _____

FROM: _____ (Contractor)

TO: CITY OF CARTERSVILLE, GEORGIA (Owner)

RE: Contract entered into the ____ day of _____, _____ between the above mentioned parties for the construction of the project entitled NATURAL GAS MAIN RELOCATION, S.R. 293/KINGSTON HIGHWAY AT DYKES CREEK 0015544, CARTERSVILLE PROJECT NO. CP-21-001.

KNOW ALL MEN BY THESE PRESENTS:

1. The undersigned hereby certifies that all work required under the above Contract has been performed in accordance with the terms thereof, that all material-men, sub-contractors, mechanics, and laborers have been paid and satisfied in full and that there are not outstanding claims of any character arising out of the performance of the Contract which have been paid and satisfied in full.
2. The undersigned further certifies that to the best of their knowledge and belief there are not unsatisfied claims for damages resulting from injury or death to any employees, sub-contractors, or the public at large arising out of the performance of the Contract or any suits or claims for any other damage of any kind, nature or description on which might constitute a lien upon the property of the Owner.
3. The undersigned makes this final affidavit as provided by the Contract and agrees that acceptance of final payment shall constitute full settlement of all claims against the Owner arising under or by virtue of the Contract.
4. IN WITNESS WHEREOF, the undersigned has signed and sealed this instrument this day of _____, _____.

SIGNED: _____ (SEAL)

BY: _____

TITLE: _____

Personally appeared before the undersigned who after being duly sworn, deposes and says that the facts stated in the above affidavit are true.

This ____ day of _____, _____.

Notary Public: _____ SEAL

My Commission Expires: _____,

_____ County, Georgia

**DAILY REPORT FOR REMOVAL AND RELOCATION
OF UTILITY or RAILROAD FACILITIES ON HIGHWAY
CONSTRUCTION** *(To Support a Reimbursable Agreement)*

Date_____

Report No._____

Name of Utility or Railroad **City of Cartersville Gas System**

Name of Company Performing the Work* _____

Ga. DOT Project **PI #0015544**

County **Floyd**

Description and Location of Work in Progress _____

LABOR

Name & Classification	Hours
Note: Labor required to restore recovered materials to suitable condition for reuse should be included on this report.	

MATERIALS USED

Item	Quantity

MATERIALS SALVAGED FOR REUSE

Item	Quantity

TRANSPORTATION & EQUIPMENT USED

ID No.	Type & Size	Hours

MATERIALS UNSALVAGEABLE

Item	Quantity
Note: Unsalvageable materials must be listed and stockpiled and the Department of Transportation notified in order that they and the Federal Highway Administration may inspect them before they are disposed of by the Utility.	

CERTIFIED CORRECT:

For the Utility/RR Contractor: _____
(*If Applicable) Superintendent

For the Utility/RR: _____
Superintendent

For the State: _____
Project Engineer

ATTACH ADDITIONAL SHEETS, IF NECESSARY

SECTION 0400 – CERTIFICATION, LICENSE AND TEST REQUIREMENTS

0401 GENERAL

Materials furnished for all construction shall be new and unused and shall be subject to test at all times by the Owner. Any samples or specimens selected for test shall be furnished at no cost to the Owner and the costs of all such tests shall be borne by the Contractor. All tests shall be made by a recognized testing laboratory acceptable to the Owner. The following minimum requirements shall be furnished to the Owner prior to commencing any work associated with this project.

0402 WELDING PROCEDURES

All welding shall be completed in accordance with the Municipal Gas Authority of Georgia's Subscribed Regulatory Compliance Service's (SRCS's) detailed written procedure specification for each welding process or method of application implemented. A change in the variables requiring a separate procedure specification shall be in accordance with API Standard 1104 *Welding of Pipelines and Related Facilities*, Latest Edition incorporated by reference by the Code of Federal Regulations, Section 2.4 *Essential Variables*. Each procedure specification must be qualified to produce welds with suitable mechanical properties and soundness meeting the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 192.225 *Welding-General*. Each procedure must be prepared and qualified in accordance with API Standard 1104 *Welding of Pipelines and Related Facilities*, Latest Edition incorporated by reference of the Code of Federal Regulations, Section 5- *Qualification of Welding Procedures for Welds Containing Filler-Metal Additives*.

0403 QUALIFICATION OF WELDERS

All welding shall be performed by persons qualified in the welding of steel pipe in accordance with the Owner's written procedure specification. Each person engaged in welding steel pipe shall be qualified to produce welds with suitable mechanical properties and soundness meeting the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 192.225 *Welding-General* for each of the Owner's procedures implemented for this project. Each qualification shall be in accordance with the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 192.227 *Qualification of welders* and the appendices thereof. All qualification tests shall be witnessed by the Owner at the Owner's facilities unless prior arrangements are agreed upon. Qualification tests shall be conducted by destructive testing by a recognized testing laboratory acceptable to the Owner. All costs associated with the qualification tests shall be borne by the Contractor. Persons performing welding of steel pipe will be qualified within the limits of the



variables set forth in the Owner's written procedure specification.

It shall be the prerogative of the Owner to require re-examination of any persons engaged in welding steel pipe whose workmanship appears to be inferior. All costs associated with re-examination shall be borne by the Contractor.

0404 EMPLOYEE ALCOHOL MISUSE PLAN

The Contractor shall maintain and implement a written alcohol misuse plan meeting the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 199 *Drug and alcohol testing*. The alcohol misuse plan must contain methods and procedures for compliance with the requirements of this Part, including the employee assistance program.

Two (2) copies of the written alcohol misuse plan the Contractor and any Subcontractors being utilized on this project has in place meeting the requirements of this Section shall be provided to the Owner.

0405 EMPLOYEE ANTI-DRUG PLAN

The Contractor shall maintain and implement a written anti-drug plan meeting the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 199 *Drug and alcohol testing*. The anti-drug plan must contain the following minimum information.

- a. Methods and procedures for compliance with all the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 199 including the employee assistance program.
- b. The name and address of each laboratory that analyzes the specimens collected for drug testing.
- c. The name and address of the plan's Medical Review Officer and Substance Abuse Professional.
- d. Procedures for notifying employees of the coverage and provisions of the plan.

Two (2) copies of the written anti-drug plan the Contractor and any Subcontractors being utilized on this project has in place meeting the requirements of this Section shall be provided to the Owner. The Contractor shall provide proof that this program is being implemented.

0406 OPERATOR QUALIFICATION

The Contractor must subscribe to the Municipal Gas Authority of Georgia's Subscribed Regulatory Compliance Service (SRCS) and be a member in good standing with up to date Operator Qualification records in accordance with the

requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 192 and Part 199. All covered tasks associated with the construction of this project shall be performed in accordance with the Operator Qualification Program subscribed to by the Bidder in accordance with the requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition, Part 192 and Part 199.

0407 STATE UTILITY CONTRACTOR LICENSE

The Contractor shall hold a current utility contractor license issued by the State of Georgia Construction Industry Licensing Board. The Contractor must also have in his employment on a full-time basis a person or persons who holds a valid utility manager certificate issued by the Division of Utility Contractors. Such utility manager shall oversee the utility contracting work of all the employees and shall be actually engaged in the performance of the business of the Contractor.

No portion of this contract may be constructed or erected unless a certified utility manager or certified utility foreman is present at the job site of such construction. No person may be employed as a utility foreman unless that person holds a valid utility foreman certificate issued by the Division of Utility Contractors. If construction will be overseen by a utility foreman and not the utility manager, a copy of the utility foreman's certification shall be provided to the Owner.

Two (2) copies *each* of the Contractor's current utility contractor license, valid utility manager certificate and, if construction will be overseen by a utility foreman and not the utility manager, a copy of the utility foreman's certification shall be provided to the Owner.

0408 GEORGIA EROSION & SEDIMENTATION CONTROL EDUCATION AND TRAINING CERTIFICATION

No portion of land disturbing activities associated with this project may be completed unless such activities are overseen by at least one person meeting the education and training certification requirements as administered and implemented by the E&SC Education and Certification Program of the Georgia Soil and Water Conservation Commission unless;

- 0408.01 the portion of land disturbing activities is under one acre and the land disturbance is more than 200 feet from State Waters unless;
- 0408.02 the portion of land disturbing activities is part of a larger "common development," then the education and training certification requirements shall apply for this project with less than one acre of land disturbance.

Two (2) copies of the certification issued by the E&SC Education and Certification Program of the Georgia Soil and Water Conservation Commission of such person meeting the education and training certification requirements shall be provided to the Owner.

The Owner may require tests or certifications in addition to the minimum tests listed, and if required, the cost of such tests will be borne by the Owner unless otherwise called for in the plans or specifications.

..... END OF SECTION

SECTION 0500 – MATERIAL SPECIFICATIONS

0501 SCOPE OF WORK

Unless specified otherwise, it is the intention of these specifications to require the Contractor to furnish all labor, tools, equipment, skills, materials and incidentals necessary and/or required to construct and complete the work at the locations shown in the plans, as shown on the details in the plans and as called for in these specifications entitled *NATURAL GAS MAIN RELOCATION, S.R. 293/KINGSTON HIGHWAY AT DYKES CREEK 0015544, CARTERSVILLE PROJECT NO. CP-21-001*. All materials for incorporation into this project shall be new, unused and manufactured in the United States and shall meet the applicable requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition and any other applicable requirements and specifications listed in these specifications.

0502 FARM TAP ASSEMBLY

0502.01 Valve Tee

See *VALVE TEES* of this section.

0502.02 Meter Valve (*Provided by the Owner*)

Meter valve shall be rated for use with natural gas and constructed of galvanized iron with a working pressure of 175 psig. Meter valve shall be of the lubricated type with a single lock wing locking in the closed position. Meter valve shall be equal to the LuboSeal meter valve, Catalog No. H-11175 as manufactured by Mueller Company, Gas Products Division of Decatur Illinois.

0502.03 Paint

Paint shall be a single component, one coat high performance system and shall be a high gloss industrial enamel suitable for surfaces in mild to moderately severe exposures. Paint shall be provided in one (1) gallon cans in the quantity as called for. Paint shall be Series 2H Hi-Build Tneme-Gloss as manufactured by Tnemec Company, Inc. of Kansas City, Missouri. Finish coat color shall be ASA 49 Gray.

Where the color yellow is called for, finish coat color shall be 02SF Lemon Yellow/Safety, Safety Yellow.

0502.04 Regulators (*Provided by the Owner*)

Regulators shall be constructed of cast steel with ductile iron spring and diaphragm case, NPT end connections and internal relief valve (*IRV*). Seat ring and disk holder shall be constructed of stainless steel with nitrile valve disk, o-rings and diaphragm. Regulators shall have a port diameter of 3/32" (2.4 mm) and an outlet pressure range of 15-40 psig (*green spring*). Body-spring case orientation shall be standard "Position 1" with spring case vent location of "E". Regulators shall be the Type 627R self-operated regulator as manufactured by Fisher Controls International, Inc. of Marshalltown, Iowa.

0502.05 Steel Line Pipe (*Provided by the Owner*)

See *STEEL LINE PIPE* of this section.

0502.06 Stone

Stone used in the regulating stations shall be Size No. 57, clean, hard and durable free from dirt. Not less than ninety-five percent (95%) by weight shall pass a one inch (1") screen, not more than sixty percent (60%) and not less than twenty five percent (25%) by weight shall pass a one-half inch (1/2") screen and not more than ten percent (10%) by weight shall pass a No. 4 sieve of the United States Standard Sieve Series.

0502.07 Threaded Fittings

See *THREADED FITTINGS* of this section.

0502.08 Unions (*Provided by the Owner*)

Unions shall be Class 3000 constructed of carbon steel meeting the requirements of ASTM A105. Unions shall be of the ground joint, non-insulating type with threaded end connections. Unions shall be equal to those as manufactured by Central Plastics of Shawnee, Oklahoma.

0502.09 Welding Fittings

See *WELDING FITTINGS* of this section.

0503 GRASSING

0503.01 General

Materials for grassing shall meet the requirements of Section 890-SEEDS AND SOD of the State of Georgia Department of Transportation's Standard Specifications for Road and Bridge Construction, Latest Edition. Grassing of areas adjacent to residential or commercial lawns shall match the type of grassing of the adjacent areas.

0503.02 Seed

Seed shall be of the species specified on the detail in the plans for the applicable area of the state, type of required stabilization and dates of planting. Seed shall meet the requirements of the Georgia Seed Laws and Rules and Regulations. Each seed bag shall be provided with an analysis tag with the results of a test made within 9 months of planting. Seed quality shall meet the following properties:

Germination and hard seed (<i>Minimum</i>)	70%
Purity (<i>Minimum</i>)	90%
Weed seeds (<i>Maximum</i>)	2%
Noxious seeds (<i>Maximum</i>)	300 seeds per pound

0503.03 Fertilizer

Fertilizer shall be of the grades specified on the detail in the plans and shall meet the requirements of the Georgia Plant Food Act in effect at the date of the Advertisement For Bids. Fertilizer shall be uncaked and undamaged at the time of application.

0503.04 Agriculture Lime

Agriculture lime shall be ground dolomitic limestone meeting the following properties:

<u>Requirements</u>	<u>Percent By Weight</u>
Total Carbonates (<i>Minimum</i>)	85
Elemental Magnesium derived from Magnesium Carbonate (<i>Minimum</i>)	6
Passing 10 mesh screen (<i>Minimum</i>)	90
Passing 100 mesh screen at least (<i>Minimum</i>)	25

0503.05 Mulch

Mulch shall be oat or wheat straw, threshed rye or Bermuda grass hay. Mulch shall be in good condition, dry enough to adhere to asphalt and free from excessive quantities of matured seeds of noxious weeds or other species constituting a menace to surrounding farmland.

0504 LINE VALVES

0504.01 Line Valve Assembly

Each line valve assembly shall be installed as shown on the details in the plans and shall consist of the following:

One Non-Lubricated Ball Valve (*Provided by the Owner*)
One 2" Square Wrench Head Adapter
Two Valve Tees w/Nipples and Caps
One Valve Box with Cast-in-Place Concrete Collar
One Valve Marker

0504.02 General

Steel line valves shall be maintenance free, full port ball valves with blowout proof stem. Steel line valves shall be suitable for buried service and shall be constructed of steel meeting the minimum requirements, or equivalent, of API 6D with weld end connections and fully welded body. The ball shall be nickel chrome plated steel finished to a quality to ensure maximum ease of operation with nylon ball seats.

0504.03 Eight-Inch (8") Steel Line Valves (*Provided by the Owner*)

Eight-inch (8") steel line valves shall be of standard construction with trunnion supported ball and internal stops stopping the ball in the fully open and fully closed positions. Eight-inch (8") steel line valves shall be worm-gear operated with waterproof gear housing and 2" square wrench head adapter for above ground operation with standard 2" valve wrench. Eight-inch (8") line valves shall have a working pressure of 740 psig and shall be the Full Opening 300 lb. Class Welded Body Ball Valve as manufactured by Cooper Cameron Corporation, Cooper Cameron Valve Division of Oklahoma City, Oklahoma.

0505 MARKING PAINT

Marking paint shall be suitable for marking underground utility lines and shall

withstand short-term outdoor weathering. Marking paint shall be water-based and specially formulated for use in the inverted position with non-clogging spray tip and spray-through cap. Marking paint shall be fast-drying providing one-coat coverage and shall produce bold, bright, vivid and highly visible markings on virtually any surface that are safe on grass and other plant life. Marking paint shall be provided in the color as specified meeting the APWA Color-Code standards for marking underground utility lines. Marking paint shall be provided in 20 oz. aerosol cans (17 oz. net weight) and shall be equal to Rust-Oleum Professional Inverted Marking Paint Spray as manufactured by Rust-Oleum Corporation of Vernon Hills, Illinois.

0506 MARKING TAPE

Marking tape shall be constructed of virgin polyethylene at a thickness of 6 mil with a width of 3" and shall meet or exceed all applicable ASTM specifications. Marking tape shall be suitable for prolonged buried use with the words "CAUTION: BURIED GAS LINE BELOW" or similar and shall meet the APWA Color-Coding of yellow. Marking tape shall be equal to Pro-Line Non-Detectable Marking Tape as manufactured by Pro-Line Safety Products Company of West Chicago Illinois.

0507 MATERIALS FOR CONCRETE

0507.01 Cement

All cement shall be standard Portland Cement, Class B

0507.02 Fine Aggregate

The fine aggregate shall consist of clean, hard, durable uncoated particles of sand or stone. When incorporated in the concrete mixture, fine aggregate shall be free from frost, frozen lumps, injurious amounts of dust, mica, soft or flaky particles, shale, alkali, organic matter, loam or other deleterious substance.

Ninety-five percent (95%) of the fine aggregate shall pass a one-quarter inch (1/4") screen; not more than twenty-five percent (25%) shall pass a fifty (50) mesh sieve, and not more than five percent (5%) by weight shall pass a one hundred (100) mesh sieve.

In no case shall fine aggregate be accepted containing more than three percent (3%) by dry weight nor more than five percent (5%) by dry volume, nor more than seven percent (7%) by wet volume of clay, loam or silt. If any samples of fine aggregate show more than seven percent (7%) of clay, loam or silt, after twenty-four (24) hours settlement after shaking in an excess of

water, the material represented by the samples will be rejected.

Fine aggregate shall be of such quality that mortar composed of Portland cement and the fine aggregate made into 2" x 4" cylinders in the same proportions as will be used in the concrete mixture shall show compressive strength at seven and twenty-eight days equal to or greater than the compressive strength of cylinders composed of mortar of the same proportions of Portland cement and the standard Ottawa sand. For proportioning test cylinder, Portland cement and fine aggregate and standard Ottawa sand shall be measured by weight, and the same Portland cement shall be used with the Ottawa sand as with the fine aggregate to be tested.

0507.03 Coarse Aggregate

Coarse aggregate shall be clean and washed gravel or crushed stone. The gravel or crushed stone shall be clean, hard, durable uncoated particles. It shall contain no vegetable or other deleterious matter, and shall be free from soft, thin, elongated, or laminated pieces.

0507.04 Water

Water for concrete work shall be fresh, clear and free from oil, acid, alkali, or organic matter.

0508 MULCH

Mulch shall be oat or wheat straw, threshed rye or Bermuda grass hay. Mulch shall be in good condition, dry enough to adhere to asphalt and free from excessive quantities of matured seeds of noxious weeds or other species constituting a menace to surrounding farmland.

0509 PAVEMENT REMOVED AND REPLACED

Pavement removed shall be replaced with pavement meeting the requirements of the State of Georgia Department of Transportation's Standard Specifications for Road and Bridge Construction for the type of pavement involved. Pavement shall be replaced as shown in the details on the plans. Traffic plates must be provided and maintained by the Contractor and shall remain in place until the pavement is replaced as called for. Traffic interruption shall be minimal.

0510 ROCK SHIELD (Provided by the Owner)

Rock shield shall be a flexible, resilient membrane designed specifically for the

protection of corrosion pipeline coatings when the pipeline is covered with a backfill material containing damaging rock and rock fragments preventing abrasion, impact and penetration of the corrosion pipeline coating. Rock shield shall consist of a 3/8" minimum closed cell polyethylene foam laminated to a minimum 25 mil thick backing. Rock shield shall readily conform to the pipe surface allowing easy application by spiral, longitudinal or cigarette wrapping. Rock shield shall be perforated allowing the cathodic protection system to maintain an uninhibited current flow or otherwise designed without the concern of blocking out the flow of cathodic protection. Rock shield shall be provided in the width and quantity as called for and shall be equal to TC 2025 Rockshield as manufactured by Chace Tapecoat of Evanston, Illinois.

0511 SERVICE TEES

Service tees shall be designed to weld directly to the main and shall be constructed of forged steel with weld inlet and outlet. Service tees shall be of the size specified in the plans and designed to make service taps under pressure with a self-contained perforator. The perforator tip shall retain the coupon and when closed shall provide a positive shut-off of gas flow. Steel service tees shall be equal to the No-Blo Autoperf Service Tee, Catalog No. H-18102 with 3/8" perforator tip size as manufactured by Mueller Company of Decatur, Illinois. of Decatur, Illinois.

0512 SILT AND EROSION CONTROL DEVICES

Material for silt and erosion control devices shall meet the requirements of the State of Georgia Department of Transportation's Standard Specifications for Road and Bridge Construction, Latest Edition. Products for silt and erosion control shall be listed in the Department's Qualified Products Manual and shall exceed the minimum requirements of this reference. Products removed from this listing will be prohibited from use on this project.

The Contractor shall provide a product submittal to the Owner prior to incorporating filter fabric into this project.

0513 STEEL LINE PIPE (*Provided by the Owner*)

Steel line pipe shall be Electric Resistance Weld (ERW), Grade X52 meeting the requirements of API Specification 5L, Specification for Line Pipe, Latest Edition incorporated by reference by the Code of Federal Regulations and shall be new and unused. Steel line pipe of higher or lower Grades than those listed by this specification will not be accepted. Steel line pipe shall be manufactured in the United States and shall bear the mark of the manufacturer. Steel line pipe shall be beveled for welding and shall be provided in diameters and wall thicknesses as specified. All steel line pipe shall be provided in double random (40' average)

lengths.

0514 STEEL LINE PIPE COATINGS

0514.01 Plant Applied Coatings (Provided by the Owner)

0514.01.1 Buried Steel Line Pipe

Plant applied coating of buried steel line pipe shall be fusion bonded epoxy (F.B.E.) applied electrostatically to an average plant thickness of 14 mils with a minimum thickness at any point of 12 mils terminating three inches (3") from the ends of the pipe. Coating specifications, procedures and electrical inspection shall be in accordance with the National Association of Pipe Coating Applicators (NAPCA) Specifications and Plant Coating Guide, Latest Edition and as required by the coating manufacturer. Plant applied coating shall be equal to Scotchkote 6233P epoxy coating as manufactured by 3M Electrical Products Division of St. Paul, Minnesota.

0514.01.2 Steel Bore Pipe Coating (Provided by the Owner)

Steel bore pipe coating shall be a plant applied dual coat, multi-layer combination of the same coating application as specified above for steel line pipe plus an additional plant applied durable, abrasion resistant overlay coating designed to be applied over fusion bonded epoxy coating for harsh to severe installation conditions and directional boring applications. Abrasion resistant overlay coating shall be applied electrostatically to a minimum average plant thickness of 20 mils with a minimum thickness at any point of 15 mils terminating three inches (3") from the ends of the pipe. Total multi-layer coating system shall be a minimum average plant thickness of 34 mils with a minimum thickness at any point of 27 mils. Coating specifications, procedures and electrical inspection shall be in accordance with the National Association of Pipe Coating Applicators (NAPCA) Specifications and Plant Coating Guide, Latest Edition and as required by the coating manufacturer. Abrasion resistant overlay coating shall be equal to the Scotchkote 6352HF Fusion Bonded Epoxy Dual Coating System as manufactured by 3M Electrical Products Division of St. Paul, Minnesota or Valspar Pipeclad 2040 Abrasion-Resistant Overcoat (ARO) as manufactured by Valspar Industrial of Minneapolis, Minnesota.

0514.01.3 Stenciling

The following minimum information shall be stenciled to the exterior of plant applied coatings.

Name of Coating Applier
Name of Pipe Manufacturer
Pipe O.D. in Inches
Pipe Wall Thickness in Inches
Type of Pipe Manufacture and Grade
Coating Specification Symbol

0514.02 Joint Wrap

0514.02.1 Joint Wrap Tape (Buried)

Joint wrap tape for the protection of buried weld joints, fittings and damaged areas of the coating shall be a minimum thickness of 35 mils. Joint wrap shall be compatible with plant applied fusion bonded epoxy coating. Joint wrap tape shall be compatible with cathodic protection and resistant to cathodic disbondment. Joint wrap tape shall be cold applied and provided in the width as specified and shall be Greenline Tape as manufactured by Royston, a division of Chase Corporation, of Pittsburgh, Pennsylvania.

0514.02.2 Joint Wrap Tape Primer (Buried)

Joint wrap tape primer shall be elastomer-resin based and formulated to be used as a corrosion resistant adhesive specifically for adhering Royston Greenline Accessory Wrap to both metallic and non-metallic surfaces for underground service. Joint wrap tape primer shall be provided in the container form and size as specified and shall be Roybond 747 as manufactured by Royston, a division of Chase Corporation, of Pittsburgh, Pennsylvania.

0514.02.3 Primerless Joint Wrap Tape (Buried)

Primerless joint wrap tape for the protection of buried weld joints, fittings and damaged areas of the coating shall be a minimum thickness of 35 mils. Primerless joint wrap tape shall be compatible with plant applied fusion bonded epoxy coating. Primerless joint wrap tape shall be compatible with cathodic protection and resistant to cathodic disbondment. Primerless joint wrap tape shall be suitable for above and below ground use. Primerless joint wrap tape shall

have an integrated primer impregnated into the adhesive suitable for use without a separate liquid primer. Primerless joint wrap tape shall be provided in the width as specified and shall be Tapecoat H35 Gray as manufactured by Tapecoat, Inc., a division of Chase Corporation, of Evanston, Indiana.

0514.02.4 Heat Shrink Sleeves (*Conventional Boring*)

Heat shrink sleeves shall be utilized on all joints subjected to pullback during conventional boring operations and heat shrink sleeves shall be a one-piece heat shrink sleeve specifically designed for such operations with durable protection against abrasion and wear. Heat shrink sleeves shall be 18" in length and shall be provided pre-cut for the pipe sizes as called for. Heat shrink sleeves shall have a minimum applied thickness of 60 ± 2 mils and shall be compatible with plant applied fusion bonded epoxy coating. Heat shrink sleeves shall be compatible with cathodic protection and resistant to cathodic disbondment. Heat shrink sleeves subjected to pullback during conventional boring operations shall be equal to the K-40 Wraparound sleeve as manufactured by Canusa, a division of ShawCor Industries Company of The Woodlands, Texas.

0514.02.5 Heat Shrink Sleeves (*Directional Boring*)

Heat shrink sleeves shall be utilized on all points subjected to pullback during directional boring operations and heat shrink sleeve shall be a three-layer sleeve system specifically designed for extreme conditions found in directional boring operations. Heat shrink sleeves shall be 18" in length and shall be provided pre-cut for the pipe sizes as called for. Heat shrink sleeves shall have a minimum applied thickness of 100 mils and shall be compatible with plant applied fusion bonded epoxy coating. Heat shrink sleeves shall be compatible with cathodic protection and resistant to cathodic disbondment. Heat shrink sleeves subjected to pullback during directional boring operations shall be equal to the DDX Directional Drilling Kit as manufactured by Canusa, a division of ShawCor Industries of The Woodlands, Texas.

0515 STOPPER FITTINGS W/OUTLET, 720# W.P. (*Provided by the Owner*)

Stopper fitting w/outlet, 720# W.P. shall be of the full encirclement type and shall have a bottom opening for the connection of a lateral line with the outlet sized for standard schedule 40 steel pipe. Stopper fitting w/outlet, 720# W.P. shall provide a positive shut-off of the flow of gas through the line with a by-pass stopper plug installed without the interruption of the flow of gas through the outlet. Stopper fitting

w/outlet, 720# W.P. shall have a working pressure of 720 psig and shall be the Bottom-Out Stopper Fitting Welding Type for Thin Wall Steel Pipe-720 psig, Catalog No. H-17281 as manufactured by Mueller Company Gas Products Division of Chattanooga, Tennessee.

0516 THREADED FITTINGS

Threaded fittings shall be constructed of carbon steel meeting the requirements of ASTM A105 and ANSI B16.11. Threaded fittings shall be ANSI Class 3000 and shall be equal to those as manufactured by Ladish Company of Cudahy, Wisconsin.

0517 VALVE BOXES

Valve boxes shall be of the cast iron roadway, sliding adjustable type. The boxes shall have a minimum inside diameter of 5-1/4" and a minimum bottom bell inside diameter of 8". The length shall be adjustable from 36" to 48" and, if necessary, the Contractor shall supply and install extensions recommended for the valve box being installed. The minimum thickness of metal at any point shall not be less than 5/16". The top section shall have a flange at the bottom to prevent external loads from being supported by the valve. Valve boxes shall be painted inside and outside with a good bitumastic paint and shall be equal to 2-piece Sliding Type Adjustable Valve Box, Figure No. 4908 and, if necessary, Sliding Extension, Figure No. 4906-X as manufactured by Opelika Foundry.

0518 VALVE MARKERS

Valve markers shall be pre-cast concrete with a compressive strength at 28 days of 3,000 psi. Valve markers shall be manufactured in strict accordance with the details shown in the plans and shall be installed at the locations shown on the plans.

0519 VALVE TEES

Valve tees shall be weld end and constructed of forged steel with a working pressure of 1,440 psig. Valve tees shall have a built-in valve assuring positive shut-off in the closed position. Valve tees shall be equal to No-Blo Capped Steel Valve, Catalog No. H-17656 as manufactured by Mueller Company, Gas Products Division of Decatur Illinois.

0520 WELDING FITTINGS

Welding fittings shall be butt weld, Grade B, seamless steel with a minimum yield strength of 35,000 psi meeting the requirements of ASTM A106 and ANSI B16.9.

Welding fittings shall be Standard Weight or Extra Strong, Pipe Schedule Number 40 in accordance with ANSI B36.10 as specified in the plans and shall be equal to those as manufactured by Ladish Company of Cudahy, Wisconsin.

..... END OF SECTION

SECTION 0600 – CONSTRUCTION METHODS

0601 SCOPE OF WORK

The work includes furnishing all labor, tools, equipment, materials, skills, and incidentals necessary or required to construct and complete in place all of the work as shown on the plans and as called for in these specifications in accordance with the prices submitted in the bid proposal. All construction procedures and techniques used and employed by the Contractor shall meet the applicable requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition. All such procedures and techniques shall be conducted in accordance with safe and accepted pipeline construction practices. At no time shall project conditions impede the quality of work by the Contractor or the Owner's ability to ensure the quality of work by the Contractor in accordance with the plans and specifications including but not limited to precipitation, fog, wind and darkness.

0602 BACKFILLING

0602.01 General

After the pipe is lowered into the trench, selected backfill free from rocks and stones shall be uniformly compacted with approved mechanical tampers the full length of the pipe to a point one foot surrounding the pipe in layers not exceeding 6". The remainder of the trench shall be backfilled in 6" layers and compacted with approved mechanical tampers and shall not contain any stones weighing more than 50 pounds each.

0602.02 Compaction

0602.02.1 General

Unless otherwise called for in these specifications, soil compaction tests may be performed to confirm the level of compaction meets the required specification. The Contractor will be responsible for all costs incurred by the Owner associated with compaction tests yielding less than the specified percentage of compaction including re-testing as necessary to ensure the minimum compaction has been achieved.

0602.02.2 Trenches

The compaction of backfill in trenches shall not be less than 95% in accordance with AASHTO Designation T99. The top 12" shall be compacted to 100% of specified density. If additional water is necessary to obtain the optimum moisture content in the backfill, the

Contractor shall add such water at no additional cost.

0602.02.3 Rock Excavation

In rock excavation, the bottom of the trench to a point one foot surrounding the pipe shall be finely pulverized soil, free from rocks and stones. The remainder of the backfill shall not contain over 75% broken stones, and the maximum stone size placed in the trench shall not weigh more than 50 pounds each. Excess rock and fragments shall be disposed of in a satisfactory manner off of the project site. Where necessary or at the request of the Owner, rock shield shall be used to further protect the line pipe coating

At the discretion of the Owner and where necessary, backfill free from rocks or rock shield will be provided by the Owner.

0602.02.4 Bore Pits

The compaction of backfill in bore pits shall not be less than 100% of theoretical maximum density. If additional water is necessary to obtain the optimum moisture content in the backfill, the Contractor shall add such water at no additional cost. If special backfill material is necessary to achieve compaction of 100% of theoretical maximum density, the Contractor shall add such material at no additional cost. Soil compaction tests may be performed to confirm the level of compaction meets this specification. The Contractor will be responsible for all costs incurred by the Owner associated with compaction tests yielding less than the specified percentage of compaction including re-testing as required.

0603 BARRICADES, WARNING SIGNS AND FLAGMEN

The Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient warning lights, danger signals and signs, provide sufficient number of watchmen and take all necessary precautions for the protection of the work and the safety of the public. If lanes of traffic are to be closed, the Contractor shall provide necessary certified flagmen. Certification shall be obtained from the Georgia Department of Transportation. Traffic control devices and placement shall be in accordance with the Georgia Utilities Coordinating Committee Manual on Traffic Control Procedures for Utilities, Latest Edition as approved by the Georgia Department of Transportation.

0604 BENDING STEEL PIPE

As necessary, the bending of steel pipe shall be done cold. Wrinkle bending will not be acceptable. Each bend must not impair the serviceability of the pipe and must be free from buckling, cracks or any other mechanical damage. Bending of steel pipe shall be accomplished with only those tools made specifically for this purpose. The longitudinal weld must be as near as practical to the neutral axis of the bend. If the coating becomes disbonded during the bending process, the Contractor shall remove the affected areas of coating and prepare and wrap the area as required by the paragraph in this section entitled *Joint Wrap*.

0605 BORING

0605.01 Conventional Boring

The conventional "free" bore method of installation shall be completed at the locations called for in the plans. The conventional "free" bore method constitutes boring and jacking with a rotating auger or rod and cutting head attachment without the use of casings or sleeves. The carrier pipe shall be pushed through the bore hole by "jacking" concurrently with the rotating auger or rod with cutting head attachment or the carrier pipe may be pulled through the bore hole as the rotating auger or rod is removed. Any other method must be approved by the Owner.

The leading edge of the carrier pipe shall be inspected for coating damage caused by rock or solid objects in the bore hole. If coating damage is evident, the damage shall promptly be reported to the Owner and, at the Owner's discretion, the bore shall be abandoned and an alternate site chosen.

0605.02 Directional Boring

The directional bore method of installation shall be completed at the locations shown in the plans in accordance with the directional drill plan and profile. The Contractor or subcontractor completing the directional drill installation shall demonstrate his ability to accurately complete the drill by documenting successful experience of drilling similar pipe sizes and lengths as that specified. The machine utilized for the drills shall be of sufficient size with adequate specifications to successfully complete the directional drill as designed. Any changes in the directional drill profile shall be submitted to the Owner in writing with accurate supporting drawings prior to any changes from that as shown in the plans. The manufacturer's recommended bend radius of the proposed pipe size and the anticipated stresses imposed on the drilled pipe shall be considered in any changes of arc radius and

entrance and exit angles of the directional bore. No change in the drill profile shall be made without prior written approval of the Owner.

0605.02.1 Pilot Hole

A pilot hole shall be drilled through the soil at the predetermined angle from horizontal grade and continue along the design profile to the exit of the drill section. The directional control of the drill shall be provided by rotating the angle of a "bent stub" behind the rotating drill head.

0605.02.2 Preream/Ream

After the pilot hole is complete, the hole shall be enlarged to a suitable diameter for the proposed pipe. A reamer shall be attached to the drill pipe at the drill exit and pulled back through the pilot hole enlarging the pilot hole to the proper diameter. Prereaming, by pulling successively larger reamers through the pilot hole, may be necessary as soil conditions warrant. A slurry solution of Bentonite, or approved equal, pumped into the hole shall aid in holding the walls of the hole during the prereaming/reaming operation, provide lubrication of the proposed pipe and, once dry, shall serve as a dirt padding between the line pipe and the soil walls.

0605.02.3 Pullback

After enlarging the drilled hole, the prefabricated line pipe shall be attached to the reamer with a swivel preventing translation of the reamer's rotation to the line pipe. The drill machine shall begin the pullback operation by concurrently pulling and rotating the drill rod, pumping and circulating additional slurry solution and pulling the line pipe through the drilled hole until it exits at the location of the drill machine.

0605.02.4 Slurry Containment

The slurry mixture may circulate back to the surface and "break out" of the pilot hole. The Contractor shall make all necessary provisions to obtain a controlled "break out" with relief holes and containment of the slurry by utilizing a vacuum truck and holding tank or by other acceptable means. Areas outside the area of the controlled "break out" shall be immediately cleaned up and restored to as near original condition as possible. All slurry mixture not contained in the drill hole and becoming a permanent part of the installation shall be transported and disposed of by acceptable means off the project site.

0605.02.5 Entrance/Exit Tie-in Holes

After the pipeline tie-ins have been completed and weld joints properly wrapped at each end of the completed directional drill, the holes shall be backfilled as required by the paragraph in this section entitled, *BACKFILLING*.

0605.02.6 Record Drawings

The Contractor shall submit accurate and detailed record drawings of the completed directional drill installation in plan and profile including entrance and exit locations. The drill profile shall be recorded in detail during the drill operation with capable locating equipment. Record drawings shall be submitted on the full-size contract plan drawings.

0605.02.7 Solid Rock Bore

Only instances where directional boring equipment specifically designed for penetration through solid rock is required to successfully complete the bore will be considered as a Solid Rock Bore. Solid rock bore shall be determined by the Owner after attempts of standard directional drilling through soil has failed. The Contractor must demonstrate that these attempts have been made and failed before implementing specialized solid rock boring equipment.

0605.02.8 Soil Borings

The Georgia Department of Transportation has provided the soil boring logs for the bridge design to familiarize the Contractor with the soil conditions for the directional bore. A soil boring map and detailed boring logs appear in Appendix A of this Section for use in the completion of the directional bore. There is no guarantee as to the accuracy or completeness of this data and this data is being provided only as a curtesy. Any inaccuracies or incompleteness of these reports will not constitute support for any changes in the price bid per lineal foot of directional bore.

0606 CARE AND HANDLING OF OWNER PROVIDED MATERIAL

All materials for incorporation into this project will be furnished by the Contractor unless specified as provided by the Owner in these specifications. All materials provided by the Owner will be stored at the Owner's storage facilities and the Contractor will be responsible for the transportation of all materials to project site at his expense. The Contractor shall inspect the condition of the materials prior to

transportation to the project site and any damage or imperfections in the materials shall be promptly reported to the Owner and not transported to the project site. All materials removed from the Owner's storage facilities by the Contractor will become the sole responsibility of the Contractor. Any damage, loss or misplacement of any materials transported to the project site by the Contractor will be remedied or replaced by the Contractor at his expense. All materials provided by the Owner and transported to the project and not used in the final construction of this project shall be returned to the Owner's storage facilities by the Contractor at his own expense.

0607 CARE AND HANDLING OF OWNER PROVIDED COATED PIPE

The steel line pipe provided by the Owner will be stored at the Owner's storage facilities or the following locations along the project route and the Contractor will be responsible for the transportation of the pipe to project site at his expense. The Contractor shall inspect the condition of the pipe and coating prior to transportation to the project site and any damage or imperfections in the pipe and/or pipe coating shall be promptly reported to the Owner and not transported to the project site. All steel line pipe removed from the Owner's storage facilities becomes the sole responsibility of the Contractor. Any damage to the pipe and/or pipe coating transported to the project site whether caused by the Contractor during loading, transporting, unloading or handling of the pipe or was damaged prior to transportation will be remedied by the Contractor at his expense. Any pipe provided by the Owner and transported to the project and not used in the final construction of this project shall be returned to the Owner's storage facilities by the Contractor at his own expense.

0608 CLEAN-UP

After the work is completed, the project site/right-of-way and surrounding areas shall be cleaned of all rubbish and other debris and the premises left in a neat and presentable condition. Extra materials delivered to the project site/right-of-way by the Contractor and not actually used for the construction of the pipeline or appurtenances shall be removed by the Contractor and returned to the Owner's storage facilities at his own expense. Clean-up work shall follow closely behind and shall be considered a part of the normal operations. Clean-up work along the pipeline routes will not be permitted to lag behind the construction operations.

0609 CLEARING AND GRUBBING

Unless specified otherwise, the entire easement or right-of-way area for the pipeline or other appurtenances shall be cleared and grubbed and all of the debris, trees, brush and stumps shall be disposed of by burning on the right-of-way if permitted by local ordinance. If burning is not permitted, then disposal shall be by

other acceptable methods off of the project site. Burying of the debris, trees, brush and stumps will *not* be acceptable. Care shall be taken not to damage the areas adjacent to the right-of-way nor shall debris, trees, brush and stumps be pushed outside the right-of-way. Any damage to areas outside the right-of-way or easement shall be immediately restored by the Contractor to as near original condition as possible and the Contractor shall be responsible for all necessary restitution.

0610 COMPLIANCE WITH THE GEORGIA DEPARTMENT OF TRANSPORTATION

The right-of-way in which this project will be constructed within is under the jurisdiction of the State of Georgia Department of Transportation and all work shall be completed in accordance with the Utility Accommodation Policy and Standards, thereof. The Contractor shall comply with all provisions required by the Georgia Department of Transportation including traffic control, clean-up, silt and erosion control and work schedules. The Georgia Department of Transportation reserves the right to inspect all work required by this contract for compliance with these policies, standards and provisions. The Contractor shall secure all required permits from the Owner and shall give the proper Georgia Department of Transportation local office a 24-hour notification before commencing work within the right-of-way under the jurisdiction of the Georgia Department of Transportation.

This project is also under the jurisdiction of a Force Account Agreement between the Owner and the Georgia Department of Transportation and all requirements, conditions and standards thereof shall apply to this project including daily work summaries known as Form DOT 8465. See Section 0300, PAYMENTS TO CONTRACTORS, Paragraph 0336.02 of these documents for additional requirements.

0611 CONNECTIONS TO EXISTING FACILITIES

0611.01 Connections to Existing Piping

Connections to existing piping shall be completed at the locations called for in the plans after it has been determined that no unharnessed mechanical coupling exists at the connection location. If an unharnessed mechanical coupling exists, it shall be harnessed before the facility is disturbed. Connections to existing piping shall be completed with the flow of gas interrupted. The valve or service tee at the connection to the existing supply of gas shall be closed and the pressure in the existing piping shall be reduced to atmospheric. The connection to existing piping shall be completed by welding. Connections to existing piping while gas is being vented to the atmosphere is prohibited.

0612 CROSSINGS OF EXISTING WATER MAINS

Portions of this project call for the crossings of existing ductile and/or cast iron water mains. The existing water mains shall be carefully supported and protected from damage. If any such structures are damaged, they shall be restored to their original condition by or at the expense of the Contractor. A minimum clearance of 24" shall be maintained between the proposed pipeline and the existing water main. The existing water main shall be wrapped with a polyethylene film for a length of 10' in either direction of the crossing and adequately affixed with duct tape or equivalent. Only 10' of the existing water main shall be exposed at any time. Prior to backfilling, the Contractor shall have the crossing inspected and approved by the owner of the water main facility. The Contractor shall notify the owner of the water facility 48 hours prior to excavating the facility. All costs incurred in meeting this requirement, including extra depth, shall be included in the price bid per linear foot of pipe and there will be no additional compensation.

0613 EXTRA DEPTH DITCH

The Contractor shall install the proposed main and services at a depth greater than the minimum depth specified to avoid conflicts with proposed and existing structures (See the paragraph in this section entitled *INTERFERENCE WITH EXISTING STRUCTURES*), in those areas requiring roadway and shoulder cuts and as directed by the Engineer. In these areas, the Contractor shall install the proposed main to a depth of 48" below the proposed, finished grade. Extra depth may also be required to maintain a minimum clearance of 12" between the top of the proposed main and the bottom of the proposed storm drain pipe. All changes in grade shall be made gradually.

It shall be the Contractor's responsibility to meet such criteria and to coordinate with the field representative of the Georgia Department of Transportation or the road construction contractor those areas requiring extra depth. Earthwork cross sections and drainage and driveway profiles have been provided with the plans to help determine those areas requiring extra depth. It shall be the Contractor's responsibility to determine required elevations of the proposed main and services to avoid these conflicts. All costs incurred by extra depth shall be included in the price bid per lineal foot of pipe according to pipe size. There will be no additional compensation.

0614 EXISTING FENCES

The Contractor shall take down fences on or crossing the right-of-way for such periods of time only as are necessary to prosecute the work of clearing, grubbing, trenching, pipe laying, backfilling and cleanup. Gaps made in fences shall be closed in a substantial manner at night and during any suspension of work. All

existing fences shall be restored to as good condition as before disturbed. All costs incurred in the removal and replacement of fences shall be included in the price bid per lineal foot of pipe. There will be no additional compensation.

0615 FARM TAP ASSEMBLY

0615.01 Fabrication

Farm tap assemblies will be provided by the Owner as an assembly as shown on the details in the plans. It shall be the Contractor's responsibility to complete the installation of the farm tap assembly as shown on the details in the plans.

0615.02 Painting

0615.02.1 Surface Preparation

All portions of the farm tap assembly not painted shall be painted by the Contractor. All steel line pipe shall be cleaned by mechanical wire brushed to remove all rust, weld splatter, foreign particles and moisture prior to painting. Any painted areas damaged by installation shall be touched up by the Contractor.

0615.02.2 Painting Workmanship

All painting shall be done by skilled and competent painters by conventional air or airless spray. Each field coat shall carefully be applied in a manner that will provide uniform coverage with complete shading of the previous coat and shall be carefully worked around joints and other irregularities in the surface. Deficiencies in film thickness shall be corrected by the application of an additional coat(s) of paint. Each coat shall be allowed to dry properly before the next coat is applied. The day's painting should be completed well in advance of the probable time of day when condensation will occur, in order to permit the film an appreciable drying time prior to the formation of paint moisture.

0615.02.3 Paint and Paint Products

All materials shall be brought to the job site in the original sealed and labeled containers of the paint manufacturer and shall be subject to inspection by the Engineer on the job. Application shall be accordance with the manufacturer recommendations.

When thinning is necessary, only the products of the manufacturer furnishing the paint, and for the particular purpose, shall be allowed. All thinning shall be done in strict accordance with the manufacturer's instructions, as well as with the full knowledge and approval of the Owner.

0615.02.4 Placing Assembly Into Operation

After all fabrication, erection, painting, backfilling and testing is completed, the Contractor shall confirm the installation has been completed in accordance with the plans and specifications and notify the Owner to purge the newly constructed facility and confirm the regulator is operating in accordance with the manufacturer's specifications. No regulator shall be placed into service until it has been determined the regulator is operating properly in accordance with the recommendations and instructions of the regulator manufacturer at the set pressure shown on the details in the plans.

The Contractor shall provide a 48 hour notice to the Owner to place the newly constructed facility onto operation.

0615.02.5 Placing Stone

The Contractor shall treat the soil beneath the assembly with an environmentally approved sterilizer to prevent plant growth within the assembly limits. The base of the assembly shall be lined with nine (9) mil, black polyethylene and three inches (3") of stone placed beneath the assembly.

0616 GRASSING

0616.01 General

0616.01.1 Temporary Grassing

Temporary grassing consists of sowing grass seed on a temporary basis where a disturbed area will be re-disturbed sometime within the project time frame and temporary mulching will not be enough to prevent erosion and sedimentation. It includes applying mulch and water as herein specified.

0616.01.2 Permanent Grassing

Permanent grassing consists of sowing grass seed on a permanent

basis. It includes the preparation of the ground, applying mulch, water and fertilizer as herein specified. The type and amount of seed, fertilizer and lime shall be as called on the detail in the plans at the time this work is done to suit soil, seasonal conditions and to match existing grass of adjacent areas.

Disturbed areas abutting lawns and yards shall be restored promptly and type of grassing shall match that of the lawns and yards. Finishing, dressing and grassing shall be completed immediately following backfilling as a continuous operation. Care shall be taken to provide positive drainage to avoid ponding. Restoration will not be permitted to lag behind construction operations.

Methods for grassing of public rights-of-way disturbed during construction shall meet the requirements of Section 700-GRASSING of the State of Georgia Department of Transportation's Standard Specifications for Road and Bridge Construction, Latest Edition. Where grassing is disturbed beyond public rights-of-way, the methods for grassing shall meet the following minimum requirements.

0616.02 Stand of Grass Required

It is the intent of this specification to require the Contractor to deliver a satisfactory stand of perennial grass before final payment will be made for any of the items herein described. If it is necessary to repeat any or all of the work, including plowing, fertilizer, seeding, and watering the Contractor shall never-the-less repeat these operations until a satisfactory stand is obtained. For this purpose, a satisfactory stand of grass is here defined as a full cover, over the areas to be seeded, with grass that is alive and growing, leaving no bare spots larger than one foot square.

0616.03 Ground Preparation

After the area to be seeded has been brought to finish grade, lime (*if required*) shall be uniformly distributed at the prescribed rate over the seeding area, with a mechanical spreader. The ground shall be prepared by plowing, disking and harrowing to a depth of at least 4 inches until these areas are friable, well pulverized and the lime in the surface shall be smoothed out. All roots and stones larger than 3 inches in any dimension, and all other foreign material detrimental to final grading, maintenance and proper growth of the planting shall be removed.

0616.04 Application of Fertilizer

Commercial fertilizer, 10-10-10 shall be distributed uniformly at the rate of 1,000 pounds per acre and shall be uniformly mixed with the soil to a depth of at least two inches by disking, harrowing or by other methods acceptable to the Owner. Fertilizer shall not be applied when the wind makes it difficult to get satisfactory distribution.

0616.05 Seeding

Seed of the prescribed type, labeled in accordance with the Georgia seed laws, rules and regulations shall be evenly spread with a mechanical spreader at rate sufficient to obtain a full stand of grass, but in no case less than 100 pounds of seed per acre.

0616.06 Watering

Immediately after seeding, the Contractor shall soak the soil with water and shall keep all seeded areas continuously moist thereafter as necessary to insure proper maintenance of the grass.

0616.07 Maintenance of Grass

The Contractor shall do all maintenance work necessary to keep all planted area in a satisfactory condition until the work is finally accepted. This shall include mowing, repairing washes that occur, reseeding, and watering as required to produce a healthy and growing stand of grass. Mowing will be required to remove tall and noxious weeds before they go to seed.

0617 GUARANTY

All workmanship and material shall be guaranteed by the Contractor for one year after final acceptance and any defective workmanship, material, or equipment detected during this one year period shall be replaced by the Contractor at no cost to the Owner. Final acceptance of the project will be made only after all work has been completed, the facility is placed into service by the Contractor and is operating in accordance with the plans and these specifications and the Owner has formally accepted all of the work by issuing final payment.

0618 INFORMATION CONCERNING CONDITIONS

The accuracy of information furnished by the Owner and/or the plans and specifications as to underground and surface structures, foundation conditions, character of soil, position and quantity of ground and subsoil water, etc., are not

guaranteed by the Owner. Bidders must satisfy themselves by personal examination and by such other means as they desire with respect to actual conditions in the nature of the ground and subsoil water and in regard to the locations of existing underground or surface structures. Unforeseen conditions shall not constitute a claim for increased compensation under the terms of the proposal nor constitute a basis for the cancellation thereof.

0619 INTERFERENCE WITH EXISTING STRUCTURES

All existing utilities, pipes, drains or other structures on, above or below ground shall be carefully supported and protected from damage. If any such structures are damaged, they shall be restored to their original condition by or at the expense of the Contractor. A minimum clearance of 24" shall be maintained between the proposed pipeline and any existing structure unless called for otherwise in the plans. All costs incurred in meeting this requirement, including extra depth, shall be included in the price bid per linear foot of pipe and there will be no additional compensation.

Insulation spacers shall be installed when the proposed steel line pipe is in close proximity to a metallic structure.

0620 INTERNAL CLEANING OF PIPE

Before placing the facility into operation, the Contractor shall ensure that all line pipe is internally free from welding icicles, rust, moisture, scale, dirt, mud and any foreign particles. The Contractor shall remove all such material by propelling cleaning pigs through all line pipe installed for this project with compressed air or inert gas. This shall be repeated as many times as necessary to ensure removal of any such defects. Wire brush type cleaning pigs and standard cleaning pigs in succession shall be used for steel line pipe and cleaning pigs specifically designed for use with polyethylene internal diameters shall be used for polyethylene pipe. Foam drying pigs shall be used to dry line pipe where significant amounts of moisture are present. In such cases, it may be necessary to introduce a drying agent into the line to completely remove any moisture.

Once the cleaning operation is complete, the Contractor shall notify the Owner of the final passing of a cleaning pig and the Owner shall confirm the pipe is absolutely clean and free from any obstructions. If for any reason, the pipe sections cannot be welded together following the final cleaning operation, the line pipe sections shall be capped by welding and filled with air or inert gas.

Where line valves will be included in the pressure testing of the facility, internal cleaning of all line pipe shall be completed prior to performing any pressure test. All line valves shall remain in the open position during all pressure testing and internal cleaning of all steel line pipe.



0621 LAYING PIPE

All pipe shall be laid in a workmanlike manner in accordance with the best modern pipeline practice. It is intended that laying, as used here, includes welding, bending, insertion of slack and lowering. The Owner may instruct the Contractor to leave "open ends" at various points during construction. Such open ends shall be connected at such time and in such manner as directed by the Owner, but previous to the final test of the pipe. The providing of these open ends, if required, will be at locations designated by the Owner and for the purpose of relieving strain from temperature changes which may develop after the line has been placed in the ditch and its temperature lowered.

0622 MARKING TAPE

0622.01 Buried Steel Line Pipe

Marking tape shall be placed in the ditch line over the centerline of all buried steel line pipe. Buried steel line pipe shall be backfilled in accordance with these specifications to a point 18" above the pipe and marking tape shall be installed in the ditch 18" above the centerline of the pipe.

0623 LOCATION OF EXISTING UTILITIES

It shall be the Contractor's responsibility to comply with the Georgia Utility Facility Protection Act and cause to have all utilities located prior to excavating. The Contractor shall request the location of all utilities by calling the Utilities Protection Center at 1-800-282-7411 or other applicable telephone number. The Contractor shall be aware of and familiar with all local, State and Federal Laws governing utility protection and conduct all excavation practices in accordance therewith.

0624 MAINTAINING THE FLOW OF GAS

Construction shall be staged in order to ensure the system downstream of construction receives a constant flow of gas. At no time during the construction shall the flow gas be interrupted to the existing distribution system. If the flow of gas is interrupted at the fault of the Contractor, any costs or damages incurred by the City due to the loss of flow shall be the responsibility of the Contractor.

0625 MARKING FACILITIES

The Contractor shall be responsible for marking and maintaining the location of the facilities installed under this Contract with "locate flags" as called for in State and Local laws, rules and regulations. "Locate flags" will be provided by the Owner. All costs incurred by the marking of facilities shall be included in the price bid per lineal

of pipe according to type of installation and size and there will be no additional compensation.

0626 ORDER SEQUENCE OF WORK

To insure completion within the allotted time, the Owner will designate the starting point or points for construction and the sequence in which the work shall be constructed, completed and placed in operation. The Contractor shall observe and comply with the detail plans and all instructions from the Owner pertaining to the sequence of work.

0627 PAVEMENT REMOVED AND REPLACED

Pavement removed and replaced shall be completed at the locations shown in the plans as shown on the details in the plans. Pavement removed and replaced shall be completed in a fashion where disruption of traffic will be minimal. The use of traffics bearing plates will be necessary to meet this requirement. All pavement replaced in accordance with these specifications shall meet the approval of the State of Georgia Department of Transportation and the requirements of the Standard Specifications for Road and Bridge Construction, Latest Edition and the Utility Accommodation Policy and Standards, latest Edition, there of.

0627.01 General

Removing and replacing pavement shall consist of removing the pavement and base course and replacing it in accordance with the details in the plans. Existing pavement removed shall be sawed or cut to neat, straight lines.

0627.02 Sub-grade

The trench shall be backfilled as specified in *BACKFILLING* of these specifications.

0627.03 Width

Unless otherwise directed by the Engineer, all pavement shall be removed to a maximum width as shown on the details in the plans.

0628 PLACING FACILITY INTO OPERATION

After all fabrication, backfilling, and testing is completed and acceptable to the Owner, the Contractor shall purge the newly constructed facility. Purge tees shall be provided and installed by the Contractor at no expense to the Owner. Purge tees shall be located at locations to ensure all piping and appurtenances are

purged of all air. The Owner shall be given 48 hours notice before the purging operation begins.

0629 PLACING FITTINGS

Fittings shall be placed at the locations shown in the plans or as designated by the Owner. Before placing in the trench, all valves and fittings shall be carefully examined, and any defects corrected. Welding fittings shall be coated and wrapped as described in this section, *Joint Wrap*. Odd shaped fittings such as stopper fittings and purge tees may either be coated and wrapped as described above or thoroughly and evenly coated with Roskote No. 612XM.

0630 PRESSURE TESTING

0630.01 General

All piping, associated valves and fittings and appurtenances shall be pressure tested in sections chosen by the Owner unless specified otherwise by these specifications and as called for by the applicable requirements of the Pipeline Safety Regulations, Code of Federal Regulations, Title 49, Latest Edition. All tests shall be conducted in the presence of the Owner. The Owner shall be given 48 hours notice before any pressure testing is conducted. The Contractor shall furnish suitable testing plugs or caps for the pipe, necessary compressors, pipe connections, gauges and other equipment and labor required. All breaks, leaks or defects in the pipe, valves, fittings or appurtenances shall be repaired and made good by the Contractor at his own expense. Following any necessary repairs, the section shall be re-tested until the test requirements have been successfully fulfilled. The test medium shall be air or inert gas.

Where line valves will be included in the pressure testing of the facility in accordance with these specifications, internal cleaning of all pipe shall be completed prior to performing the pressure test. All line valves shall remain in the open position during all pressure testing and internal cleaning of all steel line pipe.

If, for any reason, any steel line pipe has been installed and backfilled and the Contractor will not return to that section of the project within the same calendar week of the installation, the steel line pipe shall be filled with air or inert gas to a pressure of 100 psig.

0630.02 Requirements

0630.02.1 Main Lines

The following tests shall run continuously for 24 hours and each test shall be recorded on a chart recorder. The recording chart shall be 12" in diameter and shall not span more than 1.5 times the test pressure. The test pressure shall be verified by an accurate spring gauge and the recording chart shall show no drop in pressure during the test. If the recording chart shows a drop in pressure due to a temperature variation, the test shall exceed the 24 hours until the drop has recovered to the original test pressure. A test record shall be prepared for each completed test. A copy of the accepted record appears in Appendix A at the end of this section and may be reproduced for use on this project. The original test chart and test record for each completed test shall be acceptable to the Owner before the test pressure is purged from the pipe section under test.

After backfilling, the steel line pipe and associated valves and fittings designated as part of the "high pressure" distribution system shall be tested in sections chosen by the Owner to a pressure of 500 psig.

0630.02.2 Service Lines

The following tests shall run continuously for fifteen (15) minutes and shall be monitored by an accurate spring gauge. The gauge shall show no drop in pressure. Pressure testing of service lines shall be conducted after the connection to the existing service is completed and shall include the existing service line up to the valve at the meter location. If a leak has been identified downstream of the connection between the proposed service line and the existing service line, it shall be promptly reported to the Owner for repair. No part of a service line shall be placed into service until it is ensured that no leaks exist. A test record shall be prepared for each completed test. A copy of the accepted record appears in Appendix A at the end of this section and may be reproduced for use on this project. The test record for each completed test shall be acceptable to the Owner before the test pressure is purged from the pipe section under test.

After backfilling, the steel service lines, associated valves and fittings and those portions of the farm tap assemblies upstream of the regulators shall be tested to a pressure of 500 psig.

After backfilling, the steel service lines, both existing and proposed,

associated valves and fittings and those portions of the farm tap assemblies downstream of the regulators shall be tested to a pressure of 100 psig.

If an existing service line fails the fifteen (15) minute pressure test, the Contractor shall notify the Owner immediately and the Owner will take immediate action.

0630.02.3 Farm Tap Assemblies

After placing the and farm tap assemblies into operation, all threaded and flanged connections shall be "soap tested" in the presence of the Owner at operating pressure to ensure there is no evidence of leakage. Any evidence of leakage shall promptly be repaired by the Contractor.

0631 PREVENTION OF ACCIDENTAL IGNITION

The Contractor shall take the necessary precautions to prevent the accidental ignition of natural gas when cutting into and/or removing a section of pipe. These precautions shall include, but not be limited to, grounding and bonding. The cutting into of a section of pipe shall not commence until that section is isolated and the pressure in the section has been reduced to atmospheric. Only mechanical cutters will be allowed when cutting into a pipe section.

0632 PROTECTION OF FINISHED WORK

The Contractor will be held responsible for all work installed and shall be required to replace or repair any work damaged by any source or cause whatsoever until final acceptance of the work done by the Owner.

0633 PROTECTION OF PAVEMENT AND CURBING

When working along streets or roads, the Contractor shall use rubber-tired or other equipment which will not damage the paving or curbing. If pavement or curbing is damaged through negligence or carelessness on the part of the Contractor during construction, it shall be replaced at no expense to the Owner. Mats shall be used to support tracked equipment while in use or while sitting on pavement. In no case shall a tracked vehicle be "walked" along a paved road or street from one section of work to another.

0634 PROTECTION OF TREES

The Contractor shall remove only such trees on or along the work as the Owner

permits, and shall carefully protect all other trees adjacent to the work. He shall not permit excavating machinery or trucks to scrape the bark or tear the limbs from the trees, nor connect ropes or guy cables to them.

0635 PROTECTION OF PIPE SECTIONS

If it shall be necessary to stop work for any reason before the sections are welded together, suitable protection must be placed on the ends of the pipe so that they may be kept fully free from obstructions. These precautions must be carefully observed and at no time neglected as the line must be delivered to the Owner ready for operation entirely free from water, dirt or other obstruction, and the line, before its completion and acceptance, must be absolutely clean inside.

0636 PURGE AND ABANDON IN PLACE/REMOVAL

0636.01 Existing Facilities Outside GDOT Right-of Way

Once the proposed main has been placed into service and the service lines have been transferred to the proposed main, the mains and services outside of the existing or required right-of-way that are to be abandoned shall be purged of all natural gas, capped and filled with water. Valve tees shall be installed at locations approved by the Owner for this purpose at the expense of the Contractor. Venting of purged gas shall be conducted at locations where it will not be a public nuisance or safety hazard. All existing valve boxes located on mains and services to be purged and abandoned shall be filled with concrete or other suitable compactable material.

No existing main shall be removed from service until it has been confirmed by the Contractor that all service lines have been transferred to the proposed main.

0636.02 Existing Facilities Within GDOT Right-of Way

Once the proposed main has been placed into service and the service lines have been transferred to the proposed main, the mains and services within of the existing or required right-of-way that are to be abandoned shall be abandoned in accordance with the State of Georgia Department of Transportation Utility Accommodation Policy and Standards, Latest Edition. All existing mains and services to be abandoned up to 6" in internal diameter shall be abandoned as called for above. All existing mains and services to be abandoned with an internal diameter larger than 6" shall be purged of all natural gas, capped and 100% filled with grout.

No existing main shall be removed from service until it has been confirmed

by the Contractor that all service lines have been transferred to the proposed main.

0636.03 Removal of Existing Facilities

All existing piping and appurtenances shown on the plans to be removed shall remain the property of the Owner and transported to the Owner's storage facilities by the Contractor. Any piping and appurtenances shown on the plans to be removed that the Owner chooses not to retain shall be disposed of off the project site in an acceptable manner by the Contractor.

0637 RECORD DRAWINGS

The Contractor shall submit accurate and detailed record drawings of the completed installation in plan to the Owner. Record drawings shall accurately show any changes in the existing facilities that may differ from that as shown on the plans including locations, sizes and materials. Record drawings shall accurately show by detailed measurements the locations of all proposed appurtenances to the construction including regulating stations, farm tap assemblies, valves, cathodic protection test stations, fittings, etc. Record drawings shall show the as-built alignment of all line pipe installed referencing permanent structures or, if not available as in the case of roadway relocation, station numbers and offsets. Alignment shall be referenced at 100' intervals. Where the line pipe is installed at depths other than those proposed, the record drawings shall accurately show the locations and installation depths. Record drawings shall be submitted on the full-size contract plan drawings.

0638 REMOVAL OF TEMPORARY SILT & EROSION CONTROL DEVICES

Once the Contractor has established the required stand of grass and silt and erosion is no longer evident, the Contractor shall remove all temporary silt & erosion control devices. All devices shall be disposed of off of the project site. All areas that are disturbed from this removal process shall be restored to as near as possible the condition before the removal process started. All costs incurred in the removal of silt and erosion control devices and this restoration process shall be at the expense of the Contractor.

0639 RIGHT-OF-WAY AND EASEMENTS

Unless called for otherwise by these specifications, the Owner will provide all necessary permits, easements and rights-of-way through and over private property and along and under the highways and railways.

0640 ROCK EXCAVATION

All material shall be considered solid rock which cannot be excavated except by drilling, blasting or wedging. It shall consist of undecomposed stone in solid ledges or of boulders of not less than 1/2 cubic yard volume. When rock is encountered, the area shall be cleared from the rock to a depth and width of 12" from all sides of the pipe and the Owner notified who shall then measure the rock for payment. Prior to pipe installation, the bottom of the trench shall be backfilled to the grade of the pipe with selected material free from rock and rock fragments and thoroughly compacted. Following pipe installation, the ditch shall be backfilled to a point 12" above the pipe with selected material free from rock and rock fragments and thoroughly compacted. At the discretion of the Owner, rock shield or clean fill will be provided by the Owner for installation by the Contractor prior to lowering the pipe into the ditch.

The remainder of the backfill shall not contain over 75% broken stones, and the maximum stone size placed in the trench shall not weigh more than 50 pounds each. Excess rock and fragments shall be disposed of in a satisfactory manner off of the project site.

Rock excavation by blasting shall be at least 100' in advance of pipe installation. The Contractor shall utilize procedures and techniques in accordance with safe and accepted blasting practices in accordance with all Local, State and Federal Laws, Codes and Regulations. The Contractor will be responsible for any and all damage associated with rock excavation by blasting.

0641 SILT AND EROSION CONTROL DEVICES

0641.01 General

The construction of this project requires Best Management Practices (BMPs) in the prevention of sedimentation and the control of erosion. All silt and erosion control devices installed, constructed and maintained on this project shall conform to the standards and specifications set forth by the "Manual for Erosion and Sediment Control in Georgia", latest edition and must withstand up to a 25-year rainfall event. The road construction contractor will be responsible for providing silt and erosion control permitting and the installation of silt and erosion control devices project wide.

The Contractor will be responsible for the prevention of sedimentation and erosion control in all areas outside the scope of the Developers' silt and erosion control limits until permanent grassing has been established in such areas disturbed by construction and sedimentation and erosion is no longer evident. Silt and erosion control devices will be paid for at the unit price bid

according to device.

The Contractor will be responsible for the protection of existing silt and erosion control devices installed, constructed and maintained by others. If such devices are disturbed or damaged by the Contractor, all such devices shall be repaired or replaced at the Contractor's expense.

Best Management Practices (*BMP's*) shall be implemented by the Contractor to prevent or minimize erosion and control sedimentation with the installation and implementation of silt and erosion control devices before any land disturbing activity commences. Silt and erosion control devices shown on the details in the plans and at the locations shown in the plans shall be considered a minimum and additional measures deemed necessary shall be immediately implemented to effectively prevent or minimize erosion and control sedimentation. Silt and erosion control devices shall be effectively maintained and shall be removed once the erosion of the disturbed area has been permanently prevented and the area stabilized. Installation, maintenance and removal of silt and erosion control devices shall be in accordance with the minimum requirements of the following minimum standards.

- Manual for Erosion and Sediment Control in Georgia, Latest Edition
- State of Georgia Department of Transportation Standard Specifications, Construction of Roads and Bridges, Latest Edition
- National Pollutant Discharge Elimination System (*NPDES*) Permit for Storm Water Discharges Associated With Construction Activity For Infrastructure Construction Projects, Permit No. GAR100002.

0641.02 Maintenance and Inspection

Silt and erosion control devices shall be inspected by the Contractor for effectiveness, damage and proper installation at the end of each working day not to exceed once every seven (7) calendar days and within 24 hours of the end of a rainfall event that is 0.5 inches or greater. Repair of damaged or improper installation shall be remedied by the Contractor within 24 hours of inspection. Improper effectiveness of any silt and erosion control device or combination thereof that has been properly installed and maintained shall be reported to the Owner within 24 hours of inspection. Silt and erosion control devices shall be cleaned of sediment as required for the specific device. Disposal of sediment shall be in a fashion that it will not re-enter the silt and erosion control devices. All damage or improper installation shall be promptly remedied by the Contractor.

All maintenance and inspection records shall be kept on the project site at all times during construction and shall be made available for review at any

0600-22

time. Copies of maintenance and inspection records shall be provided to the Owner at the close of each calendar week.

0642 STEEL LINE PIPE COATING

0642.01 Plant Applied Coating

Steel line pipe coating procedures and electrical inspection shall be in accordance with the National Association of Pipe Coating Applicators (NAPCA) Specifications and Plant Coating Guide, Latest Edition and as required by the coating manufacturer.

0642.02 Joint Wrap

Joint wrap shall be applied in accordance with the wrap manufacture's application procedures, instructions and recommendations. The Contractor shall have a copy of the application procedures available for inspection at the project site and the workmen shall be properly instructed by the wrap manufacturer of the application procedures. The following minimum procedures shall be followed in addition to the above.

0642.02.1 Surface Preparation

Surfaces should be dry and cleaned of all rust, scale, soil, mud, oil, grease and other contaminants by motor-assisted wire brushing or blasting to "white metal finish" (SIS-Sa 2 1/2). Burrs or other sharp points shall be removed by filing or peening. Grease or oil shall be removed by naphtha or other oil-removing solvent, and the joint wiped dry.

0642.02.2 Primer

Where applicable, primer shall be applied by brush or roller without thinning and brushed to a thin film not more than 1 1/2 mils dry thickness. Primer shall not be applied too thick. Pipe heated by welding shall be allowed to cool to 120°-140° F before applying primer. Primer shall not be applied to pipe where condensation has been allowed to form.

0642.02.3 Spiral Tape Wrap

Wrapping tape shall be applied with a half overlap under a tension of about five pounds per inch of width starting and finishing about two inches back from the edge of the coating. The start shall always be

made at the rear end of the joint as determined by the direction in which pipe laying is proceeded. The first and last turns shall be wrapped one and one-third times squarely ground the pipe. Intermediate turns across the joint shall be spirally overlapped. Angle changes shall be accommodated by increasing the tension on the appropriate tape edge. The last one-third turn shall be applied without tension, the tape end being merely pressed in position.

0642.03 Field Repair of Damaged Areas

Any damaged areas shall be repaired by trimming the frayed areas of the coating, applying a brush coat of tape primer and wrapping the entire circumference of the pipe with tape. "Patching" of the damaged areas will not be acceptable.

0642.04 Field Test of Line Pipe Coating

Field tests of the line pipe coating shall be conducted immediately before the pipe is lowered into the trench. Field tests shall be conducted after the pipe has been welded and the joints prepared and wrapped in accordance with this section. Field tests shall be conducted by visual and electrical inspection. The coating and joint wrap shall be visually inspected for damage and promptly repaired before electrical inspection. Electrical inspection shall be conducted with a 10,000-volt electric holiday detector and the pipe shall be grounded by mean sufficient to the operation of the holiday detector. The detector shall be equipped with a positive signaling device to indicate flaws, holes, breaks or conductive particles in the plant applied and field wrap coatings. Test voltages shall *not* be less than that used by the coating applicator in accordance with NAPCA Specification and Plant Coating Guide, Bulletins 1-65-87 through 15-83-87. All defects found by visual or electrical inspection shall be repaired in accordance with this section and the pipe again tested before lowering into the trench.

Before each day's pipe installation, the Contractor shall inspect the condition of the holiday detector and demonstrate that it is properly working with a voltmeter and a high voltage probe. The test voltage must be the voltage as measured grounding to the line pipe and not the measured voltage of the holiday detector output to an earth ground. If at anytime it is questionable that the detector is properly working, it shall be tested and demonstrated that the detector is properly working.

0643 TAPPING OF MAINS

Taps into mains under pressure without the interruption of gas flow shall be made

at the locations shown on the plans. Taps shall be made by the installation of a stopper fitting with outlet. The Contractor shall have all materials on hand and shall conduct the work in a manner to insure the installation of the stopper fittings in a safe manner and in the minimum of time. The Contractor shall utilize only those persons who are fully qualified and knowledgeable in the tapping of mains under pressure. The Contractor shall furnish and install only those materials designed for making taps under pressure. The Contractor shall furnish the Engineer all coupons cut out of the existing main during the tapping operation.

The normal operating pressure of the existing system is 300 psig and the operating pressure will not be lowered at any time during construction to facilitate lower pressure tapping equipment.

0644 TRANSFER OF SERVICE LINES TO THE PROPOSED MAIN

Once the proposed main is placed into service and *before* the existing main is purged and abandoned, the existing service lines shall be transferred to the proposed main. After installing the proposed service piping at the locations shown in the plans, each service line shall be transferred on a service by service basis. No transfer shall begin until the Contractor can ensure transfer and re-lighting can be accomplished before the end of the day's work. Interruption of service shall be minimal to each customer and the Owner will provide forces for re-lighting. After it has been verified that *all* service lines are transferred to the proposed main, the existing mains and services shall be purged and abandoned at the locations shown in the plans as called for in these specifications.

0645 TRENCH EXCAVATION

Pipe trenches shall be excavated on lines shown on the plans. The bottom of the trenches shall be hand dressed so that the pipe has even bearing on solid, undisturbed earth throughout its length. Trenches shall be of sufficient width to provide ample working space on each side of the pipe and for maintaining a straight line of pipe. The Owner shall have the right to limit the amount of trench open at any one time. All excavated material shall be so placed as not to interfere with public travel on the roadway along which the lines are laid.

Lines shall be constructed at depths as shown in the plans. Lines shall be placed at greater depths when shown on the plans or as directed by the Owner. All grade changes shall be made gradually. If necessary of at the direction of the Owner, bending of the pipe or welded fittings shall be implemented. In laying pipe across water courses or depressions of any kind, the minimum depth herein specified shall be maintained at the bottom of the depression.

0646 WELDERS

0646.01 General

All welders shall be competent and experienced in pipeline welding. Only Shielded Metal-Arc Welding (SMAW) will be acceptable on pipe 2-3/8" O.D. and larger. Acetylene welding will be allowed on pipe smaller than 2-3/8" O.D. All welders shall have a complete working knowledge of the welding equipment and the procedures and precautions necessary for completing acceptable welds with a maximum of safety. All welders shall be qualified in accordance with Section 0400, *CERTIFICATION, LICENSE AND TEST REQUIREMENTS* of these specifications.

0646.02 Re-qualification Requirements

Re-qualification tests shall be required if there is some specific reason to question a welder's ability or if the welder is not engaged in a given process of welding (*i.e., arc or gas*) for a period of six months or more.

0646.03 Qualification Records

The Contractor shall maintain a record of the welders qualified to weld for this project including the date and results of tests.

0646.04 General Welding Procedure

All welding shall be completed in accordance with the Municipal Gas Authority of Georgia's Subscribed Regulatory Compliance Service's (SRCS's) detailed written procedure specification for each welding process or method of application implemented. The welding procedure followed during the qualifying tests shall be adhered to during subsequent construction. Welding shall not be done when the quality of the completion weld would be likely to be impaired by the prevailing weather conditions including, but not limited to, airborne moisture, blowing sand, or high wind. Wind shields shall be used when practical.

The steel line pipe will be welded by the conventional method of roll welding as many sections of pipe as practicable and later joining these roll welded sections by position welds over the ditch or by such methods as the Owner may approve. The Owner shall have the right to limit the number of sections of pipe welded ahead of the ditch at any one time.

0646.05 Welding Inspection

The Owner shall have the right to employ any reasonable means of determining the character of each welder's work, and may from time to time require the Contractor to cut out coupons or test pieces for the purpose of determining whether the welding is satisfactory. The cost of repairs necessary to replace such test pieces shall be borne by the Contractor.

All coupons suspected of having welds that are unsatisfactory shall be tested in accordance with API Standard 1104 *Welding of Pipelines and Related Facilities*, Latest Edition incorporated by reference by the Code of Federal Regulations, Section 3.4-Visual Examination and Section 3.5-*Destructive Testing*. If the coupons fail to pass these requirements, the Contractor shall be responsible for the costs of testing. If the Owner, after reviewing the test data, determines that the character of the remaining welds is in question, all of these welds shall be non-destructively tested by radiographic examination. The Contractor shall be responsible for his pro rata share for the cost of radiographic examination. The Contractor's pro rata share shall be the total cost for radiographic examination multiplied by the ratio of the failures to the total examined. Radiographic examination shall meet the requirements of API Standard 1104 *Welding of Pipelines and Related Facilities*, Latest Edition incorporated by reference by the Code of Federal Regulations, Section 6-*Acceptance Standards for Non-destructive Testing*. All testing shall be conducted by a recognized laboratory and the test results shall be furnished to the Owner.

0646.06 Standards of Acceptability

All welding shall be completed in accordance with the requirements of API Standard 1104 *Welding of Pipelines and Related Facilities*, Latest Edition incorporated by reference by the Code of Federal Regulations.

..... END OF SECTION

SECTION 0600: APPENDIX A

NATURAL GAS MAIN RELOCATION
S.R. 293/KINGSTON HIGHWAY AT
DYKES CREEK 0015544
PRESSURE TEST RECORD

Cartersville Project No.: CP-21-001

Test Medium (*check one*): ☐ Air ☐ Nitrogen ☐ Other (*specify*)

Test Length: Hrs Min Test Pressure: Begin PSIG End PSIG

Pressure Loss: PSIG Reason for Loss:

Begin Date: , 20 at am / pm (*circle*) Owner's Initials

End Date: , 20 at am / pm (*circle*) Owner's Initials

Test Section Length: L.F. Owner's Representative:

Test Section From: Sta. Rt / Lt (*circle*),

(*location, type of fitting, etc.*)

Test Section To: Sta. Rt / Lt (*circle*),

(*location, type of fitting, etc.*)

Contractor: , , (*name, city, state*)

Contractor's Superintendent/Foreman:

Pipe Supplier: , , (*name, city, state*)

Pipe Manufacturer: , , (*name, city, state*)

Pipe Size: " O.D. " W.T./DR Grade:

" O.D. " W.T./DR Grade:

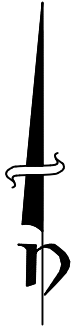
" O.D. " W.T./DR Grade:

" O.D. " W.T./DR Grade:

Joining Method: ☐ Shielded Metal Arc Welding (*SMAW*) ☐ Fusion (*check one*)

Preheat, Stress Relief: ☐ Yes ☐ No If yes; Temperature: °F

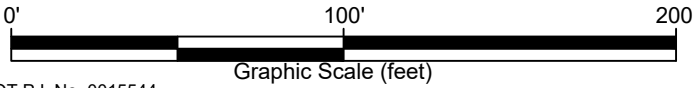
Attach additional sheets as necessary



LEGEND:

 Approximate Boring Location

Source: Google Earth
Image Date: 8/28/2019



GDOT P.I. No. 0015544

DATE				NAME	DATE	Boring Location Map		MC ² PROJ. NO.	SHEET NO.
REVISION				DESIGNED BY:	KF	1/29/2021	SR 293 (Kingston Hwy) over Dykes Creek Floyd County, GA	A011910.010	2
APPROVED BY:				DRAWN BY:	KF	1/29/2021			
				CHECKED BY:	VM	2/12/2021			
				SUPERVISED BY:	SG				



MC SQUARED, INC.
Geotechnical Consultants
1275 Shiloh Road NW, Suite 2620
Kennesaw, GA 30144
Ph: (770) 650-0873 Fax: (770) 650-7825

GEORGIA ENGINEERING CERTIFICATE OF
AUTHORIZATION No. PEF004822
Stephanie Grahl, P.E.
GEORGIA LICENSE No. 041467



Boring Log

BORING ID: BB-1

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CLIENT Kimley-Horn and Associates, Inc. **PROJECT NAME** SR 293 (Kingston Hwy) over Dykes Creek
PROJECT NUMBER A011910.010 **PROJECT LOCATION** Floyd County, Georgia
DATE STARTED 1/12/21 **COMPLETED** 1/12/21 **GROUND ELEVATION** 613.1 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR GeoLab Drilling **DRILL RIG** Geoprobe 7822 (#1029) **GROUND WATER LEVELS:**
METHOD Hollow Stem Auger **EFFICIENCY** 91% **AT TIME OF DRILLING** ---
LOGGED BY VM **CHECKED BY** SG **AT END OF DRILLING** ---
NOTES STA. 106+04, 20' RT **24hrs AFTER DRILLING** 13.0 ft / Elev 600.1 ft

DEPTH (ft)	ELEV. (ft)	GRAPHIC LOG	USCS Group Symbol	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	● SPT N VALUE ●			
								⊕ ORGANIC CONTENT % ⊕			
								PL	MC	LL	
								□ FINES CONTENT (%) □			
0								20	40	60	80
612				Asphalt 3"	SS-1	11-12-8-11 (20)					
610			SM	Medium dense, brown to reddish brown, silty SAND, moist	SS-2	6-5-6-3 (11)					
608				Very loose to dense, reddish brown, clayey GRAVEL with sand, moist	SS-3	2-WOH/12"-1 (WOH)					
606			GC		SS-4	14-19-20-15 (39)					
604				Medium dense to very loose, reddish brown to gray, clayey SAND with riprap fragments, moist	SS-5	6-8-5-3 (13)					
602											
600				1"-2" Recovery (wet)	SS-6	WOH/18" (WOH)					
598				Shelby Tube (16'-18')	ST						
596											
594				Medium dense to dense, light brown, silty SAND with rock fragments, wet	SS-7	1-WOH-2 (2)					
592			SC								
590					SS-8	WOH-2-10 (12)					
588											
586				Shelby Tube (30'-32') No Recovery	SS-9	WOH/18" (WOH)					
584					ST						
582				Medium dense to dense, light brown, silty SAND with rock fragments, wet	SS-10	28-13-6 (19)					
580											
578					SS-11	8-10-9 (19)					
576											
574					SS-12	8-8-7 (15)					
572			SM								
570											
568											
566											
564					SS-13	44-28-18 (46)					
50											

(Continued Next Page)



Boring Log

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CLIENT Kimley-Horn and Associates, Inc.**PROJECT NAME** SR 293 (Kingston Hwy) over Dykes Creek**PROJECT NUMBER** A011910.010**PROJECT LOCATION** Floyd County, Georgia

DEPTH (ft)	ELEV. (ft)	GRAPHIC LOG	USCS Group Symbol	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	● SPT N VALUE ●			
								⊕ ORGANIC CONTENT % ⊕			
								PL	MC	LL	
								□ FINES CONTENT (%) □			
50								20	40	60	80
	562		SM	Medium dense to dense, light brown, silty SAND with rock fragments, wet	SS-14	17-22-12 (34)					
	560										
	558										
	556										
	554		PWR	Partially Weathered Rock (PWR) sampled as light brown, silty SAND, wet	SS-15	32-50/5" (50/5")					>>
60	552										
	550		ML	Very stiff to stiff, light brown, sandy SILT, wet	SS-16	2-11-16 (27)					
	548										
	546										
	544			No Recovery	SS-17	4-6-4 (10)					
70	542		SM								
	540			Medium dense, light brown, silty SAND with rock fragments, wet	SS-18	11-5-11 (16)					
				Bottom of hole at 75.0 feet.							

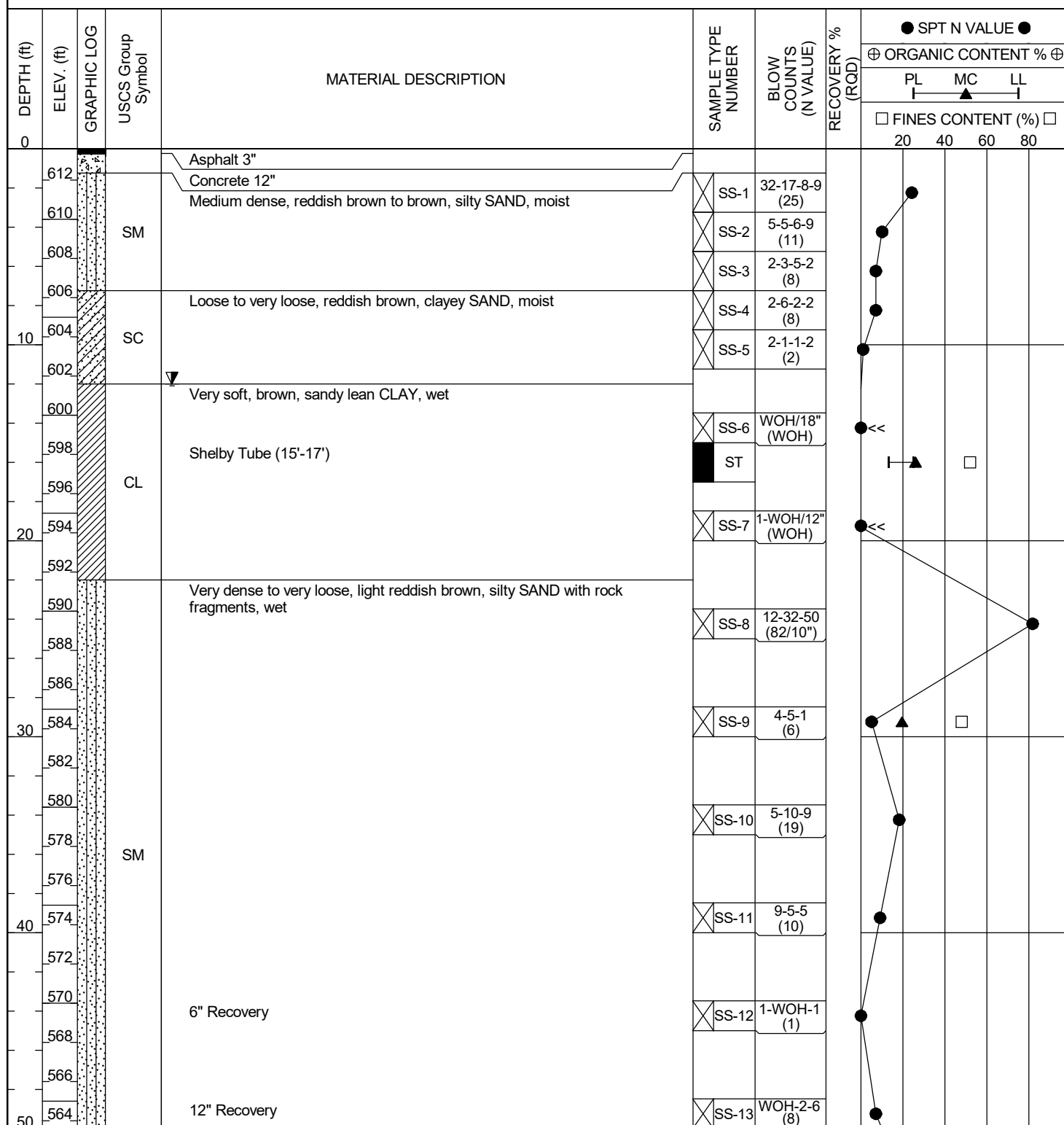


Boring Log

BORING ID: BB-2

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CLIENT Kimley-Horn and Associates, Inc. **PROJECT NAME** SR 293 (Kingston Hwy) over Dykes Creek
PROJECT NUMBER A011910.010 **PROJECT LOCATION** Floyd County, Georgia
DATE STARTED 1/13/21 **COMPLETED** 1/13/21 **GROUND ELEVATION** 613.6 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR GeoLab Drilling **DRILL RIG** Geoprobe 7822 (#1029) **GROUND WATER LEVELS:**
METHOD Hollow Stem Auger, NQ Rock Coring **EFFICIENCY** 91% **AT TIME OF DRILLING** ---
LOGGED BY VM **CHECKED BY** SG **AT END OF DRILLING** ---
NOTES STA. 106+52, 16' RT **24hrs AFTER DRILLING** 12.0 ft / Elev 601.6 ft



(Continued Next Page)



Boring Log

BORING ID: BB-2

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CLIENT Kimley-Horn and Associates, Inc.**PROJECT NAME** SR 293 (Kingston Hwy) over Dykes Creek**PROJECT NUMBER** A011910.010**PROJECT LOCATION** Floyd County, Georgia

DEPTH (ft)	ELEV. (ft)	GRAPHIC LOG	USCS Group Symbol	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	● SPT N VALUE ●			
								⊕ ORGANIC CONTENT % ⊕			
								PL	MC	LL	
								□ FINES CONTENT (%) □			
50								20	40	60	80
	562		SM	Very dense to very loose, light reddish brown, silty SAND with rock fragments, wet							
	560			6" Recovery	SS-14	1-2-25 (27)					
	558										
	556										
	554		PWR	Partially Weathered Rock (PWR) sampled as light brown, silty SAND, wet	SS-15	50/4"					
60	554			Auger Refusal at 60 feet.							>>
	552			(60'-90') Dolostone, gray to light gray, intensely to moderately fractured, moderately healed, hard rock, highly to moderately weathered, FeOx staining present	RC-1		52 (20)				
	550										
	548				RC-2		55 (47)				
	546										
	544										
70	542				RC-3		18 (7)				
	540										
	538			(75'-85') Some vuggy texture observed							
	536				RC-4		49 (15)				
	534										
80	532				RC-5		63 (40)				
	530										
	528			(85'-90') Slightly weathered to fresh							
	526				RC-6		55 (48)				
	524										
90				Bottom of hole at 90.0 feet.							



Boring Log

BORING ID: BB-3

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CLIENT Kimley-Horn and Associates, Inc. **PROJECT NAME** SR 293 (Kingston Hwy) over Dykes Creek
PROJECT NUMBER A011910.010 **PROJECT LOCATION** Floyd County, Georgia
DATE STARTED 1/15/21 **COMPLETED** 1/15/21 **GROUND ELEVATION** 605.4 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR GeoLab Drilling **DRILL RIG** Geoprobe 7822 (#1029) **GROUND WATER LEVELS:**
METHOD Hollow Stem Auger, NQ Rock Coring **EFFICIENCY** 91% **AT TIME OF DRILLING** ---
LOGGED BY VM **CHECKED BY** SG **AT END OF DRILLING** ---
NOTES STA. 107+52, 17' RT Casing from bridge deck (614.4) to mudline (605.4). **24hrs AFTER DRILLING** 4.0 ft / Elev 601.4 ft

DEPTH (ft)	ELEV. (ft)	GRAPHIC LOG	USCS Group Symbol	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	● SPT N VALUE ●			
								⊕ ORGANIC CONTENT % ⊕			
								PL	MC	LL	□ FINES CONTENT (%) □
0								20	40	60	80
	604		SC	Very loose, dark brown, clayey SAND, moist	SS-1	2-1-3-6 (4)					
	602		SM	Medium dense to dense, brown, silty SAND with gravel, wet	SS-2	8-15-21-11 (36)					
	600				SS-3	10-21-9-4 (30)					
	598			Very loose, light brown, clayey SAND with gravel, wet	SS-4	1-1-2-2 (3)					
10	596		SC		SS-5	WOH/24" (WOH)					
	594			Shelby Tube (10'-12') No Recovery	ST						
	592										
	590			No Recovery	SS-6	WOH-1-1 (2)					
	588		SM								
	586			Very dense to medium dense, light brown, silty SAND with rock fragments, wet	SS-7	15-33-35 (68)					
20	584										
	582				SS-8	12-8-5 (13)					
	580										
	578		ML	Medium dense, light brown, sandy SILT, wet	SS-9	8-13-11 (24)					
30	576										
	574										
	572		SM	Medium dense to dense, light brown, silty SAND with rock fragments, wet	SS-10	12-12-12 (24)					
	570										
	568										
40	566				SS-11	15-16-18 (34)					
	564										
	562										
	560				SS-12	8-20-23 (43)					
	558		PWR								
50	556			Partially Weathered Rock (PWR) sampled as light brown, silty SAND, wet	SS-13	50/3"					>>

(Continued Next Page)



Boring Log

BORING ID: BB-3
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CLIENT Kimley-Horn and Associates, Inc. **PROJECT NAME** SR 293 (Kingston Hwy) over Dykes Creek
PROJECT NUMBER A011910.010 **PROJECT LOCATION** Floyd County, Georgia

DEPTH (ft)	ELEV. (ft)	GRAPHIC LOG	USCS Group Symbol	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	● SPT N VALUE ●			
								⊕ ORGANIC CONTENT % ⊕			
								PL	MC	LL	
								□ FINES CONTENT (%) □			
50								20	40	60	80
	554		PWR	Auger Refusal at 51.5 feet.							
	552		CL	(51.5'-56.5') Dolostone, gray to light gray, intensely to moderately fractured, moderately healed, hard rock, highly to moderately weathered, FeOx staining present	RC-1		74 (54)				
	550			NO RECOVERY: Low water pressure, but no loss of circulation. As such, this range is indicative of residual soil (completely weathered rock)							
	548										
	546				RC-2		3 (0)				
	544										
	542										
	540				RC-3		0 (0)				
	538										
	536				RC-4		4 (0)				
	534										
	532										
	530				RC-5		0 (0)				
	528			(76.5'-86.5') Dolostone, gray to light gray, intensely to very intensely fractured, moderately hard to very soft, slightly to highly weathered							
	526				RC-6		22 (0)				
	524										
	522										
	520				RC-7		28 (23)				
				Bottom of hole at 86.5 feet.							



Boring Log

BORING ID: BB-3A

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CLIENT Kimley-Horn and Associates, Inc. **PROJECT NAME** SR 293 (Kingston Hwy) over Dykes Creek
PROJECT NUMBER A011910.010 **PROJECT LOCATION** Floyd County, Georgia
DATE STARTED 1/15/21 **COMPLETED** 1/15/21 **GROUND ELEVATION** 605.4 ft **HOLE SIZE** 4"
DRILLING CONTRACTOR GeoLab Drilling **DRILL RIG** Geoprobe 7822 (#1029) **GROUND WATER LEVELS:**
METHOD Hollow Stem Auger, NQ Rock Coring **EFFICIENCY** 91% **AT TIME OF DRILLING** ---
LOGGED BY VM **CHECKED BY** SG **AT END OF DRILLING** ---
NOTES STA. 107+57, 17' RT Casing from bridge deck (614.4) to mudline (605.4). **24hrs AFTER DRILLING** GNE

DEPTH (ft)	ELEV. (ft)	GRAPHIC LOG	USCS Group Symbol	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	● SPT N VALUE ●			
								⊕ ORGANIC CONTENT % ⊕			
								PL	MC	LL	
								□ FINES CONTENT (%) □			
51								20	40	60	80
552				Note: This boring is 5' offset from boring BB-3. Boring augered down until refusal at 51 feet. (51'-96') Dolostone, gray to light gray, intensely to moderately fractured, moderately healed, hard rock, highly to moderately weathered, FeOx staining present (56'-76') Intensely fractured	RC-8		100 (83)				
550											
548											
546											
61				(72'-74') Residual soil	RC-9		33 (10)				
544											
542											
540											
538				(76'-91') Highly to completely weathered, very intensely fractured, moderately soft to very soft rock							
536											
71					RC-10		35 (23)				
534											
532				(91'-96') Highly weathered to fresh, very intensely to moderately fractured, soft to hard rock							
530											
528											
526											
81					RC-11		23 (0)				
524											
522											
520											
518					RC-12		3 (0)				
516											
91											
514											
512					RC-13		92 (44)				
510											
				Bottom of hole at 96.0 feet.							



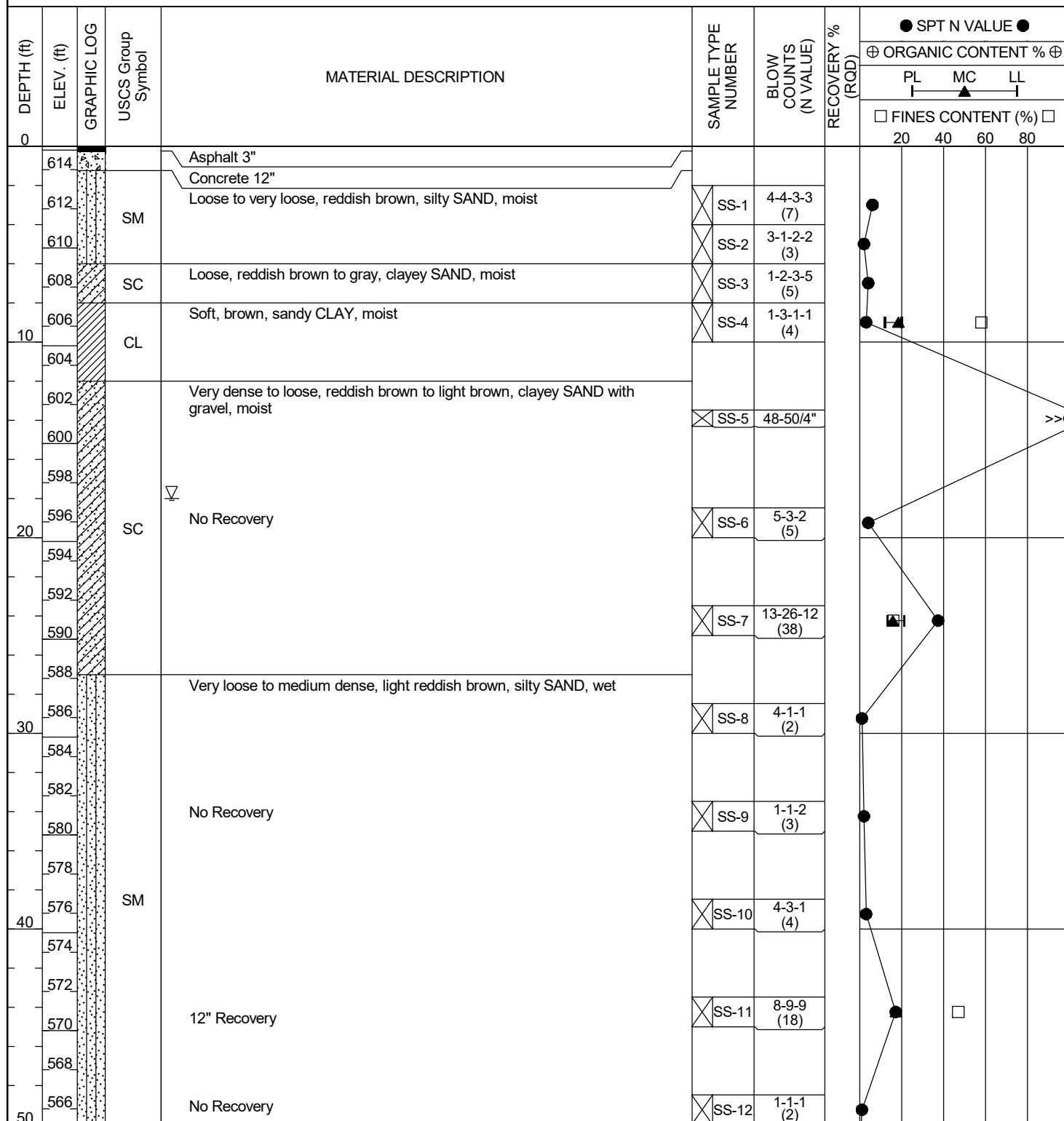
Boring Log

BORING ID: BB-4

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CLIENT Kimley-Horn and Associates, Inc.PROJECT NAME SR 293 (Kingston Hwy) over Dykes CreekPROJECT NUMBER A011910.010PROJECT LOCATION Floyd County, GeorgiaDATE STARTED 1/18/21COMPLETED 1/18/21GROUND ELEVATION 615.2 ftHOLE SIZE 4"DRILLING CONTRACTOR GeoLab DrillingDRILL RIG Geoprobe 7822 (#1029)

GROUND WATER LEVELS:

METHOD Hollow Stem Auger, NQ Rock CoringEFFICIENCY 91%▽ AT TIME OF DRILLING 18.0 ft / Elev 597.2 ftLOGGED BY VMCHECKED BY SGAT END OF DRILLING ---NOTES STA. 108+04, 19' RT24hrs AFTER DRILLING ---

(Continued Next Page)



Boring Log

BORING ID: BB-4

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CLIENT Kimley-Horn and Associates, Inc.

PROJECT NAME SR 293 (Kingston Hwy) over Dykes Creek

PROJECT NUMBER A011910.010

PROJECT LOCATION Floyd County, Georgia

DEPTH (ft)	ELEV. (ft)	GRAPHIC LOG	USCS Group Symbol	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	RECOVERY % (RQD)	● SPT N VALUE ●			
								⊕ ORGANIC CONTENT % ⊕			
								PL	MC	LL	
								□ FINES CONTENT (%) □			
50								20	40	60	80
564			SM	Very loose to medium dense, light reddish brown, silty SAND, wet							
562				No Recovery	SS-13	WOH/18" (WOH)					
560											
558											
556					SS-14	WOH-3-2 (5)					
60											
554			ML	Very soft to very stiff, light brown, sandy SILT with rock fragments, wet							
552					SS-15	WOH/18" (WOH)					
550											
548											
546					SS-16	7-5-11 (16)					
70											
544			PWR	Partially Weathered Rock (PWR) sampled as light brown, silty SAND, wet	SS-17	50/5"					
542				Auger Refusal at 76 feet.							
540											
538				(76'-96') Dolostone, gray to light gray, moderately fractured, moderately healed, moderately hard rock, highly to moderately weathered, FeOx staining present	RC-1		100 (67)				
536											
534					RC-2		50 (10)				
532											
530					RC-3		88 (48)				
528											
526				(88'-92') Some vuggy texture observed							
524					RC-4		88 (35)				
522											
520				(94'-96') Very intensely to intensely fractured, moderately soft rock, highly weathered							
				Bottom of hole at 96.0 feet.							

SECTION 0700 – MEASUREMENT AND PAYMENT

0701 GENERAL

The unit price or lump sum price bid for each item shall be for furnishing all materials, tools, labor, equipment, skills, tests and certifications, and incidentals necessary to complete the items as shown on the plans, as shown on the details in the plans and as called for in the specifications.

0702 CONNECTION TO EXISTING PIPE

0702.01 Measurement: Connection to existing pipe will be measured by the actual count of each connection completed according to size and material.

0702.02 Payment: Connection to existing pipe will be paid for at the unit price bid per connection completed according to size and material. This unit price will be full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary for connection at the locations shown in the plans and as called for in the specifications.

0703 DIRECTIONAL BORE PIPE

0703.01 Measurement: Directional bore pipe will be measured along the surface of the ground over the centerline of the directional bore installed and tested according to size and the lengths called for in the specifications. The measurement will be in linear feet.

0703.02 Payment: Directional bore pipe will be paid for at the unit price bid per linear foot of pipe installed and tested according to size. This unit price will be full compensation for furnishing all materials, fittings, labor, equipment, tools, incidentals, necessary to complete the installation at the locations shown on the plans and as called for in the specifications.

This unit price pertains to the preparation of the directional bore pipe only and the directional bore installation will be paid for at the price bid per linear foot of directional bore according to the site and size.

Directional bore pipe will be provided by the Owner.

0704 DIRECTIONAL BORE

0704.01 Measurement: Directional bores will be measured along the surface of the ground over the centerline of the drill successfully completed according to the site, size and the lengths as specified in the plans. The measurement

will be in linear feet.

- 0704.02 Payment: Directional bores will be paid for at the unit price bid per linear foot of bore successfully completed according to the site, size and the lengths as specified in the plans. This unit price will be full compensation for furnishing all labor, equipment, tools and incidentals necessary to complete the directional bores at the locations shown in the plans and as called for in the specifications.

This unit price pertains to the directional bore only and the bore pipe will be paid for at the price bid per linear foot of bore pipe according to size and material. This unit price does not pertain to bores. Bores will be paid for at the unit price bid per linear foot of bore.

If encountered, solid rock directional bore will be determined in accordance with the specifications and as called for above. Solid rock bore will be measured from the point in the bore that solid rock is encountered and determined and end at the termination of the directional bore. The total unit price payment for solid rock directional bore will be the sum of the price bid for directional bore plus the unit price bid for solid rock directional bore.

0705 FARM TAP ASSEMBLY

- 0705.01 Measurement: Farm tap assembly will be measured by the actual count of each assembly completed, tested and operational.

- 0705.02 Payment: Farm tap assembly will be paid for at the unit price bid per assembly completed, tested and operational. This price will be full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to complete the installation at the locations shown in the plans, as shown on the details in the plans and as called for in the specifications.

Steel line pipe and the farm tap assembly will be provided by the Owner.

0706 GRASSING

- 0706.01 Measurement: Grassing will be measured by multiplying the width by the length of the area grassed according to type and dividing by 9. The measurement will be in square yards. The maximum width, however, shall not exceed 15 feet where the pipeline is adjacent to the roadway. Areas beyond 15 feet in width disturbed by the construction of this project shall be grassed as called for in the specifications at the expense of the Contractor.

- 0706.02 Payment: Grassing will be paid for at the unit price bid per square yard according to type. This unit price will be full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to complete the work as called for in the specifications.

0707 LINE VALVE ASSEMBLY

- 0707.01 Measurement: Line valve assembly will be measured by the actual count of each valve installed according to size, type and material.

- 0707.02 Payment: Line valve assembly will be paid for at the unit price bid per valve installed according to size, type and material. This unit price will be full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary for the installation of the line valve assembly at the locations shown in the plans, as shown on the detail in the plans and as called for in the specifications.

This unit price includes the construction of cast-in-place concrete collars.

Line valves will be provided by the Owner.

0708 PAVEMENT REMOVED AND REPLACED

- 0708.01 Measurement: Measurement will be made by multiplying the length of paving removed and replaced according to type in feet, multiplying by the maximum width shown on the details in the plans and dividing by 9. The measurement will be in square yards.

- 0708.02 Payment: Pavement removed and replaced will be paid for at the unit price bid per square yard removed and replaced according to type. This payment will be full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary for the removal and replacement of paving as shown on the detail in the plans and as called for in the specifications.

This unit price will also include steel plating necessary to the flow of traffic until the removal and replacement is complete and acceptable.

At the discretion of the Owner, if the Contractor chooses to bore paved areas where pavement removal and replacement is called for, the bores will be paid for at the unit price bid for pavement removed and replaced per square yard according to type and the dimensions shown on the details in the plans. There will be no additional compensation.

0709 PURGE AND ABANDON IN PLACE/REMOVAL

0709.01 Measurement: Purge and abandon in place/removal will be measured along the surface of the ground over the centerline of the pipe purged and abandoned in place.

0709.02 Payment: Purge and abandon in place/removal will be paid for at the unit price bid per lineal foot of pipe purged and abandoned. This price will be full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to complete the work at the locations shown in the plans and as called for in the specifications.

This unit price shall include the transportation and/or purchase of water, grout and cutting and capping of the existing mains and services and the removal of existing appurtenances at the locations shown in the plans.

0710 SERVICE TEES

0710.01 Measurement: Service tees will be measured by the actual count of each tee installed, tested and tapped according to size and material.

0710.02 Payment: Service tees will be paid for at the unit price bid per tee installed, tested and tapped according to size and material. This payment will be full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary for the installation of service tees at the locations shown in the plans and as called for in the specifications.

This unit price will also include the connection to the existing and proposed line pipe.

0711 SOLID ROCK EXCAVATION

0711.01 Measurement: Solid rock excavation will be determined by multiplying the average depth of rock excavated in feet, times the length in feet, times the width equal to the nominal diameter of the pipe plus 2 feet and divided by 27. The measurement will be in cubic yards.

0711.02 Payment: Solid rock excavation will be paid for at the unit price bid per cubic yard. This unit price will be full compensation for furnishing all materials including blasting materials, labor, tools, equipment and incidentals necessary to complete the work as called for in the specifications.

0712 STEEL LINE PIPE

0712.01 Measurement: Steel line pipe will be measured along the surface of the ground over the centerline of the pipe installed and tested according to size and material. The measurement will be in linear feet and no deduction will be made for space occupied by valves or fittings. However, no separate payment will be made for fittings.

0712.02 Payment: Steel line pipe will be paid for at the unit price bid per linear foot of pipe installed and tested according to size. This unit price will be full compensation for furnishing all materials, fittings, labor, equipment, tools, incidentals, necessary to complete the installation at the locations shown on the plans and as called for in the specifications. This unit price will also include extra depth installation as shown in the plans, as called for in the specifications or as directed by the Owner.

Steel line pipe will be provided by the Owner.

0713 STOPPER FITTINGS

0713.01 Measurement: Stopper fittings will be measured by the actual count of each fitting installed, tested and tapped according to size and type.

0713.02 Payment: Stopper fittings will be paid for at the unit price bid per fitting installed tested and tapped according to size and type. This unit price will be full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary for the installation of stopper fittings and necessary plugging operations at the locations shown in the plans, as shown in the detail on the plans and as called for in the specifications.

This unit price includes the connection to both the existing main and the proposed main.

Stopper fittings will be provided by the Owner.

0714 TEMPORARY SILT FENCE

0714.01 Measurement: Temporary silt fence will be measured by the actual amount installed according to type. The measurements will be in linear feet.

0714.02 Payment: Temporary silt fence will be paid for at the unit price bid per linear foot of fence installed according to type. This unit price will be full compensation for furnishing all materials, fittings, labor, equipment, tools and incidentals necessary to complete the installation as shown on the

detail in the plans, at the locations shown on the plans, as called for in the specifications and as directed by the Owner.

This unit price shall include silt cleanout as necessary and as required and the removal and disposal of silt fence in accordance with the specifications.

..... END OF SECTION