



City of Raleigh

Request for Proposals #: 274-WS-2017-14

Title: Pullen to Bain Reinforcing Main

Proposal Due Date and Time: June 25, 2026, at 2:00 PM EST

ADDENDUM NO. 03

Issue Date: 6/10/2026

Issuing Department: Raleigh Water, CIP

Direct all inquiries concerning this RFP to:

Justin Biegler, PE

Senior Engineering Supervisor

Email: justin.biegler@raleighnc.gov

Issue Date: 6/10/2026

To: All Proposers

This Addendum, containing the following additions, clarifications, and/or changes, is issued prior to receipt of proposal packages and does hereby become part of the original RFP documents and supersedes the original RFP documents in case of conflict.

Receipt of this addendum must be acknowledged by signing in the area indicated below. Please note the following clarifications and make the following additions and/or changes to the RFP as listed below and **sign and return this addendum with your proposal package.**

General Questions/Clarifications:

1. *Can you revise the quantities and units (VF to EA) for the manholes on the bid form?*
A. Unit Prices and Bid Form have been updated to reflect this requested change.
2. *I see the issue date for addendum no. 1 is 5/15 but today's date is 5/13. Can you please clarify which of the two dates (5/13 or 5/15) we need to write in our proposal package?*
A. Please use the addendum date of May 15, 2026, when referencing Addendum No. 1 in the proposal package.
3. *Can an allowance for railroad flagging and monitoring be added?*
A. Unit Prices and Bid Form have been updated to reflect this requested change.
4. *Sheet T9 calls out a gas line relocation. Can a utility relocation allowance be added?*
A. Unit Prices and Bid Form have been updated to reflect this requested change.
5. *You mentioned it would be incidental to the pipe but can you really consider adding line items for the some of the storm pipe I have called out below? These are areas where it is required and not "as required": Sheet S10 specifically has approximately 57' of 15" RCP with a 4' storm manhole. Sheet T18 shows 26' of 8" DIP storm, 30' of 12" RCP storm, and 88' of 8" CPP storm to be replaced. Just an fyi, they do not make 12" RCP so it would have to be 15".*
A. A stormwater line item has been established to cover items where new or upgraded stormwater is planned as shown on S10.
6. *Can you clarify if all fittings on this job are required to be factory restrained (no megalugs)?*
A. All fittings are planned to be factory restrained - megalugs may be allowed for unforeseen field cuts if required and approved in the field. Generally, such use is

to be the exception vs the primary restraint - see Section 331413 paragraph 2.02.F.3

7. *Can a thermoplastic pavement markings line item be added? The following streets will need to be replaced after you open cut- Fayetteville St, S. Saunders, Maywood Ave, Lake Wheeler Rd, Goode St, & Ashe Ave.?*

A. Thermo striping shall be considered incidental to the pavement restorations.

8. *Can a line item be added for removing and replacing traffic signal loops?*

A. Signal loop replacement will be considered incidental to the pavement restorations.

9. *Do you have any idea when you would want this job to start?*

A. Anticipating awarding summer 2026, with a NTP of fall 2026.

10. *If possible, could you please provide us the AutoCAD files for this project? The PDF drawings are not compatible with the PDF import option.*

A. AutoCAD files are not available at this time, but the unscanned, searchable version of the PDF has been provided; Please note that these drawings are unsigned and are being provided for convenience/searchability purposes only (i.e., the signed/scanned plans remain the official version of the bid documents should any discrepancies arise).

11. *Factory Restraint vs. Field Cut: Section F.1 indicates that pipe in restraint areas must be restrained joint pipe, in our case, TR Flex. Does this mean pipe AND FITTINGS must be the same joint type (as stated in section F.4.) and fabricated at the factory (spool pieces) to exact drawing measurements?*

A. Pipe and fittings are expected to be factory restrained and will require a lay schedule accordingly.

12. *MJ Fittings as Backup: Does Section F.3 mean we should base our pricing on the "Factory Restraint" measurements given on the plans, treating field-cut MJ fittings with Mega-Lugs strictly as a field backup?*

A. Correct.

13. *System-Wide Mega-Lugs: Section F.6 allows Mega-Lugs (Series 1100) where restrained joint fittings or valves are unavailable. Is this intended only as needed for unavailable items, and is NOT permissible to install the entire project using MJ fittings and Mega-Lugs?*

A. Correct.

14. *Hydrant Tees: Section F.8 states hydrant tees do not need mainline restraint unless they fall within another restrained zone. Should we price Mechanical Joint tees with standard, non-restraining glands for the run?*

A. That is correct for hydrant tees in unrestrained sections.

15. *Domestic Requirements: Are there any Buy America (BA), Build America, Buy America (BABA), or American Iron and Steel (AIS) requirements for this project? Are imported materials allowed?*
- A. There are no “Buy American” requirements for this project. However, all materials should meet Raleigh Water material requirements per the Raleigh Water Handbook.**
16. *Will an engineer's estimate be made available to planholders?*
- A. No.**
17. *Will a geotechnical report be provided to the planholders?*
- A. The geotechnical report information can be found in the appendices of the project manual as well as SUE information and obtained permit information.**
18. *In the Unit Prices section, the measurement of the Pullen Park Booster Pump Station Site work is said to be between the 45-degree bends in Ashe Street. Isn't the intent for these bends to be the starting points of this line item, and for the scope to terminate at the 20" and 24" RJDI transition couplings?*
- A. That is correct per the project measurement and payment descriptions along with the associated demolition and removals.**
19. *Drawing D2 shows a trench detail for ductile iron pipe. Please provide a detail indicating the trench requirements for the PVC sewer lines.*
- A. Sewer trench details are included on sheet D5.**
20. *Please confirm if all 24" DIP on Drawing W20 is to be restrained. There is a callout for "24" RJDI Water Main" in an area that is also indicated to be non-restrained.*
- A. All pipe on this sheet should be restrained an addenda item has been added to address this comment.**
21. *Will the City be providing a laydown yard or is it the sole responsibility of the contractor to obtain a laydown yard?*
- A. No additional laydown areas outside of the project limits are provided. Contractors will be responsible for obtaining additional space if desired at their own expense.**
22. *In the Unit Prices section, the description of work for the Open-Cut Steel Encasement includes "grouting of annular space outside of encasement". Please clarify that there will be no grout outside of the encasement since there will not be any annular space in an open cut*
- A. Unit Prices and Bid Form has been updated to reflect this requested change correcting it to grout inside the casing annular space.**
23. *Please confirm all restraints shall be factory restraint, mega lugs and MJ fittings will not be accepted. (6", 8" 12" 24" & 36" waterlines)*
- A. All fittings are planned to be factory restrained - megalugs may be allowed for unforeseen field cuts if required and approved in the field. Generally, such use is**

to be the exception vs the primary restraint - see section 331413 paragraph 2.02.F.3

24. *Would the owner consider changing the Sanitary sewer Bid items to per each vs vertical foot, the suppliers and having issues with pricing by the vertical foot.*

A. This measurement and payment has been updated to an each basis.

25. *Please confirm all storm drain is incidental to the installation of the transmission main.*

A. That is correct, other than where indicated as planned installations. An allowance has been established within this addendum for this work but does not include "as required" items, only planned remove and relocate sections.

26. *Nationwide Permit 58, referenced in Appendix C, expired on March 14, 2026. Please confirm whether the Owner will be responsible for renewing the permit and for payment of any associated renewal fees.*

A. Owner will renew the permit and handle associated fees within the required timeframe for renewal which is within one year of the expiration.

27. *The bid form indicates a quantity of nine (9) 6" ARVs; however, the ARV schedule on the plans shows eleven (11). Please confirm if the bid form will be revised accordingly.*

A. Unit Prices and Bid Form have been updated to reflect this change

28. *Will the deadline for questions be extended?*

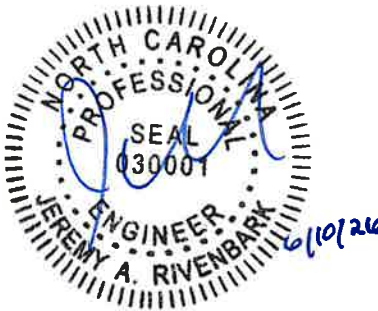
A. Per the Instructions to Bidders, questions received less than 7 working days prior to the date for opening of Bids may not be answered.

Drawing and Specification Additions/Changes:

1. 00410 Bid Form Addendum 03 replaces the 00410 Bid Form Addendum 01 section entirely. Addendum 03 updates unit prices and adds additional line items based on questions and comments to date.
2. Specification 01 22 00 Unit Prices Addendum 03 replaces the original 01 22 00 Unit Prices Addendum 01 specification entirely. Items were updated to match the Bid Form changes and modify some measurement and payment descriptions based on questions and comments to date.
3. Section 800 – SC-6.03 Contractor’s Insurance Paragraph O Railroad Protective Liability Insurance – delete “[Policy limits commonly set by the railroad and purchasing insurance coverage directly from the railroad. Specific limits may be inserted here. The \$6 million limit below is the common limit requested in the Raleigh area.]” and change the Railroad Protective Liability Insurance from “\$6,000,000 each claim and \$6,000,000 aggregate” to “\$5,000,000 each claim and \$10,000,000 aggregate”
4. Sheet T1, profile view, note that the graphic representation of the 48” casing is mistakenly drawn as a 54” casing. Although labeled correctly as 48,” the graphical

change to a 48" casing should lend more potential clearance space for the critical conflicts along the bore.

5. Sheet T18, in the plan view, change "PROPOSED 133 LF 48" x 0.750" THICK" to "PROPOSED 133 LF 54" x 0.75" THICK"
6. Sheet T23, shift mainline valve and associated thrust collars shown at Sta 111+80 to Sta 112+50.
7. On drawings T29, T32, W18, W21, R17 and R19 add the following note: "6. AT CONTRACTOR'S OPTION, TUNNEL CROWN ELEVATION CAN BE LOWERED UP TO 3 FEET. CARRIER PIPE CENTERLINE ELEVATIONS AS SHOWN ON DRAWINGS D8 AND D9 CAN BE LOWERED UP TO 3 FEET AS NEEDED TO SUIT CONTRACTOR'S MEANS AND METHODS."
8. Drawing W20, Profile Sta 17+38 to Sta 18+09, remove the begin and end RJ notes and show the proposed 24" waterline to be shaded as restrained joint pipe in its entirety on this sheet.
9. Drawing D4, Detail 1509419R, Under the ARV Schedule Table add the following: "SBD = Single Body Combination; DBC = Dual Body Combination"
10. All sewer sheets, replace all drawing callouts of "PROPOSED 4" DI SAN SEWER SERVICE, TYP" where PVC sewer main replacements are shown to read "PROPOSED 4" PVC SAN SEWER SERVICE, TYP." All sewer services should be PVC, matching proposed replacement mains and include corresponding PVC cleanouts.



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Cary, NC 27511
NC License: P-1611

SIGN BELOW AND RETURN THIS ADDENDUM WITH YOUR PROPOSAL.

Proposer Name & Company: _____ **Date:** _____

Signature: _____ **Title:** _____

BID FORM

PROJECT: Pullen to Bain Reinforcing Main

CITY BID NO.: WS-2017-14

BID FROM: _____

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ARTICLE 1 – BID RECIPIENT

- 1.01 This Bid is submitted to:
Justin Beigler, PE
City of Raleigh, Public Utilities Raleigh Water Department
One Exchange Plaza, Suite 620
Raleigh, North Carolina 2761
- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

- 2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 120 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this bid, bidder represents that:

- A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

No. _____, dated _____

No. _____, dated _____

No. _____, dated _____

No. _____, dated _____

No. _____, dated _____

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in Supplemental Conditions - 5.02 as containing reliable Technical Data, and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in SC-5.06 as containing reliable Technical Data.
- E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific sequences of construction expressly required by the Bidding Documents; and (3) Bidder’s safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 4 – BIDDER’S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
 - 1. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
 - 2. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
 - 3. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.A:
 - a. “corrupt practice” means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - b. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
 - c. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
 - d. coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

- A. For Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in the Bid Schedule below.

THIS AREA INTENTIONALLY LEFT BLANK

UNIT PRICE BID SCHEDULE

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Extended Bid Price
A. WATER AND RECLAIMED SYSTEM					
1	36" DI Transmission Main	LF	14,413		
2A	6" DI Water Main	LF	90		
2B	8" DI Water Main	LF	5,246		
2C	12" DI Water Main	LF	1,276		
2D	16" DI Water Main	LF	96		
2E	24" DI Water Main	LF	1,968		
3	16" DI Reclaimed Water Main	LF	8,790		
4A	48" Steel Encasement Pipe 0.75 Thick with 36" DI Carrier Pipe (By Trenchless Method)	LF	241		
4B	54" Steel Encasement Pipe 0.625" Thick with 36" DI Carrier Pipe (By Trenchless Method)	LF	134		
4C	30" Steel Encasement Pipe 0.469" Thick with 16" DI Carrier Pipe (By Trenchless Method)	LF	133		
5A	48" Steel Encasement Pipe 0.75 Thick with 36" DI Carrier Pipe (By Open Cut)	LF	165		
5B	30" Steel Encasement Pipe 0.469" Thick with 16" Carrier Pipe (By Open Cut)	LF	165		
6A	Abandon Existing 6" Water Main	LF	2,783		
6B	Abandon Existing 8" Water Main	LF	3,278		
6C	Abandon Existing 12" Water Main	LF	1,355		
6D	Abandon Existing 16" Water Main	LF	1,506		
7A	6" Gate Valve and Box	EA	4		
7B	8" Gate Valve and Box	EA	30		
7C	12" Gate Valve and Box	EA	10		
7D	16" Gate Valve and Box	EA	9		
7E	24" Gate Valve and Box	EA	3		
8A	6" Insertion Valve and Box	EA	5		
8B	8" Insertion Valve and Box	EA	5		
8C	12" Insertion Valve and Box	EA	5		

9	30" Diameter Line Stop	EA	1		
10A	24" Butterfly Valves	EA	1		
10B	30" Butterfly Valves	EA	2		
10C	36" Butterfly Valves	EA	10		
11A	6" x 6" Tapping Sleeve and Valve and Box	EA	3		
11B	12"x8" Tapping Sleeve and Valve and Box	EA	2		
11C	14"x8" Tapping Sleeve and Valve and Box	EA	2		
11D	16"x16" Tapping Sleeve and Valve and Box	EA	2		
12	Fire Hydrant Assembly	EA	14		
13	Temporary Blowoff Assembly	EA	2		
14	Existing Valve Box Removal	EA	44		
15	Existing Fire Hydrant Assembly Removal	EA	27		
16	Ductile Iron Fittings	LBS	277,000		
17	3/4" Water Service (Same Side)	EA	54		
18	3/4" Water Service (Opposite Side)	EA	43		
19	3/4" Water Service Changeover	EA	97		
20	Reconnect Existing Service or Fire Service - Larger than 1"	EA	23		
21	Future Taps in Dix Park	EA	3		
22	Pullen Park Booster Pump Station Site	LS	1		
23A	Air Release Manhole w/ 2" Valve	EA	4		
23B	Air Release Manhole w/ 3" Valve	EA	2		
23C	Air Release Manhole w/ 6" Valve	EA	11		
23D	Air Release Manhole w/ 8" Valve	EA	2		
23E	Air Release Manhole w/ 10" Valve	EA	2		
B. SANITARY SEWER SYSTEM					
24A	8" Sanitary Sewer Replacement	LF	4,799		
24B	12" Sanitary Sewer Replacement	LF	598		
25	4" or 6" Sanitary Sewer Service Replacement	EA	93		
26A	New 4ft diameter SS MH 0 - 6ft deep	EA	1		
26B	New 4ft diameter SSMH 0 - 8ft deep	EA	4		

26C	New 4ft diameter SS MH 0 - 10ft deep	EA	2		
26D	Replace - 4ft diameter SS MH 0 - 6ft deep	EA	7		
26E	Replace - 4ft diameter SS MH 0 - 8ft deep	EA	8		
26F	Replace - 4ft diameter SS MH 0 - 10ft deep	EA	7		
26G	Replace - 4ft diameter SS MH 0 - 12ft deep	EA	1		
26H	Replace - 6ft diameter SS MH 0 - 8ft deep	EA	1		
26I	Replace - 6ft diameter SS MH 0 - 10ft deep	EA	1		
26J	Replace - 6ft diameter SS MH 0 - 14ft deep	EA	1		
C. MISCELLANEOUS					
27	Mobilization (3% of total bid max)	LS	3%		
28	Tunnel Crossing Under Western Blvd	LF	183		
29	Western Blvd Launch and Receiving Shafts	EA	2		
30	Changeable Message Signs	EA	5		
31	Vacuum Excavation	EA	15		
32	1.5" Mill and Asphalt Fill	SY	35,000		
33	Asphalt Roadway Replacement - City	SY	15,000		
34	Asphalt Roadway Replacement - DOT	SY	500		
35	Temporary Roadway Replacement	SY	35,000		
36	Concrete Pavement Removal	CY	25		
37	Curb Replacement	LF	4,000		
38	Sidewalk, Greenway, and Curb Ramp Replacement	LF	300		
39	Temporary Construction Fence	LF	13,000		
40	Temporary Construction Entrance	EA	9		
41	Tree Protection Fencing	LF	10,000		
42	Silt Fence	LF	8,000		
43	Combination Silt Fence and Tree Protection Fence		4,000		
44	Silt Fence Outlet	EA	70		
45	Curb Inlet Protection	LF	441		

46	Undercut of Unstable Pipe Foundation	CY	2,000		
47	Select Backfill	CY	12,000		
48	Rock Excavation	CY	1,500		
49	Rock Excavation by Mechanical Methods	CY	3,000		
50	Topsoil	SY	39,500		
51	Clean Up, Seeding, and Mulching	LS	1		
52	Traffic Control	LS	1		
53	Allowance for 3rd Party Testing	LS	1	\$200,000	\$200,000
54	Allowance for Instrumentation	LS	1	\$50,000	\$50,000
55	Contingency Allowance	LS	1	\$2,000,000	\$2,000,000
56	Railroad Flagging Allowance	LS	1	\$120,000	\$120,000
57	Gas Line Relocation Allowance	LS	1	\$50,000	\$50,000
58	Stormwater Removal and Replacement	LS	1		

TOTAL BID PRICE (Sum of Items 1 - 58) \$ _____

- 5.02 Bidders are hereby notified that GS 143-128(d), requires all bidders on single prime projects to identify on their Bid form the contractors they have selected for the subdivisions for branches of work for (1) HVAC, (2) Plumbing, (3) Electrical, and (4) General. Accordingly, bidder shall list below applicable selected contractors for the following branches of work (write "N/A" if not applicable or self-performed).

HVAC _____	_____
Name	License No.
Plumbing _____	_____
Name	License No.
Electrical _____	_____
Name	License No.
General _____	_____
Name	License No.

Bidder is required to fill in the additional subcontractor and material information:

Pipe Manufacturer _____

Tunnel Contractor _____

- A. Unit Prices have been computed in accordance with Paragraph 13.03.B of the General Conditions.
- B. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.
- C. Bidder acknowledges that the rights of the Owner and the recommendations of the Engineer are not to be questioned in the Award of Contracts.
- D. Bidder acknowledges that it is the intention of the Mayor and City Council to let contracts on a basis of the Bids received in accordance with GS 143-129 and in such manner as they deem to be for the best interests of the Owner.
- E. Bidder acknowledges that the Owner reserves the right to accept or reject any or all bids and to waive any informalities in the bidding.
- F. Bidder acknowledges that should the total bid exceed the funds available to construct the project, the Owner reserves the right to reduce the scope of work from the project by deleting certain lump sum or unit price bid items prior to awarding the contract to bring the project within the funds available.
- G. Bidder acknowledges that if this contract is awarded, Bidder must, with every pay request, furnish to the Public Utilities Director of the City of Raleigh an accurate itemized statement of North Carolina Sales Taxes paid on materials, supplies, equipment, and other items charged to this contract, and otherwise fully comply with the "Procedure for Reporting North Carolina Sales Tax Expenditures.". A sales tax form must be submitted even if there is no sales tax incurred.
- H. Bidder agrees to begin work within 10 days from the date of the Notice to Proceed.
- I. Bidder agrees that should the Owner reduce the scope of work by 25% or less of the Total Bid price prior to award of the contract, the lump sum and the unit price on all bid items shall remain unchanged.
- J. Bidder agrees that in the case of failure on his part to execute the said Contract and the Bonds within 15 consecutive calendar days after written notice being given of the award of the Contract, the check, cash or Bid Bond accompanying this Bid shall be paid into the funds of the Owner's Account set aside for this Project, as liquidated damages for such failure; otherwise the check, cash or Bid Bond accompanying this Bid shall be returned to the Bidder.
- K. Bidder agrees to provide all necessary tools, machinery, equipment, apparatus, and all other means necessary to do all the work and will furnish all labor, materials and all else required to complete such Contract as may be entered into, in the manner prescribed in and in accordance with the terms of the Specifications and Contract and in accordance with the true intent and meaning thereof, and in accordance with the Plans and/or Drawings and the requirements of the Engineers under them, in a first class manner.

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Base Bid Work will be substantially complete within 700 calendar days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 15.06.B of the General Conditions within 730 calendar days after the date when the Contract Times commence to run.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the Contract Times. This amount is agreed upon as the proper measure of liquidated damages the Owner will sustain, per day, by the failure of the undersigned to complete the work, within the stipulated time, and it is not to be construed, in any sense, as a penalty.

6.03 Milestone Dates

- A. The following principal events shall be completed and ready for final payment in accordance with paragraph 15.06 of the General Conditions within days indicated below after the date when the Contract Time commences to run. In accordance with paragraph 6.02 above as liquidated damages for delay (but not as penalty) Contractor shall pay Owner the amounts indicated below for each day that expires after the time specified below for completion and readiness for final payment.

Milestone Event	Calendar Days
N/A	

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security in the form of a Bid Bond or Certified Check (Section 00430);
- B. In accordance with GS 143-128.2(c), Bidder shall identify on its bid the minority businesses that it will use on the project and the total dollar value of the bid that will be performed by the minority businesses and list the good faith efforts (Affidavit A) made to solicit participation. A Bidder that will perform all of the work with its own workforce may submit an Affidavit B to that effect in lieu of the affidavit A required above.
1. Use of MWBE Businesses (Section 00440);
 2. Identification of Minority Business Participation (Section 00440), and;
 3. Affidavit A, Listing of Good Faith Effort, or Affidavit B, Intent to Perform Contract with Own Workforce (Section 00440).
- C. Contractor's Certificates, Affidavit of Organization and Authority of Sworn Statement (Section 00441);
- D. City of Raleigh – Contractor's Poor Performance Policy (Section 00442);
- E. Non-Collusive Affidavit (Section 00443);
- F. Notice to Contractor Regarding Intrusions Beyond Project Limits (Section 00444);
- G. Evidence of authority to do business in the state of the Project (i.e., copy of contractor's license);

7.02 Submit the Bidder's Checklist as provided in the bidding documents with the bid submittal. The Checklist shall be completed and included as the first page of the submittal.

7.03 After the bid opening the Owner will consider all bids and alternates and determine the lowest responsible, responsive bidder. Upon notification of being the apparent low Bidder, the Bidder shall then file within 72 hours of the notification of being the apparent lowest bidder, the following:

- A. An Affidavit (C) that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more

than the goal established by the Owner and indicated in the Instruction to Bidders, paragraph Minority Participation Goals. This affidavit shall give rise to the presumption that the bidder has made the required good faith effort; or,

- B. Affidavit (D) of its good faith effort to meet the goal. The document must include evidence of all good faith efforts that were implemented, including any advertisements, solicitations and other specific actions demonstrating recruitment and selection of minority businesses for participation in the contract.

- 7.04 Bidder understands that if this Bid is accepted by the Owner, Bidder shall not substitute for the subcontractors named in the Bid Documents except as allowed in the Supplementary Conditions.

ARTICLE 8 – DEFINED TERMS

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

- 9.01 Bidder's License

- A. Number: _____
B. Classification: _____
C. Limitation: _____
D. Employer's Tax ID No.: _____
E. Business Address: _____
F. Phone No.: _____ Fax No.: _____
G. Contact Person: _____ E-mail Address: _____
H. Phone No. w/ Ext.: _____

- 9.02 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____

(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

The Organization and Internal Affairs of the Partnership are governed by the laws of the State of: _____

By: _____

(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title (typed or printed): _____

Attest: _____

(Signature of Corporate Secretary)

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____

(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title (typed or printed): _____

(CORPORATE SEAL)

Attest: _____

(Signature of Corporate Secretary)

Date of Qualification to do business in North Carolina is ____/____/____.

Limited Liability Company - LLC

Name of LLC: _____

Name of State under whose Laws the Limited Liability Company was formed:

By: _____

(Signature of Manager)

Name (typed or printed): _____

Title (typed or printed): _____

SECTION 01 22 00
UNIT PRICES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Delineation of measurement and payment criteria applicable to Work performed under Contract by the unit price payment method.

1.02 FIELD MEASUREMENT

- A. Take measurements and compute quantities for submittal of the monthly pay request unless specified otherwise in the measurement paragraphs as indicated in this Section.

1.03 CHANGE IN QUANTITIES

- A. Increase in the quantity of a bid item above what is indicated in the Bid Form shall only be made by a Change Order as required by the Contract Documents.
- B. A final adjusting Change Order shall be made for adjustment of the actual quantities installed prior to submittal of the final pay request.

1.04 GENERAL

- A. Items with a "(X)" in the title of the following bid items represents the size or depth as indicated on the Bid Form. Items with "(Mat'l)" in the title represents the material as indicated on the Bid Form.
- B. Method of measurement for the individual Bid Items shall be as specified below.
- C. Payment for each item shall be in accordance with the Contract Unit Price times the number of units installed in accordance with the Contract Documents.
- D. Work for each bid item shall include, but not be limited to, the work listed below, and the labor, materials, equipment, and services required and reasonably implied by the Contract Documents for a complete installation.
- E. Traffic Control will not be measured but should be included in the individual unit price items, as appropriate. This includes traffic control equipment, flagman, signage, moving control devices, and establishing detours with the City and NCDOT.
- F. Water: Work shall include pressure testing and disinfection.
- G. Sewer Service Pipe: Cleanouts shall be provided in accordance with NC building code.
- H. Payment: The first Application for Payment will be approved based on the utilities installed during the agreed upon payment period without testing. Subsequent Application for Payments shall not be approved by the Engineer unless utilities installed during the previous payment period have passed the specified tests and clean up and seeding is complete.

1.05 PAY ITEMS

A. Water and Reclaimed System

1. X" DI Transmission Main

- a. Measurement: By the price per linear foot of water transmission main installed, for restrained or unrestrained as shown on the Bid Schedule. Measure horizontally or from station to station as shown or indicated on the Drawings. No deduction will be made for space occupied by valves or fittings.
- b. Work: The unit price provided shall be the only compensation for the complete installation and includes furnishing and installing all pipe and appurtenances and all other incidental work necessary to provide a complete and ready-to-use system, except for those pay items segregated on the Bid Form.
 - 1) Clearing and grubbing where necessary.
 - 2) Construction staking
 - 3) Record survey and record drawings
 - 4) Tie-ins to existing pipe including all necessary couplings and adaptors
 - 5) Temporary removal and restoration/relocation or temporary support of, but not limited to, existing mail boxes, signs, fences, shrubs, plants, guard rails, power and telephone poles.
 - 6) Excavating, shoring and bracing where required, dewatering as required, installing, backfilling (including Class I material as specified for the pipe bedding, haunching, and initial backfill).
 - 7) Installation of warning / identification tape over utilities.
 - 8) Installation of tracer wire on non-metallic utilities, including replacement of storm drainage.
 - 9) Temporary support and protection of existing underground facilities.
 - 10) Flushing, disinfecting, and testing. Including installation and removal of temporary appurtenances
 - 11) Repair to damaged new and existing utilities.
 - 12) Cutting and removal of existing paved surfaces. Patching/repair of existing paved surfaces shall be paid as indicated in the paragraph, "Asphalt Roadway Patching – City" or "Asphalt Roadway Patching - NCDOT" depending on the roadway ownership at the location in question.

2. X" DI Water Main

- a. Measurement: By the price per linear foot of water main installed, for restrained or unrestrained as shown on the Bid Schedule. Measure horizontally or from station to station as shown or indicated on the Drawings. No deduction will be made for space occupied by valves or fittings.
- b. Work: The unit price provided shall be the only compensation for the complete installation and includes furnishing and installing all pipe and appurtenances and all other incidental work necessary to provide a complete and ready-to-use system, except for those pay items segregated on the Bid Form.
 - 1) Clearing and grubbing
 - 2) Construction staking
 - 3) Record survey and record drawings
 - 4) Tie-ins to existing pipe including all necessary couplings and adaptors

- 5) Temporary removal and restoration/relocation or temporary support of, but not limited to, existing mail boxes, signs, fences, shrubs, plants, guard rails, power and telephone poles.
 - 6) Excavating, shoring and bracing where required, dewatering as required, installing, backfilling (including Class I material as specified for the pipe bedding, haunching, and initial backfill).
 - 7) Installation of warning / identification tape over utilities.
 - 8) Installation of tracer wire on non-metallic utilities.
 - 9) Temporary support and protection of existing underground facilities.
 - 10) Flushing, disinfection, and testing.
 - 11) Repair to damaged new and existing utilities, including replacement of storm drainage.
 - 12) Cutting and removal of existing paved surfaces. Patching/repair of existing paved surfaces shall be paid as indicated in the paragraph, "Asphalt Roadway Patching – City" or "Asphalt Roadway Patching - NCDOT" depending on the roadway ownership at the location in question.
3. X" DI Reclaimed Water Main
- a. Measurement: By the price per linear foot of water main installed, for restrained or unrestrained as shown on the Bid Schedule. Measure horizontally or from station to station as shown or indicated on the Drawings. No deduction will be made for space occupied by valves or fittings.
 - b. Work: The unit price provided shall be the only compensation for the complete installation and includes furnishing and installing all pipe and appurtenances and all other incidental work necessary to provide a complete and ready-to-use system, except for those pay items segregated on the Bid Form.
 - 1) Clearing and grubbing
 - 2) Construction staking
 - 3) Record survey and record drawings
 - 4) Tie-ins to existing pipe including all necessary couplings and adaptors
 - 5) Temporary removal and restoration/relocation or temporary support of, but not limited to, existing mail boxes, signs, fences, shrubs, plants, guard rails, power and telephone poles.
 - 6) Excavating, shoring and bracing where required, dewatering as required, installing, backfilling (including Class I material as specified for the pipe bedding, haunching, and initial backfill).
 - 7) Installation of warning / identification tape over utilities.
 - 8) Installation of tracer wire on non-metallic utilities.
 - 9) Temporary support and protection of existing underground facilities.
 - 10) Flushing and testing.
 - 11) Repair to damaged new and existing utilities, including replacement of storm drainage.
 - 12) Cutting and removal of existing paved surfaces. Patching/repair of existing paved surfaces shall be paid as indicated in the paragraph, "Asphalt Roadway Patching – City" or "Asphalt Roadway Patching - NCDOT" depending on the roadway ownership at the location in question.
4. X" Steel Encasement Pipe X" Thick with X" DI Carrier Pipe (By Trenchless Method)

- a. Measurement: By the price per linear foot along the horizontal centerline of the various sizes of steel encasement pipes installed to the nearest 0.1 foot
 - b. Work: Excavation and backfilling for launch/receive pit(s), pit stabilization, steel encasement pipe, pipe supports, placement of flowable fill in void space in encasement pipe, carrier pipe within encasement, grouting of annular space between the carrier pipe and the casing pipe, casing seals, and all labor and equipment necessary for a complete installation. Include costs for the provision of bonds, insurance and inspection fees required by the respective agency or authority in charge of inspection of the encasement and carrier pipes. Pricing shall be for a guaranteed installation, regardless of conditions encountered with exception to launch/receiving pit rock excavation, and no payment shall be made for unusable casing or carrier pipe that is installed.
5. X" Steel Encasement Pipe X" Thick with X" DI Carrier Pipe (By Open Cut)
- a. Measurement: By the price per linear foot along the horizontal centerline of the various sizes of steel encasement pipes installed to the nearest 0.1 foot
 - b. Work: Excavation and backfilling, steel encasement pipe, pipe supports, placement of flowable fill in void space in encasement pipe, carrier pipe within encasement, grouting of annular space between the carrier pipe and casing pipe, casing seals, and all labor and equipment necessary for a complete installation.
6. Abandon Existing X" Water Main
- a. Measurement: By the price per linear foot of existing water main abandoned (i.e., grouted) in place as measured horizontally along the centerline of the pipe.
 - b. Work: Including, but not limited to, temporary removal and restoration or temporary support of existing mail boxes, signs, fences, shrubs, plants (under 6 feet in height), power and telephone poles; excavation; shoring and bracing; removal of existing pipe as necessary for grouting operation; grout; proper disposal of removed pipe; backfilling; disconnection from existing system; cleanup; seeding, mulching and tacking, and for all labor, materials and accessories required for a complete abandonment.
7. X" Gate Valve and Box
- a. Measurement: By the number furnished and installed.
 - b. Work: Valve, valve box, concrete setting pad and concrete top collar.
8. X" Insertion Valve and Box
- a. Measurement: By the number furnished and installed.
 - b. Work: Excavation, support of excavation, insertion valve, backfill, compaction, thrust collars, concrete setting pad, concrete top collar, and valve box.
9. X" Diameter Line Stop
- a. Measurement: By the number furnished and installed
 - b. Work: Excavation, support of excavation, line stop, backfill, compaction, thrust collars, and all else necessary for a complete installation and removal.
10. X" Butterfly Valves
- a. Measurement: By the number furnished and installed.
 - b. Work: Excavation, support of excavation, valve, manhole, backfill, and compaction.

11. X" by X" Tapping Sleeve and Valve and Box
 - a. Measurement: By the number furnished and installed
 - b. Work: Tapping the existing pipe, valve, valve box, concrete setting pad, and concrete top collar.
12. Fire Hydrant Assembly
 - a. Measurement: By the number furnished and installed.
 - b. Work: Fire hydrant, hydrant tee, hydrant elbow, standpipe extension(s), concrete base, blocking, bridle rods and rod collars, the 6-inch gate valve (including valve box, concrete setting pad and concrete top collar) and 6-inch pipe from the water main to hydrant.
13. Temporary Blowoff Assembly
 - a. Measurement: By the number furnished and installed.
 - b. Work: Main size plug with 2-inch tap, 2-inch gate valve (including valve box, concrete setting pad and top collar), 2-inch pipe from main line plug to blowoff in valve box, and concrete pad.
14. Existing Valve Box Removal
 - a. Measurement: By the number removed
 - b. Work: Removal and disposal of existing valve box and cover on abandoned water line, excavation, concrete, backfill, and compaction. Seeding and mulching shall be included for valves in unpaved areas and asphalt patching shall be included for valves in paved areas.
15. Existing Fire Hydrant Assembly Removal
 - a. Measurement: By the number removed
 - b. Work: Removal and disposal of existing fire hydrant including hydrant elbow, excavation, removal of existing valve box and cover, concrete, backfill, compaction, and seeding and mulching. Note grouting of existing hydrant leg shall be included in abandoned (X)-inch water line.
16. Ductile Iron Fittings
 - a. Measurement: By the pound, for restrained or blocked, as shown on the drawings. For 4-inch diameter fittings and larger, poundage shall be based on the number and type of fittings installed times the weight of each type of fitting. Fitting weights shall be derived from those provided in AWWA C110 for the applicable fitting type. Note that all accessories (including, but not limited to: bolts, nuts, glands, restraining type glands, or concrete thrust blocking) required for proper fitting installation shall be provided but shall not be included to determine weight for purposes of payment. A copy of the shipping invoice shall be provided to the Engineer/Owner's Representative and shall include an itemized list of fittings considered for payment. Note that fittings smaller than 4-inch diameter shall be included in the cost per linear foot of the utility installed.
 - b. Work: Complete installation of Fitting.
17. X" Water Service (Same Side)
 - a. Measurement: By number furnished and installed per each arrangement; single, dual, or quad.
 - b. Work: Excavation, backfilling, and compacting, X inch service pipe and fittings from main to right-of-way or the location as indicated on the Drawings, tap to main and service saddle, corporation stop, curb stop, backflow preventer, meter(s), meter setter(s) and meter box(es).

18. X" Water Service (Opposite Side)
 - a. Measurement: By number furnished and installed per each arrangement; single dual, or quad.
 - b. Work: Excavation, backfilling, and compacting, X inch service pipe and fittings from main to right-of-way or the location as indicated on the Drawings, direct bore under road, tap to main and service saddle, corporation stop, curb stops, backflow preventer, meter(s), meter setter(s) and meter box(es).
 19. X" Water Service Changeover
 - a. Measurement: By number completed.
 - b. Work: Excavation, backfilling, and compacting required to changeover the service line on the backside of a meter from an existing water meter to a newly installed water meter. This pay item shall also include the excavation and removal of existing water meters that are replaced as well as backfill and compaction of void areas associated with meter removal, surface preparation, seeding, and mulching of all disturbed areas.
 20. Reconnect Existing Service or Fire Service – Larger than 1"
 - a. Measurement: By number completed.
 - b. Work: Excavation, backfilling, and compacting required to reconnect the existing service line to the existing meter.
 21. Future Taps in Dix Park
 - a. Measurement: By number completed
 - b. Work: Installation of a 36"x12" tee, up to 20 feet of 12" DIP, a 12" gate valve, and cap for future water service connection. All pipe and fittings shall be restrained. Locations will be as directed during construction.
 22. Pullen Park Booster Pump Station Site
 - a. Measurement: Lump Sum for all work at the site between the proposed 36", 45 degree bend in Ashe Ave and the proposed 24" 45 degree bend in Ashe Ave. Inclusive of all connection pipe, valves, PRV, flow meter, vaults, restraint, etc., between the fittings.
 - b. Work: Excavation, backfilling, compacting, demolition, furnishing and installing all pipe, fittings, valves, PRV, flow meter, and vaults, connecting to existing pipe, removal of existing pipe, fittings, and thrust restraint to make connections, and abandonment of existing pipe and vaults, and restoration of the area to existing grade. Pavement and sidewalk restoration shall be included under separate items.
 23. Air Release Manhole w/X" Valve
 - a. Measurement: By the number furnished and installed.
 - b. Work: Air release valve, pipe, fittings, isolation valves, and manhole (including stone base, frame and cover).
- B. Sanitary Sewer System
24. X" Sanitary Sewer Replacement,
 - a. Measurement: Measure pipe from center to center of manholes. No deduction will be made for space occupied by manholes.
 - b. Work: Payment shall include but not be limited to (unless specifically noted otherwise on the Bid Form and this specification Section), the following:
 - 1) The length of existing gravity sewer to be replaced at any one location will vary.

- 2) Clearing and grubbing where necessary.
 - 3) Temporary by-passing of sewer around the work area.
 - 4) Temporary removal and restoration or temporary support of, but not limited to, existing mail boxes, signs, fences, shrubs, plants (under 6 feet in height), guard rails, power and telephone poles.
 - 5) Excavating, shoring and bracing where required, dewatering as required, installing, backfilling (including Class I material as specified for the pipe bedding, haunching, and initial backfill).
 - 6) Installation of warning / identification tape over utilities.
 - 7) Temporary support and protection of existing underground facilities.
 - 8) Connection to existing or new manholes.
 - 9) Removal and disposal of existing sewer main to be replaced.
 - 10) Grouting of any sewer main that is not removed and no longer in service.
 - 11) Flushing and testing.
 - 12) Repair to damaged new and existing utilities.
 - 13) Cutting and removal of existing paved surfaces. Patching of existing paved surfaces shall be paid as indicated in the paragraph, "Patching of Asphalt and Concrete Pavement."
 - 14) Grade disturbed areas to original surface profile prior to seeding.
 - 15) Clean up and seeding.
25. 4" or 6" Sanitary Sewer Service Replacement
- a. Measurement: By number furnished and installed.
 - b. Work: The unit price shall include, but not be limited to (unless specifically noted otherwise on the Bid Form and this specification Section), the following:
 - 1) Clearing and grubbing where necessary.
 - 2) Traffic control.
 - 3) Construction staking.
 - 4) Temporary removal and restoration/relocation or temporary support of, but not limited to, existing mail boxes, signs, fences, shrubs, plants, guard rails, power and telephone poles.
 - 5) Excavating, shoring and bracing where required, dewatering as required, installing, backfilling (including Class I material as specified for the pipe bedding, haunching, and initial backfill).
 - 6) Installation of warning / identification tape over utilities.
 - 7) Installation of tracer wire on non-metallic utilities.
 - 8) Temporary support and protection of existing underground facilities.
 - 9) Pipe, concrete blocking, connection to existing piping, and fittings 3-inch and smaller, including installation of new PVC sewer cleanout.
 - 10) Flushing and testing.
 - 11) Repair to damaged new and existing utilities.
 - 12) Cutting and removal of existing paved surfaces. Patching/repair of existing paved surfaces shall be paid as indicated in the paragraph, "Asphalt and Concrete Pavement Patching."
26. New or Replace Xft diameter SS MH 0 – Xft deep
- a. Measurement: By the number of various sizes and types and at the depth installed. Measure depths from manhole cover to lowest pipe invert.
 - b. Work: Excavating, removal and offsite disposal of existing manhole, new manhole, backfilling, stone sub base, concrete sections as required for the

depth, top adjusting rings, steps, pipe boots, drop piping and supports, and ring and cover.

C. Miscellaneous

27. Mobilization (3% of total bid max)

- a. Measurement shall not be made for this item.
- b. Work: To include administrative costs, including, but not limited to, mobilization, bonds, insurance, video inspections, shop drawing submittal, as-built documentation/surveys, and construction trailers. This shall also include mobilization of construction equipment onto the project site prior to commencing construction. General office administration for the Project construction shall be included in the individual unit price items.
- c. Bid Price for Mobilization shall not exceed 3 percent of the total bid. Half of the mobilization may be requested on the first pay request and the remainder on the second.

28. Tunnel Crossing Under Western Blvd

- a. Measurement: Measurement will be made by linear foot to the nearest 1 foot along the horizontal centerline as measured from front face of launching shaft to front face of receiving shaft. No additional payment will be made for a larger diameter tunnel or length greater than that indicated on the Contract Drawings and Specifications.
- b. Work: Tunneling under Western Blvd including mobilization and demobilization, furnishing all labor, equipment, and materials to excavate the tunnel and install the initial tunnel support, complete as indicated on the Contract Drawings and in the Specifications. Work shall include installation of initial tunnel support, grouting of annular space outside the support, rock removal, carrier pipe blocking and supports, provision and installation of carrier pipe, casing bulkheads, grouting of annular space between the initial tunnel support and carrier pipes, any required dewatering, grade control monitoring/surveying and reporting, and flushing and testing of all carrier pipe. Design of excavation supports and grade control monitoring/surveying and reporting shall be designed by a P.E., licensed in the State of North Carolina.

29. Western Blvd Launch and Receiving Shafts

- a. Measurement: By a per each basis for the shafts indicated on the drawings. Payment shall be 75% for each shaft once excavated and 25% once shaft is backfilled.
- b. Work: Excavation and backfill of shafts including mobilization and demobilization, furnishing all labor, equipment, and materials to excavate the shaft and install excavation support, complete as indicated on the Contract Drawings and in the Specifications. Work shall include, but not be limited to, cutting and removal of existing paved surfaces, temporary removal and restoration of existing mailboxes, signs, fences, etc., temporary support and protection of existing underground facilities, excavation for shafts, rock removal to the limits as necessary for the construction of the shafts, disposal of excavated material, any required dewatering, grade control monitoring/surveying and reporting, and backfill/restoration of grade. Design of excavation support and grade control monitoring/surveying and reporting shall be performed by a P.E. licensed in the State of North Carolina. Work shall also include the provision and installation of vertical casing and carrier

pipe and appurtenances within the shafts, and all backfill support in accordance with the Contract Drawings. Clearing and grubbing, patching/repair of existing paved surfaces, curb, and sidewalk and other site restoration shall be paid as indicated in other bid items.

30. Changeable Message Signs

- a. Measurement: By the number furnished, as directed by the Owner.
- b. Work: Furnishing changeable message signs to work area, programming of signage, coordination of location with Owner, moving of sign as needed during project duration, repair of any areas damaged by signs, and removal from site upon completion of project. Does not include messages signs required as part of the Traffic Control Plan.

31. Vacuum Excavation

- a. Measurement: Per each location as approved.
- b. Work: All labor, equipment, and material necessary to provide vacuum excavation (and soil replacement and compaction) in areas of congested buried utilities where mechanical excavation and hand digging are impractical. Maximum excavation limit shall be 10 feet long, 16 inches wide, and up to 30 inches deep for each vacuum excavation. Authorization for use of the item must be approved in advance of the work.

32. 1.5" Mill and Asphalt Fill

- a. Measurement: By the square yard furnished and installed.
- b. Work: Complete asphalt overlay including the required pavement clean up, primer, asphalt and striping, pavement markings, thermoplastic pavement markings, signal loops and all other pavement restoration items.

33. Asphalt Roadway Replacement - City

- a. Measurement: Measure by the square yard as shown on the drawings. Payment shall not be made for pavement repair required due to excessive open cut caused by Contractor.
- b. Work: Backfilling, compacting, stone sub-base, asphalt at the depths as specified in the City pavement replacement detail.

34. Asphalt Roadway Replacement - NCDOT

- a. Measurement: Measure by the square yard as shown on the drawings. Payment shall not be made for pavement repair required due to excessive open cut caused by Contractor.
- b. Work: Backfilling, compacting, stone sub-base, asphalt at the depths as specified in the NCDOT pavement replacement detail.

35. Temporary Roadway Replacement

- a. Measurement: Measure by the square yard. Placement of temporary pavement shall be as directed. Payment shall not be made for pavement repair required due to excessive open cut caused by Contractor.
- b. Work: Backfilling, compacting, stone sub-base, asphalt at the depth of 1"-2" of I19.0c, maintenance, and removal ahead of permanent asphalt replacement.

36. Concrete Pavement Removal

- a. Measurement: By the cubic yard of in place material removed.
- b. Work: Demolition of existing concrete pavement, removal from trench, and proper disposal.

37. Curb Replacement

- a. Measurement: By the linear foot of curb replaced, measured along the curb at water main crossings. A maximum of 10 feet will be paid for each curb crossed by a water main 4-inch or larger.
- b. Work: Removal of existing curb, excavation and preparation of subgrade, forming, concrete placement and finishing, curing, and backfill and restoration of disturbed areas.

38. Sidewalk, Greenway, and Curb Ramp Replacement

- a. Measurement: By the square yard of sidewalk and greenway replaced at water main crossings, measured along the sidewalk. Payment will be from the cut to each adjacent sidewalk panel joint for each sidewalk crossed by a water main 4-inch or larger. Ramp replacement shall be measured by the square yard of the ramp replaced. Asphalt payment shall be measured by the maximum trench width plus 2 feet on each side.
- b. Work: Removal of existing sidewalk, excavation and preparation of subgrade, forming, concrete placement and finishing, curing, asphalt paving, and backfill and restoration of disturbed areas.

39. Temporary Construction Fence

- a. Measurement: By the price per linear foot furnished and installed.
- b. Work: Excavation, furnishing and placement of construction fence along the project corridor through Dix Park as shown on the drawings, and final removal and cleanup.

40. Temporary Construction Entrance

- a. Measurement: By number furnished and installed.
- b. Work: Excavation, furnishing and placement of washed stone, maintenance, during construction, and final removal and cleanup.

41. Tree Protection Fencing

- a. Measurement: By the price per linear foot along the base of the tree protection fencing furnished and installed.
- b. Work: Posts, fabric, signs, maintenance during construction, removal and cleanup.

42. Silt Fence

- a. Measurement: by the price per linear foot along the base of the silt fence installed.
- b. Work: Posts, wire mesh, fabric, base trench, stone, and maintenance during construction, removal and clean up.

43. Combination Silt Fence and Tree Protection Fence

- a. Measurement: by the price per linear foot along the base of the combination tree protection and silt fence installed.
- b. Work: Posts, wire mesh, fabric, signs, base trench, stone, and maintenance during construction, removal and clean up.

44. Silt Fence Outlet

- a. Measurement: By number furnished and installed.
- b. Work: Excavation, washed stone, fencing, maintenance during construction, and final removal and cleanup.

45. Curb Inlet Protection

- a. Measurement: By number furnished and installed.

- b. Work: Inlet protection device, installation, maintenance during construction, and final removal and clean up.
46. Undercut of Unstable Pipe Foundation
- a. Measurement: By the price per cubic yard along the centerline of the trench times the undercut depth below the pipe bedding as approved by Engineer times the pipe bell OD plus four (4) feet. Measure unstable soils at manholes on the maximum basis of 1-foot greater diameter than the outside diameter of the manhole (excluding extended base) and a depth as approved by the Engineer. Measurement shall be based on the actual quantities removed but not exceeding the maximum specified trench dimensions. Take measurements in the presence of the Engineer. Maintain daily log sheets of measured quantities. Log sheets must be signed by Engineer and submitted with payment request. Payment shall not be made for quantities that have not been field verified by the Engineer.
 - b. Work: Complete removal and disposal of unstable soil including, but not limited to, excavating, loading, hauling, properly disposing of excavated material, and providing stone for backfill. Providing stone material for backfilling shall include, but not be limited to, material, loading, hauling, placing and compacting.
47. Select Backfill
- a. Measurement: By the price per cubic yard along the centerline of the trench times the trench depth times the pipe bell OD plus four (4) feet. Take measurements in the presence of the Engineer. Maintain daily log sheets of measured quantities. Log sheets must be signed by Engineer and submitted with payment request. Payment shall not be made for quantities that have not been field verified by the Engineer.
 - b. Work: Complete removal and disposal of unstable soil including, but not limited to, excavating, loading, hauling, properly disposing of excavated material, and providing material for backfill. Providing select fill material for backfilling shall include, but not be limited to, material, loading, hauling, placing and compacting.
48. Rock Excavation
- a. Measurement: By the price per cubic yard as follows:
 - 1) Pipe: Measure along the centerline of the trench, times the depth from the top of rock profile to the specified depth below the pipe, times the pipe bell OD plus four (4) feet.
 - 2) Structure: Measure two (2) feet beyond the outside wall of the structure (excluding extended base) and to a depth of one foot greater than the bottom of the structure.
 - 3) Tunneling and Boring Launch/Receive Pits: Maximum pit dimensions of 40' x 20' for launch and 20' x 20' for receiving, or as noted on the plans.
 - 4) General: Take measurements in the presence of the Engineer. Maintain daily log sheets of measured quantities. Log sheets must be signed by the Engineer and submitted with payment request. Payment shall not be made for quantities that have not been field verified by the Engineer.
 - b. Work: Complete removal and disposal of excavated rock material including, but not limited to, drilling, blasting, monitoring, excavating, loading, hauling, and properly disposing of excavated material. Providing specified material for

backfilling shall include, but not be limited to, material, bedding material, loading, hauling, placing and compacting.

49. Rock Excavation by Mechanical Methods

- a. Measurement: By the price per cubic yard as follows:
 - 1) Pipe: Measure along the centerline of the trench, times the depth from the top of rock profile to the specified depth below the pipe, times the pipe bell OD plus four (4) feet.
 - 2) Structure: Measure two (2) feet beyond the outside wall of the structure (excluding extended base) and to a depth of one foot greater than the bottom of the structure.
 - 3) Tunneling and Boring Launch/Receive Pits: Maximum pit dimensions of 40' x 20' for launch and 20' x 20' for receiving or as noted on the plans.
 - 4) General: Take measurements in the presence of the Engineer. Maintain daily log sheets of measured quantities. Log sheets must be signed by the Engineer and submitted with payment request. Payment shall not be made for quantities that have not been field verified by the Engineer.
- b. Work: Mechanical removal of rock shall be as described above for Excavation with the exception of blasting.

50. Topsoil

- a. Measurement: By the price per square yard of topsoil placed, using a depth of 4" per square yard.
- b. Work: Hauling and placing of topsoil used for ground cover to help establish seed, brought from borrow site.

51. Clean Up, Seeding, and Mulching

- a. Measurement shall not be made for this item.
- b. Work: Shall include the full width of the disturbed area for the cleanup and seeding along pipeline construction. Work shall include, but not be limited to, removal and proper disposal of debris and excess material, grading disturbed areas to original surface profile prior to trench excavation, cleaning of paved surfaces, proper seeding of disturbed areas including mulching, obtaining approval of cleanup from owner of right-of-way, soil amendments (fertilizer/lime), indicated tree replacement, and landscaping disturbed by construction.
- c. Total Contract Price of cleanup and seeding must be equal to a minimum of five (5) percent of the total cost of pipeline work.

52. Traffic Control

- a. Measurement: Lump Sum. Payment shall include all labor, material, equipment, and accessories required to furnish, install, maintain, adjust, and remove all traffic control and construction access items. Payment shall also include preparation of detailed traffic control plans and schedules for review and approval by the Owner and Engineer and manual labor for traffic control operations.
- b. Work: Furnishing, installing, maintaining, adjusting, removal and operations of signage, signals, and all else required for traffic control.

53. Allowance for 3rd Party Vibration Monitoring, Soil Compaction Testing, and Additional CMT.

- a. Measurement shall not be made for this item.

- b. An allowance has been established for testing (i.e., soil compaction testing and vibration monitoring above normal monitoring by Contractor) as required in these contract documents. Allowance has also been established to defer selection of actual services to a later date when additional information is available for evaluation. This allowance shall only be utilized upon request by the Owner for these testing/monitoring services.
 - c. Prior to testing, Contractor shall submit the contract between the testing firm and Contractor to the Owner for approval. Where services are requested by Owner, Contractor shall submit invoices to show actual cost of services for use in fulfillment of allowance.
 - d. Payment for allowance shall be for actual invoices for third party services plus up to 5 percent of cost of the services as compensation for coordination of the work.
54. Allowance for Instrumentation
- a. Measurement shall not be made for this item.
 - b. An allowance has been established for necessary instrumentation and controls at the Pullen Park Pump Station. The Owner shall select the instrumentation provider.
 - c. Payment for allowance shall be for actual invoices for third party services plus up to 5 percent of cost of the services as compensation for coordination of the work.
55. Contingency Allowance
- a. Measurement shall not be made for this item.
 - b. Work: A contingency is established for use only with owner's approval of unforeseen needs that may be encountered or required that are not part of the bid. No costs may be attributed to the allowance without written approval by the Owner.
56. Railroad Flagging Allowance
- a. Measurement shall not be made for this item.
 - b. Work: A contingency allowance is established for use only with the owner's approval for required flagging at the trenchless railroad crossings. Invoices shall be submitted for payment with no additional markup included.
57. Gas Line Relocation Allowance
- a. Measurement shall not be made for this item.
 - b. Work: A contingency allowance is established for use only with the owner's approval for relocation of the existing gas main on sheet T-9. Invoices from the gas utility owner shall be submitted for payment with no additional markup included. This allowance shall only be utilized in the event the City and the Contractor are unable to get the gas line relocation handled through the general City R/W encroachment coordination at the gas company's expense.
58. Stormwater Removal and Replacement
- a. Measurement: Lump Sum. Payment shall include all labor, material, equipment, and accessories required to furnish, install, maintain, adjust, and remove the planned storm system replacements
 - b. Work: Planned relocation of the existing stormwater infrastructure as depicted on sheet S-10. Item shall include all material, excavation, backfill, and restoration required to remove and replace the existing 15" RCP, including a

new stormwater manhole and all else necessary for a complete removal and replacement.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION