

## CONTRACT ADDENDUM

Atkins Project No. 100032548

ADDENDUM NO: Two (2)  
OWNER'S NAME: Cobb County-Marietta Water Authority  
PROJECT NAME: Highway 41 Water Main, Phase IV  
BID DATE: Thursday, April 2, 2015 at 10:00 A.M. Local Time  
DATE ISSUED: Tuesday, March 24, 2015

### CONTRACTOR ACTION:

1. Acknowledge receipt of this addendum by writing in "Addendum No. 2" on page BF-1 of bid proposal.
2. Replace the pages of the Bid Proposal "Exhibit A – Page BF-3.1" through "Exhibit A – Page BF-3.36" with the pages "Exhibit A – Page BF-3.1 Addendum 2" through "Exhibit A – Page BF – 3.37 Addendum 2".
  - a. Revise Bid Item 16 RESTRAINED JOINTS / PIPE RESTRAINT 36" Pipe (Pay Item 2.02).
  - b. Revise Bid Item 44 CONCRETE MANHOLE ASSEMBLY Blow-off and Valves (4' Diameter) (Pay Item 2.07).
  - c. Add Bid Item 99 CONNECTION TO CCMWA 16" WATER METER Sta 26+07 (Pay Item 2.12)
  - d. Add Bid Item 100 PAVEMENT MARKINGS (Pay Item 2.71)
3. Replace SECTION 01 22 00 MEASUREMENT AND PAYMENT with SECTION 01 22 00 MEASUREMENT AND PAYMENT marked as Addendum 2.
  - a. Revises Payment Item 2.8 POLYETHYLENE ENCASEMENT to single wrap encasement.
  - b. Adds Payment Item 2.71 PAVEMENT MARKINGS

Plastic Pavement Markings (all types) is measured by the square yard.

Payment for applying plastic pavement markings will be made at the unit price bid per square yard. The unit price bid shall be full compensation for all tools, labor, equipment, materials, traffic control, protection of pavement markings against traffic and weather and any incidentals necessary for the installation of the pavement markings as required. The unit bid shall be for all pavement markings of any size and color required.

4. Replace SECTION 01 35 13 SPECIAL PROJECT PROCEDURES with SECTION 01 35 13 SPECIAL PROJECT PROCEDURES marked as Addendum 2.
  - a. Revises Paragraph 1.3 WORK HOURS AND RESTRICTIONSNT adding the following verbiage.

Night work involving lane closures outside the hours above is permitted. Work that does not involve lane closures is permitted without restriction.

5. Replace SECTION 32 12 16 ASPHALT CONCRETE PAVING with SECTION 32 12 16 ASPHALT CONCRETE PAVING marked as Addendum 2.
  - a. Adds Paragraph 2.10 PLASTIC PAVEMENT MARKINGS:  
Section 659, GDOT Standard Specifications, latest edition.
  
6. Replace SECTION 33 05 16.13 PRECAST ONCRETE UTILITY STRUCTURES with SECTION 33 05 16.13 PRECAST ONCRETE UTILITY STRUCTURES marked as Addendum 2.
  - b. Adds Paragraph 2.3 PAINTING:  
  
Paint the exterior surfaces of all precast concrete structures for subgrade service in accordance with SECTION 09 06 91 SUBGRADE SERVICE CONCRETE COATING.
  
7. Replace Drawing 1P-1 with Drawing 1P-1 marked as Addendum 2.
  - a. Revises 36" fittings as FR joints. Fittings will be proprietary restrained joints.
  
8. Replace Drawing 1P-2 with Drawing 1P-2 marked as Addendum 2.
  - a. Adds pipe restraint at Blow Off location.
  
9. Replace Drawing 1P-7 with Drawing 1P-7 marked as Addendum 2.
  - a. Revises notes to clarify Access Manhole is 4-feet in diameter.
  
10. Replace Drawing 1P-13 with Drawing 1P-13 marked as Addendum 2.
  - a. Revises 36" fittings as FR joints. Fittings will be proprietary restrained joints.
  - b. Adds 54" pipe restraint.
  
11. Replace Drawing 1P-14 with Drawing 1P-14 marked as Addendum 2.
  - a. Revises notes to clarify location of meters to be remove (CCMWA Bid Item 55).
  
12. Replace Drawing 1P-17 with Drawing 1P-17 marked as Addendum 2.
  - a. Revises 42" 11.25 degree fittings as FR joints. Fittings will be proprietary restrained joints.
  
13. Replace Drawing 1P-18 with Drawing 1P-18 marked as Addendum 2.
  - a. Revises 42"x12" Tee as FR joints. Fittings will be proprietary restrained joints.
  
14. Replace Drawing 1P-20 with Drawing 1P-20 marked as Addendum 2.
  - a. Revises 42" 45 degree fittings as FR joints. Fittings will be proprietary restrained joints.
  
15. Replace Drawing D-400 with Drawing D-400 marked as Addendum 2.
  - a. Revises Detail 405 with notation indicating 4'-0" I.D. manhole.

**CLARIFICATONS:**

1. Regards Bid Item 48 STEEL CASING (48" Diameter, .375" W.T.) Jack and Bore Sta. @ 123+65/124+50 (Pay Item 2.10), it is anticipated that casing will be installed from outside the right of way. It is anticipated that casing will require modification so that water main can be installed as shown on drawings. Abandoned casing will be grouted. Payment for casing will be made for casing installed per Pay Item 2.10. No other payment will be made. The Bidder should include construction costs in the bid unit price.

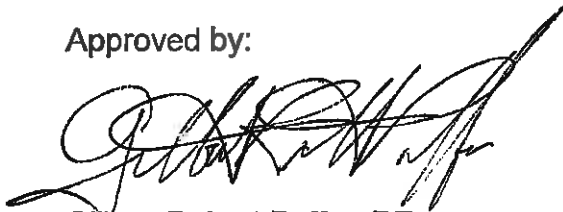
2. **Regards SECTION 02601BLW WATER MAIN CONSTRUCTION, Paragraph 3.11 BACKFILLING and Detail 104, Work shall be performed for BLW water main in accordance to Detail 104 with 12" GAB under pavement. Payment for such work for BLW water main is made under BLW Bid "GRADED AGGREGATE BASE (Pay Item 2.22)" Addendum 1.**
3. **Work involving storm drains is anticipated to be paid for under CCMWA Bid Items 74 – 77, REMOVE & REPLACE CULVERT PIPE (30" – 15" Concrete Pipe) (Pay Item 2.60) Addendum 1.**
4. **The ALLOWANCE FOR LANDSCAPING would be used to reimburse the Contractor for repair of irrigation systems damaged due to the Work.**
5. **Under the ALLOWANCE FOR GATE VALVE PURCHASE, no field painting of valve is anticipated. If valve damaged by the Contractor, the Contractor would be responsible for the repair.**
6. **Regards SECTION 09 06 91 SUBGRADE SERVICE CONCRETE COATING, it is anticipated that coatings will be factory applied. Coatings will be inspected on site visually for deficiencies.**
7. **Regards SECTION 33 05 16.13 PRECAST ONCRETE UTILITY STRUCTURES, Foley Products Company and Hanson Pipe and Precast are approved equal suppliers.**
8. **Regards use of Barrow Material, if in-place material is deemed unsuitable for backfill by the Engineer, Barrow Material will be authorized for use.**
9. **Regards Details D-104 and D-150, Detail D-104 is for use in the repair of the roadway and Detail D-150 is for use in the repair of the asphalt driveways. Under the project, damage to roadways due to the Work is required to be repaired. Where the Work is done within deceleration/acceleration lanes, repair will be done from the pavement joint common to travel lane and deceleration/acceleration lanes to the edge of pavement. Where the Work is done within travel lane, repair will be done from the pavement joint common to travel lane and next travel lane to the edge of pavement.**
10. **Trench Width per Details 107 through 150 for payment of REMOVE AND REPLACE ASPHALT/CONCRETE DRIVEWAYS AND PARKING LOTS is pipe diameter plus 48". Payment for REMOVE AND REPLACE ASPHALT/CONCRETE DRIVEWAYS AND PARKING LOTS will be made on this basis.**
11. **Grassing area measured for payment will be limited to a strip not to exceed 40 FEET wide measured along the length of the water main. For most of the project, the distance between the edge of pavement and right of way is less than or equal to 40 feet. Where the Work requires disturbance beyond this limit, reimbursement will be made for Grassing. Where areas are disturbed due to Contractor' activities beyond these limits, no reimbursement will be made for Grassing; Grassing will be the Contractor' responsibility.**
12. **The ALLOWANCE FOR TRAFFIC CONTROL will be used to reimburse for the replacement of GDOT traffic signal loops or controls if required by the WORK.**
13. **Regards ROADWAY MAINTENANCE, areas, where traffic would not be normally present, i.e. roadway shoulder and where safety barriers are present to prevent accidental traffic are not required to be patched daily.**
14. **Regards water for testing and disinfection, the Owner will provide such waters.**

15. Regards fittings, 36" through 54" fittings will be proprietary joints manufactured by the pipe supplier. Smaller fittings will be mechanical joint consistent with the requirements of the CCMWA or BLW and may be manufactured by others.
16. 42" MJ sleeves may be used subject to approval by the Engineer.
17. Sand backfill is not anticipated on this project.
18. If subsurface structure or utilities are discovered at locations not shown on drawings, the Work required to install water mains will be reimbursed at bid unit prices.
19. Regards REMOVE & REPLACE CURB AND GUTTER (ALL TYPES & SIZES), the Contractor is required to minimize any damage to existing structures. It is anticipated that that construction equipment widths exceed the width of water main trench and it is anticipated that construction activities will exceed the width of water main trench. If the damage to existing Curb and Gutter is deemed required for the Work, the cost of replacing the Curb and Gutter will be reimbursed at bid unit prices.
20. Regards tunnel settlement monitoring, the edges of pavement and roadway centerline shall be monitored at the beginning of the tunneling and on a monthly basis until tunneling complete. Final measurements shall be taken upon completion of the tunneling. If settlement is detected, monitoring shall be provided as necessary to avoid damage to roadway.
21. Regards tunnel means and methods, the use of a TBM is permitted.
22. Regards BLW water main construction, suitable in situ material may be used as backfill material consistent with the construction details with the exception that minimum cover is 4'.

**ATTACHMENTS:**

1. PreBid Meeting Sign In
2. PreBid Meeting Transcription

Approved by:



**Gilbert Robert Puffer, PE**  
**Atkins**

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

NO.	CCMWA WATER MAIN DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	TOTAL AMOUNT
<b>Cobb County-Marietta Water Authority</b>					
1.	WATER MAINS 54" DIP, Pressure Class 350 Within Tunnel (Pay Item 2.01)	105	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
2.	WATER MAINS 54" DIP, Pressure Class 350 (Pay Item 2.01)	490	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
3.	WATER MAINS 48" DIP, Pressure Class 250 (Pay Item 2.01)	50	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
4.	WATER MAINS 42" DIP, Pressure Class 250 (Pay Item 2.01)	3,750	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
5.	WATER MAINS 36" DIP, Pressure Class 250 (Pay Item 2.01)	5,690	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
6.	WATER MAINS 16" DIP, Pressure Class 350 (Pay Item 2.01)	30	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
7.	WATER MAINS 12" DIP, Pressure Class 350 (Pay Item 2.01)	150	LF	Numerals	Numerals
				Unit Price in Words	
8.	WATER MAINS 8" DIP, Pressure Class 350 (Pay Item 2.01)	60	LF	Numerals	Numerals
				Unit Price in Words	
9.	RESTRAINED JOINTS / FITTINGS 54" Pipe (Pay Item 2.02)	13	EA	Numerals	Numerals
				Unit Price in Words	
10.	RESTRAINED JOINTS / PIPE RESTRAINT 54" Pipe (Pay Item 2.02)	30	EA	Numerals	Numerals
				Unit Price in Words	
11.	RESTRAINED JOINTS / FITTINGS 48" Pipe (Pay Item 2.02)	17	EA	Numerals	Numerals
				Unit Price in Words	
12.	RESTRAINED JOINTS / PIPE RESTRAINT 48" Pipe (Pay Item 2.02)	10	EA	Numerals	Numerals
				Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

NO.	CCMWA WATER MAIN DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	TOTAL AMOUNT
<b>Cobb County-Marietta Water Authority</b>					
13.	RESTRAINED JOINTS / FITTINGS 42" Pipe (Pay Item 2.02)	2	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
14.	RESTRAINED JOINTS / PIPE RESTRAINT 42" Pipe (Pay Item 2.02)	90	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
15.	RESTRAINED JOINTS / FITTINGS 36" Pipe (Pay Item 2.02)	21	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
16.	RESTRAINED JOINTS / PIPE RESTRAINT 36" Pipe (Pay Item 2.02)	50	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
17.	RESTRAINED JOINTS / FITTINGS 16" Pipe (Pay Item 2.02)	5	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
18.	RESTRAINED JOINTS / VALVES 16" Pipe (Pay Item 2.02)	2	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
19.	CCMWA WATER MAIN RESTRAINED JOINTS / PIPE RESTRAINT 16" Pipe (Pay Item 2.02)	2	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
20.	RESTRAINED JOINTS / FITTINGS 12" Pipe (Pay Item 2.02)	13	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
21.	RESTRAINED JOINTS / VALVES 12" Pipe (Pay Item 2.02)	6	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
22.	RESTRAINED JOINTS / PIPE RESTRAINT 12" Pipe (Pay Item 2.02)	9	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
23.	RESTRAINED JOINTS / FITTINGS 8" Pipe (Pay Item 2.02)	13	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
24.	RESTRAINED JOINTS / VALVES 8" Pipe (Pay Item 2.02)	2	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	



Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
25.	RESTRAINED JOINTS / PIPE RESTRAINT 8" Pipe (Pay Item 2.02)	7	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
26.	DUCTILE IRON FITTINGS (Pay Item 2.03)	66,990	LB	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
27.	VALVES 16" Gate Valve, MJ x MJ Pay Item 2.04)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
28.	VALVES 12" Gate Valve, MJ x MJ (Pay Item 2.04)	3	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
29.	VALVES 8" Gate, MJ x MJ (Pay Item 2.04)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
30.	PIPE OUTLETS 42"x 12" Flex Ring Jt. Blow-off Tangential Welded-on Outlet (Pay Item 2.05)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

NO.	CCMWA WATER MAIN DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	TOTAL AMOUNT
<b>Cobb County-Marietta Water Authority</b>					
31.	PIPE OUTLETS 36"x 12" Flex Ring Jt. Blow-off Tangential Welded-on Outlet (Pay Item 2.05)	2	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
32.	PIPE OUTLETS 54"x 24" FLG Welded-on Outlet (Pay Item 2.05)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
33.	PIPE OUTLETS 36"x 24" FLG Welded-on Outlet (Pay Item 2.05)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
34.	PIPE OUTLETS 24" Blind Flange with 8" FLG Welded-on Outlet (Pay Item 2.05)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
35.	PIPE OUTLETS 24" Blind Flange with 6" FLG Welded-on Outlet (Pay Item 2.05)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
36.	AIR & VACUUM VALVE 6" FLG Combination AVV with 8" Gate Valve (Pay Item 2.06)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
37.	AIR & VACUUM VALVE 4" FLG Combination AVV with 6" Gate Valve (Pay Item 2.06)	1	EA	Numerals	Numerals
				Unit Price in Words	
38.	CONCRETE MANHOLE ASSEMBLY Inline Valves (10' Diameter) (Pay Item 2.07)	3	EA	Numerals	Numerals
				Unit Price in Words	
39.	CONCRETE MANHOLE ASSEMBLY, Extra Payment for sections exceeding Ten VF (10' Diameter) (Pay Item 2.07)	40	VF	Numerals	Numerals
				Unit Price in Words	
40.	CONCRETE MANHOLE ASSEMBLY Inline Valves (8' Diameter) (Pay Item 2.07)	1	EA	Numerals	Numerals
				Unit Price in Words	
41.	CONCRETE MANHOLE ASSEMBLY, Extra Payment for sections exceeding Ten VF (8' Diameter) (Pay Item 2.07)	10	VF	Numerals	Numerals
				Unit Price in Words	
42.	CONCRETE MANHOLE ASSEMBLY A/V, Inline Valves (6' Diameter) (Pay Item 2.07)	1	EA	Numerals	Numerals
				Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
43.	CCMWA WATER MAIN CONCRETE MANHOLE ASSEMBLY, Extra Payment for sections exceeding Ten VF (6' Diameter) (Pay Item 2.07)	10	VF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
44.	CONCRETE MANHOLE ASSEMBLY Blow-off and Valves (4' Diameter) (Pay Item 2.07)	5	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
45.	CONCRETE MANHOLE ASSEMBLY Extra Payment for sections exceeding Ten VF (4' Diameter) (Pay Item 2.07)	35	VF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
46.	SAMPLE TEST STATION (Pay Item 2.9)	4	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
47.	STEEL CASING (48" Diameter, .375" W.T.) Jack and Bore Sta. @ 0+14/1+24 (Pay Item 2.10)	110	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
48.	STEEL CASING (48" Diameter, .375" W.T.) Jack and Bore Sta. @ 123+65/124+50 (Pay Item 2.10)	85	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
49.	ADDITIONAL COMPENSATION FOR ROCK ENCOUNTERED IN BORE 48" (Pay Item 2.10)	20	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
50.	CASING SPACERS (48" x 36") (Pay item 2.11)	20	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
51.	CONNECTION TO CCMWA 36" WATER MAIN Franklin Drive Sta 0+04 (Pay Item 2.12)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
52.	CONNECTION TO CCMWA 42" WATER MAIN Sta 51+72 (Pay Item 2.12)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
53.	CONNECTION TO CCMWA 42" WATER MAIN Sta 88+30 (Pay Item 2.12)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
54.	CONNECTION TO CCMWA 36" WATER MAIN Herodian Way Sta 127+27 (Pay Item 2.12)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

NO.	CCMWA WATER MAIN DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	TOTAL AMOUNT
<b>Cobb County-Marietta Water Authority</b>					
55.	METER VAULT REMOVE & DISPOSE (Pay Item 2.14)	2	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
56.	INSTALLATION OF LOCATOR BALLS (Pay item 2.15)	290	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
57.	SUBGRADE STABILIZER STONE (Pay Item 2.17)	16,980	TN	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
58.	SOLID ROCK EXCAVATION IN TRENCH (Pay Item 2.18)	2,820	CY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
59.	MISCELLANEOUS CONCRETE (Pay Item 2.19)	1,050	CY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
60.	GRADED AGGREGATE BASE (Pay Item 2.22)	10,120	TN	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
61.	BORROW MATERIAL (Pay Item 2.23)	2,430	CY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
62.	MILLING EXISTING PAVEMENT 1.5" DEPTH (Pay item 2.25)	13,290	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
63.	PAVEMENT OVERLAY 1.5" DEPTH (12.5 mm SUPERPAVE) (Pay item 2.26)	13,290	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
64.	PAVEMENT TRENCH BASE 6" BASE COURSE (25 mm) (Pay item 2.27)	8,860	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
65.	PAVEMENT TRENCH BASE 5" BINDER (19mm) (Pay item 2.27)	8,860	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
66.	REMOVE & REPLACE ASPHALT DRIVEWAYS AND PARKING LOTS (Pay Item 2.28)	4,240	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
67.	REMOVE & REPLACE CONCRETE SIDEWALK (Pay Item 2.31)	3,270	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
68.	REMOVE & REPLACE CURB AND GUTTER (Concrete) (Pay Item 2.32)	9,870	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
69.	REMOVE AND REPLACE FENCE (Chain Link) (Pay Item 2.33)	110	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
70.	TRAFFIC STRIPE PAINT (Pay Item 2.34)	10	LM	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
71.	TRAFFIC STRIPE THERMOPLASTIC (Pay Item 2.34)	10	LM	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
72.	PERMANENT SEWER SERVICE (6" DIP) (Pay Item 2.56)	30	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	



Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
73.	GROUT EXISTING WATER MAIN (20") (Pay Item 2.56)	5,460	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
74.	REMOVE & REPLACE CULVERT PIPE (30" Concrete Pipe) (Pay Item 2.60)	20	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
75.	REMOVE & REPLACE CULVERT PIPE (24" Concrete Pipe) (Pay Item 2.60)	90	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
76.	REMOVE & REPLACE CULVERT PIPE (18" Concrete Pipe) (Pay Item 2.60)	70	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
77.	REMOVE & REPLACE CULVERT PIPE (15" Concrete Pipe) (Pay Item 2.60)	30	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
78.	CONSTRUCT BLOWOFF STRUCTURE (Pay Item 2.61)	3	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
79.	VIDEO DOCUMENTATION (Pay Item 2.62)	1	LS	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
80.	TAPPING SLEEVE AND VALVE (8") @ 100+17 (Pay Item 2.64)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
81.	BONDED JOINT (Pay Item 2.65)	510	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
82.	CATHODIC TEST STATION (Pay Item 2.66)	6	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
83.	TUNNEL AND TUNNEL LINER (84") (Pay Item 2.68)	105	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
84.	STOPAQ COATING 36" (Pay Item 2.73)	620	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
85.	LOW DENSITY CELLULAR CONCRETE 84" Tunnel/54" WM (Pay Item 2.75)	105	LF	_____	_____
				Numerals	Numerals
				_____	
				Unit Price in Words	
86.	TEMPORARY SILT FENCE (Pay Item 2.35)	10,440	LF	_____	_____
				Numerals	Numerals
				_____	
				Unit Price in Words	
87.	ROCK CHECK DAM (Pay Item 2.37)	20	EA	_____	_____
				Numerals	Numerals
				_____	
				Unit Price in Words	
88.	RIP-RAP (Pay Item 2.38)	490	SY	_____	_____
				Numerals	Numerals
				_____	
				Unit Price in Words	
89.	CONSTRUCTION EXIT (Pay Item 2.39)	10	EA	_____	_____
				Numerals	Numerals
				_____	
				Unit Price in Words	
90.	STRAW MULCH STABILIZATION (Ds1) (Pay Item 2.40)	13,710	SY	_____	_____
				Numerals	Numerals
				_____	
				Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
91.	CCMWA WATER MAIN GRASSING Temporary Grassing (Ds2) (Pay Item 2.41)	13,710	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
92.	GRASSING Permanent Grassing (Ds3) (Pay Item 2.41)	13,710	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
93.	SODDING (Ds4) (Pay Item 2.70)	1,380	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
94.	INLET SEDIMENT TRAP (Pay Item 2.43)	30	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
95.	STORM DRAIN OUTLET PROTECTION (Pay Item 2.44)	2	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
96.	TREE SAVE FENCE (Pay Item 2.45)	10,440	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
97.	EROSION MAT (Pay Item 2.42)	2,570	SY	Numerals	Numerals
				Unit Price in Words	
98.	NPDES PERMIT COMPLIANCE (Pay Item 2.47)	1	LS	Numerals	Numerals
				Unit Price in Words	
99.	CONNECTION TO CCMWA 16" WATER METER Sta 26+07 (Pay Item 2.12)	1	EA	Numerals	Numerals
				Unit Price in Words	
100.	PAVEMENT MARKINGS (Pay Item 2.71)	2,000	SY	Numerals	Numerals
				Unit Price in Words	
<b>CCMWA WATER MAIN BASE BID SUBTOTAL (Item 1 through 100)</b>				\$	Numerals
				Subtotal in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
<b>WATER MAIN ALLOWANCES</b>					
A1	Allowance for Force Account Work	1	LS	\$ <u>1,000,000.00</u> Numerals	\$ <u>1,000,000.00</u> Numerals
				<u>One Million and no/100</u> Unit Price in Words	
A2	Allowance for Testing	1	LS	\$ <u>250,000.00</u> Numerals	\$ <u>250,000.00</u> Numerals
				<u>Two Hundred Twenty-five Thousand and no/100</u> Unit Price in Words	
A3	Allowance for Utility Relocation By Others	1	LS	\$ <u>200,000.00</u> Numerals	\$ <u>200,000.00</u> Numerals
				<u>Two Hundred Thousand and no/100</u> Unit Price in Words	
A4	Allowance for Landscaping	1	LS	\$ <u>100,000.00</u> Numerals	\$ <u>100,000.00</u> Numerals
				<u>One Hundred Thousand and no/100</u> Unit Price in Words	
A5	Allowance for Traffic Control	1	LS	\$ <u>1,000,000.00</u> Numerals	\$ <u>1,000,000.00</u> Numerals
				<u>One Million and no/100</u> Unit Price in Words	
A6	Allowance for Corrosion Control	1	LS	\$ <u>25,000.00</u> Numerals	\$ <u>25,000.00</u> Numerals
				<u>Twenty-five Thousand and no/100</u> Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Cobb County-Marietta Water Authority</b>					
<b>WATER MAIN ALLOWANCES</b>					
A7	Allowance for Water Main Disinfection	1	LS	\$ <u>50,000.00</u> Numerals	\$ <u>50,000.00</u> Numerals
				<u>Fifty Thousand and no/100</u> Unit Price in Words	
A8	Allowance for Temporary Bus Stop Removal	1	LS	\$ <u>50,000.00</u> Numerals	\$ <u>50,000.00</u> Numerals
				<u>Fifty Thousand and no/100</u> Unit Price in Words	
A9	Allowance for Gate Valves	1	LS	\$ <u>400,000.00</u> Numerals	\$ <u>400,000.00</u> Numerals
				<u>Two Hundred Thousand and no/100</u> Unit Price in Words	
				<u>\$ 3,075,000.00</u> Numerals	
<b>(Items A1 through A9)</b>				<u>Three Million Seventy-five Thousand and no/100</u> Subtotal in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Marietta Board of Lights and Water</b>					
<b>WATER MAIN BASE BID</b>					
1.	WATER MAINS 16" DIP, Pressure Class 350 (Pay Item 2.01)	5,250	LF	_____	_____
				Numerals	Numerals
				Unit Price in Words	
2.	WATER MAINS 12" DIP, Pressure Class 350 (Pay Item 2.01)	70	LF	_____	_____
				Numerals	Numerals
				Unit Price in Words	
3.	WATER MAINS 8" DIP, Pressure Class 350 (Pay Item 2.01)	80	LF	_____	_____
				Numerals	Numerals
				Unit Price in Words	
4.	WATER MAINS 6" DIP, Pressure Class 350 (Pay Item 2.01)	110	LF	_____	_____
				Numerals	Numerals
				Unit Price in Words	
5.	RESTRAINED JOINTS / FITTINGS 16" Pipe (Pay Item 2.02)	71	EA	_____	_____
				Numerals	Numerals
				Unit Price in Words	
6.	RESTRAINED JOINTS / VALVES 16" Pipe (Pay Item 2.02)	24	EA	_____	_____
				Numerals	Numerals
				Unit Price in Words	



Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Marietta Board of Lights and Water</b>					
<b>WATER MAIN BASE BID</b>					
7.	RESTRAINED JOINTS / PIPE RESTRAINT 16" Pipe (Pay Item 2.02)	146	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
8.	RESTRAINED JOINTS / FITTINGS 12" Pipe (Pay Item 2.02)	11	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
9.	RESTRAINED JOINTS / VALVES 12" Pipe (Pay Item 2.02)	2	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
10.	RESTRAINED JOINTS / PIPE RESTRAINT 12" Pipe (Pay Item 2.02)	6	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
11.	RESTRAINED JOINTS / FITTINGS 8" Pipe (Pay Item 2.02)	15	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Marietta Board of Lights and Water</b>					
<b>WATER MAIN BASE BID</b>					
12.	RESTRAINED JOINTS / VALVES 8" Pipe (Pay Item 2.02)	4	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
13.	RESTRAINED JOINTS / PIPE RESTRAINT 8" Pipe (Pay Item 2.02)	3	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
14.	RESTRAINED JOINTS / FITTINGS 6" Pipe (Pay Item 2.02)	30	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
15.	RESTRAINED JOINTS / VALVES 6" Pipe (Pay Item 2.02)	20	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
16.	RESTRAINED JOINTS / PIPE RESTRAINT 6" Pipe (Pay Item 2.02)	10	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
17.	DUCTILE IRON FITTINGS (Pay Item 2.03)	15,740	LB	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Marietta Board of Lights and Water</b>					
<b>WATER MAIN BASE BID</b>					
18.	VALVES 16" Gate Valve, MJ x MJ (Pay Item 2.04)	12	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
19.	VALVES 12" Gate Valve, MJ x MJ (Pay Item 2.04)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
20.	VALVES 8" Gate, MJ x MJ (Pay Item 2.04)	3	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
21.	VALVES 6" Gate Valve, MJ x MJ (Pay Item 2.04)	9	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
22.	POLYETHYLENE ENCASEMENT 16" Encasement (Pay Item 2.08)	5,250	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Marietta Board of Lights and Water</b>					
<b>WATER MAIN BASE BID</b>					
23.	POLYETHYLENE ENCASEMENT 12" Encasement (Pay Item 2.08)	70	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
24.	POLYETHYLENE ENCASEMENT 8" Encasement (Pay Item 2.08)	80	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
25.	POLYETHYLENE ENCASEMENT 6" Encasement (Pay Item 2.08)	110	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
26.	STEEL CASING (24" Diameter,0.375" W.T.) Jack and Bore@Franklin Rd (Pay Item 2.10)	87	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
27.	ADD'L COMPENSATION FOR ROCK IN BORE (Pay Item 2.10) @Franklin Rd	87	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Marietta Board of Lights and Water</b>					
<b>WATER MAIN BASE BID</b>					
28.	STEEL CASING (24" Diameter, 0.375" W.T.) Jack and Bore @ Airport Industrial Dr (Pay Item 2.10)	95	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
29.	ADD'L COMPENSATION FOR ROCK IN BORE (Pay Item 2.10) @ Airport Industrial Dr	95	LF	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
30.	CASING SPACERS (24" x 16") (Pay item 2.11)	19	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
31.	CONNECTION TO MBLW 12" WATER MAIN HWY 41 Sta 0+25 (Pay Item 2.12)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
32.	CONNECTION TO MBLW 12" WATER MAIN HWY 41 Sta 46+00 (Pay Item 2.12)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
33.	CONNECTION TO MBLW 8" WATER MAIN Hwy 41 Sta 24+50 (Pay Item 2.12)	2	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Marietta Board of Lights and Water</b>					
<b>WATER MAIN BASE BID</b>					
34.	CONNECTION TO MBLW 8" WATER MAIN Hwy 41 Sta 50+00 (Pay Item 2.12)	1	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
35.	INSTALLATION OF LOCATOR BALLS (Pay item 2.15)	60	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
36.	SUBGRADE STABILIZER STONE (Pay Item 2.17)	4,670	TN	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
37.	SOLID ROCK EXCAVATION IN TRENCH (Pay Item 2.18)	300	CY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
38.	MISCELLANEOUS CONCRETE (Pay Item 2.19)	160	CY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Marietta Board of Lights and Water</b>					
<b>WATER MAIN BASE BID</b>					
39.	GRADED AGGREGATE BASE (Pay Item 2.22)	741	TN	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
40.	MILLING EXISTING PAVEMENT 1.5" DEPTH (Pay item 2.25)	240	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
41.	PAVEMENT OVERLAY 1.5" DEPTH (12.5 mm SUPERPAVE) (Pay item 2.26)	240	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
42.	PAVEMENT TRENCH BASE 6" BASE COURSE (25 mm) (Pay item 2.27)	240	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
43.	PAVEMENT TRENCH BASE 5" BINDER (19mm) (Pay item 2.27)	240	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
44.	REMOVE & REPLACE ASPHALT DRIVEWAYS AND PARKING LOTS (Pay Item 2.28)	1,640	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Marietta Board of Lights and Water</b>					
<b>WATER MAIN BASE BID</b>					
45.	REMOVE & REPLACE CONCRETE SIDEWALK (Pay Item 2.31)	100	SY	Numerals	Numerals
				Unit Price in Words	
46.	REMOVE & REPLACE CURB AND GUTTER (Concrete) (Pay Item 2.32)	530	LF	Numerals	Numerals
				Unit Price in Words	
47.	TRAFFIC STRIPE - THERMOPLASTIC (Pay item 2.34)	1	LM	Numerals	Numerals
				Unit Price in Words	
48.	CUT AND PLUG EXISTING WATER MAIN (Pay Item 2.46)	6	EA	Numerals	Numerals
				Unit Price in Words	
49.	REMOVAL OF EXISTING FIRE HYDRANTS (Pay Item 2.48)	4	EA	Numerals	Numerals
				Unit Price in Words	



Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Marietta Board of Lights and Water</b>					
<b>WATER MAIN BASE BID</b>					
50.	INSTALLATION OF NEW FIRE HYDRANT (Pay Item 2.49)	9	EA	Numerals	Numerals
				Unit Price in Words	
51.	FIRE HYDRANT EXTENSIONS (Pay Item 2.49)	18	VF	Numerals	Numerals
				Unit Price in Words	
52.	3/4" -1" COPPER SERVICE (Pay Item 2.50)	210	LF	Numerals	Numerals
				Unit Price in Words	
53.	WATER SERVICE INSTALLATION (3/4 inch) (Pay Item 2.51)	8	EA	Numerals	Numerals
				Unit Price in Words	
54.	WATER SERVICE INSTALLATION (1 inch) (Pay Item 2.51)	3	EA	Numerals	Numerals
				Unit Price in Words	
55.	VIDEO DOCUMENTATION (Pay Item 2.62)	1	LS	Numerals	Numerals
				Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Marietta Board of Lights and Water</b>					
<b>WATER MAIN BASE BID</b>					
56.	VALVE MARKERS (Pay Item 2.72)	16	EA	_____	_____
				Numerals	Numerals
				_____	
				Unit Price in Words	
57.	TEMPORARY SILT FENCE (Pay Item 2.35)	10,000	LF	_____	_____
				Numerals	Numerals
				_____	
				Unit Price in Words	
58.	ROCK CHECK DAM (Pay Item 2.37)	2	EA	_____	_____
				Numerals	Numerals
				_____	
				Unit Price in Words	
59.	RIP-RAP (Pay Item 2.38)	10	SY	_____	_____
				Numerals	Numerals
				_____	
				Unit Price in Words	
60.	CONSTRUCTION EXIT (Pay Item 2.39)	2	EA	_____	_____
				Numerals	Numerals
				_____	
				Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Marietta Board of Lights and Water</b>					
<b>WATER MAIN BASE BID</b>					
61.	STRAW MULCH STABILIZATION (Ds1) (Pay Item 2.40)	11,670	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
62.	GRASSING Temporary Grassing (Ds2) (Pay Item 2.41)	11,670	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
63.	GRASSING Permanent Grassing (Ds3) (Pay Item 2.41)	11,670	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
64.	SODDING (Ds4) (Pay Item 2.70)	1,170	SY	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
65.	INLET SEDIMENT TRAP (Pay Item 2.43)	5	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	
66.	STORM DRAIN OUTLET PROTECTION (Pay Item 2.44)	5	EA	_____ Numerals	_____ Numerals
				_____ Unit Price in Words	



Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>CCMWA WATER MAIN DESCRIPTION</u>	<u>EST. QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Marietta Board of Lights and Water</b>					
<b>WATER MAIN ALLOWANCES</b>					
A1	Allowance for Force Account Work	1	LS	\$ <u>100,000.00</u> Numerals	\$ <u>100,000.00</u> Numerals
				<u>One Hundred Thousand and no/100</u> Unit Price in Words	
A2	Allowance for Testing	1	LS	\$ <u>50,000.00</u> Numerals	\$ <u>50,000.00</u> Numerals
				<u>Fifty Thousand and no/100</u> Unit Price in Words	
A3	Allowance for Utility Relocation By Others	1	LS	\$ <u>50,000.00</u> Numerals	\$ <u>50,000.00</u> Numerals
				<u>Fifty Thousand and no/100</u> Unit Price in Words	
A4	Allowance for Landscaping	1	LS	\$ <u>25,000.00</u> Numerals	\$ <u>25,000.00</u> Numerals
				<u>Twenty-five Thousand and no/100</u> Unit Price in Words	
A5	Allowance for Traffic Control	1	LS	\$ <u>200,000.00</u> Numerals	\$ <u>200,000.00</u> Numerals
				<u>One Hundred Thousand and no/100</u> Unit Price in Words	
A6	Allowance for Water Main Disinfection	1	LS	\$ <u>10,000.00</u> Numerals	\$ <u>10,000.00</u> Numerals
				<u>Ten Thousand and no/100</u> Unit Price in Words	

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

<u>NO.</u>	<u>DESCRIPTION</u>	<u>EST.</u> <u>QTY.</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>TOTAL AMOUNT</u>
<b>Marietta Board of Lights and Water</b>					
<b>WATER MAIN ALLOWANCES</b>					

**ALLOWANCES SUBTOTAL**  
**(Items A1 through A6)**

\$ 435,000.00  
Numerals

Four Hundred Thirty Five Thousand and no/100  
Subtotal in Words

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

**1 CCMWA WATER MAIN** \$ \_\_\_\_\_  
**BASE BID SUBTOTAL** Numerals

Subtotal in Words

**2 CCMWA WATER MAIN** \$ 3,075,000.00  
**ALLOWANCE SUBTOTAL** Numerals

Three Million Seventy-five Thousand and no/100  
Subtotal in Words

---

**3 CCMWA TOTAL (1 plus 2)** \$ \_\_\_\_\_  
Numerals

Total in Words

---

**4 MBLW WATER MAIN** \$ \_\_\_\_\_  
**BASE BID SUBTOTAL** Numerals

Subtotal in Words

**5 MBLW WATER MAIN** \$ 435,000.00  
**ALLOWANCES SUBTOTAL** Numerals

Four Hundred Thirty Five Thousand and no/100  
Subtotal in Words

---

**6 MBLW TOTAL (4 plus 5)** \$ \_\_\_\_\_  
Numerals

Total in Words

Cobb County-Marietta Water Authority  
Hwy 41 - Phase 4 Water Main (From Franklin Drive to Herodian Way)  
CCMWA Project No. 41 IS 2701  
ATKINS Project No. 100032548  
PROPOSAL

---

7 GRAND TOTAL (3 plus 6)

\$ \_\_\_\_\_  
Numerals

---

Total in Words



SECTION 01 22 00  
MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 GENERAL

No quantities shall be measured for payment except items listed in the proposal, unless the Owner has approved "extra" work in accordance with the contract documents and has so advised the Contractor before the work was actually performed.

Any and all other material, labor, etc., furnished and required shall be considered as incidental to the items to be measured and shall be included in the unit price bid for water main.

The unit or lump sum prices bid for the various items shall be full compensation for furnishing all materials, tools, equipment, labor and incidentals necessary and/or required to complete the work as shown on the plans and called for in the specifications.

The quantities to be paid for shall be determined by actual measurement of the amounts placed. The Engineer shall make all measurements and the contractor shall make certain all work has been measured before concealing; otherwise, he may be required to uncover or make accessible any work so concealed in order to receive payment for such items.

PART 2 - PAY ITEMS

2.1 WATER MAINS

Measurement of the pipe in place will be along the main axis of the pipeline. No deduction in the length of pipe will be made for space occupied by valves, specials, and fittings.

The unit price bid for pipe shall include all of the materials, labor and incidentals necessary for the completion of the pipeline as called for under SECTION 33 11 13, WATER MAIN CONSTRUCTION and/or SECTION 02601 BLW WATER MAIN CONSTRUCTION, except as specifically called for in other pay items herein.

The unit price bid for water line shall include and cover all clearing and grubbing on the entire pipeline right-of-way and the disposal of all debris in dressing and finishing after the line is laid. There will be no additional pay where extra depth is incurred due to valve locations, tie-ins, restrained joint requirements, conflicts with other utilities, or other field conditions.

The Contractor shall be responsible for the reuse of acceptable in-place material including the drying or wetting to obtain suitable moisture content for compaction during backfill operations under Pay item 2.1. All excess excavated material shall be disposed of without

extra cost to the Owner.

Pipe will be paid for at the unit price bid for various sizes and types.

## 2.2 RESTRAINED JOINTS / RETAINER GLANDS

Special restrained joints will be counted in place and paid for at the unit price bid per each type and size listed in bid proposal. A restrained joint shall be defined as the separated or loose portion of materials that are installed separately from pipe, fittings, or valves. Portions of restraint that are permanently attached to pipe, fittings, or valves and/or are an integral part of the system, do not qualify for additional payment. The restraint system shall be counted only once and shall be a complete system for each joint that is to be restrained.

In the case of straight pipe, the payment for each restrained joint will be paid separate from the unit price per foot of pipe. In the case of ductile iron fittings, the payment for restrained joints will be paid separately from the payment for fittings. In the case of valves, the payment for each restrained joint will be paid separate from the unit price bid for each valve.

In the case of Owner furnished restrained joints, this extra payment for each restrained joint will be paid separate from the unit price bid for each valve or fitting. This extra payment shall include all materials, labor and incidentals necessary for a complete installation necessary to install the restrained joint and make ready for operation of the water main.

## 2.3 DUCTILE IRON FITTINGS

Measurement of all diameter fittings shall be measured in place and payment made for approved fitting installation per pound of all diameter fittings installed. The unit price bid for fittings shall include all materials, labor and incidentals necessary for the complete installation of each fitting as called for in these specifications. Weight of iron fittings for payment purposes shall be determined by the AWWA C110 weight or AWWA C153 weight for the lightest weight fitting as appropriate for service intended not including joint accessories.

Fittings that will be counted for payment under this item will include: (a) main-line fittings that are labeled on the plans, (b) plugs that are shown on stub-outs and temporary ends for future connections, (c) fittings on blow-off piping. Fittings for special cross connections and existing water main tie-ins shall be measured and paid for under a separate bid item. Fittings installed for the Contractor's convenience or negligence will not be counted for payment.

Additional fittings called for in the bid proposal and not shown on the drawings shall be installed as directed by the Engineer or Owner. If the additional fittings are not installed, they shall be delivered to the Owner to be placed in the Owner's inventory.

All straight pipes of any length shall be defined as pipe rather than fittings, unless it is listed on the bid proposal as a special pay item.

## 2.4 VALVES

Measurement of each valve shall be measured in place and payment made for approved valve installation per each valve installed. The unit price bid for valves shall include all materials, labor and incidentals necessary for the complete installation of each valve as called for in these specifications.

Access manholes for valves shall be paid for under a separate bid item. Other valves and valve boxes will be paid for at the unit price bid for valves per each, for each size and type of valve listed in the proposal. Unit price shall include all excavation, furnishing and installing of the valves, valve boxes, and valve extensions as required, concrete collar around the valve boxes, operator and all necessary incidentals to complete the work.

## 2.5 PIPE OUTLETS

Measurement of each welded outlet shall be measured in place and payment made for approved welded outlet installation per each welded outlet installed. The unit price bid for welded outlets shall include all materials, labor and incidentals necessary for the complete installation of each welded outlet as called for in these specifications.

Unit price for outlets shall include additional cost for parent pipe wall thickness increase necessary for welding and shall be based on a twenty-foot length of parent pipe. No extra payment for increased parent pipe wall thickness under this item or other bid items shall be paid.

Blind Flange with Flanged outlets or welded-on bosses, which are not included for payment under other bid items, will be counted in place and paid for at the unit price bid for each type and size listed in the proposal.

Provide all blind flanges require flanged outlets of the size shown on the drawings. For manway applications, provide blind flanges as required.

## 2.6 AIR & VACUUM VALVE

Measurement of each air and vacuum relief valve shall be measured in place and payment made for approved air and vacuum relief valve installation per each installed. The unit price bid for air and vacuum relief valves shall include all materials, labor and incidentals necessary for the complete installation of each air and vacuum relief valve and associated gate valve as called for in these specifications.

## 2.7 CONCRETE MANHOLE ASSEMBLY

Measurement of each concrete manhole assembly shall be measured in place and payment made for approved concrete manhole assembly installation per each installed. The unit price bid for concrete manhole assembly shall include all materials, labor and incidentals necessary for the complete installation of each concrete manhole assembly as called for in these specifications.

Unit price for each concrete manhole assembly shall include up to ten vertical feet of complete manhole assembly. A complete manhole assembly at a minimum shall consist of base foundation preparation and materials, a manhole base, riser sections of the diameter called for on the contract drawings, a reducer section, grade rings, manhole ring, and manhole cover. The manhole assembly shall provide a means of egress via embedded ladder rungs or other as shown on the contract drawings. No extra payment for grade ring adjusters for final grade shall be paid.

Unit price for each vertical foot in excess of ten vertical feet shall be measured and paid per vertical foot installed of the manhole riser section installed.

## 2.8 POLYETHYLENE ENCASEMENT

Polyethylene encasement will be measured in place along the length of pipe and paid for at the unit price bid per linear foot for single wrap encasement as listed in the bid proposal. Payment will be for the single wrap encasement of all pipes as required by Specification Section 33 11 13.

## 2.9 SAMPLE TEST STATION

Measurement of sample test station shall be measured in place and payment made for approved test station installations per each inline valve at which test stations are installed. The unit price bid for sample test station shall include all materials, labor and incidentals necessary for the complete installation of each sample test station at the inline valve locations as called for in these specifications and as shown in contract drawings. Payment will include the cost of two saddles, two pipe taps, two corporation cocks, copper tubing Type K in the size shown, copper fittings, two test hydrants as specified, and piping supports.

Each test station is inclusive of all work shown at each inline valve location.

## 2.10 STEEL CASING

Measurement of steel casing shall be measured in place and payment made for approved steel casing installation per lineal foot installed. The unit price bid for steel casing shall include all materials, labor, jacking, boring, and/or open trench installation, sealing the ends of the casing pipe, stabilize the carrier pipe inside the casing against movement and floatation, and incidentals necessary for the complete installation of each steel casing as called for in these specifications.

Additional payment for rock will be made when rock is encountered. Rock for bores is defined as the same as ROCK EXCAVATION in Specification SECTION 33 11 13 - WATER MAIN CONSTRUCTION. For open trench installation of casing, additional payment for rock will be made at the unit bid price for SOLID ROCK EXCAVATION IN TRENCH. For jack and bore installation of casing, additional payment for rock will be made at the unit bid price for ADDITIONAL COMPENSATION FOR ROCK ENCOUNTERED IN BORE. Payment will be made only after the Engineer has been notified and has verified presence of rock and the requirement to use a rock boring head. Extra payment will be made for the removal of rock encountered in the bore. Measurement will be made from the point of the bore where rock is first encountered to the point of the bore where evidence indicates that soil is encountered. The length of the bore affected by rock shall be measured and recorded for basis of payment of additional compensation.

Carrier pipe inside the steel casing shall be paid for separately. Spacers used on the water main inside the casing will also be paid for separately.

#### 2.11 CASING SPACERS IN STEEL CASING

Measurement of each casing spacer shall be measured in place and payment made for approved casing spacer installation per each installed. The unit price bid for casing spacer shall include all materials, labor and incidentals necessary for the complete installation of each casing spacer as called for in these specifications.

Casing spacers used in steel casing will be paid for at the unit per each size as listed in the proposal.

#### 2.12 CONNECTION TO EXISTING WATER MAINS

Payment for this item will be at the unit price bid for each location and size listed in the bid proposal. Payment shall be full compensation for locating, cutting-in and connecting to the existing facilities and removal of existing piping as necessary to complete the connection. Pipe and special fittings used in making the connection will be paid for separately.

#### 2.13 CONNECT BLOW-OFF TO STORM DRAIN FACILITY

Payment for this item will be made at the unit price bid for this work and shall be full payment for extra work required for connecting to the existing storm drainage structure. Piping and fittings will be paid for separately.

#### 2.14 WATER MAINS REMOVE & DISPOSE

Measurement of the water main removed will be along the main axis of the pipeline in place. No deduction in the length of pipe will be made for space occupied by valves, specials, and fittings.

The unit price bid for pipe shall include all of the materials, labor and incidentals necessary for the complete removal and suitable disposal of the pipeline except as specifically called for in other pay items herein.

The unit price bid for water line shall include and cover all excavation, backfilling, and the disposal of all debris, after the water main is removed. There will be no additional pay where extra depth is incurred due to valve locations, tie-ins, restrained joint requirements, conflicts with other utilities, or other field conditions.

Measurement of the meter vaults removed will be for each removed in place.

The unit price bid for meter vault removal shall include all of the materials, labor and incidentals necessary for the complete removal and suitable disposal of the materials within the vault and the vault except as specifically called for in other pay items herein.

The unit price bid for meter vault removal shall include and cover all excavation, backfilling, and the disposal of all debris, after the line is removed. There will be no additional pay where extra depth is incurred due to valve locations, tie-ins, restrained joint requirements, conflicts with other utilities, or other field conditions.

## 2.15 LOCATOR BALL INSTALLATION

The locator ball installation will be paid for at the unit price bid per each installation. The price shall be compensation for all labor, tools, equipment, and materials necessary to complete the installation as shown on the plans. The Contractor is responsible for installation PVC pipe at the time of construction, maintaining pipe during construction, installation of backfill after pipe location has been surveyed, furnishing and installation of locator balls with appropriate information, capping of pipe, and backfilling.

This unit price bid includes the cost of the locator balls to be installed.

## 2.16 FLUSHING AND DISINFECTING OF WATER MAINS

Payment for flushing and disinfecting water mains shall be made under an allowance item. The payment from this allowance shall be full compensation for all tools, labor, equipment, materials, and any incidentals necessary for the flushing and disinfecting of water mains as required.

Pressure testing of the pipeline is the responsibility of the Contractor and the cost of this testing shall be included in the cost of the installation of the pipeline. Cleanliness of pipeline is the responsibility of the Contractor and the cost of cleaning and maintaining the cleanliness of the pipeline shall be included in the cost of the installation of the pipeline.

## 2.17 SUBGRADE STABILIZER STONE

Measurement for payment for subgrade stabilizer stone will be made by the ton.

Weight for payment will be taken from dray tickets for stone actually placed in accordance with the following limitations:

- a. Stone used for stabilizing trench bottom in wet areas will be paid for.
- b. Stone used for type 4 and type 5 bedding conditions will be paid for.
- c. Stone used for constructing temporary driveways will be paid for.
- d. Stone used for constructing temporary travel lane adjacent to existing roadway will be paid for.
- e. Stone used for construction haul roads will not be measured for payment, nor will that which is placed contrary to contract requirements.

## 2.18 SOLID ROCK EXCAVATION IN TRENCH

Rock will be measured in place, and the quantity paid for shall be the length of the excavation, measured along the centerline of the pipe, times the average depth of the excavation, times the width equal to the nominal diameter of the pipe plus four feet.

## 2.19 MISCELLANEOUS CONCRETE

Miscellaneous concrete will be measured in place and paid for at the unit price bid per cubic yard. Reinforcing steel, where required, will be paid for separately as outlined.

## 2.20 STRUCTURAL CONCRETE

The unit price shall include all delivery, placing, and curing costs associated with installing concrete within formwork. The concrete volume will be measured in place and paid for at the unit price bid per cubic yard. Only work directed by the Engineer will be paid for. Concrete structures damaged or replaced due to Contractor error or negligence will not be paid for. No compensation will be allowed for removal of existing concrete.

## 2.21 REINFORCING STEEL

The unit price shall include all costs associated with the furnishing and installing reinforcing steel of the sizes required for a concrete structure. The amount of reinforcing steel will be measured in place and paid for at the unit price bid per pound. Only work directed by the Engineer will be paid for.

## 2.22 GRADED AGGREGATE BASE

Graded aggregate base is measured by the ton, mixed and accepted in place.

Graded aggregate base will be paid for at the contract unit price per ton. This unit price shall be full compensation for materials, the shaping and the compaction of the existing roadbed, loading, hauling, and unloading, crushing and processing, mixing, spreading, watering, compacting and shaping, maintenance, priming, when required, and all

incidentals necessary to complete the work.

## 2.23 BORROW MATERIAL

Borrow material is measured by the cubic yard, compacted to specified soil density, and accepted in place.

Borrow material will be paid for at the contract unit price per cubic price. This unit price shall be full compensation for materials, the shaping and the compaction of the existing roadbed or pipe trench, loading, hauling, and unloading, processing, mixing, spreading, watering, compacting and shaping, maintenance, priming, when required, and all incidentals necessary to complete the work. This unit price includes the geotechnical engineering services and testing necessary to document the suitability of the borrow material as backfill material.

## 2.24 GEOGRID SOIL REINFORCEMENT

Geogrid soil reinforcement, complete and accepted, is measured for payment by the square yard.

Payment for geogrid soil reinforcement will be made at the unit price bid per square yard for work complete in place and accepted. The unit price bid shall be full compensation for all tools, labor, equipment, materials, traffic control, protection of concrete against traffic and weather and any incidentals necessary for the installation of the geogrid soil reinforcement as required.

## 2.25 MILLING EXISTING PAVEMENT

Milling existing pavement is measured by the square yard.

Milling existing pavement will be paid for at the contract unit price per square yard. Payment is full compensation for furnishing labor and equipment, milling, hauling, disposing of milled material, and satisfactorily performing the work.

## 2.26 PAVEMENT OVERLAY

Pavement overlay is measured by the square yard.

Pavement overlay will be paid for at the contract unit price per square yard. The unit price shall include the application of a tack coat prior to pavement overlay and the placement of a surface pavement of the type shown on drawings and to the depth shown on drawings. Payment is full compensation for furnishing labor, material, and equipment, applying tack coat, placing pavement overlay, and satisfactorily performing the work.

## 2.27 PAVEMENT TRENCH BASE



Pavement trench base is measured by the square yard.

Pavement trench base will be paid for at the contract unit price per square yard. The unit price shall include the application of a tack coat prior to pavement trench base and the placement of either base or binder course of the type and to the depth shown on drawings. Payment is full compensation for furnishing labor, material, and equipment, applying tack coat, placing pavement, and satisfactorily performing the work.

## 2.28 REMOVE & REPLACE ASPHALT DRIVEWAYS AND PARKING LOTS

Measurement shall be the length of the pavement replaced, measured along the centerline of the pipe multiplied by the trench width. The unit of measurement shall be the square yard.

Asphalt driveways and parking lots replaced will be measured in place and paid for at the unit price bid per square yard. Asphalt driveway or parking lot surfaces damaged or removed due to contractor error or negligence will not be paid for. The unit price bid shall be full compensation for the asphalt, tack, GAB, and all materials, labor, tools and equipment required to complete the replacement as shown on drawings. Maintenance of the driveway and parking lot during construction until replacement shall be included in unit price. No compensation will be allowed for the removal of existing asphalt driveways and parking lots.

## 2.29 REMOVE & REPLACE CONCRETE DRIVEWAYS AND PARKING LOTS

Measurement shall be the length of the pavement replaced, measured along the centerline of the pipe multiplied by the trench width plus two feet. The unit of measurement shall be the square yard.

Concrete driveways and parking lots replaced will be measured in place and paid for at the unit price bid per square yard. Concrete driveway or parking lot surfaces damaged or removed due to contractor error or negligence will not be paid for. The unit price bid shall be full compensation for the concrete, and all materials, labor, tools and equipment required to complete the replacement as shown on drawings. Maintenance of the driveway and parking lot during construction until replacement shall be included in unit price. No compensation will be allowed for the removal of existing concrete driveways and parking lots.

## 2.30 REMOVE AND REPLACE GRAVEL DRIVEWAY

Gravel driveways will be measured in place and the unit of measurement shall be the square yard.

Gravel driveways will be measured in place and payment will be made at the contract unit price bid per square yard. The unit price will be full compensation for smoothing the driveway bed and leveling a 12" thick layer of graded aggregate base. Maintenance of the

driveway during construction shall be included in unit price.

### 2.31 REMOVE & REPLACE CONCRETE SIDEWALK

Sidewalks removed and replaced shall be measured in place and the unit of measurement shall be the square yard.

Sidewalks removed and replaced shall be measured in place and shall be paid for at the unit price bid per square yard. Concrete sidewalks shall be replaced with a minimum thickness of 4" and of a matching width, unless directed otherwise by the Engineer. The unit price bid shall include the cost of saw cutting the existing sidewalk. Sidewalks shall be constructed in accordance with GDOT standard specifications and details. The work shall include the installation of ramps for handicap accessibility, the installation of detectable warning surfaces, and other work necessary to comply with current GDOT requirements.

### 2.32 REMOVE & REPLACE CURB AND GUTTER (ALL TYPES & SIZES)

Curb or curb and gutter completed in place and accepted is measured in linear feet along the face of the curb.

Each type of curb and curb and gutter remove and replaced shall be paid for at the contract unit price bid per linear foot. Payment is full compensation for removal of existing curb or curb and gutter, furnishing of materials, preparing subgrade or pavement surface, installing, and maintaining curb or curb and gutter installed.

### 2.33 REMOVE AND REPLACE FENCE (All Sizes & Types)

Payment for this item will be at the bid price per linear foot for all sizes and types of fence as listed in the bid proposal. The length shall be measured in place after replacement. Fencing shall be removed only where necessary for carrying out the work or as directed by the Engineer. Where the existing fence materials are unsuitable for replacement, the Contractor shall furnish new materials, the costs of which are to be included in the bid price. Bid price shall include all labor, material, tools and equipment to carry out the work. No payment will be made except when fence is replaced.

### 2.34 TRAFFIC STRIPE

Traffic Stripe (all types) is measured by the linear mile.

Payment for applying traffic stripe will be made at the unit price bid per linear mile. The unit price bid shall be full compensation for all tools, labor, equipment, materials, traffic control, protection of traffic stripe against traffic and weather and any incidentals necessary for the installation of the traffic stripe as required. The unit bid shall be for solid and skip traffic stripe of any size and color required.

### 2.35 TEMPORARY SILT FENCE

Temporary silt fence shall be paid for at the unit price bid per linear foot and will be measured in place. The quantity shall be field measured and only the quantity installed at the engineer's approval will be measured for payment. The unit price bid shall be full compensation for all material, labor, tools and equipment necessary to install, maintain, and remove the temporary silt fence as specified in the contract documents. Silt fence will only be measured for payment once.

### 2.36 HAY BALE BARRIER

Hay bale barriers will be measured in place and paid for the unit price bid per linear foot. Payment shall be full compensation for all labor tools, equipment, materials and any incidentals necessary to install, maintain and remove hay bale barriers. No payment will be made for hay bale barriers placed without the approval of the engineer.

### 2.37 ROCK CHECK DAM

Rock check dams will be counted in place and paid for at the unit price bid for each. Payment shall be full compensation for all labor, tools, equipment, materials and any incidentals necessary to install, maintain and remove check dams. No payment will be made for check dams placed without the approval of the engineer.

### 2.38 RIP-RAP

Rip-Rap will be measured in place paid for at the unit price bid per square yard. Placement of Rip-Rap will be as directed by the engineer. Unit price bid shall be full compensation for all labor, materials and equipment required to furnish and install required rip-rap.

### 2.39 CONSTRUCTION EXIT

Construction exits will be counted in place and paid for at the unit price bid for each. The unit price bid shall be full compensation for all material, labor, tools and equipment necessary to install, maintain and remove all construction exits as specified in the contract documents. Only exit locations approved by engineer will be counted for payment.

### 2.40 STRAW MULCH STABILIZATION

Straw mulch stabilization shall be paid for at the unit price bid per square yard and will be measured in place. Measurement shall be along the centerline of the pipeline multiplied by the average width of the area mulched. The unit price bid shall be full compensation for all material, labor, tools and equipment necessary to install the straw mulch stabilization as specified in the contract documents.

### 2.41 GRASSING

Grassing shall be paid for at the unit price bid per square yard of grassing. Contractor shall be responsible for replacing all grass destroyed during installation of water main. Grassing area measured for payment will be limited to a strip not to exceed 40 FEET wide measured along the length of the water main. Where grassing is required in areas adjacent to any residential or commercial lawn, the type of grass to be planted and grown shall match the type of grass growing on the adjacent lawn. No modification shall be made in the unit price.

#### 2.42 EROSION MAT (SLOPES)

Payment for erosion mat will be made at the unit price bid per square yard. The unit price bid shall be full compensation for all tools, labor, equipment, materials, protection of erosion mat against weather, and any incidentals necessary for the installation of the erosion mat as required.

#### 2.43 INLET SEDIMENT TRAP

Inlet sediment traps will be counted in place and paid for at the unit price bid for each. Payment shall be full compensation for all labor, tools, equipment, materials and any incidentals necessary to install, maintain and remove sediment traps. No payment will be made for sediment traps placed without the approval of the engineer.

#### 2.44 STORM DRAIN OUTLET PROTECTION

Storm drain outlet protection will be counted in place and paid for at the unit price bid for each. Payment shall be full compensation for all labor, tools, equipment, materials and any incidentals necessary to install, maintain and remove outlet protection. No payment will be made for outlet protection placed without the approval of the engineer.

#### 2.45 TREE SAVE FENCE

Temporary tree save fence shall be paid for at the unit price bid per linear foot and will be measured in place. The quantity shall be field measured and only the quantity installed at the engineer's approval will be measured for payment. The unit price bid shall be full compensation for all material, labor, tools and equipment necessary to install, maintain and remove the tree save fence as specified in the contract documents. Tree save fence will only be measured for payment once.

#### 2.46 CUT AND PLUG EXISTING WATER MAIN

Water mains cut and plugged with a mortared brick wall shall be paid at the unit price bid for each. The unit price bid shall be full compensation for all labor, materials, tools, and equipment necessary to complete the procedure.

#### 2.47 NPDES PERMIT COMPLIANCE

Payment for compliance with NPDES permit requirements shall be made under a lump

sum bid. The lump sum bid shall be full compensation for compliance with NPDES requirements as described in Specification Section 01 41 00 including the employment of an Environmental Professional for specified services. This item is inclusive of all associated fees to the Georgia Environmental Protection Division (EPD), Cobb County, and other agencies as necessary for the compliance with erosion control requirements as specified and shown on drawings and required by law or regulation.

#### 2.48 REMOVAL OF EXISTING FIRE HYDRANT

The unit price for this item shall be full compensation for removing the existing fire hydrant in good condition and delivering it to the Owner's yard.

#### 2.49 INSTALLATION OF NEW FIRE HYDRANT

Fire hydrants will be counted in place.

Fire hydrants will be paid for at the unit price bid for each. Fire hydrant extension shall be paid for at the unit price bid per vertical foot.

The unit price shall be full compensation for the cost of excavation, preparation of foundation, furnishing and placing stone, blocking hydrant, setting hydrant, testing hydrant, and all expenses incidental to completing the work. The connecting pipe between the fire hydrant and the main will be paid for separately at the unit price bid for the size pipe used. Locked hydrant adapters and locked hydrant tees are paid for under miscellaneous fittings.

#### 2.50 COPPER TUBING

Copper tubing for service connections shall be paid for at the unit price bid per linear foot of pipe installed. The cost of corporation cocks, curb stops, service fittings, and service saddles shall be included in the payment of this item.

#### 2.51 WATER SERVICE INSTALLATION

Water service installation shall be paid for at the unit price bid per each existing service connected. The price shall be compensation for all labor, tools, equipment, and materials necessary to complete the installation as shown on the plans. The Contractor shall connect new water services to existing meter, meter box, and backflow preventer relocated to back of right of way by the contractor and reconnected to existing water service by contractor.

#### 2.52 TEMPORARY WATER MAIN

Where required, the Contractor shall install temporary water main of the size and type indicated to meet the needs of the property owners. The water main shall be buried to the depth necessary for protection from damage by traffic. The cost of the removal shall be included in the unit price bid. The cost of a temporary connection to an existing water

main or fire hydrant shall be included in the unit price bid. The water main shall be installed only at the direction of the Engineer. Bid price shall include all labor, material, tools, and equipment necessary for the installation and maintenance of the temporary water main. Payment under this item shall be made at the unit price bid per linear foot of temporary water main installed.

#### 2.53 TEMPORARY WATER SERVICE

Where required, the Contractor shall install temporary water service of the size and type required to meet the needs of the property owners. The water service shall be buried to the depth necessary for protection from damage by traffic. The cost of the removal shall be included in the unit price bid. The water service shall be installed only at the direction of the Engineer. Bid price shall include all labor, material, tools, and equipment necessary for the installation, connection, and maintenance of the temporary water service. Payment under this item shall be made at the unit price bid per linear foot of temporary water service installed.

#### 2.54 TEMPORARY SEWER SERVICE

Where required, the Contractor shall install a temporary sewer service of the size and type required to meet the needs of the property owners. The temporary sewer service shall be installed to the line and grade necessary to maintain flow. The cost of the removal shall be included in the unit price bid. The temporary sewer service shall be installed only at the direction of the Engineer. Bid price shall include all labor, material, tools, and equipment necessary for the installation, connection, and maintenance of the temporary sewer service. Payment under this item shall be made at the unit price bid per linear foot of temporary sewer service installed.

#### 2.55 PERMANENT SEWER SERVICE

Where required, the Contractor shall install a permanent sewer service of the size and type indicated to meet the needs of the property owners. The permanent sewer service shall be installed to the line and grade necessary for maintain flow. The permanent sewer service shall be installed only at the direction of the Engineer. Bid price shall include all labor, material, tools, and equipment necessary for the installation of the permanent sewer service. Payment under this item shall be made at the unit price bid per linear foot of permanent sewer service installed.

#### 2.56 GROUTING EXISTING WATER MAIN

Measurement for the grouting of existing water mains shall be on the linear foot basis for each size of water main as measured in place.

Payment for grouting existing water main shall be made under a unit price bid per linear feet. The unit price bid shall be full compensation for all work including cutting of existing water main, installation of vents as required, grout materials compliant with GDOT

requirements, installation of grout, and removal of vents.

#### 2.57 FLOWABLE FILL

Payment for this item will be made at the unit price bid listed in the proposal and shall be full compensation for all tools, materials, equipment, and labor necessary to place flowable fill within Project. Payment shall be based on the actual length of the pipeline times the depth and width of pipeline trench. The Engineer prior to placement must approve calculation of the amount of material to be placed.

#### 2.58 WATER SERVICE CASING AND PIPE BURSTING

Payment for this item will be made at the unit price bid listed in the proposal and shall be full compensation for all tools, materials, equipment, and labor necessary to either install PVC casing pipe under an existing roadway or burst an existing water service for installation of a new water service. Measurement for payment shall be based on the actual length of the installed casing pipe or actual length of bursted water service.

#### 2.59 COUPLINGS

Payment for this item will be made at the unit price bid listed in the proposal and shall be full compensation for all tools, materials, equipment, and labor necessary to place either install pipe couplings jointing pipes of different material. Measurement for payment shall be based on each coupling installed.

#### 2.60 REMOVE & REPLACE CULVERT PIPE (ALL TYPES & SIZES)

Culvert pipe completed in place and accepted is measured in linear feet along the center line of the pipe.

Each type of culvert pipe removed and replaced shall be paid for at the contract unit price bid per linear foot. Payment is full compensation for removal of existing culvert pipe, furnishing of materials, preparing bedding and installing backfill and subgrade materials, installing, and maintaining culvert pipe installed and connecting new culvert pipe to existing culvert pipe.

#### 2.61 CONSTRUCT BLOWOFF STRUCTURE

The blowoff structure shall be counted in place.

The blow structure shall be paid for at the unit price for each. This price shall include all cost for materials to be supplied and shown on contract drawings, all labor, tools, equipment, and incidental material necessary to construct the blowoff structure at the structure location.

The cost of any concrete, gravel, pipe fittings, valves, or other materials included within other unit price bids necessary to construct the structure, or that is contained within the structure shall be paid under that price bid.

## 2.62 VIDEO DOCUMENTATION

Video documentation will be paid for under a lump sum bid. This price shall include all cost for all materials, all labor, tools, equipment, and incidentals necessary to video record the project.

The Contractor shall employ the services of a professional video company to record the project conditions prior to construction. The video record shall document the project from beginning to end within the construction limits. The Pre-Construction Video shall document existing damage to curbs, streets, sidewalks, driveways, trees, poles, and surrounding structures. The video recording shall be time and date stamped and geo-coded with northings, eastings, and direction of view. The video recording shall be suitable for legal proceedings.

## 2.63 REMOVE & REPLACE GUARDRAIL

Guardrail will be measured in place and the unit of measurement shall be in linear feet.

Payment for removing and replacing guardrail will be made at the unit price bid per linear foot. The unit price bid shall be full compensation for all tools, labor, equipment, materials, traffic control, temporary guardrail for the protection of traffic, weather and any incidentals necessary for the removal and replacement of guardrail. The unit bid shall be for guardrail of any size and type. Existing guardrail shall be removed and replaced the type of guardrail matching the existing and compliant with current GDOT specifications and standards.

## 2.64 TAPPING SLEEVE, VALVE, AND BOX

Tapping sleeves and valves will be paid for at the unit price bid for each size and type. The price bid for tapping sleeve and valve shall include required tapping sleeve, tapping valve, valve box with concrete collar and all other materials and labor to complete a tap on an existing water main.

## 2.65 BONDED JOINTS

- A. Measurement for the bonding of joints shall be for each pipe joint bonded.
- B. Payment at the unit price bid will include installation of double bonding of joints as shown. Payment for bonded joints will be made after successful testing of joints.

## 2.66 CATHODIC TEST STATIONS

- A. Measurement for the cathodic test stations shall be for each station installed.



- B. Payment at the unit price bid will include installation of cathodic test stations as shown. Payment of cathodic test stations will be made after successful testing of test stations.

## 2.67 WATER METER AND CONCRETE VAULT

Measurement of water meter and concrete vault shall be for installed and in place.

Payment for water meter and concrete vault shall be made on the basis of lump sum bid price. Water meters and all other materials are to be supplied by the Contractor unless noted otherwise. This price shall include all cost for materials to be supplied and shown in contract drawings, all labor, tools, equipment, and all incidental material necessary to construct or set the vault, transport and assemble the meter, and connect to the water mains at the meter location.

The cost of any concrete, gravel, steel reinforcement, pipe, pipe fittings, associated valves, or other material necessary to construct the vault, or that is contained within the vault shall be included in the price bid.

Any concrete, gravel, pipe, pipe fittings, or other material necessary to construct the pipeline outside the vault will be paid for separately as outlined in the "Measurement and Payment Section" of these Contract Documents.

## 2.68 CONCRETE VALVE MARKERS

Valve markers will be counted in place, and will be paid for at the unit price bid per each.

## 2.69 STOPAQ

The application of Stopaq corrosion protection wrap will be measured in place along the length of pipe and paid for at the unit price bid per linear foot as listed in the bid proposal. The unit price bid shall include all materials, labor, equipment, and incidentals necessary for the complete installation of Stopaq wrap.

## 2.70 SODDING

Sodding shall be paid for at the unit price bid per square yard of sod. Contractor shall be responsible for placing sod required during installation of water main. Sodded area measured for payment will be measured along the length of the water main for the width of sod. Where sodding is required in areas adjacent to any residential or commercial lawn, the type of grass to be planted and grown shall match the type of grass growing on the adjacent lawn. No modification shall be made in the unit price.

## 2.71 PAVEMENT MARKINGS

Plastic Pavement Markings (all types) is measured by the square yard.

Payment for applying plastic pavement markings will be made at the unit price bid per square yard. The unit price bid shall be full compensation for all tools, labor, equipment, materials, traffic control, protection of pavement markings against traffic and weather and any incidentals necessary for the installation of the pavement markings as required. The unit bid shall be for all pavement markings of any size and color required.

**\*\*END OF SECTION\*\***

SECTION 01 35 13  
SPECIAL PROJECT PROCEDURES

PART 1 - GENERAL

1.1 PROJECT MANAGEMENT

The Contractor shall schedule and coordinate all work by his forces and subcontractors and others involved to maintain the accepted progress schedule. The Contractor's duties also include the planning of work, the scheduling or ordering and delivery of materials, and checking and control of all work under this contract. Construction schedules shall be submitted to the Engineer for review prior to the start of any work. Schedules shall be verified or updated as necessary.

The Contractor shall be responsible for complete supervision and control of his subcontractors as though they were his own forces. Notice to the Contractor shall be considered notice to all affected subcontractors.

The Contractor shall appoint a qualified representative to act as the, "Project Coordinator, Project Manager or the Project Superintendent", who shall be responsible for coordinating all work and providing liaison with the Engineer and the Owner. This person shall be responsible for all duties described above and in all matters represent the Contractor regarding this project in the absence of a Corporate Officer or Principal of the firm. This person will be on the Project site for the duration of the project.

The Contractor shall give daily notice of all activities via internet communications to the following:

1. Georgia DOT
2. Cobb DOT.
3. Cobb Police.
4. Cobb Fire & Emergency.
5. Cobb County Water System
6. Marietta Police.
7. Marietta Fire & Emergency.
8. Smyrna Police.
9. Smyrna Fire & Emergency.
10. Smyrna Utility Services.
11. Owner.
12. Engineer.

The Contractor shall employ only competent and skilled personnel on the work. At all times when the work is in progress, the Contractor shall have a competent Superintendent or Foreman present with authority to receive orders, execute the work and to promptly supply materials, tools, plant equipment and labor as may be required. Should the Engineer demand, the Contractor shall immediately remove any Superintendent, Foreman or worker whom the Engineer considers incompetent, or undesirable, or both.

## 1.2 CREW SUPERVISION

The contractor's laborers, pipelayer(s) and equipment operator(s) must be supervised by a non-operator certified foreman or certified superintendent experienced in laying 36" and 42" ductile iron pressure water main. The foreman's and superintendent's resume, including OSHA certification status must be submitted to the Engineer and Owner for review prior to award of the contract.

## 1.3 WORK HOURS AND RESTRICTIONS

Except in the case of an emergency or other unusual circumstance, no work shall be done on the project outside of Owner-approved work hours. Except in an emergency, the Contractor must obtain approval of the Owner before scheduling additional work hours.

There shall be **no** traffic lane closures during weekdays between the hours of 5 AM to 9 AM and 3 PM to 6 PM. Exception to this requirement will only be made the approval of the Georgia DOT.

Night work involving lane closures outside the hours above is permitted. Work that does not involve lane closures is permitted without restriction.

Work within the Caswell Parkway, affecting ingress and egress to the residents on Caswell Parkway is limited to 30 days. Access by emergency vehicles must be maintained.

If milling or excavation is performed within 1,000 feet of any existing traffic signal or flashing beacon, contact GDOT District 7 District Traffic Operations (DTO) at 770-986-1765.

## 1.4 CLOSING VALVES

Except in an emergency the Contractor shall not close or open valves on any water main without first gaining approval from the Owner of the water main.

## 1.5 TRENCH SAFETY ORDINANCE

Cobb County has enacted a local ordinance which requires strict adherence to OSHA regulations Subpart P, Part 1926 pertaining to trenching and excavation. All bidders are advised to be familiar with both the OSHA regulations and the local ordinance before bidding this project.

## 1.6 ACCESS TO ADJACENT PROPERTY

The Contractor shall be responsible for ensuring vehicular access to business and residences adjacent to the pipeline route. If site conditions allow, the contractor will construct a temporary gravel driveway for access; in this case, gravel will be paid for at the

unit price bid, but site grading will not be considered for separate payment.

The Contractor will not be permitted to deny access to any property along the route. If two drives are available, only one drive may be closed at a time. If one drive is available, the drive can only be closed one half at a time while access is maintained on the other half. The work on a drive must be completed within one day's time. The drive must be repaved within 10 working days of disturbance due to construction.

#### 1.7 OWNER FURNISHED MATERIALS

Certain materials may be furnished by the Owner and are currently stored at the Wyckoff Water Plant located off Mars Hill Road, Acworth, Georgia. Contractor is responsible for loading, transporting, and unloading these materials at the job site. These Owner furnished items have been paid for by the Owner.

**The Owner is furnishing no materials for this project.**

#### 1.8 TIE-INS

All tie-ins to the CCMWA's and other utilities' existing water mains shall be performed in a timely and efficient manner in order to minimize the down-time to the system. If necessary, the Water Authority may require two crews working simultaneously at each end of the relocation section during the tie-in operations to minimize the system down-time.

#### 1.9 EROSION CONTROL

It is the Contractor's responsibility to furnish, install and maintain any and all erosion control devices and silt fencing as may be required by any County, State or Federal agency that may have jurisdiction over the area in which work is being performed in the execution of this contract. In the event there are conflicting requirements, the most stringent regulations shall apply. It will be the responsibility of the Contractor to remove all erosion control devices and silt fencing upon completion of the work at such time that a suitable ground cover has been established and final stabilization has been reached. See sections 01 41 00 and 31 25 00 for further details on regulatory requirements and erosion control methods.

#### 1.10 WORK ZONE TRAFFIC CONTROL

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. Contractor shall comply with all local and state ordinances concerning traffic control. No road closings will be allowed without prior approval of the local governing authority.

All personnel involved in traffic control and doing any flagging must have received training and a certificate upon completion of the training from a GDOT approved training program.

All costs for providing certified flaggers will be borne by the Contractor. Failure to provide certified flaggers as required above shall be reason for suspending work regarding the flagger(s) until a certified flagger can be provided. Flagging personnel shall be equipped with radio communication.

It is the Contractor's responsibility to submit and obtain approval for traffic control from the appropriate governing authority. The Contractor shall employ a firm that provides traffic control planning on a professional basis and shall submit that firm and its qualifications for review. All traffic control plans shall be prepared in accordance with Manual on Uniform Traffic Control Devices (MUTCD).

The Contractor shall have on-site a Certified Traffic Control Supervisor. The Certified Traffic Control Supervisor shall have completed Temporary Traffic Control Design and Supervision instruction by the National Safety Council or equivalent training. Proof of such training will be provided. The Certified Traffic Control Supervisor shall be on-site during all times traffic is interrupted by construction activities; during normal work times and during emergencies outside normal work times. The Certified Traffic Control Supervisor shall have the authority to direct necessary work activities to maintain a safety work environment for the public and for the workers. The Certified Traffic Control Supervisor's sole duty shall be to supervise traffic safety and shall perform no other duties on the project.

#### 1.11 CREEK CROSSING

Upon award of the project, the Contractor shall submit, to the engineer and Owner, his detailed plans for any creek crossing within the scope of this project. These plans will also be reviewed by the Cobb County Community Development Department for erosion control methods. The Contractor will be responsible for furnishing and incorporating any additional erosion control methods required by the Community Development Department.

#### 1.12 CLOSURES

Closures shall be made in straight sections of pipe using a solid long body mechanical joint sleeve. Installation shall include a filler/spacer ring to compensate for the final lap joint. Fit shall be tight as practical. Closure shall be at least one pipe length away from an adapter. Closing with no spacer ring or by "bucking" pipe sections together with no sleeve will not be allowed.

#### 1.13 ACCEPTANCE AND FINAL PAYMENT

When the project provided for under this contract has been completed by the Contractor, and all parts of the work have been approved by the Engineer according to the contract, the Engineer shall, within ten (10) days unless otherwise provided, make final inspection and advise the Contractor to prepare a final estimate, showing the value of work as soon as the necessary measurements and computations can be made. Contractor and Owner acknowledge that all progress certificates or estimates upon which payments shall have

been made, will have been based on approximations only, and will be subject to correction in the final payment. Contractor shall prepare the final estimate and submit the same for payment within ninety (90) days of notification of final acceptance of the project by the Engineer. If Contractor fails to submit a final estimate and bill within said ninety (90) day period, the Contractor will be deemed to have conclusively waived, relinquished and forfeited any amounts remaining due under this contract, and the Owner may defund the project and re-appropriate said funds with no further liability under this contract or otherwise to Contractor. The amount of the final estimate, 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 Engineer, provided that the Contractor has properly maintained and operated the project as specified under the attached 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 performed or labor and material furnished under this contract.

#### 1.14 PIPE STORAGE

Pipe storage is subject to approval by the Georgia Department of Transportation.

#### 1.15 Not Applicable

#### 1.16 SCHEDULE REQUIRMENTS

Connection to 36" Water Main north of Windy Hill Road and to the 42" Water Main south of Windy Hill Road can only be made after February 25, 2016.

#### 1.17 TEST REQUIRMENTS

The Contractor is responsible for providing temporary pipe restraint necessary to restrain the water main during hydrostatic test. The hydrostatic test pressure for this project is 250 psi. Water mains shall be tested independently of any existing water main prior to connection.

#### 1.18 ROADWAY MAINTENANCE

The Contractor shall maintain the surface of the roadway in a suitable condition for the safe traverse by traffic.

1. At the end of each work day, in those work areas within the roadway, place a temporary asphalt surface. Provide 3" 12.5 mm SuperPave asphalt.
2. Maintain traffic surface until asphalt base and binder has been placed.
3. Place asphalt base and binder courses after 500 feet of water main have been installed.
4. Mill and overlay pavement after completion of water main construction.

Steel plates will only be used with the agreement of the Engineer. Any steel plate installed within a travel lane must have edges asphalted and pinned and comply with the requirements of the Utility Accommodation Manual.

### 1.19 METERS

The following is a list of existing BLW meters to be connected with new water services.

	METER ADDRESS	Meter Number	Meter Size
1690	COBB PKWY SOUTH	96029030	1
1702	COBB PKWY SOUTH	F00433	0.75
1710	COBB PKWY SOUTH	9452	0.75
1736	COBB PKWY SOUTH	V02313	0.75
1740	COBB PKWY SOUTH		0.75
1750	COBB PKWY SOUTH	756	0.75
1764	COBB PKWY SOUTH	V03061	0.75
1770	COBB PKWY SOUTH	51606525WR	0.75
1800	COBB PKWY SOUTH	L00970	0.75
1830	COBB PKWY SOUTH	VL3849	1

Contractor is field verify meters and meter sizes.

### 1.20 DISPOSAL OF MATERIALS

The Owner reserves the right to retain ownership of existing materials; pipe, valves, and fittings. The Contractor shall make Owner-designated materials available for recovery by the Owner. All other materials shall become the responsibility of the Contractor for disposal.

\*\*\*END OF SECTION\*\*\*



SECTION 32 12 16  
ASPHALT CONCRETE PAVING

PART 1 - GENERAL

1.1 WORK INCLUDED

All labor equipment and materials required to furnish and install asphalt concrete paving for roadways and parking areas as shown on the Drawings.

1.2 RELATED WORK

1.2.1 Testing Laboratory Services: Section 01 45 29

1.3 PAVING CONTRACTOR REQUIREMENTS

1.3.1 A Ga. DOT prequalified General Contractor shall provide all the work described under this specification.

1.3.2 The name of the Paving Contractor shall be submitted to the Owner 5 days after the bid.

PART 2 - PRODUCTS

2.1 GRADED AGGREGATE BASE COURSE

Section 815, GDOT Standard Specifications, latest edition.

2.2 BITUMINOUS PRIME COAT

Section 821, GDOT Standard Specifications, latest edition. Viscosity grade MC-70.

2.3 ASPHALTIC CONCRETE BASE COURSE

Section 828, GDOT Specifications, latest edition; 25 mm.

2.4 ASPHALTIC CONCRETE BINDER COURSE

Section 828, GDOT Specifications, latest edition; 19.5 mm.

2.5 BITUMINOUS TACK COAT

Section 822, GDOT Standard Specifications, latest edition. Grade SS-1 or SS-1h.

- 2.6 ASPHALTIC CONCRETE SURFACE COURSE  
Section 828, GDOT Standard Specifications, latest edition; 12.5 mm.
- 2.7 PAINT TRAFFIC STRIPING  
Section 652, GDOT Standard Specifications, latest edition.
- 2.8 THERMOPLASTIC TRAFFIC STRIPE  
Section 653, GDOT Standard Specifications, latest edition.
- 2.9 COLD MIX FOR PATCHING  
Section 401, GDOT Standard Specifications, latest edition.
- 2.10 PLASTIC PAVEMENT MARKINGS  
Section 659, GDOT Standard Specifications, latest edition.

### PART 3 - EXECUTION

- 3.1 Construct graded aggregate base course in accordance with Section 310, GDOT Standard Specifications, latest edition.
- 3.2 Apply bituminous prime coat in accordance with Section 412, GDOT Standard Specifications, latest edition.
- 3.3 Construct asphaltic concrete base and binder courses in accordance with Section 400, GDOT Standard Specifications, latest edition.
- 3.4 Apply bituminous tack coat in accordance with Section 413, GDOT Standard Specifications, latest edition.
- 3.5 Construct asphaltic concrete surface course in accordance with Section 400, GDOT Standard Specifications, latest edition.
- 3.6 Apply traffic striping course in accordance with Section 652, GDOT Standard Specifications, latest edition or Section 653, GDOT Standard Specifications, latest edition as appropriate.
- 3.7 Omit all references to measurement and payment in the GDOT Specifications.
- 3.8 Final pavement will be subject to Georgia DOT acceptance for smoothness and trafficability.

**\*\*END OF SECTION\*\***

SECTION 33 05 16.13  
PRECAST CONCRETE UTILITY STRUCTURES

PART 1 - GENERAL

1.1 DESCRIPTION

1.1.1 Section Includes: Requirements for providing precast concrete structures, manholes, wet wells, vaults, and other miscellaneous structures or members.

1.2 REFERENCE STANDARDS

1.2.1 All work hereinafter shall comply with current and applicable portions of the following:

1.2.1.1 American Concrete Institute (ACI) Publications.

1.2.1.2 American Society for Testing and Materials (ASTM) Publications.

1.2.1.3 American Welding Society (AWS) Publications.

1.2.1.4 ACI 318, Building Code Requirements for Reinforced Concrete.

1.2.1.5 Precast/Prestressed Concrete Institute (PCI).

1.3 RELATED SPECIFICATIONS

1.3.1 SECTION 09 06 91 - SUBGRADE SERVICE CONCRETE COATING

1.4 QUALITY ASSURANCE

1.4.1 Acceptable Manufacturers and Erectors shall have had a minimum of 5 years' experience in precast structural concrete work of the quality and scope required on this project. The producer shall have an established written quality assurance program in effective operation at their plant attested to be a current enrollment of the plant in the PCI "Certification Program for Quality Control" or a Quality Control Program acceptable to the Engineer. The written Quality Control Program will be furnished to the Engineer upon request.

1.4.2 Design

1.4.2.1 Structural members have been indicated on the drawings by general size and depth. The structural analysis and design of these items as well as lifting devices for all precast concrete members shall be performed by the manufacturer of the precast materials and subject to review of Engineer.

1.4.2.2 Design shall be in accordance with ACI 318, latest edition, and under the supervision of a Professional Engineer registered in the state where the project is located.

1.4.2.3 Design loads shall consist of dead load, live load, impact load, and loads due to water table and any other loads which may be

imposed upon the structure. Unless noted otherwise, live loads shall be for HS-20 per AASHTO standard specifications for highway bridges and design wheel loads shall be 16 kips. The live load shall be that which produces the maximum shear and bending moments on the structure.

1.4.2.4 Before shipment, all concrete members shall be inspected to determine that materials and workmanship conform to the requirements of these specifications and the manufacturer/vendor quality control program.

#### 1.4.3 Allowable Tolerances

1.4.3.1 Dimensions and cambers shall be within the tolerances as described in PCI MNL-116, Division V, Section 5.

1.4.3.2 Deflection: Deflection under design live load shall not exceed calculated deflection by more than 10 percent.

#### 1.4.4 Sampling and Testing

##### 1.4.4.1 General

1.4.4.1.1 Samples and tests required below and other tests are to be made by and at the Contractor's expense. The tests shall be performed by an independent commercial testing laboratory or by the manufacturer's lab subject to review by the Engineer. Compressive strength tests for initial prestress may be performed in the manufacturer's plant laboratory. Certified copies of test reports shall be furnished as required in this Specification, and shall include all test data and results.

##### 1.4.4.2 Concrete Testing

1.4.4.2.1 During the progress of the work, plastic concrete, as delivered to the casting site, shall be sampled and tested for slump, air content and compressive strength in accordance with ACI 381, Part 2, Chapter 3, and Part 3, Chapter 4. No fewer than 6 cylinders shall be made during each concreting cycle. Not more than 1 test in 10 shall fall below the specified strength.

##### 1.4.4.3 Slump Tests

1.4.4.3.1 Slump tests shall be in accordance with ASTM C 143.

##### 1.4.4.4 Failure to Meet Strength Requirements

1.4.4.4.1 If compressive strength tests fail to meet the above requirements, the Engineer may require load tests to be made in accordance with ACI 318. Units failing to meet requirements of the load tests shall not be used. Load tests shall be performed at the expense of the Contractor.

## 1.5 SUBMITTALS

### 1.5.1 Shop Drawings

1.5.1.1 Furnish complete details of design, manufacture, fabrication, installation and erection in accordance with the contract conditions. Location of all inserts and openings shall be shown.

1.5.2 Design computations shall be submitted with shop drawings for review prior to manufacture of any units and shall bear the seal of the Professional Engineer who performed or approved the design and is registered in the state where the project is located. All design loads shall be clearly shown.

1.5.3 Each precast concrete unit shall be properly identified by a specific mark, to appear both on the shop drawings and on the manufactured unit. These identifying marks are to be clearly visible to facilitate proper erection and installation.

1.5.4 All connections, bearings, and anchorage details shall be shown on the shop drawings. The precast concrete manufacturer, subject to review of Engineer, will be permitted to modify any details shown on the drawings provided such modifications will be equally or more efficient and more consistent with the latest recommended practices of the Precast/Prestressed Concrete Institute, and at no additional cost to the Owner. All cast-in connection components shall be designed with positive anchorage which shall be accomplished by having the anchors attached to or around reinforcing steel wherever possible.

1.5.5 Design loads, used in design of the precast concrete section, shall be indicated on the shop drawings.

### 1.5.6 Certificates of Conformance

1.5.6.1 Before delivery of materials and equipment, 4 notarized certificates attesting that materials and equipment meet the requirements specified shall be submitted to the Engineer for review.

## 1.6 DELIVERY, STORAGE AND HANDLING

### 1.6.1 Delivery

1.6.1.1 Precast structures and members shall be inspected upon delivery to the erection site and stored in a manner that will prevent staining and damage.

1.6.1.2 Substantially damaged, cracked, or broken units which are deemed unsuitable for the intended use shall be rejected and removed from the site at no cost to the Owner.

1.6.1.3 The Engineer's decision will be final in determining unsuitable units.

## 1.6.2 Handling

1.6.2.1 Precast concrete members shall be lifted and supported during transportation only at the lifting and/or support points shown on the Shop Drawings. Only lifting devices embedded in these sections by the manufacturer shall be used, unless specific authorization to use other lifting points is received in writing from the manufacturer.

1.6.2.2 Proper equipment shall be used to transport the precast concrete sections to the job site. Trucks and trailers with sufficient capacity to handle the heaviest sections specified, without overloading the access routes, must be used. Units damaged due to racking or twisting will be rejected whether damaged on site and route or at the plant.

1.6.2.3 Proper access on the job site shall be provided by the contractor to permit transportation units to proceed under their own power to a location accessible to erection units.

## 1.6.3 Storage

1.6.3.1 Store precast structures or members off the ground on wooden blocking, pallets, or other appropriate means away from brush, and in areas accessible for inspection.

## 1.6.4 Repair or Replacement

1.6.4.1 Repair damage or defects if Engineer deems repairable and at his direction.

1.6.4.2 Remove and replace at no cost to the Owner if Engineer deems damage or defects are not repairable by Contractor.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

2.1.1 Reinforced Concrete Materials: As modified herein, except that slump requirement shall not apply to manholes.

2.1.2 Precast Concrete Manholes: ASTM C478 except:

2.1.2.1 Compressive Design Strength of Concrete

2.1.2.1.1 Minimum 5,000 psi using Type II cement.

2.1.2.1.2 Minimum compression cylinder test of 4,000 psi at time of shipment.

2.1.2.2 Configurations: Follow Drawings and Standard Details.

2.1.2.3 Joints: ASTM C443.

2.1.2.4 Appurtenances.

2.1.2.4.1 Steps: Manufacture standard details.

2.1.2.4.2 Bolt inserts: Follow Standard Details.

2.1.2.4.2.1 Embed one of following a minimum of 3 inches, to accommodate ¾-inch diameter bolts.

2.1.2.4.2.1.1 Heckman Building Products Corporation, No. 444 Star Threaded Inserts.

2.1.2.4.2.1.2 Pennsylvania Insert Corporation, the Liberator.

2.1.2.4.2.1.3 Atlantic Concrete Products Co., Bolt Slot Insert System.

2.1.2.4.2.1.4 Strut Service Company inserts.

2.1.2.5 Manhole Identification: Clearly marked on inside near top where applicable.

2.1.2.5.1 ASTM Specification designation.

2.1.2.5.2 Manhole setting number (bases only) and Owner project number.

2.1.2.5.3 Date of manufacture.

2.1.2.5.4 Production control number for tracking manufacture phases of item and name or trademark of manufacturer.

2.1.2.5.5 Manhole sections with flexible connectors:

2.1.2.5.5.1 Marked above connector openings with type and size, and type of pipe for which connector is designed.

2.1.2.5.5.2 Engraved or stenciled markings with waterproof paint or ink in minimum 1-inch high letters.

2.1.2.5.6 Lined manholes: Stenciled with waterproof paint or ink markings as noted herein that cannot be easily removed from lining or epoxy coated surfaces.

2.1.2.6 Precast Manhole Sections

2.1.2.6.1 Approved Manufacturers:

2.1.2.6.1.1 Tindall

2.1.2.6.1.2 Old Castle

2.1.2.6.1.3 Or approved equal

2.1.2.7 Precast Concrete Grade Rings: ASTM C478, except:

- 2.1.2.7.1 Compressive Design Strength of Concrete: Minimum 5,000 psi using Type II cement.
- 2.1.2.7.2 Configurations: Follow Standard Details.
- 2.1.2.7.3 Rings: Drilled with holes 1½- to 2-inch diameter to accommodate frame anchor bolts.
  - 2.1.2.7.3.1 Grade rings with cracks or fractures passing through height of ring and any continuous crack extending for length of 3 inches or more will be rejected.
  - 2.1.2.7.3.2 Rings with damaged edges which will prevent making satisfactory joint in the opinion of the Engineer will be rejected.
  - 2.1.2.7.3.3 Planes of ring surfaces: Within limits of plus or minus ¼ inch of horizontal and vertical, except for sloped adjusting grade ring to be within ¼ inch of Standard Detail.
  - 2.1.2.7.3.4 Protection
    - 2.1.2.7.3.4.1 On lined manholes: Follow manufacturer's recommendations.

2.1.2.7.4 Approved manufacturers:

- 2.1.2.7.4.1 Atlantic Concrete Products Company
- 2.1.2.7.4.2 Americast
- 2.1.2.7.4.3 Contractors Precast Corporation
- 2.1.2.7.4.4 Hanson Concrete Products
- 2.1.2.7.4.5 Dal-Col Products, Inc.
- 2.1.2.7.4.6 Prism Precast Products, Inc.
- 2.1.2.7.4.7 Frederick Precast Concrete, Inc.
- 2.1.2.7.4.8 Or approved equal

2.1.2.8 Precast Concrete Vaults and Wet Well: ASTM C858

- 2.1.2.8.1 Configurations: Follow drawings.
- 2.1.2.8.2 Identification: Clearly mark inside of each precast concrete vault section.
  - 2.1.2.8.2.1 ASTM Designation.
  - 2.1.2.8.2.2 Structure size.
  - 2.1.2.8.2.3 Date of manufacture.



2.1.2.8.2.4 Project station location and Owner project number.

2.1.2.8.2.5 Name or trademark of manufacturer.

2.1.2.8.2.6 Mark slabs on top and bottom surfaces.

#### 2.1.2.8.3 Design Mixes

2.1.2.8.3.1 5,000 psi at 28 days using Type II cement.

2.1.2.8.3.2 Mix proportion: ACI 318.

#### 2.1.2.8.4 Approved Manufacturers

2.1.2.8.4.1 Tindall

2.1.2.8.4.2 Old Castle

2.1.2.8.4.3 Or approved equal

#### 2.1.2.8.5 Vault Access Doors

2.1.2.8.5.1 Vault access doors shall be fabricated aluminum, 4 feet wide by 4 feet long, unless otherwise specified by the Engineer. Access doors shall mount flush with the surrounding area.

2.1.2.8.5.2 Access doors shall be equipped with heavy brass hinges, stainless steel pins, compression spring operators, an automatic hold-open arm with release handle and a locking device, to receive a padlock.

2.1.2.8.5.3 All vault access doors shall be H-20 rated traffic doors.

2.1.2.8.5.4 Access doors shall be Type JD-AL as manufactured by the Bilco Company, New Haven, Connecticut, or approved equal.

#### 2.1.2.8.6 Ladders

2.1.2.8.6.1 Ladders shall be of aluminum construction. Rung diameter shall be 1-inch minimum, with 12 inches between rungs, and 18 inches between side bars. Ladders shall exceed the requirements of CAL/OSHA and ANSI standards.

2.1.2.8.6.2 Material for ladders shall be high strength 6061-T6 aluminum alloy.

2.1.2.8.6.3 Appropriate Bilco, or approved equal, ladder-up safety post for each ladder installation shall be provided.

#### 2.1.2.8.7 Sump

2.1.2.8.7.1 Vault floor shall contain an 18-inch-diameter hole for installation of a 24-inch-deep sealed sump with a removable expanded metal safety grate. The vault floor shall be constructed such that there is a positive slope to the sump. A minimum 6-inch drain shall be provided where applicable or as directed by the Engineer.

2.1.2.8.7.2 Sump pump shall be Zoeller Model #M53, or approved equal.

#### 2.1.2.9 Miscellaneous Materials

2.1.2.9.1 Granular Bedding: ASTM C33 coarse aggregate size number 4.

2.1.2.9.2 Weep holes: Service weight cast iron covered with non-erodible filter on earth side.

#### 2.1.2.10 Manhole Ring and Cover

2.1.2.10.1 Manhole rings shall be made from gray or ductile iron and manhole cover shall be ductile iron. Castings shall be made in the USA and shall be ERGO® Access Assembly with EJ product number 41600533L01 or approved equal. Approved equal must meet the requirements of this specification.

2.1.2.10.2 Material: Manufacturer shall certify that the ductile iron conforms to ASTM A536 grade 70-50-05 or 80-55-06. Castings must contain a minimum of 85% recycled content.

2.1.2.10.3 Markings: The top of manhole covers shall have the country of origin and manufacturers identification. The cover shall have "WATER" permanently cast into the cover in 2" Gothic lettering. The bottom of the casting shall have the product name or series number, part number, production date (example: mm/dd/yy) for tracking purposes, and material quality (such as ASTM A536) to verify the materials used. Castings without proper markings shall be rejected.

2.1.2.10.4 Product Specifics:

Cover: Covers and grates shall be provided with a continuous vulcanized one piece EPDM gasket with a shore durometer of 70 ±5 permanently attached to the cover. An integrated Slip Resistant surface shall be cast into the cover surface. The hinge shall have a drain to allow for proper debris and foreign object removal. The cover or grate shall positively lock at 90° to prevent accidental closure and open fully to 120°. For ergonomic purposes the cover or grate must be removable at 120°. The cover shall also include a single multi-tool lifting slot adjacent to the edge of the cover and opposite to the hinge to facilitate opening/lifting/prying once unlocked. The lifting slot must be open to the edge of the cover to allow for prying. The cover shall have no less than 24 each, one inch diameter vent holes. Nominal cover diameter shall be 38" with a 36" clear opening.

Frame: Frame shall have a 36" clear opening. Frames shall have a minimum of four 1" holes/slots for anchoring purposes. Frames shall be 6" in height. Slots for embedment/lightening are not allowed in frame flange.

- 2.1.2.10.5 These castings are manufactured to withstand highway traffic loads, exceeding AASHTO H-20/HS-20 specifications (wheel loads of 16,000 pounds with a tire contact area of 8" x 20").

## 2.2 SOURCE QUALITY CONTROL

2.2.1 Test Equipment: Instruments, gages, and other testing and measuring equipment of proper range, type, and accuracy to verify conformance with specification requirements.

2.2.1.1 Ensure equipment is calibrated and certified at annual intervals.

2.2.1.2 Calibrate against measurement standards with known relationship to existing national standards.

2.2.1.3 Calibrate and certify gages on equipment to which they belong, and keep them on equipment following certification.

2.2.1.4 Do not use instruments, gages, testing, and measuring equipment found to be out of calibration or adjustment until applicable requirements have been met.

2.2.1.5 Calibration by agency regularly engaged in this type of activity.

2.2.2 Precast Manhole Testing

2.2.2.1 Joint and Barrel Testing: ASTM C443.

- 2.2.2.1.1 Plant vacuum testing: ASTM C1244.
- 2.2.3 Acceptance Procedure for Concrete Strength of Precast Manhole Sections: Procedure applies to acceptance and approval of precast manhole bases, riser, and cone sections, flat top slabs, and grade rings.
  - 2.2.3.1 Concrete Design Mix Approval: Based on submittal specified above herein.
    - 2.2.3.1.1 The Owner will issue approval for up to 3 years, provided design mix materials and sources are not changed and in-plant concrete testing of manhole sections continues to be accepted without rejection of more than 2 days' production in a row.
      - 2.2.3.1.1.1 Every 3 years thereafter, and under failure conditions stated above resubmit concrete design mix for approval.
      - 2.2.3.1.1.2 Production from mixes other than those approved will be rejected.
    - 2.2.3.1.2 Compressive strength test: ACI 301 and ACI 318.
- 2.2.4 Vaults and Other Precast Concrete Structures
  - 2.2.4.1 Determination of concrete compressive strength: from compressive tests made on concrete cylinders.
  - 2.2.4.2 Unless otherwise specified, retain independent testing facility approved by Engineer for molding, capping, and testing concrete cylinders following appropriate ASTM requirements or, at Engineer's option, make cylinders and use own equipment to test.
    - 2.2.4.2.1 Furnish test results to Engineer.
    - 2.2.4.2.2 Engineer may require core samples of finished products.
    - 2.2.4.2.3 When requested by Engineer, furnish compressive test specimens for testing in addition to requirements above, and continue to monitor quality of concrete.
  - 2.2.4.3 Notify Engineer at least 10 working days prior to pouring any structure.
  - 2.2.4.4 The Owner may perform random or full inspections of manufacture of boxes, vaults, and precast structures to inspect:
    - 2.2.4.4.1 Steel placement and size.
    - 2.2.4.4.2 Overall fabrication.
    - 2.2.4.4.3 Workmanship.
    - 2.2.4.4.4 Other general or specific aspects of production and specification compliance.

## 2.3 PAINTING

Paint the exterior surfaces of all precast concrete structures for subgrade service in accordance with SECTION 09 06 91 SUBGRADE SERVICE CONCRETE COATING.

## PART 3 - EXECUTION

### 3.1 EARTHWORK

- 3.1.1 The Contractor shall prepare an excavation large enough to accommodate the structure and permit grouting of openings and backfilling operations.
- 3.1.2 The bottom of the structure shall be placed on 6 inches of compacted, crushed rock subbase, and graded level to the elevation as shown on the plans.
- 3.1.3 Vault excavations shall be backfilled with imported granular material to a minimum relative density of 95 percent standard proctor method as determined by ASTM D-698.

### 3.2 INSTALLATION

- 3.2.1 Openings or “knockouts” in precast concrete vaults shall be located as shown on the drawings and shall be sized sufficiently to permit passage of the largest dimension of pipe and/or flange.
- 3.2.2 Upon completion of installation, all voids or openings in the vault walls around pipes shall be filled with 3,000 psi non-shrink grout.
- 3.2.3 After the structure and all appurtenances are in place and approved, backfill shall be placed to the original ground line or to the limits designated on the plans.
- 3.2.4 All joints between precast concrete vault sections shall be made watertight. The plastic joint sealing compound shall be installed according to the manufacturer’s recommendations to provide a watertight joint which remains impermeable throughout the design life of the structure. The outside of the entire structure shall be coated with an approved waterproofing material.
- 3.2.5 Access doors shall be built up such that the hatch is flush with the surrounding surface unless otherwise specified on the drawings or by the Engineer. The Contractor is responsible for placing the cover at the proper elevation where paving is to be installed and shall make all necessary adjustments so that the cover meets these requirements.
- 3.2.6 Ladders shall be installed using Type 316 stainless steel capsule anchors.
- 3.2.7 Ladders shall be attached a minimum of 3 places to the vault wall.
- 3.2.8 Ladder shall be centered under access door opening.

### 3.3 FIELD QUALITY ASSURANCE

- 3.3.1 Perform field testing of precast concrete structures required under other sections of these specifications.

\*\*\* END OF SECTION \*\*\*

Project:		Hwy 41 Water Main, Phase IV	
Location:		GMO, 1170 Atlanta Industrial Drive, Marietta, GA 30066	
Meeting:		PreBid Meeting Attendance	
Name	Organization	Phone	Date:
			March 12, 2015
			eMail
Jim Puffer	ATKINS	770-933-0280	gil.puffer@atkinslab.com
Karen Johnson	CCMWA	41-392-7294	KJANNEX@CCMWA.ORG
Albert Sealy	Seal for L. H. Ind.	256-689-1308	albert.sealy@sealy.com
Elting Johnson	Superior Water Services	(770) 514-3227 x26	eljohnson@superiorwtr.com
Corrie Dukes	Precision Blasting	770-949-0668	cdukes@pblasting.com
Eric Kuehneld	Thalke Const	919-241-1635	erick@thalke.com
Bob Whitefield	NOVA	404-374-8826	bwhtc@NOVA.COM
John Lamica	CCMWA	678-409-4149	jlamica@CCMWA.org
Scott Cline	Ruby-Collins, Inc.	404-392-8340	scott@ruby-collins.com
Tim Dunn	LAYNE	404-323-7646	TIM.DUNN@LAYNE.COM
Mark Daniels	WHP	404-316-2078	MDANIELS@WHP.COM
Zach Humphrey	Beves Contracting Co.	770-271-1159	ZHumphrey@BevesContracting.com
London Blewitt	Gorney Construction	423-522-7418	lblewitt@gorney.com
Brian Beardsley	JOHN D STEPHENS	770-972-8000	BBEARDSLEY@JANDSTEPHENS.COM
Jeanathan Strack	Strack, Inc.	770-949-1591	jeanathan@strackinc.com
Joe Strack	Strack Inc	404-423-0871	joe@strackinc.com
ALAN HANBY	UNITY CONSTRUCTION	770-943-9886	ALANUNITY@BELLSOUTH.NET
Joel Reever	HAYES PIPE SUPPLY	770-519-8883	jreever@hayespipe.com
Self Ridgett	Atkins	770-605-1035	jsridgett@atkins.com
Steven Archer	John D. Stephens, INC	770-972-8000	s.archer@jandstephens.com
Sharon Reynolds	Smullin	678-629-0449	Sharon@smullin.com

# Cobb County Marietta Water Authority (CCMWA) Highway 41 Pre-Bid Meeting Minutes

---

<b>Date:</b>	<b>Thursday, March 12, 2015</b>
<b>Time:</b>	<b>10:00 A.M</b>
<b>Location:</b>	<b>CCMWA (Marietta, GA)</b>
<b>Host:</b>	<b>Gil Puffer</b>

## **Introductions:**

### **Gil Puffer:**

Can everybody hear me OK? Ok, thank you. My name is Gill Puffer I am with Atkins. I'm just going to introduce some of the people in the room from the owner to the engineering side. The gentleman over there is Jeff Padgett. He will be our Field Representative on this job. Another gentleman in the back is John Lamica. He's the pipe line Operations Manager and for the owner is Ken Janney. He is the Project Manager for the Cobb County Marietta Water Authority.

### **Thanks:**

We thank you for your interest in this project. From both the owners point of view and the engineers point of view.

We are recording this and we are going to transcribe the minutes of this and we will make this available. If you have a question, please identify yourself, and the company you are with and I'll try also to repeat the question so that it is very clear, if you have any questions. We have a signup sheet in the front. I think everybody signed in, but if anybody comes in, please make sure you're signed in.

Other people who are going to be important on this job are in particular in terms of operations is GDOT. The gentleman who is the District 7, Area 2 Maintenance Engineer is Sabastian Nesbitt. We have very good working relationships with them and their two concerns are traffic safety for the public and to see that anything that is disturbed is repaired to GDOT



standards and that is our intent; that is safe and that we comply and meet the expectations of GDOT. They are in essence our host on the right of way and we very good working relationships and we want to leave behind a good history of working with them.

The two areas of concern for us immediately is safety and we say safety because this is heavily travelled corridor. This large pipe is going to be installed to relatively deep depths and obviously we want a safe job and I know that's your concern as a contractor is to have a safe job. The other issue is that 41, if not, is the most heavily travelled road in Georgia, it is pretty close to the top five. We know that there is going to be traffic interruptions. We have in the "Special Project Conditions" the limitations of work hours, but we've made allowances for the services in regards to traffic control. It is very critical for everybody that we have good safety for the travelling public. Those are two of the top concerns that we have.

**Agenda:**

My agenda here was basically to go over the kind of scope that we have in general just to look at it overall: view of the job and then talk about our time frame and talk about addendum one, which has been sent to all. Plan Holders, you should receive it today and then answer some questions.

**Project:**

So the first start of the job basically, we have it on the tv's. This is beginning of our job and where we are is basically is across from Dobbins air force base and we are connecting onto, what was, Highway 41 Water Main Phase 3. We are going to cross the road and move on the west side. For this section of road on plan sheets 2P through 14, I think, you'll also see a parallel, 16" water main that we are installing in essence for the BLW. That will be installed per their specifications. It is intended that they not be in the same trench. We've located them some distance apart, so that maintenance on one of those lines will not affect maintenance on the other line. But basically we're going to move on a parallel location. We have an intersection which will be difficult. Airport Industrial is a heavily used intersection and

we are required to open cut it, so you have a lot of traffic going through that section. Yellow Freight has a transit facility down that road. It's kind of an industrial area: going cross that intersection will be problematic. It will take some scheduling and coordination to do that safely. We then move up there. What I am trying to do is highlight any areas which we think will be of significant problem. Then what we are doing is moving up towards of the hill and Windy Hill just before Terrell Mill. Approximately just south/North of Terrell Mill we're going to cross 41 with a 54" water main inside an 84" tunnel about 105ft long and that will be the terminal point of Ken Janney' 54" water main which goes at this point over the Quarles Water Treatment Plant. We are trying to provide a future connection for that project with the minimum interruption on Highway 41 in the future. We also have an area that we are starting out for the future of Caswell Parkway that we are limited in the time that we can do that work. We've discussed it with the City of Marietta and we will have thirty days to get that work done. I don't know that is going to be an issue to do that work: we are restricted in the timeframe that we can be in that area. That will be in essence that we currently have a project that you see there. That is where the North terminal point where the project is. We will connect to that work. That work is scheduled to be done, approximately, I have a date in the contract, approximately January 2016. That will be the North Terminus and the Caswell Parkway is the north terminus of BLW project.

We then move south of the tunnel project and connect just inside, basically inside, the City of Smyrna city limits, just south of Capital Cadillac, we're begin laying a 42" water-main, generally along the sidewalk turn lanes of 41 and pretty much heading straight through south of that location. The other location is going to be difficult traffic wise because of the clock tower and as I said south of that is an apartment complex that we have to open cut both those intersections, so those are the areas of concern regarding maintaining traffic and getting that work done. We go basically to the bottom of the creek and from that point we head south continually and we terminate,

basically, just north of Herodian Way. We have a 42" valve that we are putting in there with tee such that in the future, so that the Authority, should if they decide, can extend that line to provide other services and we are going to cross 41 again and tie into existing 36" line, which is just terminated north of Herodian Way. That is general is the scope of work that we're looking at.

We have a relatively deep line and we're trying to maintain 10 ft. of cover. The reason we are trying to maintain 10 ft. of cover is because that GDOT works on this road that provides strong drainage and everything else: it will not affect the water-main in the future.

That typically is the scope of work. Our schedule is approximately one year. We bid this and were awarded April, May, June, probably June giving the time we have to get the contracts executed. We expect the start date, basically, June of this year with the intent of completing June of next year. The reason to do that is to obviously complete this work before the Braves' operations begin in the spring of 2017.

There is going to be a lot of other work going on at the same time. GDOT has significant programs going on; Windy Hill, the Braves have a significant construction program going on at their site and this smaller area of the world we got a lot of work going on at the same time. We will try to get out of the way and be done before everyone else is.

Generally, site access we have on the drawings: easement areas at the north end there is a permanent easement where we begin and that's shown on the drawings as well as we as we put in there the easement drawings legal descriptions. At the south end we have temporary construction, easement access to where we have to put the casing across the road and we have that access provided.

The storage and materials is going to be limited: obviously subject to GDOT approval, but you can see how congested the site is. And those are the bigger issues that we have.

As I have said, we have issued addendum number one. You'll have that. We've added some additional information as to the existing site conditions; north and south. We have changed the valve configuration at the tunnel to a 54" valve versus a 48 with reducers on it to make it a little bit tighter and we have had to change the alignment a little bit towards the roadway more. We've moved it a little bit towards the roadway: approximately 10 ft. Those changes are included. That kind of concludes the scope of work.

The other issue we have, probably a little bit unique. We are bonding the joints for cathodic protections; we have corrosion stations along the route, but on three locations; one at the beginning of the job, one we should have it noted on our drawings, on the west side, 36' side somewhere on their side of the air force base, and on the south termination on the west side, we have gas lines at those locations. Atlanta Gas installed a brand new 12"/24" high pressured gas line on the east side. What we are placing on these pipes at these three locations that are approximately 620 linear feet of it is Stopaq Coating. Albert Sealy is their sales rep. He would be the gentlemen I think you would need to talk to in regards to that material. It is a unique material. Our purpose is to provide cathodic protection to the pipe line. We have had issues in the past to catholically protect the gas lines, so we are trying to take extra steps to protect them.

That is about the scope of work. Do you have anything, Ken, that you would like to add to it.

**Ken Janney:**

No, not really

**Gil Puffer:**

Do you have any questions you would like to ask in terms of?

**Questioner 1:**

Regarding Bores and GDOT refusal to give permit.

**Ken Janney:**

GDOT Utility Permitting would not allow bores at these locations.

**Gil Puffer:**

GDOT and local office are very good to work with. They have been very reasonable. Sabastian has been very good to work

with and I think the people that we have been interacting with have been very good. Their conscientious and I say the two things they're concerned with is the safety and the travelling public and seeing that the facilities are maintained and repaired to what they were or better to what they were. I know we will have good working relationships out there if we do those two things. We have very good working relationships. Any other questions? Yeah, go ahead.

**Questioner 2:**

Can we close lanes of traffic?

**Gil Puffer:**

We can close a lane of traffic. We are restricted, but we can do that. We can close lanes of traffic.

**Questioner 2:**

Between the hours of 9 – 3

**Gil Puffer:**

Right that is the only time we can... Questioner interjects and it is inaudible.

**Questioner 2:**

Inaudible

**Gil Puffer:**

I don't want to leave a lot of plates. This is a heavily travelled road, so from a safety point of view, I don't think those plates is a great thing; there slick, they get wet and so on, so I'd rather put down 3" of just cold patch and try to put that down there; let people travel on that and then I come back and repair that: take that out and put permanent fix in it. We are very limited in terms of our ability to work.

**Questioner 2:**

Inaudible:

**Gil Puffer:**

We would have to leave them so that overnight people could travel

**Gil Puffer:**

Any other questions?

**Questioner 2:**

inaudible, but BLW notes states back fill specification contradicts the trench detail specification.

**Gil Puffer:**

Can you give me a reference on that

**Questioner 2:**

026-01-14 (This may need clarifying)

**Gil Puffer:**

I will address that. But basically, the detail of that, this is on the BLW project. I will make that in writing and address that, but in general I will look for any inconsistency and address that.

**Questioner 2:**

Will the landscape allowance cover Shrubs and trees?

**Gil Puffer:**

Yeah, that's meant to cover shrubberies and trees. Yes, if it a landscaped site and if GDOT approves it: some of that stuff is not GDOT approved, so sometimes we don't have to repair it. If it's landscape, which is beyond the normal course of sod, the intent is to pay that through the landscape allowance.

**Questioner 2:**

Inaudible question

**Gil Puffer:**

Yes, there is no restriction terms of from the right away to the construction we have use of that area.

We have copies of the sign in sheet here.

That's the purpose if we have conflicts with utility: that's the purpose of it, strong drains. I think we've identified all of those, which we typically put underneath

**Questioner 3:**

inaudible question but notes state question regarding allowance for valves. Have they been pre-purchased?

**Gil Puffer:**

They have not be pre-purchased, but we have specified.

There are flex-ring connections with the exception of the 54' valve.

**Questioner 3:**

Will field yielding be allowed if pipe does not match flex ring?

**Gil Puffer:**

The valve allowance will pay for the adaptor. That adaptor goes from flex ring to a US pipe it will pay for that adaptor. So the purpose of the allowance is so that US Pipe can bid, American can bid, and that there is no advantage to American because we are using the proprietary valve. So that the adaptor we get from American would be adapted to the valve and would adapt for your purposes.

Other questions?

OK, I will ask you this. I had a request for an electronic bid tab, so that you guys could use that. If you wish to have that electronic bid tab, send me an email and I will forward that to you for the purposes in the bidding. It has all the normal caveats and everything. Basically, I have generated an electronic bid tab if you wish to use that in your work in putting your pricing together.

In the absence of any other questions, we appreciate your interest, we appreciate your time. Thank you very much for attending this meeting and we look forward to your bids. As we said before we have sign-in sheets over here.

**Meeting Closed**