



CITY OF ATLANTA

Kasim Reed
Mayor

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DEPARTMENT OF PROCUREMENT
Adam L. Smith, Esq., CPPO, CPPB, CPPM, CPP,
CIPC, CISCC, CIGPM
Chief Procurement Officer
asmith@atlantaga.gov

December 14, 2015

Dear Potential Proponents:

Re: FC-8473, Annual Contract Large Water Meter Testing and Repairs

Attached is one (1) copy of **Addendum Number 2**, which is hereby made a part of the above-referenced project.

For additional information, please contact Mr. Karl Walbrook, Contracting Officer, at (404) 865-6517 or by email at kwalbrook@atlantaga.gov.

Sincerely,


Adam L. Smith

ALS/kpw



ADDENDUM NO. 2

This Addendum No.2 forms a part of the Request for Proposals and modifies the original solicitation package and any prior Addenda as noted below and is issued to incorporate the following:

1. Questions and Answers:

A total of four (4) questions and answers are attached hereto as **Attachment No. 1.**

2. Exhibit D (Revised):

Exhibit D Bid Schedule and Pricing Information was revised and is attached in its entirety hereto as **Attachment No. 2.**

3. Service Agreement Definitions (Added):

The Service Agreement Definitions are attached hereto as **Attachment No. 3.**

4. Scope of Work or Services, Table of Contents (Revised):

The revised Table of Contents is attached hereto in its entirety as **Attachment No. 4.**

5. Scope of Work or Services, Table No. 4, Work Order Report Fields (Revised):

The Work Order Report Fields, Table No. 4. has been revised (12.11.15) and is attached hereto as **Attachment No. 5.**

6. Revised Description of Scope of Services (Revised):

The revised Description of Scope of Services (revised 12/11/15) is attached hereto as **Attachment No. 6.**

7. Exhibit E – Scope of Work or Services: The following Sections have been amended as follows: In the following Sections: Section 1 Paragraph 4, Section 7.e.i. Paragraph 2, Section 7.g.ii., Section 10.a.i.v Paragraph 3, Change “Meter Box” to “Meter Installation”.

8. Exhibit E—Scope of Work or Services

The following Section has been amended as follows:

Section 5.a.- Change paragraph 1 to read:

The Service Provider shall coordinate the Services with the City in a manner which allows the Service Provider to complete the Services efficiently and effectively and the City to perform its work and manage the Agreement in an efficient and effective manner. Such coordination shall include, but not be limited to, planning the Services, complying with Submittal requirements, attending meetings, participating in conference calls, performing field coordination and providing the communication necessary to achieve this objective.



FC-8473, Annual Contract Large Water Meter Testing and Repair

Addendum No. 2

December 14, 2015

Page 3

Section 5.a.- Change paragraph 3 to read, “The Service Provider shall work with the City to ensure the processes and procedures developed for the Service Provider to execute the Services and the City to perform supporting work are efficient and effective.”

Section 5.c. - Change the first sentence to read, “The Service Provider shall coordinate the Services with the City and owners of private and public property.”

Section 5.c. - Delete paragraphs 2 and 3.

Section 7.g.ii. - Delete line item 3 which reads, “Meter Boxes from which mud cannot be removed.” Renumber remaining line items.

Section 10.a.ix--Change this section, and its title, to read as follows:

X. Removal of Water, Debris and Mud from Meter Installations.

The Service Provider is responsible for dewatering the Meter Installations as necessary to complete all Work Orders. The Service Provider is also responsible for removing mud and debris from Meter Installations only as necessary to complete all Work Orders. Mud and debris removal is considered to be limited when the in-place volume of mud and debris required to be removed is less than or equal to 3 cubic feet, and the removal of mud and debris from valve boxes and sleeves can be accomplished using hand tools (e.g. augers, rock picks, etc.) If the removal of more than 3 cubic feet of mud and debris from the meter box is required, or air/water flushing of the valve sleeve or valve box is required, such shall be noted on the Work Order as a Recommended Repair. For Work Orders that require the City to remove mud or debris, the processes for determining whether the Work Order will be closed or further coordinated by the Service Provider with the City shall be included in the Work Plan.

In the second paragraph of the following Sections, change “Meter Boxes” to “Meter Installations”: Section 10.b.i, Section 10.c.i, and Section 10.d.i.

9. Exhibit E—Scope of Work or Services

Section 10.a.x. Change Section 10.a.x, and its title, to read as follows:

10.a.xi. Performance of Shutdowns and Test Shutdowns

When required to perform the Services a Shutdown and/or Test Shutdown shall be performed. Except as otherwise approved by the Customer, the Service Provider shall provide Customers with a minimum of seventy two (72) hours of notice prior to performing a Shutdown, and twenty four (24) hours of notice prior to performing a Test Shutdown. Prior to performing a Shutdown the Service Provider shall perform a Test Shutdown.



Should the Service Provider desire the City to perform the Shutdown and/or Test Shutdown, such shall be identified as a Recommended Repair.

Procedures for determining when Test Shutdowns and Shutdowns are required; how Test Shutdowns and Shutdowns will be coordinated, performed and documented; and whether a work order will be closed or further coordinated by the Service Provider with the City when the performance of a Shutdown or Test Shutdown by the City is required, shall be included in the Work Plan.

10. The last day to submit questions has been extended to Tuesday, December 15, 2015 at 5:00 P.M. EST. Only questions relating to this Addendum No. 2 may be posed.

11. Update of Project Reassignment:

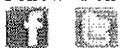
The new Contracting Officer for FC-8473, Annual Contract Large Water Meter Testing and Repairs, is Karl Walbrook.

The last day for questions has changed and is Tuesday, December 15, 2015 at 5:00 P.M. EST.

The Proposal due date HAS been modified and Proposals are due on Wednesday, December 23, 2015 and should be time stamped in no later than 2:00 P.M. EST and delivered to the address listed below:

Adam L. Smith, Esq., CPPO, CPPB, CPPM, CPP,
CIPC, CISCC, CIGPM
Chief Procurement Officer
Department of Procurement
55 Trinity Avenue, S. W.
City Hall South, Suite 1900
Atlanta, Georgia 30303

****All other pertinent information is to remain unchanged****



**FC-8473, Annual Contract Large Water Meter Testing and Repair
Addendum No. 2
December 14, 2015
Page 5**

Acknowledgment of Addendum No. 2

Proponents must sign below and return this form with Proposal to the Department of Procurement, 55 Trinity Avenue, City Hall South, Suite 1900, Atlanta, Georgia 30303 as acknowledgment of receipt of this Addendum.

This is to acknowledge receipt of Addendum No. 2 for **FC-8473, Annual Contract for Large Water Testing and Repairs** on this the _____ day of _____, 20__.

Legal Company Name of Proponent

Signature of Authorized Representative

Printed Name

Title

Date



ATTACHMENT NO. 1

Questions and Answers

ATTACHMENT 1

FC-8473, Annual Contract Large Water Meter Testing and Repairs Questions/Answers

Question 1:

We hold Utility Contractor's License status in AR, MS, LA and TN which are reciprocating with the State of Georgia. We are asking you to please reconsider the requirement, stated in the bid above, to hold a Georgia Utility Contractor's License to place a bid for this project.

Answer: No.

Question 2:

Will the city consider adding a bid item for the removal of mud/debris from the vault based on size? The City may get better pricing instead of adding the cost to the site surveys, because not all vaults need to be cleaned.

Answer: The City's intent is for the Service Provider to remove small quantities of mud and debris such that the Work Orders can be completed without invoking the use of City forces. Typically this type of work does not require the removal of large amounts of mud and debris, but some removal is required to read numbers, operate valves, open meters, remove meters for off-site testing, etc. To clarify the City's intent Exhibits D and E have been modified. See Addendum No. 2, Item Nos. 2 and 8.

Question 3:

Will the City provide any meter parts in order to make repairs to the meters.

Answer: The bid documents discuss whether the Service Provider or the City will provide Parts. The Parts to be provided by the City or the Service Provider are listed in Table 2 of Exhibit D which is included with this Addendum as Attachment No. 2. All other parts needed to make repairs are Incidentals and shall be provided by the Service Provider. See Section 9.g of the Scope of Work or Services and the information regarding Table 2 in Exhibit D.

Question 4:

If the customers water service has to be turned off or interrupted in order to make necessary repairs to the meters, will the City's personnel compete the task of turning water service on/off?

Answer: The City has revised the Bid Documents to allow the Service Provider to request the City to perform Shutdowns and Test Shutdowns. See Addendum No. 2 Item No. 10.

ATTACHMENT NO. 2

Exhibit D (Revised 12-11-15)

EXHIBIT D

BID SCHEDULE AND PRICING INFORMATION

FC-8473, Annual Contract for Large Water Meter Testing and Repair

Description of Bid Items

The Bid Items, including the Unit Prices included in Tables 1 and 2, are inclusive of all Services included in the Agreement. The descriptions of the Bid Items correlate with the Bid Items presented in the Large Water Meter Testing and Repair Bid Schedule, which includes Tables 1 and 2. All Bid Items must be completed including the Bid Items identified in Tables 1 and 2.

Section 1 – Primary Bid Items

Bid Item 1--Data Management System: The lump sum price for this bid item includes all Services required to develop and implement the Data Management System. Once the City has signed off on the development and implementation of the Data Management System, the lump sum price for this bid item shall be submitted in a Payment Request. Thereafter, all Services associated with the Data Management System, shall be included in the unit price for Bid Items 2 through 11 below.

Bid Item 2--Site Survey Work Order (WO): The unit price for a Site Survey Work Order; includes all Services required to perform a Site Survey.

Bid Item 3— On-Site Survey & Test WO: The unit price for a performing an On-Site Survey & Test WO includes all Services required to perform a Survey & Test WO with On-Site Testing, with the exception that installation of a test port nipple, if required, is included in Bid Item 5.

Please Note: When a meter for which a Survey & Test WO has been issued and the meter would be tested on-site but cannot be tested due to the need for Recommended Repairs, the meter shall not be tested and the WO shall be billed at the contract price for a Site Survey WO.

Bid Item 4—On-Site Survey Test & Repair WO: The unit price for a performing an On-Site Survey Test & Repair WO includes all Services required to perform a Survey Test & Repair WO with On-Site Testing, with the exception that installation of a test port nipple, if required, is included in Bid Item 5, and the unit prices for purchasing and installing Parts are included in Table 2.

Please Note: When a meter for which a Survey Test & Repair WO has been issued and the meter would be tested on-site but cannot be tested due to the need for Recommended Repairs, the meter shall not be tested or repaired and the WO shall be billed at the contract price for a Site Survey WO. If the meter is properly identified as Ready to Test but fails the Meter Test as a result of Recommended Repairs which could not have been identified as part of the Site Survey and are outside the scope of Meter Repair covered under this Agreement, repairs shall not be made and the WO shall be billed at the contract price for a Survey & Test WO.

Bid Item 5--Installation of Test Port Nipple: The unit price for the Installation of a Test Port Nipple includes all materials, equipment, labor and Incidentals required to perform the Services necessary to install a test port nipple.

Bid Item 6 -- Off-Site Survey & Test WO: The unit price for performing an Off-Site Survey & Test WO includes all Services required to perform a Survey & Test WO which includes Off-Site Testing, with the exception that the unit prices for purchasing and installing Parts are included in Table 2.

Please Note: When a meter for which a Survey & Test WO has been issued and the meter would be tested off-site but cannot be removed due to the need for Recommended Repairs, the meter shall not be removed or tested and the WO shall be billed at the contract price for a Site Survey WO.

Bid Item 7—Off-Site Survey Test & Repair WO: The unit price for a performing an Off-Site Survey Test & Repair WO includes all Services required to perform a Survey Test & Repair WO which includes Off-Site Testing, with the exception that installation of a test port nipple, if required, is included in Bid Item 5, and the unit prices for purchasing and installing Parts are included in Table 2.

Please Note: When a meter for which a Survey Test & Repair WO has been issued and the meter would be tested off-site but cannot be removed due to the need for the City to perform a Test Shutdown and/or Shutdown, or repairs that are not covered as part of the Scope of Services, the meter shall not be tested or repaired and the WO shall be billed at the contract price for a Site Survey WO.

Section 2 – Parts

This item provides funding for Parts. Parts shall be charged in accordance with the unit prices provided in Table 2.

Section 3--Allowance

This item provides funding for Optional Work Orders, updates to the Data Management System, or other unforeseen Services associated with surveying, inspecting, repairing and testing large meters, including 1 ½ and 2-inch meters. This item may also be used to fund additional Primary Bid Items and Parts. Optional Work Orders and Parts shall be charged in accordance with the unit prices provided in Tables 1 and 2.

TABLE 1 – UNIT PRICES FOR OPTIONAL WORK ORDERS

Please Note: Table 1 includes Bid Items 8 through 10. The unit prices in Table 1 will be included in the Agreement and will be considered in the bid evaluation but are not included in the Bid Total.

Bid Item 8--On-Site Meter Test WO: The unit price for a performing an On-Site Meter Test WO includes all Services required to perform a Meter Test in the field, with the exception that installation of a test port nipple, if required, is included in Bid Item 5.

Please Note: When a meter for which a Meter Test WO has been issued and the meter would be tested on-site but cannot be tested due to the need for Recommended Repairs, the Service Provider may charge a service fee equal to the price of the Meter Test or \$175.00 (whichever is less) provided all Recommended Repairs were listed on the Site Survey Report if a Site Survey WO was issued.

Bid Item 9—On-Site Meter Test & Repair WO: The unit price for a performing an On-Site Meter Test & Repair WO includes all Services required to perform a Meter Test & Repair WO with On-Site Testing, with the exception that installation of a test port nipple, if required, is included in Bid Item 5, and the unit prices for purchasing and installing Parts are included in Table 2.

Please Note: When a meter for which a Meter Test & Repair WO has been issued and the meter would be tested on-site but cannot be tested due to the need for Recommended Repairs, the Service Provider may charge a service fee equal to the price of the Meter Test or \$175.00 (whichever is less) provided all Recommended Repairs were listed on the Site Survey Report if a Site Survey WO was issued. If the meter is Ready to Test but fails the Meter Test as a result of Recommended Repairs which are outside the scope of Meter Repair covered under this Agreement, repairs shall not be made and the WO shall be billed at the contract price for a Meter Test WO.

Bid Item 10—On-Site Meter Repair WO: The unit price for a performing an On-Site Meter Repair WO includes all Services required to perform a Meter Repair with the exception that the unit prices for purchasing and installing Parts are included in Table 2.

Please Note: When a meter for which a Meter Repair WO has been issued and the meter would be repaired on-site but cannot be repaired do to the need for the City to perform a Test Shutdown and/or Shutdown, or Recommended Repairs which are outside the scope of Meter Repair covered under this Agreement, the Service Provider may charge a service fee equal to the price of the Meter Repair or \$175.00 (whichever is less).

TABLE 2 – UNIT PRICES FOR PARTS

Please Note: Table 2 includes Bid Item 11. The unit prices in Tables 2 will be included in the Agreement and will be considered in the bid evaluation but are not included in the Bid Total.

Bid Item 11—Parts: The unit price listed in the column titled “Purchase Price” shall be the Service Provider’s cost for purchasing the Part, including shipping and handling charges from the manufacturer. No markup shall be included. All other costs associated with replacing a Part shall be included in the unit price listed in the column titled “Labor”. Payment of this Bid Item shall be complete payment for obtaining and installing a Part. All parts which are not listed as a Part on the Bid Form shall be considered Incidentals.

Note: The City will supply new meters when replacement meters are required. For all other Parts the City may elect to supply the Parts. Should the City elect to supply Parts, no payment will be made for the “Purchase Price” of the Part.

BID SCHEDULE

CITY OF ATLANTA
DEPARTMENT OF WATERSHED MANAGEMENT
FC - 8473
ANNUAL CONTRACT FOR LARGE METER TESTING AND REPAIR
BID SCHEDULE

The City reserves the right to add or delete quantities under each Bid Item and the Contractor agrees to perform the Work for the unit price listed in its bid.

The Bid Items, including the Unit Prices included in Tables 1 and 2, are inclusive of all Services included in the Agreement. The descriptions of the Bid Items correlate with the Bid Items presented in the Large Water Meter Testing and Repair Bid Schedule, which includes Tables 1 and 2. All Bid Items must be completed including the Bid Items identified in Tables 1 and 2.

SECTION 1 -- PRIMARY BID ITEMS

BID ITEM NO.	ITEM	ESTIMATED QUANTITY	UNIT	BID UNIT PRICE	EXTENDED BID PRICE
1	DATA MANAGEMENT SYSTEM (SEE BID ITEM 1 ON PAGE 1)	1	Lump Sum	\$ _____	\$ _____
2	SITE SURVEY W.O (SEE BID ITEM 2 ON PAGE 1)				
2a	Meters < 3-inches	400	each	\$ _____	\$ _____
2b	Meters ≥ 3-inches	400	each	\$ _____	\$ _____
3	ON-SITE SURVEY & TEST W.O (SEE BID ITEM 3 ON PAGE 1)				
3a	Compound and Turbine Meters				
3a1	3-inch	320	each	\$ _____	\$ _____
3a2	4-inch	280	each	\$ _____	\$ _____
3a3	6-inch	260	each	\$ _____	\$ _____
3a4	8-inch	170	each	\$ _____	\$ _____
3a5	10-inch	15	each	\$ _____	\$ _____

3b	Fire Service Meters				
3b1	4-inch	170	each	\$ _____	\$ _____
3b2	6-inch	60	each	\$ _____	\$ _____
3b3	8-inch	35	each	\$ _____	\$ _____
3b4	10-inch	5	each	\$ _____	\$ _____
3b5	12-inch	5	each	\$ _____	\$ _____
4	ON-SITE SURVEY TEST & REPAIR W.O (SEE BID ITEM 4 ON PAGE 1)				
4a	Compound and Turbine Meters				
4a1	3-inch	80	each	\$ _____	\$ _____
4a2	4-inch	70	each	\$ _____	\$ _____
4a3	6-inch	60	each	\$ _____	\$ _____
4a4	8-inch	40	each	\$ _____	\$ _____
4a5	10-inch	5	each	\$ _____	\$ _____
4b	Fire Service Meters				
4b1	4-inch	40	each	\$ _____	\$ _____
4b2	6-inch	10	each	\$ _____	\$ _____
4b3	8-inch	10	each	\$ _____	\$ _____
4b4	10-inch	5	each	\$ _____	\$ _____
4b5	12-inch	1	each	\$ _____	\$ _____

5	INSTALLATION OF TEST PORT NIPPLE (SEE BID ITEM 5 ON PAGE 2)				
5a	3" Meter (All Types)	5	each	\$ _____	\$ _____
5b	4" Meter (All Types)	5	each	\$ _____	\$ _____
5c	6" Meter (All Types)	5	each	\$ _____	\$ _____
5d	8" Meter (All Types)	5	each	\$ _____	\$ _____
5e	10" Meter (All Types)	1	each	\$ _____	\$ _____
5f	12" Meter (All Types)	1	each	\$ _____	\$ _____
6	OFF-SITE SURVEY & TEST W.O (SEE BID ITEM 6 ON PAGE 2)				
6a	Compound and Turbine Meters				
6a1	3-inch	30	each	\$ _____	\$ _____
6a2	4-inch	30	each	\$ _____	\$ _____
6a3	6-inch	30	each	\$ _____	\$ _____
6a4	8-inch	20	each	\$ _____	\$ _____
6a5	10-inch	2	each	\$ _____	\$ _____
6b	Fire Service Meters				
6b1	4-inch	20	each	\$ _____	\$ _____
6b2	6-inch	10	each	\$ _____	\$ _____
6b3	8-inch	10	each	\$ _____	\$ _____
6b4	10-inch	2	each	\$ _____	\$ _____
6b5	12-inch	1	each	\$ _____	\$ _____
7	OFF-SITE SURVEY TEST & REPAIR W.O (SEE BID ITEM 7 ON PAGE 2)				
7a	Compound and Turbine Meters				
7a1	3-inch	5	each	\$ _____	\$ _____
7a2	4-inch	5	each	\$ _____	\$ _____
7a3	6-inch	5	each	\$ _____	\$ _____

7a4	8-inch	5	each	\$ _____	\$ _____
7a5	10-inch	2	each	\$ _____	\$ _____
7b	Fire Service Meters				
7b1	4-inch	5	each	\$ _____	\$ _____
7b2	6-inch	5	each	\$ _____	\$ _____
7b3	8-inch	5	each	\$ _____	\$ _____
7b4	10-inch	2	each	\$ _____	\$ _____
7b5	12-inch	1	each	\$ _____	\$ _____
TOTAL FOR ITEMS 1 - 7					\$ _____

SECTION 2-- PARTS

Parts	1	each	\$200,000.00	Included in Bid Summary Below
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SECTION 3-- ALLOWANCE FOR CONTINGENCY

Contingency	1	each	\$100,000.00	Included in Bid Summary Below
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BID SUMMARY

SECTION	ITEM	AMOUNT
1	Primary Bid Items (ITEMS 1 - 7)	\$ _____
2	Allowance for Parts	\$200,000.00
3	Allowance for Contingency	\$100,000.00

BID TOTAL -- SECTIONS 1, 2 AND 3 INCLUSIVE

\$ _____

In Words:

**TABLE 1 – UNIT PRICES FOR OPTIONAL
WORK ORDERS**

TABLE 1
UNIT PRICES FOR OPTIONAL WORK ORDERS (NOT INCLUDED IN BID TOTAL)

The Bid Items, including the Unit Prices included in Tables 1 and 2, are inclusive of all Services included in the Agreement. The descriptions of the Bid Items correlate with the Bid Items presented in the Large Water Meter Testing and Repair Bid Schedule, which includes Tables 1 and 2. All Bid Items must be completed including the Bid Items identified in Tables 1 and 2.

BID ITEM NO.	ITEM	ESTIMATED QUANTITY	UNIT	BID UNIT PRICE
8	ON-SITE METER TEST W.O			NB: SEE ITEM 8, PAGE 5
8a	Compound and Turbine Meters			
8a1	3-inch	1	each	\$ _____
8a2	4-inch	1	each	\$ _____
8a3	6-inch	1	each	\$ _____
8a4	8-inch	1	each	\$ _____
8a5	10-inch	1	each	\$ _____
8b	Fire Service Meters			
8b1	4-inch	1	each	\$ _____
8b2	6-inch	1	each	\$ _____
8b3	8-inch	1	each	\$ _____
8b4	10-inch	1	each	\$ _____
8b5	12-inch	1	each	\$ _____

TABLE 1**UNIT PRICES FOR OPTIONAL WORK ORDERS (NOT INCLUDED IN BID TOTAL)**

9		ON-SITE METER TEST & REPAIR W.O			NB: SEE ITEM 8, PAGE 4	
9a		Compound Meter				
9a1	3-inch	1	each	\$ _____		
9a2	4-inch	1	each	\$ _____		
9a3	6-inch	1	each	\$ _____		
9a4	8-inch	1	each	\$ _____		
9a5	10-inch	1	each	\$ _____		
9b		Fire Service Meter				
9b1	4-inch	1	each	\$ _____		
9b2	6-inch	1	each	\$ _____		
9b3	8-inch	1	each	\$ _____		
9b4	10-inch	1	each	\$ _____		
9b5	12-inch	1	each	\$ _____		
10		ON-SITE METER REPAIR W.O			NB: SEE ITEM 8, PAGE	
10a		Compound Meter				
10a1	3-inch	1	each	\$ _____		
10a2	4-inch	1	each	\$ _____		
10a3	6-inch	1	each	\$ _____		
10a4	8-inch	1	each	\$ _____		
10b5	10-inch	1	each	\$ _____		

TABLE 1**UNIT PRICES FOR OPTIONAL WORK ORDERS (NOT INCLUDED IN BID TOTAL)**

10b	Fire Service Meter			
10b1	4-inch	1	each	\$ _____
10b2	6-inch	1	each	\$ _____
10b3	8-inch	1	each	\$ _____
10b4	10-inch	1	each	\$ _____
10b5	12-inch	1	each	\$ _____

In the sole discretion of the City, unbalanced Unit Prices may deem the bidder non-responsive.

BID SCHEDULE

TABLE 2 – UNIT PRICES FOR PARTS

TABLE 2
UNIT PRICES FOR PARTS (NOT INCLUDED IN BID TOTAL)

The Bid Items, including the Unit Prices included in Tables 1 and 2, are inclusive of all Services included in the Agreement. The descriptions of the Bid Items correlate with the Bid Items presented in the Large Water Meter Testing and Repair Bid Schedule, which includes Tables 1 and 2. All Bid Items must be completed including the Bid Items identified in Tables 1 and 2.

BID ITEM NO.	ITEM	ESTIMATED QUANTITY	UNIT	PURCHASE PRICE ^{(1) (2)} (Column A)	LABOR (Column B)	BID UNIT PRICE ^{(1) (2)} (Col A + Col B)
11	PARTS	NB: SEE ITEM 11, PAGE 5				
11a	Positive Displacement Meters					
11a1	5/8" Positive Displacement Meter					
11a1a	Complete Meter	1	each	\$ _____	\$ _____	\$ _____
11a2	3/4" Positive Displacement					
11a2a	Complete Meter	1	each	\$ _____	\$ _____	\$ _____
11a3	1" Positive Displacement Meter					
11a3a	Complete Meter	1	each	\$ _____	\$ _____	\$ _____
11a3b	T-10 Chamber Assembly	1	each	\$ _____	\$ _____	\$ _____
11a4	1 1/2" Positive Displacement Meter					
11a4a	Complete Meter	1	each	\$ _____	\$ _____	\$ _____
11a4b	T-10 Chamber Assembly	1	each	\$ _____	\$ _____	\$ _____
11a5	2" Positive Displacement Meter					
11a5a	Complete Meter	1	each	\$ _____	\$ _____	\$ _____
11a5b	T-10 Chamber Assembly	1	each	\$ _____	\$ _____	\$ _____

TABLE 2
UNIT PRICES FOR PARTS (NOT INCLUDED IN BID TOTAL)

11b	Compound Meter					
11b1	2" Compound Meter					
11b1a	Complete Meter	1	each	\$ _____	\$ _____	\$ _____
11b1b	Unitized Measuring Element	1	each	\$ _____	\$ _____	\$ _____
11b1c	Rotating Disk Chamber	1	each	\$ _____	\$ _____	\$ _____
11b1d	Turbine Chamber	1	each	\$ _____	\$ _____	\$ _____
11b1e	Automatic Valve	1	each	\$ _____	\$ _____	\$ _____
11b1f	Strainer	1	each	\$ _____	\$ _____	\$ _____
11b2	3" Compound Meter					
11b2a	Complete Meter	1	each	\$ _____	\$ _____	\$ _____
11b2b	Unitized Measuring Element	1	each	\$ _____	\$ _____	\$ _____
11b2c	Rotating Disk Chamber	1	each	\$ _____	\$ _____	\$ _____
11b2d	Turbine Chamber	1	each	\$ _____	\$ _____	\$ _____
11b2e	Automatic Valve	1	each	\$ _____	\$ _____	\$ _____
11b2f	Strainer	1	each	\$ _____	\$ _____	\$ _____
11b3	4" Compound Meter					
11b3a	Complete Meter	1	each	\$ _____	\$ _____	\$ _____
11b3b	Unitized Measuring Element	1	each	\$ _____	\$ _____	\$ _____
11b3c	Rotating Disk Chamber	1	each	\$ _____	\$ _____	\$ _____
11b3d	Turbine Chamber	1	each	\$ _____	\$ _____	\$ _____
11b3e	Automatic Valve	1	each	\$ _____	\$ _____	\$ _____
11b3f	Strainer	1	each	\$ _____	\$ _____	\$ _____

TABLE 2
UNIT PRICES FOR PARTS (NOT INCLUDED IN BID TOTAL)

11b4	6" Compound Meter					
11b4a	<i>Complete Meter</i>	1	each	\$ _____	\$ _____	\$ _____
11b4b	<i>Unitized Measuring Element</i>	1	each	\$ _____	\$ _____	\$ _____
11b4c	<i>Rotating Disk Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11b4d	<i>Turbine Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11b4e	<i>Automatic Valve</i>	1	each	\$ _____	\$ _____	\$ _____
11b4f	<i>Strainer</i>	1	each	\$ _____	\$ _____	\$ _____
11b5	8" Compound Meter					
11b5a	<i>Complete Meter</i>	1	each	\$ _____	\$ _____	\$ _____
11b5b	<i>Unitized Measuring Element</i>	1	each	\$ _____	\$ _____	\$ _____
11b5c	<i>Rotating Disk Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11b5d	<i>Turbine Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11b5e	<i>Automatic Valve</i>	1	each	\$ _____	\$ _____	\$ _____
11b5f	<i>Strainer</i>	1	each	\$ _____	\$ _____	\$ _____
11c	Turbine Meter					
11c1	1 ½" Turbine Meter					
11c1a	<i>Complete Meter</i>	1	each	\$ _____	\$ _____	\$ _____
11c1b	<i>Unitized Measuring Element</i>	1	each	\$ _____	\$ _____	\$ _____
11c1c	<i>Turbine Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11c1d	<i>Strainer</i>	1	each	\$ _____	\$ _____	\$ _____

TABLE 2
UNIT PRICES FOR PARTS (NOT INCLUDED IN BID TOTAL)

11c2	2" Turbine Meter					
11c2a	<i>Complete Meter</i>	1	each	\$ _____	\$ _____	\$ _____
11c2b	<i>Unitized Measuring Element</i>	1	each	\$ _____	\$ _____	\$ _____
11c2c	<i>Turbine Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11c2d	<i>Strainer</i>	1	each	\$ _____	\$ _____	\$ _____
11c3	3" Turbine Meter					
11c3a	<i>Complete Meter</i>	1	each	\$ _____	\$ _____	\$ _____
11c3b	<i>Unitized Measuring Element</i>	1	each	\$ _____	\$ _____	\$ _____
11c3c	<i>Turbine Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11c3d	<i>Strainer</i>	1	each	\$ _____	\$ _____	\$ _____
11c4	4" Turbine Meter					
11c4a	<i>Complete Meter</i>	1	each	\$ _____	\$ _____	\$ _____
11c4b	<i>Unitized Measuring Element</i>	1	each	\$ _____	\$ _____	\$ _____
11c4c	<i>Turbine Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11c4d	<i>Strainer</i>	1	each	\$ _____	\$ _____	\$ _____
11c5	6" Turbine Meter					
11c5a	<i>Complete Meter</i>	1	each	\$ _____	\$ _____	\$ _____
11c5b	<i>Unitized Measuring Element</i>	1	each	\$ _____	\$ _____	\$ _____
11c5c	<i>Turbine Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11c5d	<i>Strainer</i>	1	each	\$ _____	\$ _____	\$ _____

TABLE 2
UNIT PRICES FOR PARTS (NOT INCLUDED IN BID TOTAL)

11c6	8" Turbine Meter					
11c6a	<i>Complete Meter</i>	1	each	\$ _____	\$ _____	\$ _____
11c6b	<i>Unitized Measuring Element</i>	1	each	\$ _____	\$ _____	\$ _____
11c6c	<i>Turbine Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11c6d	<i>Strainer</i>	1	each	\$ _____	\$ _____	\$ _____
11c7	10" Turbine Meter					
11c7a	<i>Complete Meter</i>	1	each	\$ _____	\$ _____	\$ _____
11c7b	<i>Unitized Measuring Element</i>	1	each	\$ _____	\$ _____	\$ _____
11c7c	<i>Turbine Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11c7d	<i>Strainer</i>	1	each	\$ _____	\$ _____	\$ _____
11d	Fire Service Meter					
11d1	4" Fire Service Meter					
11d1a	<i>Complete Meter</i>	1	each	\$ _____	\$ _____	\$ _____
11d1b	<i>Unitized Measuring Element</i>	1	each	\$ _____	\$ _____	\$ _____
11d1c	<i>Turbine Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11d1d	<i>Automatic Valve</i>	1	each	\$ _____	\$ _____	\$ _____
11d1e	<i>Strainer</i>	1	each	\$ _____	\$ _____	\$ _____

TABLE 2
UNIT PRICES FOR PARTS (NOT INCLUDED IN BID TOTAL)

11d2	6" Fire Service Meter					
11d2a	<i>Complete Meter</i>	1	each	\$ _____	\$ _____	\$ _____
11d2b	<i>Unitized Measuring Element</i>	1	each	\$ _____	\$ _____	\$ _____
11d2c	<i>Turbine Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11d2d	<i>Automatic Valve</i>	1	each	\$ _____	\$ _____	\$ _____
11d2e	<i>Strainer</i>	1	each	\$ _____	\$ _____	\$ _____
11d3	8" Fire Service Meter					
11d3a	<i>Complete Meter</i>	1	each	\$ _____	\$ _____	\$ _____
11d3b	<i>Unitized Measuring Element</i>	1	each	\$ _____	\$ _____	\$ _____
11d3c	<i>Turbine Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11d3d	<i>Automatic Valve</i>	1	each	\$ _____	\$ _____	\$ _____
11d3e	<i>Strainer</i>	1	each	\$ _____	\$ _____	\$ _____
11d4	10" Fire Service Meter					
11d4a	<i>Complete Meter</i>	1	each	\$ _____	\$ _____	\$ _____
11d4b	<i>Unitized Measuring Element</i>	1	each	\$ _____	\$ _____	\$ _____
11d4c	<i>Turbine Chamber</i>	1	each	\$ _____	\$ _____	\$ _____
11d4d	<i>Automatic Valve</i>	1	each	\$ _____	\$ _____	\$ _____
11d4e	<i>Strainer</i>	1	each	\$ _____	\$ _____	\$ _____
11d5	12" Fire Service Meter					
11d5a	<i>Complete Meter</i>	1	each	\$ _____	\$ _____	\$ _____
11d5b	<i>Unitized Measuring Element</i>	1	each	\$ _____	\$ _____	\$ _____
11d5c	<i>Turbine Chamber</i>	1	each	\$ _____	\$ _____	\$ _____

TABLE 2
UNIT PRICES FOR PARTS (NOT INCLUDED IN BID TOTAL)

11d5d	<i>Automatic Valve</i>	1	each	\$ _____	\$ _____	\$ _____
11d5e	<i>Strainer</i>	1	each	\$ _____	\$ _____	\$ _____
11e	Registers					
11e1	T-10 Registers					
11e1a	<i>5/8" T-10 Register</i>	1	each	\$ _____	\$ _____	\$ _____
11e1b	<i>3/4" T-10 Register</i>	1	each	\$ _____	\$ _____	\$ _____
11e1c	<i>1" T-10 Register</i>	1	each	\$ _____	\$ _____	\$ _____
11e1d	<i>1 1/2" T-10 Register</i>	1	each	\$ _____	\$ _____	\$ _____
11e1e	<i>2" T-10 Register</i>	1	each	\$ _____	\$ _____	\$ _____
11e2	T/T Registers					
11e2a	<i>3" T/T Register</i>	1	each	\$ _____	\$ _____	\$ _____
11e2b	<i>4" T/T Register</i>	1	each	\$ _____	\$ _____	\$ _____
11e2c	<i>6" T/T Register</i>	1	each	\$ _____	\$ _____	\$ _____
11e2d	<i>8" T/T Register</i>	1	each	\$ _____	\$ _____	\$ _____
11e3	HPT Registers					
11e3a	<i>3" HPT Register</i>	1	each	\$ _____	\$ _____	\$ _____
11e3b	<i>4" HPT Register</i>	1	each	\$ _____	\$ _____	\$ _____
11e3c	<i>6" HPT Register</i>	1	each	\$ _____	\$ _____	\$ _____
11e3d	<i>8" HPT Register</i>	1	each	\$ _____	\$ _____	\$ _____
11e3e	<i>10" HPT Register</i>	1	each	\$ _____	\$ _____	\$ _____
11e3f	<i>12" HPT Register</i>	1	each	\$ _____	\$ _____	\$ _____

TABLE 2
UNIT PRICES FOR PARTS (NOT INCLUDED IN BID TOTAL)

11e4	HTP P3 Registers					
11e4a	4" HPT P3 Register	1	each	\$ _____	\$ _____	\$ _____
11e4b	6" HPT P3 Register	1	each	\$ _____	\$ _____	\$ _____
11e4c	8" HPT P3 Register	1	each	\$ _____	\$ _____	\$ _____
11e4d	10" HPT P3 Register	1	each	\$ _____	\$ _____	\$ _____
11e4e	12" HPT P3 Register	1	each	\$ _____	\$ _____	\$ _____
11f	Meter Interface Unit					
11f1	Meter Interface Unit	1	each	\$ _____	\$ _____	\$ _____
11g	Antenna Cable					
11g1	Antenna w/ 6-foot cable	1	each	\$ _____	\$ _____	\$ _____
11g2	Antenna w/ 20-foot cable	1	each	\$ _____	\$ _____	\$ _____

(1) The City will supply new meters.

(2) Should the City elect to supply Parts, no payment will be made for the "Purchase Price" of the Part.

In the sole discretion of the City, unbalanced Unit Prices may deem the bidder non-responsive.

ATTACHMENT NO. 3

Exhibit B

Definitions

EXHIBIT B
DEFINITIONS

When used in the Contract Documents, the following capitalized terms have the following meanings:

“Applicable Law(s)” means all federal, state or local statutes, laws ordinances, codes, rules, regulations, policies, standards, executive orders, consent orders, orders and guidance from regulatory agencies, judicial decrees, decisions and judgments, permits, licenses, reporting or other governmental requirements or policies of any kind by which a Party may be bound, then in effect or which come into effect during the time the Services are being performed, and any present or future amendments to those Applicable Laws, including those which specifically relate to: (a) the business of City; (b) the business of Service Provider or Service Provider’s subcontractors; (c) the Agreement and the Contract Documents; or (d) the performance of the Services under this Agreement.

“Charges” means the amounts payable by City to Service Provider under this Agreement.

“City Security Policies” means the policies set forth in **Exhibit D**.

“Code” means the Code of Ordinances for the City of Atlanta, Georgia, as amended.

“Contract Documents” include this Agreement and the exhibits and other documents attached or referenced herein as well as any authorized changes or addenda hereto.

“Facility” or “Facilities” means the physical premises, locations and operations owned or leased by a Party and from or through which Service Provider will provide any Services.

“Force Majeure Event(s)” means acts of war, domestic and/or international terrorism, civil riots or rebellions, quarantines, embargoes and other similar unusual governmental actions, extraordinary elements of nature or acts of God.

“Party” or “Parties” means City and/or Service Provider.

“Person” means individuals, partnerships, agents, associations, corporations, limited liability companies, firms or other forms of business enterprises, trustees, executors, administrators, successors, permitted assigns, legal representatives and/or other recognized legal entities.

“Service Provider Personnel” means and refers to Service Provider employees or subcontractors hired and maintained to perform Services hereunder.

“Third Party” means a Person other than the Parties.

ATTACHMENT NO. 4

Scope of Work or Services

Table of Contents (Revised 12-11-15)

FC-8473, Annual Contract for Large Water Meter Testing and Repair

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ATTACHMENT NO. 5

The Work Order Report Fields
Table No. 4 (Revised 12-11-15)

Table 4
Work Order Report Fields

Abbreviations	
wo	= Provided by the City in the Work Order
woo	= Optional Information to be Provided by the City in the Work Order
x	= Information to be Collected by the Service Provider

Ref No.	Report Field	Work Order Types					
		Site Survey	Meter Test	Meter Test & Repair	Meter Repair	Survey & Test	Survey Test & Repair
1	Crew Information						
2	Work Performed By (Crew Supervisor)	X	X	X	X	X	X
3	Date & Time Work Performed	X	X	X	X	X	X
4	General WO Information						
5	Work Order Number	WO	WO	WO	WO	WO	WO
6	Work Order Type	WO	WO	WO	WO	WO	WO
7	Account Number	WOO	WOO	WOO	WOO	WOO	WOO
8	Customer Name	WOO	WOO	WOO	WOO	WOO	WOO
9	Meter Zone Code	WOO	WOO	WOO	WOO	WOO	WOO
10	Customer Contact						
11	Name	WOO	WOO	WOO	WOO	WOO	WOO
12	Title	WOO	WOO	WOO	WOO	WOO	WOO
13	Telephone No.	WOO	WOO	WOO	WOO	WOO	WOO
14	E-mail Address	WOO	WOO	WOO	WOO	WOO	WOO
15	Service Address						
16	Service Address Number	WO	WO	WO	WO	WO	WO
17	Service Address Street	WO	WO	WO	WO	WO	WO
18	Service Address Correct (Y/N)	X	X	X	X	X	X
19	If No, Provide Correct Service Address	X	X	X	X	X	X
20	Meter Location Notes						
21	Meter Location Notes	WOO	WOO	WOO	WOO	WOO	WOO
22	Meter Location Notes Correct & Adequate (Y/N)	X	X	X	X	X	X
23	If No, Provide Corrected Meter Location Notes	X	X	X	X	X	X
24	Meter Coordinates						
25	North	WOO	WOO	WOO	WOO	WOO	WOO
26	East	WOO	WOO	WOO	WOO	WOO	WOO
27	Meter Coordinates Correct (Y/N)	X				X	X
28	If No, Provide Correct Coordinates	X				X	X
29	North	X				X	X
30	East	X				X	X
31	Meter Placement						
32	Inside	X	WOO	WOO	WOO	X	X
33	Boiler Room	X	WOO	WOO	WOO	X	X
34	Basements	X	WOO	WOO	WOO	X	X
35	Outside	X	WOO	WOO	WOO	X	X
36	Vault/Pit	X	WOO	WOO	WOO	X	X
37	Hot Box	X	WOO	WOO	WOO	X	X
38	Misc Information						
39	Type of Business (Premise Type)	X				X	X

Table 4
Work Order Report Fields

Abbreviations	
wo	= Provided by the City in the Work Order
woo	= Optional Information to be Provided by the City in the Work Order
x	= Information to be Collected by the Service Provider

Ref No.	Report Field	Work Order Types					
		Site Survey	Meter Test	Meter Test & Repair	Meter Repair	Survey & Test	Survey Test & Repair
40	Water Consumption Information	woo	woo	woo	woo	woo	woo
41	Meter Inspection						
42	Was Meter Inspected (Y/N)	x				x	x
43	Was Vault Accessible (Y/N)	x	x	x	x	x	x
44	If No, Reason for Access Limitation	x	x	x	x	x	x
45	Could Not Locate	x	x	x	x	x	x
46	Paved Over	x	x	x	x	x	x
47	Locked Gate	x	x	x	x	x	x
48	Congested Area	x	x	x	x	x	x
49	Covered by Asphalt/Concrete	x	x	x	x	x	x
50	Covered by Ground	x	x	x	x	x	x
51	Unable to Dewater (City Approval Required)	x	x	x	x	x	x
52	Unable to Remove Mud (City Approval Required)	x	x	x	x	x	x
53	Vault Unsafe	x	x	x	x	x	x
54	Presence of Gas	x	x	x	x	x	x
55	Oxygen Reading	x	x	x	x	x	x
56	Combustible Gas Reading	x	x	x	x	x	x
57	Carbon Monoxide Reading	x	x	x	x	x	x
58	Hydrogen Sulfide Reading	x	x	x	x	x	x
59	Crumbling Structure	x	x	x	x	x	x
60	Presence of Animal	x	x	x	x	x	x
61	Other	x	x	x	x	x	x
62	Meter Lid						
63	Meter Lid Missing (Y/N)	x	x	x	x	x	x
64	Meter Lid Type (Shape)	x	x	x	x	x	x
65	Meter Lid Material	x	x	x	x	x	x
66	Meter Lid Fit (Y/N)	x	x	x	x	x	x
67	Meter Lid Damaged (Y/N)	x	x	x	x	x	x
68	Meter Lid Called in (Y/N)	x	x	x	x	x	x
69	Ticket Number	x	x	x	x	x	x
70	Work Preparation						
71	Dewatering Performed (Y/N)	x	x	x	x	x	x
72	Debris Removal Performed (Y/N)	x	x	x	x	x	x
73	Shutdown Performed (Y/N)		x	x	x	x	x

Table 4
Work Order Report Fields

Abbreviations	
wo	= Provided by the City in the Work Order
woo	= Optional Information to be Provided by the City in the Work Order
x	= Information to be Collected by the Service Provider

Ref No.	Report Field	Work Order Types					
		Site Survey	Meter Test	Meter Test & Repair	Meter Repair	Survey & Test	Survey Test & Repair
74	Meter Vault						
75	Material	x				x	x
76	Length	x				x	x
77	Width	x				x	x
78	Depth	x				x	x
79	Vault Ladder						
80	Present - No Repair	x				x	x
81	Present - Needs Repair	x				x	x
82	Not Present -- Not Needed	x				x	x
83	Not Present -- Needed						
84	Vault Conditon						
85	No Repair Needed	x				x	x
86	Repair Needd	x				x	x
87	Comments	x				x	x
88	High/Low Side Meters						
89	Meter Serial Number	x	x	x	x	x	x
90	Meter Type	x	x	x	x	x	x
91	Meter Manufacturer	x	x	x	x	x	x
92	Meter Model	x	x	x	x	x	x
93	Meter Size	x	x	x	x	x	x
94	High/Low/Bypass Registers	x	x	x	x	x	x
95	Register Serial No. (MIU No.)	x	x	x	x	x	x
96	Register Size	x	x	x	x	x	x
97	Register Size Correct (Automatic Y/N)	x	x	x	x	x	x
98	Register Type	x	x	x	x	x	x
99	Register Type Correct (Automatic Y/N)	x	x	x	x	x	x
100	Register Reading	x					
101	Registration Units	x					
102	Register Glass Broken (Y/N)	x					
103	IU Wire Cut (Y/N)	x					
104	High/Low Side Antenna						
105	Antenna Present (Y/N)	x	x	x	x	x	x
106	Antenna Properly Mounted (Y/N)	x	x	x	x	x	x
107	Antenna Properly Positioned (Y/N)	x	x	x	x	x	x
108	Antenna Cord Sufficient Length (Y/N)	x	x	x	x	x	x
109	Pin Installed						
110	When Arrive (Y/N)	x	x	x	x	x	x
111	When Leave (Y/N)	x	x	x	x	x	x
112	Inlet/Outlet/Bypass Valves						
113	Size	x				x	x

Table 4
Work Order Report Fields

Abbreviations	
wo	= Provided by the City in the Work Order
woo	= Optional Information to be Provided by the City in the Work Order
x	= Information to be Collected by the Service Provider

Ref No.	Report Field	Work Order Types					
		Site Survey	Meter Test	Meter Test & Repair	Meter Repair	Survey & Test	Survey Test & Repair
114	Type	x				x	x
115	Location	x				x	x
116	Could Not Locate	x				x	x
117	Covered by Asphalt/Concrete	x				x	x
118	Covered by Ground	x				x	x
119	Inside Box	x				x	x
120	Outside Box	x				x	x
121	If Valves Outside of Box Provide Coordinates	x				x	x
122	North	x				x	x
123	East	x				x	x
124	Valve Condition	x				x	x
125	Operable	x				x	x
126	Operable - Leaking	x				x	x
127	Operable - Needs Repair	x				x	x
128	Operable - Needs Replacement	x				x	x
129	Non-Operable - Stem nut missing	x				x	x
130	Non-Operable--Broken Stem	x				x	x
131	Non-Operable - Replace	x				x	x
132	Comments	x				x	x
133	Test Port						
134	Present	x	x	x		x	x
135	Installed		x	x		x	x
136	Size	x	x	x		x	x
137	Recommended Testing Location						
138	Test Location Recommendation (Onsite/Offsite)						
139	Basis for Off-Site Testing	x	x	x		x	x
140	Date Meter Removed		x	x		x	x
141	Date Meter Reinstalled		x	x		x	x
142	Water Valve						
143	Water Valve (On/Off) -- Arrive	x	x	x	x	x	x
144	Water Valve (On/Off) -- Leave	x	x	x	x	x	x
145	Meter Installation Status						
146	Meter is Ready to Test (Y/N)	x			x		
147	Repairs Needed (Y/N)						
148	If Yes, Recommended Repairs (Dropdown Checklist)	x	x	x	x		x

Table 4
Work Order Report Fields

Abbreviations	
wo	= Provided by the City in the Work Order
woo	= Optional Information to be Provided by the City in the Work Order
x	= Information to be Collected by the Service Provider

Ref No.	Report Field	Work Order Types					
		Site Survey	Meter Test	Meter Test & Repair	Meter Repair	Survey & Test	Survey Test & Repair
149	If Yes, Basis for Repair (Dropdown Checklist)	x	x	x	x		x
150	WO Costs						
151	Identification of bid items and parts used for repairs			x	x		x
152	Unit cost for each bid item and part used for repairs			x	x		x
153	Calculation of cost for each bid item and part used for repairs			x	x		x
154	Total Cost of WO			x	x		x
155	Meter Test Data						
156	Test Location (On-Site/Off-Site)		x	x		x	x
157	AWWA Standards		x	x		x	x
158	Line Pressure		x	x		x	x
159	Static pressure		x	x		x	x
160	Residual pressure		x	x		x	x
161	Water Temperature		x	x		x	x
162	Register Reading (High, Low & Bypass)						
163	Before		x	x	x	x	x
164	After		x	x	x	x	x
165	Registration Units		x	x	x	x	x
166	Test Data— Before/After Repairs (All testing rates)						
167	Test Rate (GPM)		x	x		x	x
168	Meter Volume		x	x		x	x
169	Tester Volume		x	x		x	x
170	Test Accuracy		x	x		x	x
171	Corrected Accuracy		x	x		x	x
172	Required Accuracy Limits		x	x		x	x
173	Overall Accuracy		x	x		x	x
174	Summary Information						
175	Meter Passed Test (Y/N)		x	x		x	x
176	Estimated Volume of Water Used		x	x	x	x	x
177	Comments	x	x	x	x	x	x
178	Work Order Package (Month/Yr) (Automatic)	x	x	x	x	x	x
179	Picture documentation (with date stamp)	x	x	x	x	x	x
180	Schematic of Meter Installation	x				x	x
181	Schematic of Meter Box top w/ measurements to valve box covers	x				x	x

ATTACHMENT NO. 6

Scope of Services (Revised 12-11-15)

FC-8473, Annual Contract for Large Water Meter Testing and Repair Scope of Services

1. OVERVIEW OF SCOPE

This Agreement provides the services necessary to locate, evaluate, repair and test large meters that are part of the City of Atlanta's Water Distribution System. The City of Atlanta's Water Distribution System is located in the City of Atlanta, the portion of Fulton County located south of the Chattahoochee River, and Hartsfield-Jackson International Airport. For the purpose of this Agreement, large meters are defined as meters that are greater than or equal to 1 ½ inches in size.

The Services include the performance of Site Survey, Meter Test, Meter Test & Repair, Meter Repair, Survey & Test, and Survey Test & Repair Work Orders. Any large meter that is part of the City of Atlanta's Water Distribution System may be addressed as part of this Agreement, however, the primary work covered under this Agreement is the performance of work orders for meters that are greater than or equal to 3-inches in size and are part of the City of Atlanta's Large Meter Testing Program, or are being investigated for operational, billing, or compliance information. Approximately fifteen hundred work orders are anticipated to be issued each year. Ninety to one-hundred and fifty work orders are anticipated to be issued each month; however, the number of work orders to be performed is neither guaranteed nor limited.

This Agreement includes the work required to convert the paper and electronic systems currently being utilized to collect and transfer work order information to a fully-electronic data collection and management system (Data Management System). The Data Management System will provide a mechanism for collecting Work Order Information electronically in the field and transferring that data to the City in electronic formats that are compatible with the City's geographic information, computer maintenance management, customer service, and billing systems. The Data Management System is required to have automated, internal quality controls.

In general the performance of the Work Orders involves various combinations of inspecting Meter Installations and testing, cleaning, calibrating and repairing Meters. The Services include, but are not limited to, coordinating the Services; preparing Submittals; maintaining and certifying equipment; visiting the site; locating the meter and valves; removing water, mud and debris from the Meter Installation; performing shutdowns (if needed); repairing, testing and calibrating the meter; and documenting information about the Meter Installations and the performance of the Services. The Services also include defining and performing Quality Assurance and Quality Control procedures, developing and implementing the Data Management System; preparing reports and payment requests; and administering the Agreement. Meter Testing includes both on-site and off-site testing of meters.

2. PROJECT MILESTONES

The Services shall be completed within the timeframes identified below. Days listed in Table 1 are calendar days as measured from the Notice to Proceed:

Project Milestone	Milestone Date
Kickoff Meeting	7
Submittal of Health/Safety and Security Plan	10
Initiation of Field Work	21
Submittal of Draft Work Plan	14
Submittal of Draft QA/QC Plan	21
Submittal of Draft Data Management System Plan	42
Full Transition to Data Management System	120

The field work for Work Orders (WOs) shall be completed within twenty eight (28) calendar days from the issuance date of the Work Order.

The Data Management System shall be updated with Work Order Information on a weekly basis. Work Order Information shall be posted to the Data Management System within fourteen (14) days of when the information is collected in the field.

Payment Requests for Work Orders shall be submitted within forty-nine (49) calendar days from the issuance date of the Work Order.

For an Expedited WO the performance of the field work and emailing of the WO report to the City shall be completed as soon as is possible and within five (5) calendar days from the issuance date of the Work Order.

Meter Test & Repair WOs that are issued as a result of the Service Provider failing to meet the guarantee and warranty requirements shall be completed as soon as is possible and within five (5) calendar days from the issuance date of the Work Order.

If the Service Provider falls to meet the 30 day recovery requirement for implementing a Recovery Plan, the City has the right to charge the Service Provider liquidated damages of \$500 per day for each Work Day that that a required schedule is not met.

3. REGULATORY REQUIREMENTS

The Service Provider shall comply with the applicable requirements of local utilities and other authorities having jurisdiction.

The Service Provider shall comply with all applicable OSHA requirements as well as any other locally accepted federal, state, county, municipal or facility safety code, regulation, practice, or program which applies.

4. CODES AND STANDARDS

Whenever reference is made to conforming to the standards of any technical society, organization, body, code or standard, it shall be construed to mean the latest standard, code, specification or tentative specification adopted and published at the time of advertisement for Bids.

Where the Service Provider's quality standards establish more stringent quality requirements than the laws, codes, regulations, or technical standards described herein, the more stringent requirements shall prevail. Such standards are made a part hereof to the extent which is indicated or intended.

The following standards apply to the Services:

- AWWA Manual M6—Water Meters—Selection, Installation, Testing, and Maintenance
- ANSI/AWWA C700 – Cold-Water Meters – Displacement Type, Bronze Main Case
- ANSI/AWWA C701 – Cold-Water Meters – Turbine Type, for Customer Service
- ANSI/AWWA C702 – Cold - Water Meters – Compound Type
- ANSI/AWWA C703 – Cold-Water Meters – Fire Service Type
- ANSI/AWWA C707 – Encoder-Type Remote-Registration Systems for Cold-Water Meters
- NSF/ANSI Standard 61 – Drinking Water System Components, Annex F and G
- ASME/ANSI B16.1 – Cast Iron Flanges and Flanged Fittings
- City of Atlanta, Bureau of Drinking Water's Design Criteria and Standards Manual

If there is a conflict between any section of these specifications and the Design Criteria and Standards Manual, the City shall determine which will govern.

5. COORDINATION

a. Coordination with the City

The Service Provider shall coordinate the Services with the City in a manner which allows the Service Provider to complete the Services efficiently and effectively and the City to perform its work and manage the Agreement in an efficient and effective manner. Such coordination shall include, but not be limited to, planning the Services, complying with Submittal requirements, attending meetings, participating in conference calls, performing field coordination, and providing the communication necessary to achieve this objective.

The Service Provider shall work with the City to ensure that the City has a clear understanding of the Service Provider's methods for performing the Services and the Service Provider has a clear understanding of the City's goals and objectives for the Services.

The Service Provider shall work with the City to ensure the processes and procedures developed for the Service Provider to execute the Services and the City to perform supporting work are efficient and effective.

The Service Provider shall work with the City to ensure that Submittals are straightforward, easy to use, accurate and complete.

The Service Provider shall anticipate that coordination with multiple City Departments and groups will be required. Such groups are anticipated to include, but are not be limited to, the Department of Watershed Management's Office of Linear Operations, Distribution, Construction Management, GIS, IT, Billing, Customer Service and the Department of Aviation.

i. Meetings

The Service Provider is required to attend all meetings required to complete the Services. At a minimum such meetings are anticipated to include a Kickoff Meeting, two (2) Work Plan Meetings, meetings to develop and transition to the Data Management System, and monthly planning meetings. Unless otherwise approved by the City, meetings will be located at City facilities. In the event that the Service Provider fails to attend such meetings, project progress associated with such meetings (e.g. Work Plan approval, Pay Request approval, meeting of Milestones, etc.) is anticipated to be impacted. The consequences of missing meetings shall be borne by the Service Provider.

b. Transition to Data Management System

The Service Provider shall initiate the work using the City's existing procedures and system for conducting Site Surveys and Meter Tests.

The Service Provider shall transition to using the Data Management System as quickly as possible, at a minimum, achieving the full transition to the Data Management System by the Data Management System Project Milestone.

c. Field Coordination

The Service Provider shall coordinate the Services with the City and owners of private and public property. Such coordination shall include, but is not limited to, coordinating access to the Work Site and scheduling the shutdown, or interruption, of any water supply.

i. Minimization of Nuisance and Interference

As the Service Provider pursues the Services, there may be an impact on public mobility, public safety, and the ability of the public to access their property. The Service Provider shall perform the Services in a manner that minimizes the potentially negative impact of the Services on the public.

The Service Provider may be required to phase street closures with other Service Providers and/or City crews, public events, athletic events, etc. It is expected that the Service Provider will manage its Services to address any public impact and Service Provider coordination issues that arise.

ii. Daily Notifications

For any meter for which the Service Provider is issued a Work Order, upon determining that the lid on the Meter Box is missing, or so damaged as to present a safety hazard, the Service Provider shall report the missing/damaged lid to the City's Customer Service Department by contacting 404-658-6500 and providing the information requested by the Customer Service representative. The Service Provider shall obtain the ticket number for the lid from the City representative and document the ticket number on the Work Order Report.

6. QUALITY ASSURANCE/QUALITY CONTROL

The Service Provider shall establish and execute a Quality Assurance/Quality Control (QA/QC) Program for the Services.

The Service Provider's Quality Assurance/Quality Control (QA/QC) Program shall ensure that:

- 1) Service Provider's staff are properly qualified and trained
- 2) Proper equipment is used
- 3) Equipment used is properly maintained and calibrated
- 4) Services are coordinated with the City
- 5) Services are coordinated at the Site
- 6) Services are executed in a timely fashion
- 7) Services are properly performed
- 8) Services are properly inspected by the Service Provider
- 9) Schedules are met
- 10) Submittals are accurate and complete
- 11) Data which is collected is accurate and complete
- 12) Repairs are appropriately identified and properly performed
- 13) Testing is accurate and complete
- 14) The Data Management System is fully developed and implemented
- 15) All data within the Data Management System, including Reports and summary tables are fully backed up

If in the opinion of the City, the QA/QC Program is not working, the Service Provider shall revise the QA/QC Program.

a. Personnel Qualifications & Training

The Service Provider shall ensure that all Service Provider Personnel are qualified and properly trained for the Services they perform.

In addition to being fully trained in the technical aspects of the Services, Service Provider Personnel shall be fully trained in:

- 1) Correct and accurate responses to public inquiries and concerns
- 2) Quality Assurance and Quality Control requirements
- 3) Manners and housekeeping, and
- 4) Emergency procedures, conflict resolution, and safety.

Records of personnel experience, training and qualifications shall be submitted to the City for review and approval.

i. Field Crews

All crew members shall be OSHA certified for confined space entry.

Crews that test meters shall have at least one member who meets the qualifications for a Meter Testing Crew Supervisor, and shall be capable of testing all major brands of large meters (i.e. Hersey, Neptune, Sensus, Badger, Rockwell, etc.)

Crews that repair meters shall have at least one member who meets the qualifications for a Meter Repair Crew Supervisor, and shall be capable of repairing all major brands of large meters (i.e. Hersey, Neptune, Sensus, Badger, Rockwell, etc.)

b. Inspection of Services

The Services are subject to inspection by representatives of the City at any time. This shall include, but is not limited to, observing the performance of the Services; inspecting the facilities and apparatus used to perform the Services; and inspecting manuals, test results, paperwork, etc. pertinent to the Services. Such inspection may include office, shop, or field inspection. Inspection of the Services includes all Services performed by Service Provider Personnel and Third Parties.

Compliance is the responsibility of the Service Provider. No act or omission on the part of City staff or City representatives shall be construed as relieving the Service Provider of this responsibility.

7. SUBMITTALS

a. General

Except as otherwise specified herein, all Submittals are subject to review and approval by the City.

The City's review and acceptance of a Submittal shall not relieve the Service Provider from any of its obligations for the performance of the Services.

Except as otherwise approved by the City, no Services covered by a Submittal shall begin until the Submittal has been approved by the City.

The Service Provider shall work with the City to ensure that Submittals are straightforward, easy to read, easy to use, accurate and complete.

The formatting of Submittals is subject to approval by the City. In general, Submittals other than drawings shall be formatted to be printed on letter, legal or ledger paper at a font no smaller than Calibri 11.

When a law, regulation, code, guidance document, process, procedure or other document/file of significant volume is submitted, and only a small portion of the document/file applies to the Services, the applicable portion of the document/file shall be summarized and/or highlighted for easy use and review.

Except as otherwise specified herein or approved by the City, the Service Provider shall submit two (2) hardcopies of each Submittal along with an electronic pdf version of the document and an unlocked electronic version of the document which can be edited using a standard Microsoft office suite product.

b. Work Orders

The City will issue a Work Order for each meter for which a Site Survey, Meter Test, Meter Test & Repair, Meter Repair, Survey & Test, or Survey Test & Repair is to be performed.

Although Work Orders may be issued individually, they will typically be issued in groups. Except as otherwise approved by the City, the Work Orders included in a Payment Request shall align with the Work Orders as issued, i.e. a Payment Request will include a single Work Order or a group of Work Orders that were issued together.

Prior to receiving payment for a Work Order, a Payment Request which includes the Work Order must be submitted and approved by the City.

Up to five times per month, the City may issue an Expedited Work Order. The requirements for an Expedited Work Order are the same as for a regular Work Order of the same type, with the exception that the performance of the field work and the completion of the associated WO report shall be completed as soon as is possible and in accordance with the Project Milestone. The City shall provide the Service Provider with email notification of the Expedited Work Order and the Service Provider shall acknowledge by email receipt of the notification. Upon completion the Service Provider shall email the Work Order Report to the City.

c. Equipment Submittals

At the City's request the Service Provider shall submit information regarding the equipment being used to perform the Services. The City's request shall identify the information requested and/or the reason behind the request for the Submittal. The information submitted shall be of sufficient detail to answer the City's questions and allow the City to evaluate its concern(s).

d. Parts Submittals

At the City's request the Service Provider shall submit information regarding the Parts and/or Incidentals used in the Services. The City's request shall identify the information requested and/or the reason behind the request for the Submittal. The information submitted shall be of sufficient detail to answer the City's questions and allow the City to evaluate its concern(s).

e. Plans

The Service Provider shall submit the plans identified below.

i. Work Plan

The Work Plan shall identify how the Service Provider will perform the Services to ensure that:

- 1) Service Provider Personnel are properly qualified and trained
- 2) Proper equipment is available and utilized
- 3) Equipment is properly maintained, calibrated, and certified
- 4) Services are coordinated with the City
- 5) Services are coordinated at the Site
- 6) Services are executed in a timely fashion
- 7) Services are properly performed
- 8) Services are properly inspected
- 9) Schedules are met
- 10) Submittals are accurate and complete
- 11) Data is accurate and complete
- 12) Repairs are appropriately identified and properly performed
- 13) Testing is accurate and complete

- 14) The Database Management System is fully implemented
- 15) All data within the Data Management System, including WO reports and summary tables is maintained and backed up

The Work Plan shall include, but is not limited to, the following:

- 1) A description of the methods that will be used to deliver the Services
- 2) A copy of the schedules for the Services
- 3) Identification of the timing for when updated schedules will be delivered
- 4) A table of the Submittals identifying the name, content, and the date of submission for each Submittal
- 5) The approach for developing the content and format of Submittals
- 6) Copies of the processes and procedures that will be used to deliver the Services, including but not limited to:
 - a. The method that will be used to keep the City abreast of the locations where the work crews are working
 - b. Methods, equipment, and procedures that will be used to locate Meter Boxes and valves
 - c. Methods, equipment, and procedures that will be used to dewater and remove mud from Meter Installations
 - d. The process which will be used to coordinate with the City regarding the opening and closing of valves
 - e. The process which will be used to coordinate with the City regarding Recommended Repairs that are not included in a Meter Repair Work Order
 - f. Charts, or process flow diagrams which show the logic behind
 - i. When On-Site versus Off-Site Testing will be recommended
 - ii. When a meter is Ready to Test
 - iii. What repairs are required, including the replacement of Parts
 - iv. When a meter will be replaced versus repaired
 - g. A complete set of repair procedures

No payments will be made to the Service Provider until the Work Plan is fully accepted by the City.

If, in the opinion of the City, the Work Plan is unclear or is not working, the Service Provider shall revise the Work Plan.

ii. Health/Safety and Security Plan

Prior to performance of the Services, the Service Provider shall submit a Health/Safety and Security Plan.

The Health/Safety and Security Plan shall include the provisions necessary to ensure the health, safety and security of Parties and Third Parties performing the Services and visiting the Work Site. The plan shall include, but is not limited to, the following:

- 1) The names, contact information, and responsibilities of the person(s) responsible for health, safety and security
- 2) The key health, safety and security rules, regulations and policies that will be implemented
- 3) A description of the processes and procedures that will be used to ensure safety/health and security
- 4) Copies of the policies, processes and procedures which will be used to ensure health/safety and security, including, but not limited to, ensuring the following requirements will be met:
 - a. Safety and rescue equipment will be maintained and readily available for use
 - b. Confined space entry
 - c. Placement of barriers to mark open or missing Meter Box lids
 - d. Routing of vehicles and pedestrians around the Work Site
 - e. City notification following an accident or claim
 - f. Service Provider Personnel (including new employees), City staff, and Third Parties are aware of the requirements outlined in the Health/Safety and Security Plan
- 5) A list of the safety and rescue equipment that will be carried on the trucks

The adequacy and implementation of the Health/Safety and Security Plan, shall be the responsibility of the Service Provider.

Review of the Health/Safety and Security Plan by the City shall not impose any duty or responsibility upon the City for the Service Provider's performance of the Services in a safe manner.

iii. Data Management System Plan

The Data Management System Plan shall outline the approach for developing and implementing the Data Management System.

The Data Management System Plan shall include, but is not limited to, the following:

- 1) A description of the approach for developing the Data Management System, including how the Service Provider plans to coordinate with the City regarding system requirements, design, testing, updating, maintenance, and system documentation
- 2) The Data Management System Schedule
- 3) Identification of the hardware, software, and handheld units proposed to be used

- 4) Identification of the information needed from the City, including the timing of information needs
- 5) Information on the database design, including a Data Dictionary
- 6) Identification regarding the type and frequency of maintenance and backup procedures proposed to be performed on the Data Management System
- 7) Identification of the support proposed to be available to Parties and Third Parties who will utilize the Data Management System, including the availability of the various types of support provided
- 8) Identification of the proposed training that will be performed
- 9) Identification of the proposed QA/QC procedures to be used during the development of the Data Management System to ensure the Data Management System functions properly and is implemented on time
- 10) Identification of the QA/QC proposed procedures to be built into the system for verifying the quality of the data, both as it is collected in the field and as it is transferred through the Data Management System
- 11) Identification of the documentation of the Data Management System proposed to be provided

iv. Quality Assurance/Quality Control Plan

The QA/QC Plan shall include, but is not limited to, the following:

- 1) The identification of the Quality Assurance parameters and Quality Control processes and procedures that will be used to implement the QA/QC Program
- 2) Copies of the Quality Control processes and procedures that will be used to ensure conformance with the QA/QC Program, including but not limited to:
 - a. Procedures that will be used to locate Meter Boxes and valves
 - b. Procedures that will be used to obtain City approval for closing out WOs which have not been completed
 - c. Methods that will be used to QA/QC the data collected during the performance of WOs (Note: QA/QC for the development and implementation of the Data Management System, and data as it moves through the Data Management System, shall be covered in the Data Management Plan.)
 - d. Procedures to ensure that the QA/QC Plan is implemented by all Service Provider Personnel, including suppliers and Third Party testing/calibration firms
 - e. Copies of the forms proposed to be used as part of QA/QC Program

Note: For draft versions of the QA/QC Plan, a list of Submittals that will be included in the QA/QC plan, but have not yet been approved by the City shall be included. The list shall include the name of the Submittal, a brief description of the content of the Submittal, the status of the Submittal and the estimated date of Submittal approval.

- 3) The format for all reports
- 4) The processes and timing for submitting reports
- 5) At the City's request the following shall be provided:
 - a. An explanation of the basis for the QA/QC activities proposed in the Plan
 - b. An explanation of the adequacy of the QA/QC activities proposed in the Plan

No payments will be made to the Service Provider until the QA/QC Plan is approved by the City.

The City may perform independent quality assurance audits to verify that actions specified in QA/QC Plan have been implemented.

If in the opinion of the City, the QA/QC Plan is unclear or is not working, the Service Provider shall revise the QA/QC Plan.

v. Recovery Plan

Should a schedule indicate that the Service Provider is falling behind in the Services such that a Schedule Milestone or a Project Milestone will be missed by more than 5 calendar days, at the City's request the Service Provider shall submit a Recovery Plan. The Recovery Plan shall be designed to bring the Services back into line with the Project and Schedule Milestones as soon as possible and no longer than within 30 days. The Recovery Plan shall include the addition of Service Provider Personnel if such is necessary to meet the 30 day recovery requirement and/or to perform the Services in accordance with future Project or Schedule Milestones. No additional payment will be made to implement the Recovery Plan.

f. Schedules

The Service Provider shall submit the schedules identified below.

i. Project Schedule

The Service Provider shall submit a Project Schedule which outlines how the Services will be performed to meet the Project Milestones. The Project Schedule shall be of sufficient detail, and shall include sufficient milestones, to allow the City to monitor the progress of the Services with respect to the Project Milestones. The Project Schedule shall include a full list of the activities and milestones required to complete the Services, the duration of the activities, the dependencies between activities, and the responsible party. A description of the activities shall be submitted with the schedule. (Note: The details of the Data Management System Schedule may be shown in the Project

Schedule as a single activity with reference to the Data Management System Schedule for additional details.)

ii. Data Management System Schedule

The Service Provider shall submit a Data Management System Schedule (DMSS) for developing and implementing the Data Management System (DMS). The DMSS shall be of sufficient detail, and shall include sufficient milestones, to allow the City to monitor the performance of the Services so as to ensure that implementation of the DMS occurs by the Project Schedule Milestone date. The DMSS shall include a full list of the activities and milestones required to complete the Services, the duration of the activities, the dependencies between activities, and the responsible party. A description of the activities shall be submitted with the schedule.

iii. Crew Work Schedules

The Service Provider shall supply the City with the schedules that will be followed by the work crews, including daily updates of schedule modifications. The schedules shall be of sufficient detail to allow the City to coordinate inspection activities and to monitor the progress of the Services.

g. Reports

The Service Provider shall submit the reports identified below.

i. Meeting Minutes

The Service Provider shall provide meeting minutes for meetings, or portions of meetings, that are led by Service Provider Personnel. Meeting minutes shall document the key points of the meeting and shall include the Action Items identified during the meeting. Meeting minutes shall include electronic copies of the handouts provided at the meeting, and shall be issued by the end of the third business day following the date of the meeting.

ii. Daily Report

By 9:00 a.m. of each Work Day, the Service Provider shall provide a Daily Report for work performed the previous Work Day. The report shall identify the following:

- 1) Meters for which a missing/damaged Meter Box lid has been identified, including the Ticket Number for the information called in
- 2) Meter Installations that cannot be dewatered
- 3) Meter Boxes that cannot be located
- 4) Meters with defective, incorrectly sized, or incorrectly installed, registers

- 5) Registers which were replaced
- 6) Meters which were replaced
- 7) MIUs which were replaced

iii. Work Order Reports

Each Work Order has an associated Work Order Report. The Work Order types and the Work Order Reports are listed in Table 4 located at the end of this Scope of Services. The fields in the Work Order Reports and the electronic database associated with the Work Order Reports shall include, but are not limited to, the fields shown in Table 4.

iv. Project Status Report

The Project Status Report shall include, but is not limited to the following:

- 1) The status of the implementation of the Data Management System
- 2) The status of Submittals
- 3) The status of Work Orders

At a minimum the status of Work Orders shall include a table of WOs which includes the WO type (e.g. Site Survey, Meter Repair, etc.), the Group WO number, the date the Group WO was issued, the date the Payment Request for the Group WO was submitted to the City and the number of individual WOs contained within the Group WOs.

v. Payment Request Summary Report

For each WO being submitted for payment and/or closeout, the PR Summary Report shall include, but is not limited to, the items listed in Table 2.

Table 2--Payment Request Summary Report						
Report Field	WO Type					
	Site Survey	Meter Test	Meter Test & Repair	Meter Repair	Survey & Test	Survey Test & Repair
Ref. No.	X	X	X	X	X	X
Work Order #	X	X	X	X	X	X
Account #	X	X	X	X	X	X
Customer Name	X	X	X	X	X	X
Meter #	X	X	X	X	X	X
Meter Size	X	X	X	X	X	X
Service Address	X	X	X	X	X	X
Date of Services	X	X	X	X	X	X
Testing Is or Will Be On-Site or Off-Site	X	X	X		X	X
Meter is Ready to Test	X					
Recommended Repairs	X	X			X	
Meter Test Passed or Failed		X	X		X	X
New Test Port Installed		X	X		X	X
Cost of Test Port		X	X		X	X
Cost of WO excluding Test Port & Parts	X	X	X	X	X	X
Cost of Parts			X	X		X
Total WO Cost	X	X	X	X	X	X

vi. Repair Summary Report

The Repair Summary Report shall provide a concise listing by meter of Recommended Repairs and Required Repairs. Of key importance is formatting the report so that it will be easy for the City to differentiate Recommended Repairs from Required Repairs.

vii. Meter and Valve Location Report

The Meter and Valve Location Report shall include the information needed by the City to upload the meter and valve location information collected during the performance of WOs to the City's GIS system. The information required shall be determined as part of the Data Management System development.

viii. Computer Maintenance Management System (CMMS) Report

The CMMS Report shall include the information needed by the City to upload the information collected during the performance of WOs to the City's

CMMS system. The information required shall be determined as part of the Data Management System development.

ix. Billing System Report

The Billing System Report shall include the information needed by the City to upload the information collected during the performance of WOs to the City's billing system. The information required shall be determined as part of the Data Management System development.

x. Customer Service Report

The Customer Service Report shall include the information needed by the City to upload the information collected during the performance of WOs to the City's customer service system. The information required shall be determined as part of the Data Management System development.

xi. Database Query Report

The Database Query Report shall compile specific fields of Work Order Information. The application for creating the report shall have the capability of allowing the user to specify specific meters, groups of meters, time periods and fields of Work Order Information to be included in the report. The information required shall be determined as part of the Data Management System development.

h. Payment Requests

The cover sheet of the Payment Applications shall be the DWM's standard Payment Request form.

Except as otherwise approved in the Work Plan, a Payment Request (PR) shall include the items listed in Table 3.

Table 3--Payment Request Components
Payment Request Cover Sheet
Project Status Report
Payment Request Summary Report
Repair Summary Report
Meter and Valve Location Report
CMMS Report
Billing System Report
Customer Service Report
WO Report for Each WO in the PR
A copy of the portion of the database that includes the information associated with the WOs included in the PR

The reports included in a Payment Request shall include only the WOs which are to be closed out and/or paid as part of the Payment Request.

8. DATA MANAGEMENT SYSTEM

The Service Provider shall supply, develop, maintain, provide support to users and backup the electronic and web-based Data Management Systems necessary to complete the Services including, but not limited to the following:

- 1) Upload WO information provided by the City into handheld instruments and databases
- 2) Collect meter location, meter valve location, and WO information using handheld instruments
- 3) Edit the information collected in the handheld instruments while the information is in the handheld instruments
- 4) Develop the database(s) required to store and manage the electronic information required to perform the Services
- 5) Develop the QA/QC procedures for verifying the quality of the data, both as it is collected in the field and as it is transferred through the Data Management System
- 6) Develop and implement electronic systems for implementing the QA/QC procedures
- 7) Provide for the complete electronic transfer of data from data input to deliverables
- 8) Download the Work Order Information into an electronic format acceptable to the City for uploading into the City's Customer Service System, Computer Maintenance Management System (CMMS), Billing system and Geographic Information System (GIS)
- 9) Generate and populate the data portions of all reports directly from the Data Management System:
- 10) Provide the City with real-time web access to Work Order Information, including a simple process for City staff to query the database, generate reports, and download reports

The applications that are developed for collecting information in the handheld units shall:

- 1) Use a standardized format that requires the completion of Required Fields
- 2) Use dropdown menus for fields that can be completed with Standard Information
- 3) Require Supplemental Information fields to be completed
- 4) Require active confirmation that numbers provided on the WOs (e.g. Service Address, Meter Number, MIU Number, etc.) are intentionally being changed
- 5) Have built-in QA/QC measures for recording and evaluating items such as the meter number, MIU number, register type, register size, meter readings, latitude, longitude, etc.
- 6) Notify the user that required information is missing should a user attempt to close out of a WO without completing the Required Fields

The Data Management System shall include a Data Dictionary. The Data Dictionary shall describe the contents, format, and structure of the Data Management System, including the relationship between its elements. The Data Dictionary shall provide definitions for the fields used in the handheld instruments and the Data Management System reports. The Data Dictionary shall identify Required Fields, shall identify the fields where dropdown menus are used, shall identify the Standard Information provided in the specific dropdown menus, and shall identify where Supplemental Information is required.

The Service Provider shall:

- 1) Provide all software and licenses (excluding the standard Microsoft Office Suite of products) necessary for the City to access and utilize the web-based database from four City specified locations, i.e. 14th Street NW, 72 Marietta Street NW, etc.
- 2) Provide training for City staff to utilize the web-based database, including the performance of queries and downloading reports
- 3) Provide support for the City staff that utilize the Data Management System and the products of the Data-Management System
- 4) Backup the Data Management System every 3 days
- 5) Manage the Data Management System to provide access to all Work Order Information generated during the term of the Agreement, using the standard routine processes.

Except as otherwise approved by the City all electronic reports shall be designed to be downloaded into Microsoft Word or Excel, and printed on a maximum paper size of 11 by 17 inches.

All electronic equipment and software products, including the handheld units, are subject to the approval of the City.

9. EQUIPMENT AND PARTS

a. General

The Service Provider shall provide all equipment, Parts, products and Incidentals required to complete the Services.

All equipment and products shall be installed in accordance with the manufacturer's instructions and recommendations.

Care shall be used in the handling, storage, and installation of all equipment and products so as to prevent damage to and to insure proper performance of the product or equipment.

Equipment furnished under this section shall be of a design and manufacturer that has been successfully used in similar applications. The manufacturer shall have furnished equipment for a minimum of five similar applications that have a demonstrated record of successful operation for a minimum period of 5 years. At the City's request the Service Provider shall provide a list of such installations with installation description, contact names, addresses, and telephone numbers.

b. Manufacturers

All Parts shall be produced from an-ISO 9001 manufacturing facility.

Each brand of Parts shall be furnished by a single manufacturer who shall assume full responsibility for providing Parts which meet the requirements, certifications and warranty requirements required herein.

Nothing in this provision shall be construed as relieving the Service Provider of his overall responsibility for the Services.

c. Submittals

A copy of the manufacturer's warranty shall be provided for all Parts and Incidentals.

d. Warranties and Guarantees

The manufacturer shall provide a warranty that guarantees all Parts and Incidentals to be free from defects in materials and workmanship for a period of no less than one (1) year from the date of installation.

The City shall be responsible for obtaining the manufacturer's warranty for Parts provided by the City.

e. Handheld Units

The coordinates provided for the meter and meter valve location information shall have a submeter accuracy of <60cm 2dRMS (i.e. there shall be a 95% probability that the coordinate information provided is within 60 centimeters of the actual point.)

The handheld units used to collect the data in combination with the post-processing performed on this data shall be adequate to provide this accuracy. The equipment and post processing procedures used to deliver this accuracy shall be demonstrated for areas in which it is known to be difficult to collect information.

The procedures to be used for post-processing the data shall be included in the QA/QC Plan.

At the City's request, meter and valve locations shall be collected using the DWM's Meter and Valve Location Program. The City's Meter and Valve Location Program requires the use of Ipad minis with 32GB Ipad retina Display, Otterbox cases, and Verizon 3G/4G broadband service or approved equal.

f. Testing Equipment

Measuring and/or testing instruments shall be maintained within the prescribed limits.

Tests and calibrations shall be performed against valid standards traceable to nationally recognized standards.

The results of equipment tests and calibrations shall be documented and certified by the party performing the test and/or calibration.

Tests and calibrations which are required to be performed by a Third Party shall be performed by commercial firm that is independent of the Service Provider and acceptable to the City. The Third Party shall be staffed with experienced technicians, properly equipped and fully qualified to perform the tests and calibrations in accordance with the specified standards.

i. Meter Testing Equipment

The Service Provider is responsible for providing Third Party calibration of the Meter testing equipment.

All Meter Testing equipment shall be calibrated by the Third Party in accordance with AWWA standards. These calibrations shall be performed prior to the commencement of Meter Testing, and at 6-month intervals thereafter for the duration of the Agreement, and shall be certified by the Third Party. The Third Party certification shall provide an overview of the calibration procedures, document the equipment that was calibrated, verify

and document that the calibrated equipment includes all of the equipment that is required to be calibrated in order to meet AWWA standards, document that the calibrated equipment meets AWWA calibration and accuracy standards, and include the calibration results.

g. Parts

The City will supply new meters when replacement meters are required. The Service Provider is responsible for both picking up and/or returning meters to the City.

Except as otherwise requested by the City, the Service Provider shall provide all Parts and Incidentals required to complete work orders.

In the event that City elects to supply Parts the City shall provide Parts to the Service Provider in bulk, or at the Work Site (e.g. in the form of a rolling warehouse). The procedures for the City to supply Parts shall ensure that Parts are available to the Service Provider in accordance with the Crew Work Schedules and shall be documented in the Work Plan.

All parts shall be new.

Unless otherwise approved in writing by the City, all Parts shall be supplied by the manufacturer of the meter into which the Parts are being installed (i.e. Neptune Parts shall be supplied for Neptune meters, Badger Parts shall be supplied for Badger meters, etc.) Parts for the various types of meters shall conform to the requirements specified in Sections 9.g.i through 9.g.iv below.

i. Meters

The size of the meter shall be determined by the nominal size (in inches) of the opening in the inlet and outlet flanges.

Except as identified below all meters shall comply with the following requirements:

- Maximum working pressure: 150 psi
- Temperature range: 33° F to 100° F water temperature
- Maintenance: All parts shall be accessible for in-line service

1. Compound Meters

Manufacturer: Compound type water meters shall be TRU/FLO Compound meters as manufactured by Neptune Technology Group, Recordall Compound meter as manufactured by Badger Meter, Inc., or approved equal.

Standard: All compound type meters shall meet or exceed the requirements of the latest revision of ANSI/AWWA C702 for Class II

meters, NSF/ANSI 61, and the requirements of the Safe Water Drinking Act.

Description: The meters shall be compound type and shall consist of a meter housing, strainer, measuring elements, hydraulic valve and sealed registers.

Operating Characteristics: Compound type meters shall consist of a combination of an AWWA Class II inline horizontal axis turbine meter for measuring high rates of flow and a rotating disc type positive displacement meter for measuring low rates of flow. Both meters shall be enclosed in a single main case. An automatic valve shall direct flow through the disc meter at low flow rates and through the turbine meter at high flow rates.

Casing and Cover: The main casing and cover shall be cast from an ANSI/NSF 61, Annex G and Annex F certified no lead high copper alloy containing a minimum of 85% copper. The cover shall contain a stainless steel calibration vane for the purpose of calibrating the turbine measuring element while the meter is in-line and under pressure. A test plug shall be located in the main case or the cover for the purpose of field testing of the meter. The meter casing shall have flanged ends.

Markings: The meter serial number shall be imprinted on the meter flange or cover as well as the register box covers. Meters shall carry the NSF-61 mark on the casing. The size, model, and arrows indicating direction of flow shall be cast in raised characters on the main case and cover.

External Bolts: Casing bolts shall be made of AISI Type 316 stainless steel.

Unitized Measuring Element: The unitized measuring element shall be a complete assembly factory calibrated to AWWA standards that includes the cover, registers, and both a turbine measuring element and a rotating disc chamber assembly. It shall be easily field removable from the meter body without the requirement of unbolting flanges.

Measuring Chambers: The turbine measuring chamber shall be a self-contained unit, attached to the cover for easy removal. The rotating disc chamber shall be a self-contained unit mounted on the cover and shall be easily removable from the cover. The turbine shaft shall be tungsten carbide with tungsten carbide inserts and shall rotate in removable graphite bushings. Thrust bearings shall be tungsten carbide.

Intermediate Gear Train – Turbine Section: The gear train shall be housed in the turbine measuring chamber. The intermediate gear train shall be

directly coupled from the turbine rotor and magnetically coupled to the register through the meter cover. All moving parts of the gear train shall be made of a self-lubricating polymer or stainless steel for operation in water.

Automatic Valve: The disc meter shall include a self-actuated valve that directs flow through the disc meter at low flow rates and through the turbine meter at high flow rates. The self-actuated throttle valve shall restrict the flow through the disc meter to minimize wear. The automatic valve shall be of the spring-loaded, poppet type. All valve parts shall be made of no-lead high copper alloy containing a minimum of 85% copper, stainless steel, or suitable steel, or a suitable polymer with a replicable semi-hard EPDM rubber seat. Only the cover shall be removed to gain access to the valve for inspection or service.

Strainer: The strainer shall be easily removable and shall have an effective straining area of double the disc meter inlet.

2. Turbine Meters

Manufacturer: Turbine type water meters shall be High Performance Turbine meters as manufactured by Neptune Technology Group, Recordall Turbo Series meters as manufactured by Badger Meter, Inc. or approved equal.

Standard: All turbine type meters shall meet or exceed the requirements of the latest revision of ANSI/AWWA C701 for Class II in-line meters, NSF/ANSI 61, and the requirements of the Safe Water Drinking Act.

Description: The meters shall consist of three basic components: meter casing, measuring chamber and sealed register.

Casing and Cover: The main casing and cover shall be cast from an ANSI/NSF 61, Annex G and Annex F certified no lead high copper alloy containing a minimum of 85% copper. The cover shall contain a stainless steel calibration vane for the purpose of calibrating the turbine measuring element while the meter is in-line and under pressure. A test plug shall be located in the main case or the cover for the purpose of field testing of the meter. The meter casing shall have flanged ends.

Markings: The meter serial number shall be imprinted on the meter flange or cover as well as the register box covers. Meters shall carry the NSF-61 mark on the casing. The size, model, and arrows indicating direction of flow shall be cast in raised characters on the main case and cover.

External Bolts: Casing bolts shall be made of AISI Type 316 stainless steel.

Connections: Main casing connections shall be flanged as specified in Table 3, ANSI/AWWA C701.

Unitized Measuring Element: The unitized measuring element shall be a complete assembly factory calibrated to AWWA standards that includes the cover, register, and turbine measuring element. It shall be easily field removable from the meter body without the requirement of unbolting flanges.

Measuring Chamber: The turbine measuring chamber shall be a self-contained unit and shall be removable from the main casing. The turbine spindles shall be stainless steel. Turbine shafts shall be tungsten carbide.

Intermediate Gear Train: The intermediate gear train shall be directly-coupled to the turbine rotor and magnetically coupled to the register through the meter cover. All moving parts of the gear train shall be made of a self-lubricating polymer or stainless steel for operation in water.

Strainer: The strainer shall be easily removable and shall have an effective straining area of double the disc meter inlet.

3. Displacement Meters

Manufacturer: Displacement type water meters shall be manufactured by Neptune Technology Group, Badger Meter Inc. or approved equal.

Standard: All displacement type meters shall meet or exceed the requirements of the latest revision of ANSI/AWWA C700, NSF/ANSI 61, and the requirements of the Safe Water Drinking Act.

Description: The meters shall be positive displacement type using discs and shall consist of a meter casing, measuring chamber and sealed register.

Operating Characteristics: Water shall flow through the meter strainer and into the measuring chamber where it will cause the disc to nutate. A drive magnet will transmit the motion of the disc to a follower magnet located within the register. The follower magnet will be connected to the register gear train. The gear train will reduce the disc nutations into volume totalization units displayed on the register.

Casing and Cover: The cover shall have a rated working pressure of 150 psi. The meter casing shall be bronze with screwed or flanged ends as necessary to match field conditions.

Markings: The meter serial number shall be imprinted on the meter flange or cover as well as the register box covers. Meters shall carry the NSF-61

mark on the casing. The size, model, and arrows indicating direction of flow shall be cast in raised characters on the main case and cover.

External Bolts: Casing bolts shall be made of AISI Type 316 stainless steel.

Measuring Chamber: Measuring chamber shall be a self-contained unit and shall be removable from the main casing.

Strainer: A strainer shall be provided for the meter. It shall be easily removable and have an effective straining area of double the meter inlet area.

Maintenance: The register, measuring chamber and strainer shall be replaceable without removing the meter housing. All parts shall be interchangeable between like-sized meters.

4. Fire Service Meters

Manufacturer: Fire service meters shall be Protectus III S as manufactured by Neptune Technology Group, Recordall Fire Series Assembly as manufactured by Badger Meter Inc. or approved equal.

Standard: All fire service type meters shall meet or exceed the requirements of the latest revision of ANSI/AWWA C703 for Class II meters, NSF/ANSI 61, and the requirements of the Safe Water Drinking Act.

Description: Fire service meters shall be used as a combined fire and domestic service meter where one water line serves both fire and domestic or process needs and flow is in one direction.

Operating Characteristics: Fire service meters shall consist of a mainline meter of the turbine type (Class II) to measure high flow rates, a fire service strainer, a bypass meter to measure low flow rates, and an automatic valve (mainline valve) to automatically divert flow rates other than fire flows through the bypass meter.

- In normal operation, during low flow rates all water shall flow through the bypass section and be registered by the turbine meter.
- When pressure loss through the bypass section approaches a predetermined pressure, the mainline valve shall automatically open permitting flow to enter the mainline meter and be measured. When flow rate decreases sufficiently, the mainline valve shall close and all lower flows shall be measured by the bypass meter.

- The automatic valve shall be controlled by a weight which shall lock the valve in the closed position until a predetermined pressure loss overcomes the weight and opens the valve.

Casing and Cover: The mainline meter main casing shall be cast iron with epoxy coating inside and out. Swing arm and seats shall be bronze. Valve discs shall be elastomer. Casing bolts shall be steel.

Markings: The meter serial number shall be imprinted on the meter flange or cover as well as the register box covers. Meters shall carry the NSF-61 mark on the casing. The size, model, and arrows indicating direction of flow shall be cast in raised characters on the main case and cover.

External Bolts: Flange bolt pattern and hole diameter in accordance with ANSI B16.5 Class 125/AWWA C207 Class D.

Automatic Valve: Valve discs shall be elastomer.

Strainer: A strainer shall be incorporated into the design of the fire service meter and shall be upstream of the turbine meter. Strainer shall have a straining area of at least 4 times the meter inlet area.

Maximum working pressure: 175 psi

ii. Registers

All registers shall meet the requirements of ANSI/AWWA C707 – Encoder-Type Remote-Registration Systems for Cold- Water Meters

Registers shall be as manufactured by Neptune Technology Group, or approved equal.

Except as otherwise approved by the City and the manufacture, the register for a given meter type shall be as specified below:

- Compound Meters—T/T Pro-Read Register
- Turbine Meters-- High Performance Turbine (HPT) Pro-Read Register
- Displacement Meters-- Pro-Read T-10 Register
- Fire Service Meters-- HP Protectus III Fire Service Compound Meter Register (HPT P3)

Separate magnetic-drive registers shall record the flow of the turbine meter and the disc meters and their total will be the registration of the compound meter.

Registers shall be permanently roll-sealed, straight reading indicating in cubic feet.

Registers shall include a center-sweep test hand, a low flow indicator, and a glass lens.

Registers shall be serviceable without interruption of the meter's operation.

Register boxes and covers shall be of bronze composition. The name of the manufacturer shall be clearly identifiable and located on the register box covers.

Registers shall be affixed to the cover by means of a plastic tamperproof seal pin that must be destroyed in order to remove the register.

Registration accuracy over the normal operating range shall be 98.5% to 101.5%. Registration at the crossover shall not be less than 95% with direct reading registers. Registrations at the crossover shall not be less than 90% with absolute encoder or generator remote registers. Registration at the extended low flow rate shall not be less than 95%.

A translator encoder register compatible with the City of Atlanta's Automatic Meter Reading (AMR) System shall be provided. The register shall provide direct electronic transfer of meter reading information from the meter to the City's AMR device. The register shall send data in ASCII format. The Encoder Register shall be factory-wired and potted to provide reliability in moist conditions.

The translator encoder register shall use an absolute encoder to directly read the actual position of the index odometer wheels, when interrogated by a reading device (Touch Probe, Radio MIU or Telephone MIU). The reading device shall provide all necessary power. When interrogated by an AMR device the translator encoder shall communicate to the device in ASCII computer language the absolute meter reading, and an eight-digit identification number. Any error on non-read shall be immediately indicated by the meter reading equipment.

The translator encoder registers shall include a standard full 6-wheel encoding, and have a 6-wheel odometer assembly for direct manual reading in hundreds of cubic feet.

iii. Meter Interface Units

Meter Interface Units (MIUs) shall be R900 pit MIUs as manufactured by Neptune Technology Group, or approved equal.

iv. Antenna Cables

The length of the antenna cable shall be selected to minimizing the potential for damage caused by the cable becoming taught while removing the Meter Box lid and to maximize the ease of use for maintenance personnel (e.g. being sufficiently long to allow the Meter Box lid to be easily removed but not so long as to create tangling problems.)

10. EXECUTION OF FIELD WORK

a. General

The following applies to the field work conducted as part of the Services

i. Site Access

The City will provide legal access to the Work Site.

WOs within the Hartsfield-Jackson International Airport security boundary are anticipated to be performed. City staff will escort the Service Provider within the Airport security boundary.

ii. Site Conditions

Site conditions will vary from Work Site to Work Site, requiring the performance of various Incidental activities to accomplish the Services.

The Service Provider shall make all necessary investigations to determine the Work Site conditions and any unique features that may affect the performance of the Services.

iii. Health, Safety & Security

The Service Provider shall be fully responsible for the health, safety and security of Parties performing the Services and visiting the Work Site.

The Service Provider shall ensure that proper protective gear, safety equipment and rescue equipment are adequately maintained, readily available at the site, and properly used in the appropriate situations. All crew members shall wear safety vests and steel toed boots.

The Service Provider shall ensure that Service Provider Personnel are properly trained, and have a demonstrated ability, to implement the safety procedures and protocols, including the use and operation of protective gear, and the use and operation of safety and rescue gear and equipment.

The Service Provider shall ensure that safety procedures and protocols are followed.

All crews who perform Work Orders shall consist of a minimum of two people.

iv. Standard Equipment

All crews shall be equipped with the tools and equipment necessary to efficiently perform the Services.

All crews shall be equipped with a metal detector, depth meter, manhole hook, pry bar, long screw drivers, meter stick, wire brush meter shovel and an oxygen sensor.

The equipment necessary to dewater Meter Installations shall be available to each crew on a daily basis.

v. Protection of the Services

The Service Provider is responsible for the protection of the Services and the Work Site, including existing utilities and structures.

The Service Provider shall protect the Work Site from theft, vandalism and unauthorized entry.

The Service Provider shall insure that all utilities are properly notified and that utilities are properly marked prior to performing the Services.

No equipment shall be left unattended and running during work hours.

1. Traffic and Pedestrian Control

The Service Provider is responsible for properly managing traffic, through and around the Work Site, including motorized, non-motorized and pedestrian traffic.

2. Barricades, Lights and Signals

The Service Provider shall furnish and erect barricades, fences, lights, danger signals, and other precautionary measures necessary for the protection of persons, property and the Services.

All open Meter Boxes, and Meter Boxes with missing lids, located at the Work Site shall be clearly marked with cones, caution tape and/or barricades as necessary to prevent Persons and vehicles from stumbling on, falling into, or being injured or damaged by the open Meter Box.

vi. Housekeeping

Except as otherwise approved by the City, the Service Provider shall return all Work Sites to their original condition, or better, as Services are completed or by the end of the day, whichever comes first.

1. Removal and Disposal of Water and Waste

The Service Provider is responsible for the removal and disposal of all water, mud, rubbish, material and debris that must be moved or removed to perform the Services.

vii. Repair and Restoration

The Service Provider will be held responsible for repairs, replacements and restoration required as a result of the performance of the Services or failure to properly perform the Services. Such repairs, replacements and restoration shall be completed by the Service Provider at no cost to the City of Atlanta or the owner of the damaged property.

viii. Meter and Valve Location

The Service Provider shall implement the following techniques as necessary to locate meters and valves:

- 1) Use the meter location information provided in the WO
- 2) Access the Data Management System to identify location information
- 3) Use a GPS device to locate the meter/valve
- 4) Contact the Customer at the service address
- 5) Contact the Site Superintendent (where applicable)
- 6) Use a depth finder to locate the meter/valve
- 7) Probe the ground
- 8) Scan the ground with a metal detector

If the meter cannot be located using the techniques identified above, the Service Provider shall contact the City for additional information.

The Service Provider shall record the GPS coordinate locations for meters and valves. The location of a meter is defined to be the center of the Meter Box lid, or the center of the meter where a Meter Box does not exist. The location of a valve is defined to be the center of the valve box cover, or the center of the valve stem where a valve box cover does not exist.

The procedure to be used for locating Meter Boxes and valves shall be included in the QA/QC Plan.

ix. Valve Operation

The Service Provider will be responsible for opening and closing the meter inlet, outlet and bypass valves. In the event that the operation of these valves will result in the Customer's water service being interrupted or shut down, the Service Provider may request the City to perform the Shutdown and/or Test Shutdown.

The opening and closing of any distribution system valve, including meter inlet, outlet and bypass valves, shall be performed only by a person who holds a valid Water Distribution License. Except as otherwise approved by the City, all distribution system valves located on, or adjacent to, a water main, shall be opened and closed by the City or by the Service Provider under the direct supervision of the City.

x. Removal of Water, Debris and Mud from Meter Installations

The Service Provider is responsible for dewatering the Meter Installations as necessary to complete all Work Orders. The Service Provider is also responsible for removing mud and debris from Meter Installations as necessary to complete all Work Orders with the exception that the Service Provider is only responsible for the removal of limited mud and debris. Mud and debris removal is considered to be limited when the in-place volume of mud and debris required to be removed is less than or equal to 3 cubic feet, and the removal of mud and debris from valve boxes and sleeves can be accomplished using hand tools (e.g. augers, rock picks, etc.) If the removal of more than 3 cubic feet of mud and debris from the meter box is required, or air/water flushing of the valve sleeve or valve box is required, such shall be noted on the Work Order as a Recommended Repair. For Work Orders that require the City to remove mud or debris, the processes for determining whether the Work Order will be closed or further coordinated by the Service Provider with the City shall be included in the Work Plan.

xi. Performance of Shutdowns and Test Shutdowns

When required to perform the Services a Shutdown and/or Test Shutdown shall be performed. Except as otherwise approved by the Customer, the Service Provider shall provide Customers with a minimum of 72 hours of notice prior to performing a Shutdown, and 24 hours of notice prior to performing a Test Shutdown. Prior to performing a Shutdown the Service Provider shall perform a Test Shutdown.

Should the Service Provider desire the City to perform the Shutdown and/or Test Shutdown, such shall be identified as a Recommended Repair.

Procedures for determining when Test Shutdowns and Shutdowns are required; how Test Shutdowns and Shutdowns will be coordinated, performed

and documented; and whether a work order will be closed or further coordinated by the Service Provider with the City when the performance of a Shutdown or Test Shutdown by the City is required, shall be included in the Work Plan.

xii. Installation of Pins and Locking of Bypass

At the conclusion of each Work Order, the Service Provider shall insure that the bypass is fully closed and clock pins are properly installed. Meters for which the bypass was locked prior to the Services shall be relocked.

xiii. Warranties and Guarantees

The Service Provider shall provide a warranty to the City that guarantees that all Parts replaced in accordance with the provisions of this Agreement shall be free from defects in materials and workmanship for a period of no less than one (1) year from the date of a passing Meter Test performed subsequent to the replacement of the Parts. In addition, the Service Provider shall guarantee that the repairs made to the Meter are sufficient to ensure that the Meters and the Meter connections to adjacent piping and valves will not leak, and will maintain a passing meter accuracy, for the same one (1) year period.

Upon discovery that a meter or Part is defective or malfunctioning, that a Meter or Meter connection is leaking, or the AWWA meter accuracy standards are not being met, the City shall provide email notification to the Service Provider. The email notification from the City shall include a Survey Test & Repair WO for the malfunctioning Meter and shall reference the WO number under which the Meter and/or Parts were initially replaced.

The Service Provider shall acknowledge receipt of the email notification and work order. The work order shall be completed as soon as is possible and in accordance with the Project Milestone.

If upon inspection, it is determined by the City, that the malfunction was caused by defects in the Services, no payment shall be made for the work order included with the notification.

If upon inspection, it is determined by the City, that the malfunction was not caused by defects in the Services, payment for the WO included with the notification, shall be made in accordance with the standard payment amounts identified in the Agreement.

b. Site Survey

i. General

The Service Provider shall conduct a Site Survey for each Meter for which a Site Survey Work Order is issued.

The Services required to complete a Site Survey include, but are not limited to, coordinating the Services; visiting the site; locating the meter and valves; removing water, mud and debris from the Meter Installation; collecting, storing and maintaining the Site Survey information; defining and performing Quality Assurance and Quality Control, providing reports and databases; preparing payment requests; performing repair and restoration of the Work Site; and administering the Agreement as it pertains to the performance of a Site Survey.

ii. Collection of Site Survey Information

The Service Provider shall collect all information required to accurately complete a Site Survey Report.

Except as otherwise approved by the City, all Site Survey information shall be collected electronically in the field.

For meters that do not have a test port, the Service Provider shall make a recommendation regarding whether a test port should be installed or the meter should be tested off-site.

As part of the Site Survey the Service Provider shall determine whether the meter is Ready to Test or whether Recommended Repairs are needed before the meter is tested.

iii. Quality Assurance/Quality Control

Quality assurance and quality control requirements for Site Surveys shall be performed as outlined in the Quality Assurance and Quality Control Plan and the Data Management System Plan.

iv. Documentation

Upon completion of a Site Survey, the Data Management System, including all databases and components required to run reports, shall be updated with the information collected as part of the Site Survey Report. The timeframe for updating the Data Management System with Site Survey results shall be identified in the QA/QC and Data Management System Plans.

c. Meter Test

i. General

The Service Provider shall conduct a Meter Test for each meter for which a Meter Test Work Order is issued.

The Services required to complete a Meter Test include, but are not limited to, calibrating the equipment; coordinating the Services; visiting the site; locating the meter; implementing safety procedures; dewatering and removing mud and debris from the Meter Installation; performing shutdowns; installing a test port (if required); calibrating the meter, testing the meter in accordance with AWWA standards; collecting, storing and maintaining the Meter Test information; providing all Submittals and databases associated with the Meter Test; implementing QA/QC procedures; performing repair and restoration of the Work Site; submitting payment applications; and managing the Agreement as it pertains to the performance of a Meter Test.

ii. Submittals

The Service Provider shall submit a cut sheet of the material recommended by the manufacturer(s) of the existing meter(s) for lubricating the meter test plug.

iii. Test Port Installation

If the installation of a test port is required to perform On-Site Testing, the test port shall be installed within the meter vault. The test port shall be placed between the outlet side of the meter and the inlet of the outlet valve, using a 2-inch saddle and a 1 and ½-inch or 2-inch brass ball valve and brass nipple.

iv. Testing Requirements

Meter Tests shall be conducted in accordance with the requirements of Chapter 5 of AWWA Manual M6 and the applicable ANSI/AWWA Standards for the type of meter being tested.

If during a Meter Test or a Survey & Test a meter is found to have one or more defective or improper meter registers, the Service Provider shall contact the City to determine if the work order should be changed to include meter repairs, the register should be replaced with a temporary test register in order to complete the test, or the test should be postponed. The outcome of this coordination shall be specifically documented in the corresponding Work Order Report.

No testing shall be conducted when the temperature is below 32 degrees Fahrenheit.

Testers shall not be operated above the pressure limits recommended by the tester manufacturer.

Calibration of the meter, and retesting the meter after calibrating the meter, is part of the Meter Test.

Except as otherwise approved by the manufacturer, testers shall be physically secured at pressures above 80 psi.

The Service Provider shall lubricate the meter test plug after testing.

Upon completion of testing, the Service Provider shall insure that the bypass is fully closed and clock pins are properly installed. Meters for which the bypass was locked prior to the meter test shall be relocked.

Except as otherwise approved by the City, the Service Provider shall use a test discharge hose that will safely discharge to a storm drain inlet.

In the event that connecting to a fire hydrant is required, the Service Provider shall provide backflow prevention and disinfection in accordance with City policies and guidance.

1. Test Rates

Except as otherwise approved in the Work Plan, meters shall be tested at seven different test flow rates. Test flow rates and volumes shall be in accordance with AWWA Manual M6 and the applicable AWWA Standards. Except as otherwise approved in the Work Plan the following test points shall be covered, with the remainder of the seven test rates interspersed to cover the full continuous operating range of the meter.

- a. A maximum rate flow test of 25% or more of the meter rated capacity;
- b. An intermediate rate flow test of approximately 10% of the meter rated capacity (high point of maximum registration);
- c. A minimum rate flow test of the meter rated capacity
- d. At least one flow test (preferably more) in the changeover range of flows (if applicable)

2. Accuracy

To be deemed accurate the meter shall meet the accuracy criteria identified in AWWA Manual M6, and the applicable ANSI/AWWA Standards.

v. Collection of Meter Test Information

The Service Provider shall collect all information required to accurately complete a Meter Test Report.

Except as otherwise approved by the City, all Meter Test Report information shall be collected electronically in the field.

vi. Analysis

The Service Provider shall analyze the Meter Test results to determine if:

- 1) The Meter has passed the test and no additional repairs are needed
- 2) The Meter has passed the test but Required Repairs are needed
- 3) The Meter failed the test and Recommended Repairs are needed before the Meter is retested
- 4) The Meter failed the test and it is likely the meter should be replaced

vii. Quality Assurance/Quality Control

Quality assurance and quality control requirements for Meter Tests shall be performed as outlined in the Quality Assurance and Quality Control Plan.

viii. Documentation

Upon completion of a Meter Test, the Data Management System, including all databases and components required to run reports, shall be updated with the information collected as part of the Meter Test Report. The timeframe for updating the Data Management System with the Meter Test results shall be identified in the QA/QC and Data Management System Plans.

d. Meter Test & Repair

i. General

The Service Provider shall perform Meter Test & Repair for each meter for which a Meter Test & Repair Work Order is issued.

The Services required to complete a Meter Test & Repair include, but are not limited to, visiting the site; locating the meter; dewatering and removing mud and debris from the Meter Installation; performing shutdowns; inspecting, repairing, calibrating and conducting Meter Tests as necessary to ensure that the meter is fully operational and meets AWWA accuracy requirements for the meter; and all requirements specified herein. The provision of Parts, equipment, products and Incidentals, including the calibration of equipment is included, as well as providing Submittals; implementing safety and QA/QC procedures; coordinating the work; collecting, storing and maintaining the

Meter Test & Repair information; repairing and restoring the Work Site; submitting payment applications; and managing the Agreement as it pertains to the performance of a Meter Test & Repair.

ii. Installation of New Meters

Prior to installing a new meter, the Service Provider shall verify that the existing Meter Installation complies with the manufacture's installation requirements. In the event that the existing Meter Installation does not comply with the manufacturer's requirements, the Service Provider shall identify the situation and request direction from the City prior to installing a new meter in the existing location and orientation.

iii. Requirements for Meter Test & Repair

Each meter and Meter Installation for which a Meter Test & Repair Work Order is issued shall be inspected, tested, cleaned, and repaired by the Service Provider as necessary to eliminate leaks from the Meter and Meter connections, achieve passing test results for meter accuracy based on the performance of Meter Testing in accordance with AWWA standards, meet the guarantee and warranty requirements, and complete the Meter Test & Repair Report.

The Service Provider shall replace any the components of the Meter which are inappropriate for the installation (e.g. wrong register type or size) and/or which do not meet the specifications for equipment and Parts.

After a Meter is restored to its proper operating condition, it shall be calibrated and tested, or retested, to insure it conforms to all applicable AWWA standards for repaired meters.

All Parts and replacement meters, which are replaced in accordance with the Work Plan and the Quality Assurance/Quality Control Plan may be billed to the City in accordance with the Bid Schedule provided the original Parts and meters are removed and returned to the City in plastic bags or suitable containers labeled with the individual WO number, the meter serial number, and the date the repairs were made. Meters and/or Parts that are missing from the Meter Installation at the time the Service Provider arrives at the Site, such that they cannot be returned to the City, shall be documented by in a time and date stamped pre-fieldwork photo attached to the work order.

Plastic bags and containers shall be furnished by the Service Provider.

iv. Collection of Meter Test & Repair Information

The Service Provider shall collect all information required to accurately

complete a Meter Test & Repair Report.

Except as otherwise approved by the City, all Meter Test & Repair Report information shall be collected electronically in the field.

v. Quality Assurance/Quality Control

Quality assurance and quality control requirements for Meter Repairs shall be performed as outlined in the Quality Assurance and Quality Control Plan.

vi. Documentation

Upon completion of a Meter Repair & Test, the Data Management System, including all databases and components required to run reports, shall be updated with the information collected as part of the Meter Test & Repair Report. The timeframe for updating the Data Management System with Meter Test & Repair results shall be identified in the QA/QC and Data Management System Plans.

e. Meter Repair

The Service Provider shall perform a Meter Repair for each meter for which a Meter Repair Work Order is issued.

The Services required to complete a Meter Repair WO is the same as the Services required to complete a Meter Test & Repair with the following exceptions:

- Testing of the meter to verify that the meter meets AWWA accuracy requirements will not be performed.
- A Meter Repair Work Order will specify the repairs to be made (Note: If the Service Provider believes Recommended Repairs are needed that are not included in the Meter Repair WO, the Service Provider shall coordinate with the City regarding whether such repairs shall be made as part of the Meter Repair Work Order)
- A Meter Repair Report shall be completed in lieu of the Test & Repair Report
- The information for the Meter Repair Report shall be collected electronically in the field
- Quality assurance and quality control shall be performed as outlined for Meter Repair in the Quality Assurance and Quality Control Plan, and
- The Data Management System, including all databases and components required to run reports, shall be updated with the information collected as part of the Meter Repair Report.

f. Survey & Test

The Service Provider shall perform a Survey & Test for each meter for which a

Survey & Test Work Order is issued.

The Services required to complete a Survey & Test WO is the same as the Services required to complete a Site Survey and a Meter Test with the following exceptions:

- A Survey & Test Report shall be completed in lieu of the Site Survey and Meter Test Reports,
- The information for the Survey & Test Report shall be collected electronically in the field,
- Quality assurance and quality control shall be performed as outlined for Survey & Test in the Quality Assurance and Quality Control Plan, and
- The Data Management System, including all databases and components required to run reports, shall be updated with the information collected as part of the Survey & Test Report.

g. Survey Test & Repair

The Service Provider shall perform a Survey, Test & Repair for each meter for which a Survey, Test & Repair Work Order is issued.

The Services required to complete a Survey, Test & Repair Test WO is the same as the Services required to complete a Site Survey and a Meter Test & Repair with the following exceptions:

- A Survey Test & Repair Report shall be completed in lieu of the Site Survey and Meter Test & Repair Reports,
- The information for the Survey Test & Repair Report shall be collected electronically in the field,
- Quality assurance and quality control shall be performed as outlined for Survey Test & Repair in the Quality Assurance and Quality Control Plan, and
- The Data Management System, including all databases and components required to run reports, shall be updated with the information collected as part of the Survey Test & Repair Report.