

**DISTRICT OF COLUMBIA  
WATER AND SEWER AUTHORITY**

**Board of Directors**

*Joint Meeting of Environmental Quality and Operations and  
Finance and Budget Committee*

*Thursday, September 26, 2019*

10:00 a.m.

- 1. **Call to Order**..... Major Riddick, Chairperson
- 2. **Advanced Metering Infrastructure (AMI) Project Update (Attachment 1)** .....Sheena Robinson
- 3. **Action Item**..... Joel Grosser
  - A. **Recommendation of Approval for Meter and AMI Installation Services (Attachment 2)**
- 4. **Executive Session\***..... Major Riddick
- 5. **Adjournment**

\* The DC Water Board of Directors may go into executive session at this meeting pursuant to the District of Columbia Open Meetings Act of 2010, if such action is approved by a majority vote of the Board members who constitute a quorum to discuss: matters prohibited from public disclosure pursuant to a court order or law under D.C. Official Code § 2-575(b)(1); contract negotiations under D.C. Official Code § 2-575(b)(2); legal, confidential or privileged matters under D.C. Official Code § 2-575(b)(4)(A); collective bargaining negotiations under D.C. Official Code § 2-575(b)(5); facility security under D.C. Official Code § 2-575(b)(8); disciplinary matters under D.C. Official Code § 2-575(b)(9); personnel matters under D.C. Official Code § 2-575(b)(10); proprietary matters under D.C. Official Code § 2-575(b)(11); decision in an adjudication action under D.C. Official Code § 2-575(b)(13); civil or criminal matters where disclosure to the public may harm the investigation under D.C. Official Code § 2-575(b)(14), and other matters provided in the Act.



# Advanced Metering Infrastructure (AMI) Project

Joint Session:  
Environmental Quality & Operations | Finance & Budget

September 26, 2019

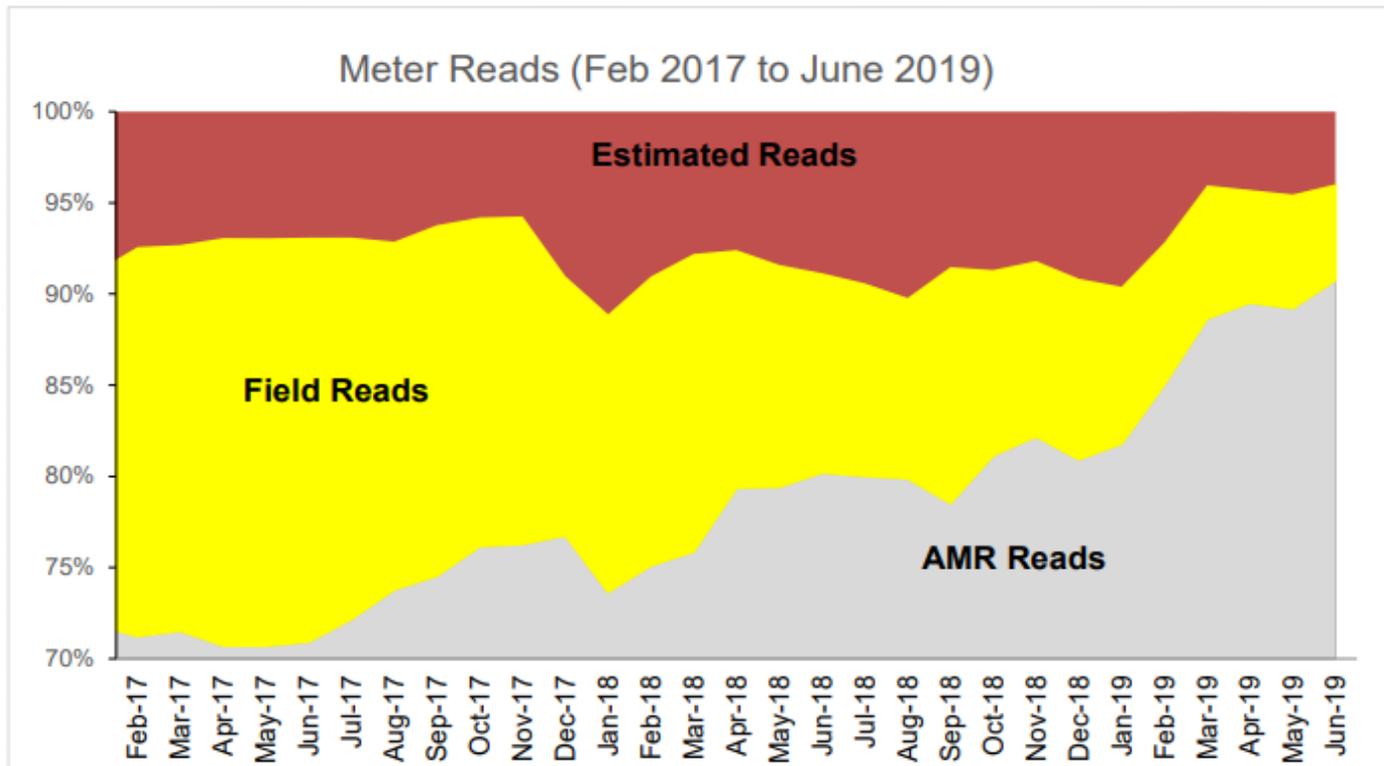


- 1. Success from Prior Efforts**
- 2. Project Overview**
- 3. Project Urgency**
- 4. Installation Scope**
- 5. Accelerated Vendor Selection**
- 6. Why Utility Metering Services (UMS)?**
- 7. Projected Timeline**
- 8. Success Metrics**
- 9. Budget**
- 10. Next Steps**
- 11. Appendix**



# Success from Prior Efforts

- Installed 85,534 meters and meter transmission units (MTUs)
- Increased overall AMI transmission rate from 70% to 92.4%
- Reduced estimated bills from project start date
- Improved transmission and redundancy efforts through 90 upgraded data collection units (DCUs)





# Project Overview

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Replace 11K aged and high-risk meters and meter transmitting units (MTUs)

- Timeline: September 2019 – April 2020
- Increase meter transmission to 98% for small meters
- Reduce the volume of manual reads to eliminate unfunded, temporary contract meter readers
- Reduce the volume of estimates



# Project Urgency

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- Minimize unplanned costs from manual meter reading (at a rate of \$38K per month that's not budgeted)
- Reduce long-term consecutive estimates that result in lost revenue
- Accelerate installation and avoid starting during peak water main break season
- Address imminent failure of aged MTU devices (currently about 57%)
- Ensure customer responsiveness for customer complaints on the additional \$20 fee (beginning in August 2019)

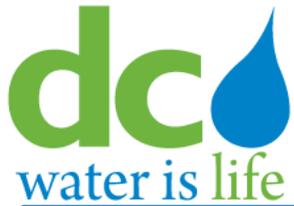


# Installation Scope

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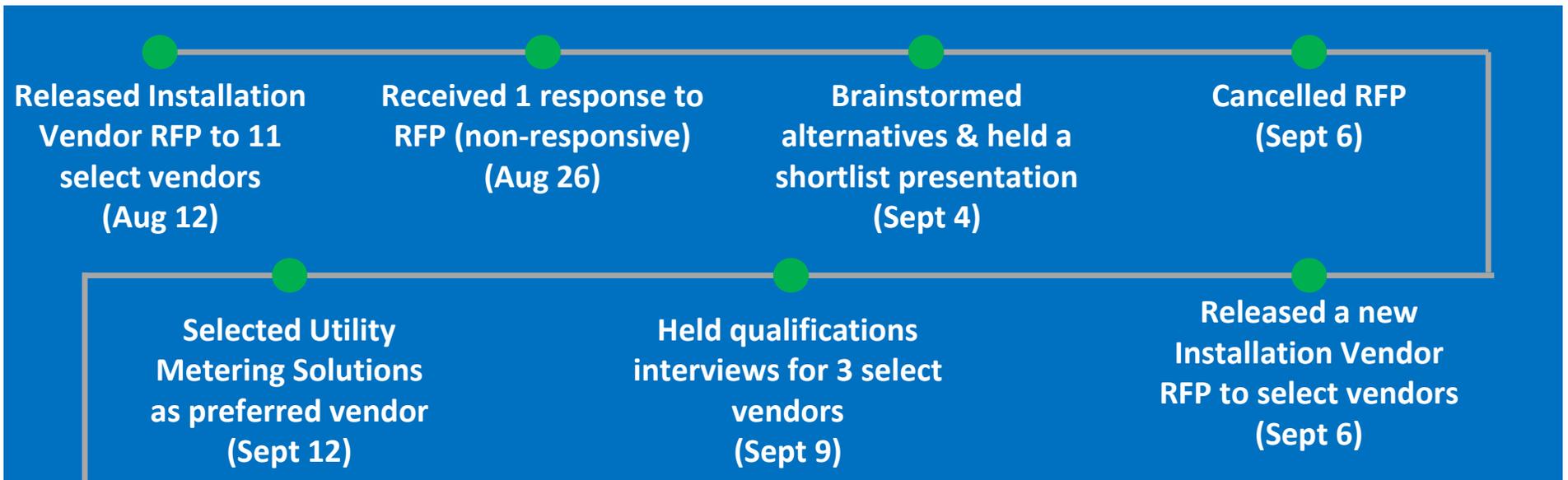
**10,666** meter and MTU installations are required

- Either not touched, not assigned, or unable to complete during AMR project
- **2,782** will be worked through DC Water internal staff (Metering, Water Services, etc.)
  - Location: all indoor meters, some outdoor meters at restricted building types
  - Building Type: Federal, Municipal, DC Housing Authority, WASA – DC Water owned meters
- **7,884** will be outsourced to an external vendor
  - Location: outdoor meters
  - Building Type: Commercial, Residential, Multifamily

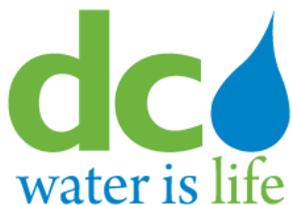


# Accelerated Vendor Selection

- Over the past six weeks, the AMI Project team has worked to determine an installation vendor
- This process has followed Procurement regulations – accentuating the three driving values: competitive, fair, and prioritizing local and small business participation



*Thank you to these teams for their innovation and responsiveness in this vendor selection process!*



# Why Utility Metering Solutions?

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The AMI Project Team selected Utility Metering Solutions (UMS) as DC Water's preferred installation partner.

- **Sprint Approach** – 15 experienced technicians who can mobilize before the busy winter season
- **Industry Credentials** – experienced with project scope at comparable utilities, experienced water technicians, defined approach for challenging installations
- **Timeline Commitment** – only vendor to commit to mid-October mobilization with capacity to increase staffing (rather than overtime); incentivized pricing for installations completed before December 1, 2019

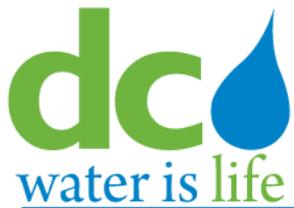
*UMS is motivated to conduct the work in our timeline and invested in DC Water's success. The AMI Project Team is confident in this partnership.*



# Projected Timeline

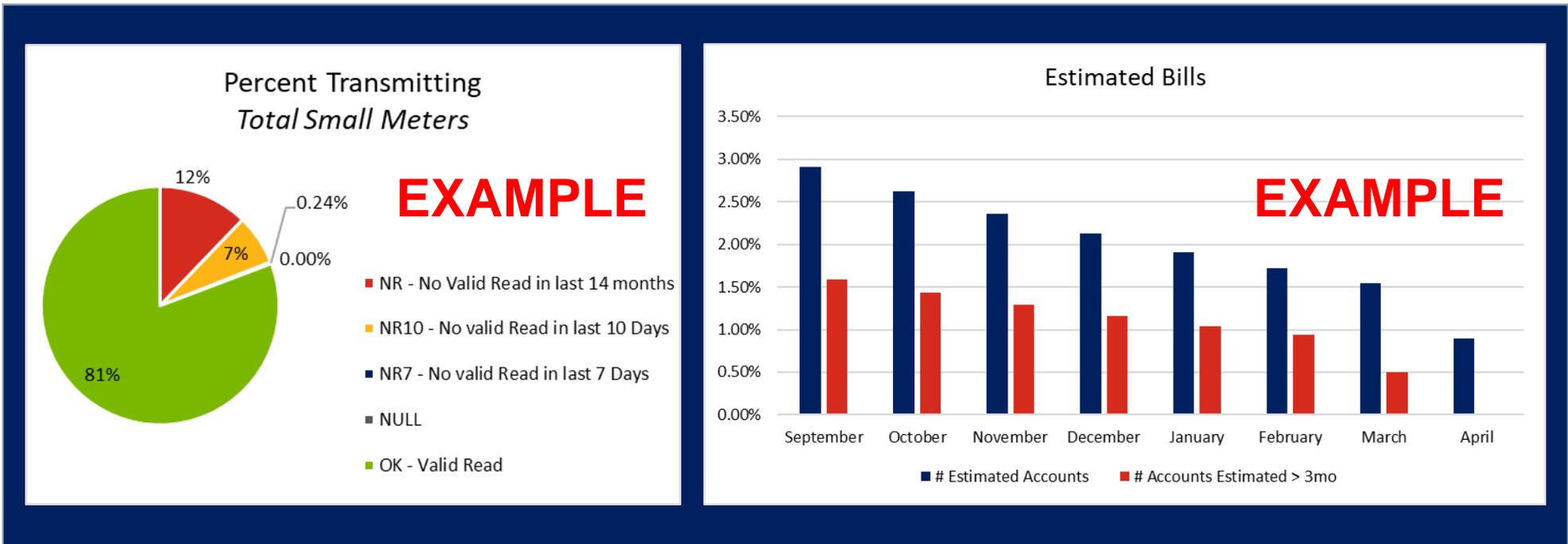
	19-Sep	19-Oct	19-Nov	19-Dec	20- Jan	20-Feb	20-Mar	20-Apr
<b>Total ~11,000</b>		<b>1,520</b>	<b>3,030</b>	<b>1,450</b>	<b>1,510</b>	<b>1,890</b>	<b>960</b>	<b>640</b>
Internal Staff ~3,000	Onboard	720	630	570	630	450		
Installation Vendor ~8,000		800	2400	880	880	1,440	960	640
<b>Cumulative</b>		<b>1,520</b>	<b>4,550</b>	<b>6,000</b>	<b>7,510</b>	<b>9,400</b>	<b>10,360</b>	<b>11,000</b>

- DC Water’s internal staff will kick off indoor installations on 9/23
- Contracting with the installation vendor will occur in parallel to kick off on 10/14 (*pending Board approval*)



# Success Metrics

- Throughout installations, DC Water will track and report key metrics in line with the organization’s strategic goals
- The metrics below, among others, are in line with the Customer Experience department’s Enterprise Performance Management Initiative #1





# Budget: Pricing Approach

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- **TRIPLE WIN** approach
  - **UMS is incentivized** to complete installations before the busy winter season
  - **West Monroe is incentivized** to increase AMI penetration in the small meter population and minimize RTUs
  - **DC Water reduced risk** via unit pricing on meters and transitioning to pre-authorized Time & Material for challenging installations



# Budget: Incremental Request

- The Board approved FY 2020 budget is \$2.6M
- The estimated funding required for the AMI project is \$2.9M for the following activities –

Line Item	Est. Budget
Utility Metering Solutions’ Anticipated Costs	\$1.92M
Remaining 2020 West Monroe Contract Value	\$0.68M
Internal DC Water Crew & Fixed Costs *Nets out planned spend of \$313k	\$0.28M*
<b>Additional 2020 Budget Request:</b>	<b>\$2.9M</b>

*\*Combined with the \$5.7M SGS bid, this budget would put project spend at ~\$8.4M – well below the 2016 Engineer’s Estimate of \$11.3M*

For additional information on assumptions used to estimate the requested budget, please see the Appendix



## Next Steps

- Seek joint committee's recommendation of action item to the full Board for the \$1.9M contract award to the selected vendor
- Seek recommendation from the Finance & Budget Committee to allocate \$2.9M to PAY-GO financing to complete the project in FY 2020



# Appendix



# Breakdown of meter sizes

Meter Sizes	UMS	DC Water
5/8" Meter	2,810	800
3/4" Meter	700	353
1" Meter	3,092	774
1.5" Meter	604	355
2" Meter	678	500
<b>Total</b>	<b>7,884</b>	<b>2,782</b>



# UMS Budget Detail

Based on Utility Metering Solutions’ proposal, the estimated additional funding is \$1.92M

Category	Est. Budget
Plumbing (incl. 15% markup)	\$0.09M
Meter Replacement (standard)	\$1.12M
Performance Bonus (pre-11/30)	\$0.07M
Meter Survey Fee	\$0.11M
Meter Replacement (RTU)	\$0.51M
E-Waste Disposal Fee	\$0.03M
<b>Total</b>	<b>\$1.92M</b>



# Inputs & Assumptions

## Scope Assumptions

Data Point	Unit	Value
Total Months	#	8
Plumbing Budget	\$	\$75,000.00
Total UMS Installations Pre-Nov. 30	#	3150
Total Unit Cost Completions	%	70%
Total RTU	%	30%

## RTU Assumptions

Data Point	Rate of Occurrence	T&M Hours
Obstructed Pit	25%	2
Faulty Equipment / Stuck Valve	10%	1
Meter Mismatch	5%	0
Tree Roots	10%	6
Unable to Access	35%	Meter Exchange
Imminent Failure	5%	Meter Exchange
Leak	10%	Meter Exchange

## Project Setup, Installation, and Mobilization

Data Point	Quantity	Value
Project Setup, Initiation, and Mobilization	1	\$11,500.00



# Inputs & Assumptions

## Meter & MTU Installation Services

Data Point	Quantity	Value
5/8" Meter Exchange	2810	\$164.50
3/4" Meter Exchange	700	\$164.50
1" Meter Exchange	3092	\$180.00
1.5" Meter Exchange	604	\$350.00
2" Meter Exchange	678	\$350.00

## Software and Oversight

Data Point	Value
Materials & 3rd Party Services	15%
Field Hourly Rate	\$96.00
RTU / Survey Only	\$45.00
Meter Install Performance Bonus (adder)	\$21.00
Project Bonding (if required)	2.5%

## Administrative Costs

Data Point	Value
E-Waste Disposal (UMS MTUs) - per endpoint	\$4.00
Meter Storage (Sensus) - per month	\$2,499.00
Lid Storage (Bingham & Taylor) - per month	\$1,295.00
Trailers (Pac Van) - quantity	4
Trailers (Pac Van) - cost per month	\$75.00
Claims - N/A	\$0.00
Remaining 2020 WMP Contract Value	\$678,000.00



# Inputs & Assumptions

## Internal Installers

Data Point	Value
Meters/MTUs	2782
Plumbing budget	\$20,000.00
Required installers - full-time WS/MO employees	6
Required installers - temp employees	1
Total installers	7
Required foremen	1
Total internal crew	8
Estimated months to completion	6
Estimated monthly overtime hours	40
Annual salary - MO/WS employee (fully loaded)	\$101,250.00
Annual salary - Temporary employee	\$59,217.60
Annual salary - Foreman (fully loaded)	\$118,800.00
Planned spend	\$313,000.00
Vehicle purchase - N/A	\$0.00
Existing spare vehicles	13
Aclara MTU programming puck	\$300.00
Existing Aclara MTU programming pucks	6
Laptop purchase with required programs	\$2,000.00
Existing laptops for use	8

**DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY  
BOARD OF DIRECTORS CONTRACTOR FACT SHEET**

**ACTION REQUESTED**

**GOODS AND SERVICES CONTRACT AWARD**

**METER AND ADVANCED METERING INFRASTRUCTURE (AMI) INSTALLATION SERVICES  
(Non - Joint Use)**

Approval to execute contract award for Meter and Advanced Metering Infrastructure (AMI) Installation services in the amount of \$1,919,597.79.

**CONTRACTOR/SUB/VENDOR INFORMATION**

<b>PRIME:</b> Utility Metering Solutions (UMS) 7200 Falls of Neuse Road Suite 100 Raleigh, NC 27615	<b>SUBS:</b> S&J Service, Inc. 5133 Frolich Lane Hyattsville, MD 20781	<b>PARTICIPATION:</b> 0.04%
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**DESCRIPTION AND PURPOSE**

Original Contract Value:	\$1,919,597.79
No. of Option Years:	0
Anticipated Contract Start Date:	10-14-2019
Anticipated Base Period Completion	04-30-2020
Proposals Received:	3
Proposal Price Range:	\$1,114,101.00 - \$2,253,640.00
Preference Points Received:	0

**Purpose of the Contract:**

The purpose of this contract is to obtain installation services to complete the Water Meter Rehabilitation Program. The goal is to mitigate manual reading and estimation of customer accounts and complete a high volume of replacement prior to the winter season. The proposed awardee, Utility Metering Solutions (UMS), would install meters, meter transmission units (MTUs), and pit lids for select outdoor accounts.

**Contract Scope:**

The awardee will provide services including, but not limited to:

- Small meter installation (5/8"-2") – amounting 7,884 accounts
- MTU installation and programming – amounting 7,884 accounts
- Subcontract plumbing repairs and manage repair schedules
- Survey and repair of atypical scenarios (e.g., collapsed pits)
- Scheduling and managing customer appointments

**Supplier Selection:**

Three firms submitted proposals in response to the solicitation. The firms met DC Water’s technical requirements including: field deployment methodology, quality assurance, staffing and recruiting, approach to challenging installations, and relevant experience.

UMS submitted the highest technically rated proposal based on the ability to meet the schedule with the necessary experienced resources. UMS offered a fixed fee contract of \$1,594,155.00 in their proposal. 70% of meters are anticipated to be replaced under the fixed fee arrangement. With the additions of plumbing repairs (with a 15% markup), a meter survey fee for installations returned to utility, time and materials remediation on 30% of meters, the e-waste disposal fee, and a performance bonus for installations completed prior to December 1<sup>st</sup>, 2019, DC Water estimates the total UMS contract value at \$1,919,597.79. These estimates are based on industry benchmarks and the RTU results from the previous meter and MTU installation projects. The lowest price vendor could only commit 9 resources to the project supplemented with overtime hours and could not commit to the project mobilization requirement of mid-October. UMS committed to 18 project resources with the ability to add more and mobilization by mid-October.

**Savings:**

UMS’s original price submitted in the amount of \$2,253,540.00. Through negotiations, UMS decreased its price by \$334,042.21

LSBE participation – plumbing repairs as required

**PROCUREMENT INFORMATION**

<b>Contract Type:</b>	Fixed Price with Time and Materials	<b>Award Based On:</b>	Highest Rated Proposal
<b>Commodity:</b>	Goods and Services	<b>Contract Number:</b>	19-PR-CCO-44
<b>Contractor Market:</b>	Limited Competition with Preference Points for LBE and LSBE participation		

**BUDGET INFORMATION**

<b>Funding:</b>	Capital Equipment / Pay-Go	<b>Department:</b>	Customer Care
<b>Service Area:</b>	DC Water	<b>Department Head:</b>	Armon Curd

**ESTIMATED USER SHARE INFORMATION**

User	Share %	Dollar Amount
District of Columbia	100.00%	\$1,919,597.79
Washington Suburban Sanitary Commission	0.00%	\$0.00
Fairfax County	0.00%	\$0.00
Loudoun Water	0.00%	\$0.00
Other (PI)	0.00%	\$0.00
<b>TOTAL ESTIMATED DOLLAR AMOUNT</b>	<b>100.00%</b>	<b>\$0.00</b>

  
 Armon Curd Date 9/19/19  
 EVP Customer Experience

  
 Dan Bae Date 9/19/19  
 VP of Procurement and Compliance

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 Matthew T. Brown Date  
 CFO and EVP of Finance and Procurement

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 David L. Gadis Date  
 CEO and General Manager