



City of Denton

City Hall
215 E. McKinney Street
Denton, Texas
www.cityofdenton.com

AGENDA INFORMATION SHEET

DEPARTMENT: Procurement
ACM: Cassey Ogden
DATE: March 21, 2023

SUBJECT

Consider adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a Professional Services Agreement with Black & Veatch Corporation, for Advanced Metering Infrastructure Deployment Program Management – Proof of Concept for the Water Metering Department; providing for the expenditure of funds therefor; and providing an effective date (RFQ 7574-023 – Professional Services Agreement for planning services awarded to Black & Veatch Corporation, in the not-to-exceed amount of \$185,687.00). [The Public Utilities Board recommends approval \(7 - 0\).](#)

INFORMATION/BACKGROUND

Water Utilities manages approximately 42,000 water meters in order to manage and record the volume of water that reaches our many customers. Currently, Denton's water meters are manually read by workers, which costs approximately \$1.05 per meter per month. Manual meter reads are presented with physical obstacles, such as standing water, pests, and fences, and they can result in human error, which requires a more costly re-read to correct and validate the erroneous or missing meter read.

A 2021 Feasibility Study completed by Jacobs Engineering Group highlighted the many cost savings opportunities of switching to an Advanced Metering Infrastructure (AMI) system, including significantly reduced cost of reading meters, increased accuracy of reads, reduced vehicle cost, and improved meter reading accuracy (if static meters are selected). When compared to the cost of implementing an AMI system, including the cost of replacing all of our water meters, Jacobs calculated an estimated 8.9 percent to 11.0 percent Return on Investment (ROI) and indicated that the investment pays for itself in 11 to 13 years, compared to a 20-year life cycle of the water meters.

In addition to the tangible benefits, the Feasibility Study identified many intangible benefits of the proposal, in the form of improved customer service, environmental impacts, planning, and operations. Customers will experience improved transparency in their water use data, which will help them identify and mitigate their water leaks and better manage their water-consuming habits. This will in turn have an environmental impact of improving water conservation and reducing waste. Staff will be able to plan for water capacity needs more effectively by better understanding daily and hourly customer demand. Operations will be streamlined by reducing erroneous or missing meter reads, and safety hazards will be reduced by limiting the obstacles and hazards often faced when accessing a water meter.

DME previously implemented an AMI system starting in 2010. Staff deployed the AMI meters using City staff and completed the project in 2015. DME continues to manage the meter reading program for both

Electric and Water. The AMI options for Water have been slower to develop, due to the meter residing in an in-ground lidded pit. The Feasibility Study with Jacobs showed that the technology has now advanced sufficiently, and there are metering manufacturers with a proven track record of cost-effective AMI systems.

The proposed scope of work is a Proof of Concept for Water AMI meters, to include an evaluation of technologies, an implementation plan, and both an alpha and beta testing phase, and training. The anticipated project completion is January 1, 2024, according to the proposal provided by the consultant. By the conclusion of this project, staff expects to have identified a best-fit solution for Denton Water Utilities and to be prepared for a full-scale AMI rollout to include all Denton water meters, a project which will be refined and submitted under a separate heading after the conclusion of the Proof of Concept project.

Request for Qualifications for professional engineering services for Water and Wastewater was solicited using the City's formal solicitation process. City Council approved a pre-qualified list of engineering firms on March 23, 2021 (Ordinance 21-546).

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On March 23, 2021, Council approved RFQ 7574 for a prequalified list of professional engineering firms for Water and Wastewater (Ordinance 21-546).

On March 13, 2023, the Public Utilities Board (PUB) recommended this item to the City Council for consideration.

RECOMMENDATION

Award a contract with Black & Veatch Corporation, for Advanced Metering Infrastructure Deployment Program Management – Proof of Concept for the Water Metering Department, in a not-to-exceed amount of \$ 185,687.

PRINCIPAL PLACE OF BUSINESS

Black & Veatch
Fort Worth, TX

SUSTAINABILITY MEASURES

This project is anticipated to improve water conservation and reduce waste through customer data transparency, and fossil fuel pollution will be mitigated by reduced reliance on vehicles to read and maintain meters.

Relationship to Sustainability Framework

Focus Area:
Water
Greenhouse Gasses

What are some of the goals the department will be setting up to ensure that the sustainability measures are met?

- Goal 1: Improved water conservation through customer data transparency
- Goal 2: Reduced vehicle hours through remote meter reading and reduced re-reads

ESTIMATED SCHEDULE OF PROJECT

This project will be started upon approval with a completion date of January 1, 2024.

FISCAL INFORMATION

These services will be funded from Water Metering account 630465517.1365.40100 Requisition #159120 has been entered into the Purchasing software system in the amount of \$185,687. The budgeted amount for this item is \$185,687.

EXHIBITS

Exhibit 1: Agenda Information Sheet

Exhibit 2: Ordinance and Contract

Respectfully submitted:
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Purchasing Manager

For information concerning this acquisition, contact: Tiffany Sherrane, 940-349-7331.

Legal point of contact: Marcella Lunn at 940-349-8333.