



City of Denton

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

AGENDA INFORMATION SHEET

DEPARTMENT: Procurement
CFO: Cassey Ogden
DATE: November 15, 2022

SUBJECT

Consider adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract with Starboard Consulting, LLC, for hosting, implementing, and integrating Maximo Software Suite for Utilities (MSSU) for Denton Municipal Electric (DME); providing for the expenditure of funds therefor; and providing an effective date (RFP 7817 - awarded to Starboard Consulting, LLC, for one (1) year, with the option for four (4) additional one (1) year extensions, in the total five (5) year not-to-exceed amount of \$3,300,000.00).

INFORMATION/BACKGROUND

Pursuant to an organizational assessment performed in 2019 for Denton Municipal Electric (DME), organizational changes have been made to redesign the way DME executes work. Specifically, to integrate better planning and coordination between engineering, procurement, material management, and operations to achieve operational efficiencies and to do more with less. Consistent with industry best practices, a comprehensive work management, and planning system is needed to achieve the efficiencies and integration that will position DME to meet the high electric growth in demand in the most cost-effective manner.

Each year DME manages several hundred capital improvement and revenue projects annually. Timely provision of the services associated with this workload is achieved by its management, engineering, and construction and maintenance staff using antiquated practices and processes which are reliant on a set of independent applications and their customized integrations for financials, inventory, workforce management, construction drawings, construction standards, and spreadsheets maintained by multiple divisions. As application versions are updated by our vendors, the integrations must also be updated and in many cases, the individuals who wrote the integration code are no longer at DME or Tech Services creating a material risk in DME's ability to properly execute and track work. As the utility has grown and DME prepares for continued rapid growth, the need for more sophisticated and detailed project management techniques have been desired and identified. This need was further identified in the 2019 organizational and system overview assessments performed by Ulteig Engineering and nFront Consulting, LLC. The results of these assessments were finalized in December 2019. Ulteig's system overview noted a number of existing DME processes that could be considered ineffective for project design and construction.

- **Work Order Development**

Presently, construction projects are created in AutoCAD and include a separate material list prepared using an Excel spreadsheet. There is no visibility into material availability into the warehouses. A construction packet is handed off to line crews who manage the project from the field, and when complete the project as built is passed to GIS for completion of the project. The current processes place an additional burden on

construction crews to constantly try to interpret the engineering design against standard construction practices. Current closeout procedures use multiple spreadsheets, manual finance and accounting procedures with material reconciliation, and non-standardized records of the project required by regulatory authorities and allow for additional cost entries well after the point the project should be considered “closed.” These processes do not provide for a consistent flow of a construction project.

The lack of a structured capability to design, estimate, and manage the costs within DME does not allow for consistent methodologies for practical project management purposes which have led to schedule delays, permit delays, and project cost overruns due to the current manual nature of project management.

- **Construction Packets**

DME does have a set of Construction Standards, which have been sealed by a Texas Professional Engineer, but project material lists are generated using an Excel Spreadsheet which, in today’s standards and for a utility the size of DME, is considered an ancient methodology. Current construction packets are inefficient for processing and provide no clear method to maintain proper asset or accounting records. The lack of rigidity of the construction process allows for inconsistent workflow practices.

- **Inventory Management**

JD Edwards (JDE) is currently the inventory management system for the City of Denton, including DME. This application does not easily provide on-hand material quantities, minimum/maximum levels, quantities reserved for future projects, or on-order quantities. It also does not easily provide anticipated lead times, provide tie-highs, turn ratios, contract identifiers, vendor contact information, and manufacturer’s part numbers. The current work management processes do not create pick lists, input is manual, and creating reports can be cumbersome.

Digital records of inventories are stored in JD Edwards and the LifeCycle asset repository systems. These two systems do not communicate, making it hard to manage the list of stored assets. DME achieves asset management through paper and pencil, spreadsheets, and workforce, all of which contribute to error-ridden processes and inaccurate data. GIS indicates there are over 300,000 DME assets currently in the field. There are no records or events recorded that could identify, proactively, service issues due to anticipated equipment failures based on supplier technical notices or device history. DME’s assets are installed throughout Denton, and its project inventory stock is located at three sites. Currently, it’s nearly impossible to track and maintain every asset in the field and the inventory stock sites.

- **Capital Project Planning**

DME develops its capital improvement projects (CIP) for fiscal and organizational planning purposes. CIP provides insight into DME’s capital improvement plan over a multi-year period for non-recurring expenditures such as electric infrastructures, real estate, and facilities. The CIP program develops scope, timing, and financial costs based on prioritized projects; and the CIP establishes expenditures for constructing, maintaining, upgrading, and replacing electric facilities such as substations, distribution line extensions, and transmission lines over a period of five or more years. CIPs are considered living documents and are updated annually. The absence of structured capabilities to design, estimate, and manage costs for DME’s CIP does not allow for consistent methodologies for practical planning purposes. The CIP process is carried out using spreadsheets, Word, PowerPoint, JDE, meetings, and multiple other systems.

- **FERC Accounting**

DME maintains its books and records according to the Federal Energy Regulatory Commission (FERC) uniform regulatory accounting and financial reporting requirements for electric utilities. The FERC Uniform System of Accounts (USofA) provides basic account descriptions, instructions, and accounting definitions. Using FERC accounting practices, DME classifies and categorizes the costs associated with capital projects. JDE does not facilitate FERC accounting practices; therefore, FERC accounting is managed

manually through spreadsheets prior to key JDE information being transferred to that application. JDE will continue to be the financial system for DME and the COD. Starboard Maximo could integrate with JDE's Warehouse, Purchasing, and Accounts Receivable and Payable modules.

- **Workforce and Equipment Scheduling**

All Workforce and equipment scheduling is being done manually. For efficient scheduling of crew time vs workload, a Workflow Management Systems (WMS) is greatly needed. Without the correct proactive scheduling, equipment needed to complete certain projects will be in use on other projects at any given time which is very ineffective and slows productivity.

- **Proactive Maintenance**

DME currently has an extensive field inventory of system control devices such as gang-operated-airbreak-switches, manual and automatic switchgears, automated distribution field devices, capacitor controls, and substation equipment. Proper operation of these devices is crucial to distribution and reliability and power quality for customers. These key devices necessitate scheduled and regular checks and supplier-required service. With the number of devices that are included in this classification, no consistent and organized methodologies and records exist as they are spread amongst numerous spreadsheets which do not allow for proper maintenance scheduling.

A key recommendation from Ulteig was to implement a synchronized Workflow Management and Design application with the following needs:

- Should be capable of functioning under separate business units such as distribution, transmission, O&M, Denton Energy Center, etc.
- Should provide consistent work order management
- Should provide workforce and equipment scheduling and management
- Should provide for material visibility and tracking
- Should provide for proper plant accounting
- Should provide for asset management
- Should have a geo-spatial integration component to incorporate GIS into the system

nFront confirmed in their assessment that improvement in project management and practice is needed. DME vetted several WMS products and Computerized Maintenance Management Systems (CMMS), and electric distribution line design applications to improve its management and accounting related to workflow, maintenance, and design. This project will require the services of consultants for software development, implementation, integrations, configuration services, and maintenance and support. Due to vendors' specificities of services, they could provide, it was necessary to allow them to bid on full or parts of the RFP modules. RFP 7817 was advertised to obtain these services, and vendors were encouraged to bid on all or parts of the project.

WMS is a provision of the Maximo software suite. It manages, combines, and automates work order processes. For example, automating a simple task such as sending work items from one employee to the next requires several people to complete specific tasks in a particular order. Moreover, Maximo can process the supporting records at the system level in a multisite environment. Maximo's WMS processes can benefit, not only DME but, the whole city and its subsidiaries. As a result, Maximo's WMS is a popular choice for planning, designing, building, testing, and managing workflow processes, among other utilities. For decades, utilities like Austin Energy, CoServ, and Oncor have been using Maximo.

CMMS is an integral part of Maximo that centralizes information and facilitates the processes of maintenance operations. In addition, CMMS helps optimize the utilization and availability of physical equipment like vehicles, machinery, communications, electric infrastructures, and other related assets.

CMMS is a tool for managing and maintaining critical assets. If properly configured it records equipment downtime statistics, performance, associated documentation, video, and images such as repair manuals, safety procedures, and warranties.

Starboard LLC proposed the use of IBM Maximo Software Suite for Utilities (Maximo) for the WMS and CMMS through a Software as a Solution (SaaS) solution. Maximo's application suite is a single, integrated, SaaS platform that is comprised of WMS and CMMS applications. SaaS will benefit DME by minimizing additional hardware and support from the City of Denton Tech Services. The widespread adoption of Maximo throughout the electric utility industry provides added certainty that the system will be updated and maintained on a regular basis and that ongoing support will be available.

ArcFM Designer XI is a distribution line design software application included in DME's standard contract with Schneider Electric. ArcFM Designer is a graphic work design tool software. It facilitates the digital design and efficient management of DME's CIP and customer-related projects as it progresses through the different departments. This application has never been configured for DME's use. Critical to the total project is integration with DME's existing Schneider Electric design application. DME requested and Schneider Electric (SE) submitted a proposal to provide configuration services for the ArcFM Designer XI to make it useable by DME. Spend authorization for the Schneider Electric component of this project is under separate request but the two are integral to the overall MSSU project.

This RFP also covers the purchase of Starboard LLC's Maximo and configuration services for SE ArcFM Designer XI. In addition, DME intends to integrate Designer with Maximo Software Suite to provide greater efficiencies in the design process by taking advantage of helpful information and processes available in these other systems.

Benefits of deploying Maximo and Designer include:

- Prolonged life of assets through improved maintenance while analyzing historical and real-time data to determine asset health, analyze failure trends, and plan condition-based maintenance and schedulers.
- Rehabilitation, repairing, and replacing assets efficiently by allowing personnel to make more educated decisions on scheduling, asset replacement, and new asset investments.
- Meeting consumer demands with a focus on internal systems through a streamlined process for field technicians to accelerate work efficiencies with real-time information and continuous feature availability in connected or mode (mobile applications).
- Focus on activities critical to sustained performance through much-improved work management by improved job plans for recurring tasks, predictive maintenance, and being able to manage labor and skill correctly to the job.
- Enabling DME to meet service expectations and regulatory requirements through planning and scheduling of checks and change-outs of the assets at the correct times. For instance, certain pieces of equipment (capacitor banks) can keep DME in compliance or not based on the power factor of the feeder.
- Improving responses to emergencies or unexpected risks.
- Health Safety and the environment by identifying and eliminating hazards in the workplace by combining Health Safety Environment data with real-time information from wearables and environmental sensors with advanced analytics.
- Managing field workforces by organization operational workforces through better planning and scheduling and provides for full transparency of crews and their workload giving operation management insight into productivity.

Below is a breakdown of estimated expenditures over the next 5 years:

Project Description	MSSU Estimated 5-year Expenditure
Development Services Year 1	\$375,000
Development Services Year 2	\$1,150,000
Development Services Year 3	\$950,000
Development Services Year 4	\$321,388
Development Services Year 5	\$200,000
Contingency	\$303,612
Total	\$3,300,000.00

Requests for Proposals was sent to 350 prospective suppliers, including 6 Denton firms, of this item. In addition, specifications were placed on the Materials Management website for prospective suppliers to download and advertised in the local newspaper. Four (4) proposals with two (2) being responsive were received and evaluated based on published criteria including compliance with specifications, probable performance, project schedule, and price. Based on this evaluation, Starboard Consulting, LLC was ranked the highest and determined to be the best value for the city.

NIGP Code Used for Solicitation:	208 - Computer Software for Microcomputers (Preprogrammed) & 209 – Computer Software for Mini and Mainframe Computers (Preprogrammed)
Notifications sent for Solicitation sent in IonWave:	350
Number of Suppliers that viewed Solicitation in IonWave:	15
HUB-Historically Underutilized Business Invitations sent out:	33
SBE-Small Business Enterprise Invitations sent out:	144
Responses from Solicitation:	4
Responses Meeting Specifications:	2

PRIOR ACTION/REVIEW (COUNCIL, BOARDS, COMMISSIONS)

On November 14, 2022, this item will be presented to the Public Utilities Board (PUB) for consideration.

RECOMMENDATION

Award a contract to Starboard Consulting, LLC, for hosting, implementing, and integrating Maximo Software Suite for Utilities (MSSU) for Denton Municipal Electric (DME), in a one (1) year, with the option for four (4) additional one (1) year extensions, in the total five (5) year not-to-exceed amount of \$3,300,000.

PRINCIPAL PLACE OF BUSINESS

Starboard Consulting, LLC
Longwood, FL

ESTIMATED SCHEDULE OF PROJECT

This is an initial one (1) year contract with options to extend the contract for four (4) additional one (1) year periods, with all terms and conditions remaining the same.

FISCAL INFORMATION

These items/services will be funded from DME's CIP budget account: 402001.7899. Requisitions will be entered on an as-needed basis. The budgeted amount for this item is \$3,300,000.

EXHIBITS

Exhibit 1: Agenda Information Sheet

Exhibit 2: Pricing Evaluation

Exhibit 3: LLC Members

Exhibit 4: Ordinance and Contract

Respectfully submitted:
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Purchasing Manager

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