



REQUEST FOR PROPOSAL

WATER METER REPLACEMENT PROGRAM

INTRODUCTION

Purpose of Request

City of Cisco (hereinafter referred to as “city”) is seeking proposals from qualified firms, experienced in the supply of water meters for measuring potable water usage and in the installation, implementation and use of fixed base automatic water meter reading systems. A fixed base automatic water meter reading system hereinafter shall be referred to as (the "AMI"), Automated Metering Infrastructure, is to be purchased by the city. All constraints/limitations associated thereto will be the responsibility of the selected firm to manage in order to deliver a “turnkey” project within the awarded schedule of prices. The scope of the work will span over several years from the execution of the contract. Price increase schedules should be included to reflect any foreseeable price increases over the course of the project.

Background

The city supplies potable water to residents through a network of pipes, pump stations and elevated towers. Water usage is measured for each customer through a water meter located at each customer’s property. There are approximately 2,000 meters throughout the city for residential, commercial and industrial customers. A majority of these meters and MTUs were installed less than 10 years ago, but are at the end of their useful life.

Currently, the city utilizes an AMI Water Meter Reading System and is seeking to replace that system. Upon review of the Request for Proposal (RFPs), the city anticipates purchasing an AMI including all collectors, transmitters, hardware, software and all necessary appurtenances to secure all water meter readings for the entire city service area.

Project Description

The city is requesting proposals for (1) the supply of water meters throughout the city and (2) supply and installation of a fixed based automatic water meter reading system according to the specifications contained herein. The city shall own the entire infrastructure from the collectors down to the meters and meter interface units (MIU). City personnel must be able to access all collected data at any time in order to perform daily operations, provide customer support, and to do research. The finished system shall also provide for advanced data analysis. Considering the timeline of this project will span multiple years, the transitional/duality ability of the system is of utmost importance.

Project Objective

It is the intent of the city to issue a single contract to the selected firm to provide all necessary services to install and implement the system according to the specifications contained herein. The AMI installation will be a “turnkey” project, functioning under a single contract. There will be no independent contracts issued by the city to any other contractor. The contractor will be responsible for adhering to all requirements of the specifications and for the performance of all sub-contractor(s). The project will include installation of all individual meters and MIUs by the winning vendor or vendor’s subcontractor.

The supplied water meters shall be of the highest quality, capable of reading to best accuracy possible, and be constructed to last a minimum of 20 years. The AMI shall be functional, efficient and of high quality to the maximum extent possible

Project Timeline

Upon award of the contract, the selected firm will be required to install the AMI infrastructure within 6 months. Installation of all industrial / commercial / residential meters will be installed within 1 year of the award letter. It is the intent of the city to have this project completed prior to April 30, 2024.

Professional Services Required

The selected firm must provide all services necessary to meet the objectives of this project. Further information on the services that the city anticipates will be needed for this project is contained in the Scope of Services section. Any work that is to be sub-contracted or performed by others shall be clearly defined. All sub-contractor(s) are subject to the city's review and approval.

Proposal Evaluations

Submitted proposals will be evaluated on a pre-determined point scale in order to determine the Most Qualified Firm (MQF) to perform the work. The MQF will be recommended to the City Council for approval.

The city reserves the right to select the firm that provides the best "package" for the project. The city anticipates heavy interest in this project and that there will be pros and cons to each package submitted. The city also puts great value in the infrastructure component of the project. A breakdown of the evaluation criteria and weighting is shown below.

Criteria	Weight
Water Meter Functionality (Section 1)	20%
Automatic Meter Read Infrastructure (AMI) (Section 2)	20%
Functionality of the proposed MIUs (Section 2)	20%
Cost	40%
Total	100%

Pre-Proposal Meeting

A Preproposal Meeting will be held on Monday, May 8, 2023 at 10:00 a.m. at 506 Conrad Hilton Blvd. The purpose of this meeting is to provide a brief overview of the project and to answer any questions from prospective firms.

City of Cisco Contacts:

Primary Contact

Darwin Archer
City Manager
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Secondary Contact

Tammy Osborne
City Secretary
(254) 442-2111 Ext. 113
citysecretary@ciscotexas.gov

Deadline of Receipt of Proposals and Submittal Address

The deadline for receipt of proposal packets one (1) electronic copy of the complete proposal and four (4) printed copies of the complete proposal is:

Monday, May 15, 2023 at 2:00 p.m.

Please submit printed proposals to:

City of Cisco
P.O. Box 110
Cisco, TX 76437

Please submit electronic proposals to:

citysecretary@ciscotexas.gov

Demonstration of System

Any firm submitting a proposal will be required to present an in-person demonstration, including presentation of actual meters being proposed and corresponding software application, during the week of Staff Evaluation.

Proposal Schedule

The proposed schedule for issuance, acceptance, evaluation, recommendation, and approval of a contract is as follows:

Task	Date
“Request for Proposal” Issued	April 12, 2023
Pre-Proposal Meeting	May 8, 2023
Issuance of any necessary Addenda	As necessary
Proposals Due	May 15, 2023
Staff Evaluation/Demonstrations	May 15-19, 2023
Recommendation to City Council	May 22, 2023

TECHNICAL SPECIFICATIONS

Section 1. Water Meters

The city realizes that there are a number of manufacturers that provide good quality meters for municipal water systems. It is the desire of the city to get the best meters and most current technology available in order assure a great quality product for years to come.

All meters must meet or exceed the latest AWWA Standards for metering accuracy. Better accuracy meters will be evaluated higher than lower accuracy meters. The city also desires its meters to be tamper resistant with the ability to send an alert if the meter is altered in any way.

The city desires to have a magnetic meter with no moving parts. Manufacturers are encouraged to submit specifications for both magnetic meters as well as mechanical style meters (as an alternate) and an add/deduct cost for the mechanical meter.

Meter accuracy and battery life will also play an important role in the evaluation process. The city desires to have a minimum 20 year warranty on the meter, MTU (if separate) and battery.

All Meters shall have imprinted on them, the size and direction of water flow through the meter.

The body shall be completely lead-free and meet the AB1953, ANSI/NSF Standard 61 requirement.

When a meter is to be installed in a vault or pit set installation, screw terminal connections are not acceptable. The register shall utilize a magnetic coupling technology to connect a 3-wire cable to a touch read, radio read, or fixed base meter reading system. The magnetic coupling shall be completely water proof and warranted against water intrusion.

Meters shall operate up to a working pressure of 150 pounds per square inch (psi), without leakage or damage to any parts. The accuracy shall not be affected by variation in pressure up to 150 psi.

Each meter will be paid for at the unit prices indicated in the schedule of prices. The unit price includes the cost of the meter, meter interface unit (MIU), installation of the meter, new wiring between the meter and the MIU, and any other items necessary for the delivery, supply, coordination, and installation of new water meters at individual properties. The pay item for the water meter will be based on the size of the meter.

Section 2. Fixed Base Automatic Meter Read System / Infrastructure (AMI)

The city currently residential, commercial, and industrial meters monthly utilizing an AMI Water Meter Reading System and is seeking to replace the Fixed Base Automatic Water Meter Reading System with two-way communication capabilities.

The main goals of the new AMI and the firm providing the AMI are:

- Perform water meter reading in the most cost-effective manner possible
- Improve customer service through the effective use of customer usage data, customer leak detection, and off cycle meter readings
- Improve utility operations and enhanced revenue generation (water loss identification)
- Improve the identification of service line leaks through leak detection analytics
- Increase meter reading efficiency throughout the service territory
- Store and transmit pertinent meter reading, data logging information and tamper data from electronic meter registers
- Provide customer service tools that will notify the city of tampering, leak detection, unusual usage, trending, etc.
- Provide a fixed network data collection system to collect readings, usage, leak and tamper information from the transmitter modules, and provide the data to the Finance Billing Department or Management
- Provide manufacturer-supplied software and customer support necessary to provide upload billing data files to city owned Tyler Technologies (Incode 10) software program

- Provide customer support services including assistance with software operation, troubleshooting and reconciling failed devices, network growth and the addition of new devices, training, recurrent software upgrades, and other activities to sustain proper operation of the AMI
- Provide the installation of all necessary infrastructure equipment and appurtenances
- Provide an AMI system capable of acquiring daily reads (The ideal system will have the ability to record hourly reads and have the capability to retrieve “on demand” reads in “real time”)
- The Buyer shall furnish a list, including street addresses, of all structures (towers, tanks, etc.) used to accomplish meter reading for the service area to be attached to this RFP. Information such as height of structure, type of structure, indoor or outdoor hardware. Proposer shall submit a detailed propagation study with their response which shall outline modeled coverage and number and location of collection devices. The Proposer must present a Statement of Work with their response outlining that given the proposed collection system, the utility coverage area will be able to read 100% of the water meters in the city.
- Provide the ability to add automatic shutoff valves in all meters.
- Identify failing meters & MTUs through analytics of battery life, consumption pattern, etc.
- Ability to retrofit meters with new MTUs if the meter has tested as accurate and the city chooses to leave the meter in place.

Any systems and services proposed must cover the requirements stated below, and must have the flexibility to read other meters as well as the potential for other applications in the future. Further, companies are expected to propose systems and equipment with sufficient redundancy, such that if a failure of any major system component or part thereof does occur, it will not interrupt the flow of meter reading information to customer revenue systems. The proposal shall contain an explicit comply/exception assessment of whether the system meets each requirement and, whenever necessary, description of compliance to each point. If the system or any part of the system fails to meet any of the following requirements, explain the reasoning that substantiates that the variation from these requirements is not critical. Please note that all answers must reflect current capabilities. Any future capabilities must be stated as such and outlined with a development schedule.

System Description

In your response, please make sure to answer all the questions outlined below. Please keep your responses **in order**, which will help keep the review process more streamlined.

- ☐ Briefly describe the data flow in the system, listing each component and how they interface.
- ☐ Detail the proposed system configuration.
- ☐ The system shall be full two-way communication to the water meter transmitter, allowing for not only demand and special reads but programming of the endpoint remotely.
- ☐ The city also requires that the proposed AMI system be able to communicate with and operate a remote shut-off valve.
- ☐ The system shall ensure accurate time recordings for all readings.
- ☐ The user interface shall support multiple users across the enterprise.
- ☐ The system shall be capable of identifying and quantifying customer leaks (after the meter).

- The system shall be capable of supporting acoustical leak detection to identify potential leaks in the city's water distribution system.
- Give the specifications of the transmitter module (i.e. size, weight, etc.).
- List the environmental specifications of the transmitter module and describe its ability to withstand heat/cold and water intrusion.
- Indicate the expected product life of the transmitter module and any engineering data to support the claim.
- Describe all tamper sensors/indicators available with the transmitter module. The transmitter module must support cut cable tamper and reprogram detection.
- The transmitter shall utilize two-way communications with the data collector to allow for wireless communications between the two devices for re-programming and time synchronization. The transmitter shall be configurable via wireless communications.
- The transmitter will have a fixed factory set non-programmable identification number to insure absolute identity of the transmitter within the radio AMI system.
- The transmitter will provide multiple transmissions per day at a minimum of (1) per day, with hourly readings. The transmitter shall have the ability for time synchronization. In addition, if the transmitter is configured in hourly usage /consumption profile mode, the transmitter shall also provide the daily meter reading data packet with hourly consumption data for the previous 24 hours.
- Firm's solution must provide the same functionality for both indoor water meters and those located in pit settings. Module proposed for pit setting must be able to withstand the harsh pit environment and have no exposed electrical connections.
- A dual input transmitter module must be available for connecting meters with two registers.
- Provide the specifications of Fixed Network Data Collection Device (i.e. size, weight, etc.).
- Each tower collection device shall provide a live, two-way connection with the back-end computer system.
- Define the performance characteristics of the data collection device (read rate, accuracy, etc.).
- The AMI must verify data integrity in every message.
- Define any applicable warranties associated with the data collection device.
- The data collection device must have the capability to receive software upgrades via the network.
- The data collection device must be capable to interface to a Windows 10 supported computer, as well as Android, Apple, and Microsoft products.
- The data collection device must provide diagnostics capability to allow troubleshooting via the network.
- Describe the range of the data collectors indicating radius from the collector.
- Specify the manufacturer, product name and product version of the operating system and database that the AMI operates on.
- The proposed AMI must provide the ability to store a minimum of 90+ days of meter reading data including hourly data logging information for up to 50,000 transmitter modules.
- The city must be able to submit customer data (name, address) to the AMI via a standard file format (for access and search options in the user interface).
- Provide software upgrades to the data collection devices and system software as required by the AMI (must also be included in the cost of the proposal).
- Propose the transition and integration plan across the multi-year program so that data collection, transfer, and ultimately billing within Incode 10 is not interrupted.

- Describe the customer support for the AMI system inclusive of phone support, communications, trouble shooting and proactive network monitoring.
- Daily consumption reads must be collected, time stamped, and available to the city for all water customers daily. The time must be provided by the transmitter module, must be a real time clock, and must be synchronized daily to a city acceptable standard.
- If a FCC license is required, the company must assist in acquiring the license. Please define timetable for acquiring FCC license.
- Specify the warranty period on all applicable products.
- State how long the company has supported existing AMI product lines.
- AMR/AMI Company must have sold, installed and put into operation the AMI that is being proposed to the City of Cisco to assure knowledge and familiarity with the proposed AMI system. The AMR/AMI Firm shall comply with all AWWA Industry Standards.
- Company must supply 24-hour per day customer support, 7 days a week. Specify details of the company's support package.
- Please include any assumptions made in the proposed solution and pricing.
- Provide company profile and background.
- It is preferred but not mandatory that the majority of the components be produced in the United States in a manner that complies with the Buy American Requirements.
- A list of location, references and contact information for where the proposed AMI system is fully operational within the United States.
- The city is interested in obtaining information for both city hosted data management and a manufacturer hosted "Cloud" data management system. Base bids shall assume a city hosted system. Manufacturers with "Cloud" hosted systems are encouraged to explain their systems and provide the appropriate alternate pricing schedule in their proposal.
- Technical Specifications must be provided on the attached forms. Please be complete and accurate in filling out the forms. Failure to fill out any section of the form will result in the item being void and no points will be assigned for that item in the evaluation process.
- All on-going costs (software maintenance, firmware upgrades, etc.) must be disclosed in the proposal.
- Please include a copy of the bidding companies current W-9.

SCOPE OF SERVICES

The selected company shall manage the acquisition of equipment from the manufacturer and oversee all sub-contractor(s) as awarded. Furthermore, all materials, methods, and workmanship shall be in conformance with all related standard practices of the construction industry, Federal, State, County and city standards. The selected company must provide all services necessary to meet the goals and objectives of this project.

Companies are required to complete the attached Equipment Details and Proposed Prices forms and submit them in connection with their response to the RFP.

TECHNICAL SPECIFICATIONS

ITEM	DESCRIPTION
RESIDENTIAL METERS (5/8" - 2")	
Manufacturer / Model No(s)	
Meter Type (ex. magnetic, nutating disc, oscillating piston, etc.)	
Precision/Accuracy	
Low Flow Accuracy – 5/8"	
Low Flow Accuracy – 3/4"	
Low Flow Accuracy – 1"	
Low Flow Accuracy – 1 1/2"	
Low Flow Accuracy – 2"	
Pressure Loss – 5/8"	
Pressure Loss – 3/4"	
Pressure Loss – 1"	
Pressure Loss – 1 1/2"	
Pressure Loss – 2"	
Maximum Operating Pressure	
Meter Alerts	
Reverse Flow Meter Alert (yes/no)	
Internal or with AMR?	
Tamper Alerts (yes/no)	
Internal or with AMR?	
Durability / Warranty / Guarantee	
Is the meter guaranteed?	
How many years? Gallons?	
Is the battery guaranteed?	
How many years? Proration schedule?	
Is the meter accuracy guaranteed?	
How many years? Accuracy level?	
Internal Memory	
Does the meter have data logging?	
What is the data interval?	
How long will the meter retain the data?	

TECHNICAL SPECIFICATIONS

ITEM	DESCRIPTION
METERS (3", 4", and 6")	
Manufacturer / Model No(s)	
Meter Type (ex. magnetic, nutating disc, oscillating piston, etc.)	
Precision/Accuracy	
Low Flow Accuracy – 3"	
Low Flow Accuracy – 4"	
Low Flow Accuracy – 6"	
Pressure Loss – 3"	
Pressure Loss – 4"	
Pressure Loss – 6"	
Maximum Operating Pressure	
Meter Alerts	
Reverse Flow Meter Alert (yes/no)	
Internal or with AMR?	
Tamper Alerts (yes/no)	
Internal or with AMR?	
Durability / Warranty / Guarantee	
Is the meter guaranteed?	
How many years? Gallons?	
Is the battery guaranteed?	
How many years? Proration schedule?	
Is the meter accuracy guaranteed?	
How many years? Accuracy level?	
Internal Memory	
Does the meter have data logging?	
What is the data interval?	
How long will the meter retain the data?	

TECHNICAL SPECIFICATIONS

ITEM	DESCRIPTION
AMI SYSTEM	
Manufacturer / Model No(s)	
Meter Interface Unit (MTU)	
Meter Interface Unit (MIU) Model No.	
Meter Interface Unit (MIU) Transmitter Strength	
MIU able to be retrofitted to existing meters if meter is not intended to be replaced	
Capital Infrastructure System	
Number of Collectors/Antennas Needed	
Proposer has the ability to provide installation of all necessary infrastructure equipment and appurtenances (yes/no)	
Licensing	
Is the system protected with FCC licensing?	
What is the broadcast frequency	
What type of licensing is required for the software?	
Two-Way Capability	
Does the system have two-way capability? (yes/no)	
Secondary System	
Secondary system if primary fails (if yes, why type?)	
Incode 10 Interface	
Is there an interface to the city's billing system? (Tyler Technologies – Incode 10)	
Is there a plan for the transition period (utilization of the new system and old system seamlessly)?	
Leak Detection	
Does the system have the ability to read external water main leak detection modules?	
What additional infrastructure or equipment would be necessary to achieve this?	
Training	
Is on-site training included? How many days?	
Customer Service	
Does the software have ability to notify city of low (freezing) temperatures of the meter? (yes/no)	
Does the software have the ability to notify city of unusual usage daily (high, low or zero usage)?	
Does the software have the ability to notify the city of leak detection daily? (before and after the meter) (yes/no)	
Does the software have the ability to notify the city of an empty/dry meter? (yes/no)	
What additional permissions, licenses, etc. are needed to utilize the leak detection described in the 2 questions above?	
Ability to store and transmit meter reading data, data logging, and tamper data from electronic meter registers? (yes/no)	
Capable of acquiring hourly reads – if not hourly, how frequently?	

Ability to add automatic shutoff valves in selected homes and operate through same interface as meter reading	
ITEM	DESCRIPTION
AMI SYSTEM (continued)	
MIU Battery Life / Guarantee	
What is the MIU/Transmitter battery life?	
Is the MIU/Transmitter battery guaranteed? How long?	
Ability to identify failing meters & MTUs (MIUs) through analytics of battery life, consumption, pattern, etc.	
Miscellaneous	
Does your system have dual port MIUs/Transmitters?	
Are software updates included in annual maintenance?	
Number of seats per software license	
% of system components assembled in the USA	
Number of working systems in Texas and United States	
Customer support services to be provides including assistance with software operation, troubleshooting, and reconciling failed devices, network growth, and the addition of new devices, training, recurrent software upgrades, and other activities needed to sustain proper operation of the AMI	
Provide manufacturer-supplied software and customer support necessary to provide upload billing data files to city owned software programs	

SCHEDULE OF PRICES			
ITEM	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
WATER METERS	UNIT		
Supply 5/8" & 3/4" Water Meter including Meter Interface Unit (This line item includes both 5/8" x 1/2", 5/8" x 3/4", and 3/4" x 3/4" water meters as determined by the owner. Cost for either meter will be the same) – Residential	1650	\$	\$
Supply 1" water meter including meter interface unit – Residential	50	\$	\$
Supply 2" water meter including meter interface unit - Residential	100		
Supply 5/8" & 3/4" Water Meter including Meter Interface Unit (This line item includes both 5/8" x 1/2", 5/8" x 3/4", and 3/4" x 3/4" water meters as determined by the owner. Cost for either meter will be the same) – Commercial	1650		
Supply 1" water meter including meter interface unit – Commercial	50		
Supply 1 1/2" water meter including meter interface unit - Commercial	10		
Supply 2" water meter including meter interface unit	100	\$	\$
Supply 3" water meter including meter interface unit	5	\$	\$
Supply 4" water meter including meter interface unit	10	\$	\$
Supply 6" water meter including meter interface unit	5	\$	\$
SUBTOTAL WATER METERS	1917	\$	\$
AUTOMATIC METER READ INFRASTRUCTURE (AMI)	UNIT		
Supply, install, configure, and test collectors, collector antenna, mounting hardware, computer equipment, software and all other items necessary for the complete installation of a fixed based network automatic water meter reading infrastructure system per the technical specifications.	1 (lump sum)		
Handheld device (if needed) to communication with individual MIU	1 (lump sum)		
SUBTOTAL AUTOMATIC METER READ INFRASTRUCTURE (AMI)		\$	
TOTAL (BASE PACKAGE)		\$	

SCHEDULE OF PRICES			
ITEM	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
ADDITIONAL UNIT PRICE ITEMS	UNIT		
MIU for exiting meters that are not being replaced (MIU and new wiring)	1 Each	\$	\$
Annual Maintenance Service Contract for Equipment and Software (5 year price guarantee)	1 (Each year)	\$	\$
ADDITIONAL MANUFACTURER SUBMITTED ITEMS (LIST BELOW)			
		\$	\$
		\$	\$
		\$	\$
		\$	\$
		\$	\$
		\$	\$
		\$	\$
		\$	\$
		\$	\$
		\$	\$
		\$	\$
		\$	\$
ALTERNATE ITEMS / OTHER OPTIONAL ITEMS	CIRCLE ONE		
Remote “CLOUD BASED” Data Management System	ADD	DEDUCT	
Annual Maintenance Service Contract for Equipment and Software (5 year guarantee price) – “Cloud Based”	ADD	DEDUCT	
Supply	ADD	DEDUCT	
ADDITIONAL MANUFACTURER SUBMITTED ITEMS (LIST BELOW)			
	ADD	DEDUCT	
	ADD	DEDUCT	
	ADD	DEDUCT	
	ADD	DEDUCT	

THIS PROPOSAL IS BEING SUBMITTED BY THE FOLLOWING:	
Name of Company	
Address 1	
Address 2	
City, State, Zip Code	
Contact Person	
Contact Person Phone	
Contact Person Email	
Date of Submittal	
Signature	