DEPARTMENTAL INPUT
CONTRACT/PROJECT MEASURE ANALYSIS AND RECOMMENDATION

☑ New ☐ OTR ☐ Sole Source ☐ Bid Waiver ☐ Emergency Previous Contract/Project No.: N/A

☐ Re-Bid ☐ Other LIVING WAGE APPLIES: ☐ YES ☑ NO

Requisition No./Project No.: RQWS1300004 TERM OF CONTRACT: 3 YEAR(S) WITH: 3 2 YEAR OTRs

Requisition /Project Title: Meter Reading Solution

Description: The purpose of this solicitation is to establish a contract an electronic Meter Reading Solution (MRS) to replace the existing legacy system. The selected Proposer shall be responsible for providing meter reading devices, associated software license, training, testing and implementation services as well as ongoing support and maintenance for the proposed MRS.

Issuing Department: WASD Contact Person: Beth Goldsmith Phone: 305-375-4417

Estimate Cost: $530,000 for initial term

Funding Source:	GENERAL	FEDERAL	OTHER
	-	-	Proprietary

ANALYSIS

Commodity Codes: 205 92045

Contract/Project History of previous purchases three (3) years

Check here ☑ if this is a new contract/purchase with no previous history.

	EXISTING	2ND YEAR	3RD YEAR
Contractor:			
Small Business Enterprise:			
Contract Value:	$	$	$

Comments:

Continued on another page (s): ☐ YES ☑ NO

RECOMMENDATIONS

	Set-aside	Sub-contractor goal	Bid preference	Selection factor
SBE				

Basis of recommendation:

See scope.

Signed: Beth Goldsmith Date sent to SBD: 2/8/2013

Date returned to ISD Procurement:

Revised April 2005

Electronic Meter Reading Solution – Draft Scope of Services

Introduction

Miami-Dade County, hereinafter referred to as the County, as represented by the Miami-Dade Water and Sewer Department, hereinafter referred to as WASD, is soliciting proposals for an electronic Meter Reading Solution (MRS) to replace the existing meter reading system. The proposed MRS should modernize current operations and gain efficiencies by providing automation and eliminating manual data entry. The selected Proposer shall be responsible for providing handheld meter reading devices, associated software licenses, training, installation and implementation services as well as ongoing support and maintenance for the proposed MRS.

WASD is seeking a turnkey solution to replace the existing meter system that is capable of meeting current needs and has the flexibility to address future expansion. The proposed MRS will be required to have an application software component that will interface with WASD's current billing software as well as ruggedized handheld devices to be used to record meter readings, report meter box conditions, and conduct surveys in the field. The proposed MRS will be used to conduct operations on a monthly and quarterly basis at four field district locations as well as one backup office. The proposed handheld devices may also be used to work field activities, instantly report meter irregularities or damaged equipment, report leaks for prompt handling, and allow for radio, telephone, camera, and global positioning satellite (GPS) functionalities.

Current Environment

WASD currently reads over 2.1 million water meters on an annual basis. This includes approximately 15,000 meters that are read monthly and 430,000 that are read quarterly. Quarterly and monthly meter reading operations are currently conducted in four (4) field district locations. It is anticipated that future billing cycles may be converted from quarterly operations to monthly.

Handheld Devices

Currently, operations are conducted using 35 Itron Model G5 Handheld Devices. These devices reached the end of supported life on December 31, 2012.

Software Environment

The handheld devices use Itron PremierPlus 4 version 3.6 software for the collection of data. The PremierPlus 4 software resides on HP Proliant DL360 servers running Windows Server 2008 SP2, Oracle 11G. The PremierPlus 4 software currently interfaces with the Oracle's PeopleSoft Customer Information System (CIS) version 8.9 via a scheduled batch process. This process is further outlined in Attachment 1, "Meter Read Download Processes." It is anticipated that WASD will migrate to Oracle Customer Care and Billing (CC&B) version 2.3.1 prior to the implementation of the proposed MRS.

Software Requirements

The proposed MRS shall include application software that shall have two major components: a component that runs on the handheld devices for the collection of meter data and a backend component to be used by administrators in an office setting. The backend system will be used by office staff to assign routes and produce reports..

The proposed MRS shall be capable of operating within the County's Technology Model and meeting the County's Hosting Requirements.

Interface Requirements

The proposed MRS shall be required to interface with the Oracle CC& B. This interface will be completed via a flat file to be loaded into a staging table and then populate data into the various CC&B tables. This

data may include customer account data, meter information (including fields such as missed read codes, instructions, and comments), read date, actual meter reading, reading time, elapsed time between reads, number of attempts, flagged meters (inactive accounts with a consumption reading) and field condition observations. The proposed MRS must include backup and restore capabilities of all essential data from CC&B, including completed routes, partially deleted routes, and data statistics. This should include the ability to complete either partial or full restores by allowing users to select which data is to be restored. The interface with CC&B shall provide meter reading routes by districts, for specific read date and reading cycle.

Handheld Device Requirements

The proposed MRS shall include 40 handheld devices for the collection of meter data. The handheld devices should be ruggedized and include any needed accessories (protective covering, docking equipment, charging devices, etc.) that are needed for the effective performance of the solution. The County is not responsible for providing handheld devices in association with the proposed MRS.

Maintenance Services To Be Provided

The proposed MRS must be of the most recent release and the selected Proposer shall provide maintenance services for the proposed MRS throughout the term of the contract. These services shall include updates and upgrades to maintain compatibility with future County hardware and software infrastructure. Maintenance Services for the software component shall include corrections of any substantial defects, fixes of any minor bugs, and fixes due to any conflicts with mandatory operating system security patches as well as upgrades to new version releases. Upgrades to the software component should be provided within 6 months at no additional cost to the County and should include any re-architecture or implementation cost associated with the support of the new release. All environments, both production and non-production environments, such as testing and staging shall be covered under Maintenance Services. Maintenance services for the handheld devices shall include preventative maintenance to combat normal wear and tear from general usage to maintain proper operations. Additionally, as part of maintenance services, when defective and/or damaged handheld devices are identified by the County, the County shall ship such devices to the selected Proposer and upon receipt the selected Proposer shall ship a replacement unit to the County with a preference for 2 day shipping.

Technical Support Services To Be Provided

The selected Proposer shall be responsible for provided technical support services to ensure optimal performance of the proposed MRS. This should include remote diagnostic tools to detect and correct application errors in the software component. The County's preferred escalation process is outlined below:

Severity	Definition	Response Time	Resolution Time	Status Frequency Update
1=Critical	A major component of the System is in a non-responsive state and severely affects Users' productivity or operations. A high impact problem which affects the Users.	One (1) Hour	Four (4) Hours	One (1) Hour

Severity	Definition	Response Time	Resolution Time	Status Frequency Update
2=Urgent	Any component failure or loss of functionality not covered in Severity 1, which is hindering operations, such as, but not limited to: excessively slow response time; functionality degradation; error messages; backup problems; or issues affecting the use of a module or the data.	Two (2) Hours	Eight (8) Hours	Two (2) Hours
3=Important	Lesser issues, questions, or items that minimally impact the work flow or require a work around.	4 hours	Seventy two (72) Hours	Four (4) Hours
4=Minor	Issues, questions, or items that don't impact the work flow. Issues that can easily be scheduled such as an upgrade or patch.	24 hours	One (1) Month for an acceptable work around until final resolution	Weekly Status Call

The selected Proposer should make live support available 6AM to 7PM Eastern Standard Time, Monday through Friday per week. The selected Proposer should also make on-call support available 24 hours per day, 7 days per week to address Critical issues.

Implementation Services To Be Provided

The selected Proposer shall be responsible for providing on-site installation and configuration services for the proposed MRS. This should include planning and operational process redesign. The selected Proposer shall be responsible for testing the Solution and insuring proper functionality prior to launching in the production environment. No conversion of historical data will be completed as part of this implementation.

Training Services To Be Provided

The selected Proposer shall provide on-site training on the proposed MRS for a minimum of 50 users, broken down into user appropriate sessions for the following groups:

Field Users	35
Administrative Users	15
System Administrators/IT Staff	10

The selected Proposer must provide all necessary documentation on the proposed MRS, customized for the County, both in hard copy and in electronic format. Facilities and computers will be provided by the County for the purpose of conducting such training. Additional training shall be made available via on-line videos or other resources on an ongoing basis throughout the term of the contract awarded as a result of this solicitation.

Inventory Requirements

The selected Proposer shall provide replacement parts for handheld devices to be housed on-site at the County for the completion of immediate repairs.

Requirements Table

	Requirement
1.	Proposed MRS includes a graphical user interface (GUI) to navigate through multiple functions from the general purpose screen.
2.	Proposed MRS includes common language compatibility within a relational database which supports Oracle version 11g or higher or MS SQL 2008 or higher functions.
3.	Users shall be able to make queries on any field and select data for printing or exporting to other applications.
4.	Proposed MRS has the ability to restart the application and to ensure data integrity either onsite or remotely.
5.	Proposed MRS completes system backups automatically, in unattended mode (off hours).
6.	Proposed MRS provides descriptive error messages and on-line help by context. On-line help shall suggest possible causes, recommend solutions and/or corrective action, and provide references to the User's Manual.
7.	Proposed MRS requires users to "Log on" and "Log off", as well as an automated "Log Off" capability after a specified time interval.
8.	Proposed MRS provides the ability to suppress passwords so that they do not appear on the screen as they are being entered.
9.	Proposed MRS provides role based functional access.
10.	Proposed MRS supports Active Directory single sign-on.
11.	Proposed MRS allows users to view and/or print a report summarizing the status of routes.
12.	Proposed MRS displays the user defined field conditions, such as number of reads, skips, and missed read for each route.

	Requirement
13.	Proposed MRS allows users to access all essential account information necessary to: a. estimate accounts b. correct readings c. change field condition codes d. correct the read date
14.	Proposed MRS has the ability to use the time stamp of each reading to calculate the elapsed read time between each meter read on each route.
15.	Proposed MRS records and retains the following types of statistics within the software component: a. Mileage on vehicles b. Route read times c. Individual meter reader statistics including number of meters assigned, and field conditions d. Communications statistics which includes errors and transmission times
16.	Proposed MRS allows users to define/schedule daily route assignments based on conditions that may affect the assignments such as holidays and no read days via either a specific meter reader or hand-held device.
17.	Proposed MRS computes daily workloads for each district based on route read times, and displays this data graphically.
18.	Proposed MRS has the capacity to read up to 30,000 meters per day.
19.	Proposed MRS includes an unattended automatic operations mode which will: a. Initiate data transfer between the handheld device and the software component b. Initiate data transfer between the software and CC&B c. Prepare new routes and/or unread accounts from previous routes for loading into the handheld devices d. Print designated reports e. Initiate backups f. Initiate reports

	Requirement
20.	Proposed MRS is capable of: a. If interrupted, when restarted, resume operations precisely at the point where they were terminated b. Log all automatic operations for user review c. Log start and completion date, and time of all automatic operations d. Log which functions that were executed and/or not executed e. Log all system errors
21.	Users are able to create a new route consisting of the unread meters to include field conditions identified from previous read attempts to inform the reader of reasons for missed reads from one or more selected read routes.
22.	Proposed MRS includes a search functionality to retrieve meter reading data.
23.	Proposed MRS has the ability to provide an assignment to a remote office from either a centralized office or another remote (district) office.
24.	Proposed MRS handles the volume of data from remote offices concurrently.
25.	Proposed MRS allows users to view the complete input information for each route down to the account level and the meter reading level
26.	Proposed MRS identifies all routes by district and assignment status.
27.	Proposed MRS identifies all completed routes that are ready for billing.
28.	Proposed MRS identifies all routes that have not been completed by the required read date.
29.	Proposed MRS contains a fully integrated query tool and/or report writer that includes standard reports with the ability to create or modify ad hoc reports that exportable to Excel and PDF.
30.	Proposed MRS contains audit trails to track changes and security levels to limit the accessibility of information.

	Requirement
31.	Proposed MRS has the ability to archive data for a period of 13 months.
32.	Proposed MRS allows users to split and/or merge routes into different handheld devices.
33.	Proposed MRS shall identify the meter reading handheld device by: a. Serial number b. District assigned to c. Meter reader assigned d. Status (such as assigned, inactive, out for repair, etc)
34.	Proposed MRS is able to display the status of an account or route.
35.	Data transfer to and from the handheld device is independent of the district location and the particular cradle and/or port where the handheld device is loaded.
36.	Proposed MRS verifies data integrity through an error control / correction function to insure that the correct number of bits (data) is transferred during communications between the handheld device and the software component.
37.	Proposed MRS allows users to define the fields to be displayed on the primary screen of the proposed handheld devices.
38.	Proposed MRS includes messaging functionality that allows users to send messages directly to a single handheld device or to all handheld devices.

	Requirement	Meet (Y, N, F, C)	Module/Detailed Explanation
Technical Requirements			
1.	Proposed handheld devices include intuitive navigation with minimal key strokes required for meter reading functions.		
2.	Proposed handheld device shall have the ability to retrieve unread accounts.		
3.	Proposed handheld device shall have visual and audio warning message capability to signal users of certain conditions such as failed reading input or a warning of a hazardous condition.		

	Requirement	Meet (Y, N, F, C)	Module/Detailed Explanation
4.	Users are able to enter the in and out vehicle odometer readings into the handheld device as a required part of daily sign on and sign off procedures.		
5.	Users are able to recall and correct readings or other entry errors that have been previously committed to the handheld device.		
6.	Proposed handheld devices are able to associate multiple meters to one premise.		
7.	Users are able to read meters out of the sequence preset in the handheld device.		
8.	Users are able to search by entering the meter number, premises address, or read sequence number.		
9.	Users are able to scroll from meter to meter one at a time or in "high speed" (continuous operation), forward or backwards.		
10.	Users are able to request a count of how many unread meters are left in the route on the handheld device at any point in the route.		
11.	Proposed handheld devices include a time stamp function to record and report the following information: a. Time stamp of the first attempt or reading taken b. Time stamp of the last attempt or reading taken c. Timestamp each reread attempt d. Timestamp each field condition e. Timestamp any free form text entered		
12.	Users are able to input readings of up to 10 dials (including decimals) on the handheld device.		
13.	Proposed handheld devices include two (2) user defined levels of high and two (2) user defined levels of low consumption checks. If either of these conditions occurs, the handheld device shall require the user to reenter the reading.		
14.	Proposed handheld devices prompt users to enter field observations based on predefined field conditions. This should include up to ninety-nine (99) observation codes.		

	Requirement	Meet (Y, N, F, C)	Module/Detailed Explanation
15.	Proposed handheld devices include up to ninety-nine (99) Missed Read Conditions.		
16.	Proposed handheld devices include up to ninety-nine (99) Trouble Codes (Meter Box Conditions).		
17.	Proposed handheld devices include to ninety-nine (99) premises hazard codes.		
18.	Proposed handheld devices notify users of hazardous conditions for both the premises and the customer that display prior to displaying the premise address. Proposed handheld devices require users to acknowledge a hazardous conditions notification prior to proceeding to the next screen.		
19.	Proposed handheld devices do not allow duplicate entry of the same Trouble Code (Meter Box Condition) on the same meter record. Once reported, the selected condition shall be displayed on the primary screen of the handheld device.		
20.	Proposed handheld devices displays all meter locations for every meter on the handheld device.		
21.	Proposed handheld devices accommodate a free-form fifty (50) character meter location field.		
22.	Proposed handheld devices include the following fields with the corresponding minimum field lengths: a. Free Form Comments (40 char.) b. Vehicle Number (6 char.) c. Odometer Reading (6 char.) d. Missed Read Codes (2 char.) e. Meter Box Condition (Trouble) Codes (2 char.) f. Survey Codes (2 char.) g. Route Message (40 char.) h. Time Stamp (15 char.) i. Number of Routes on the device (1 char.) j. Hi/Low Attempt Counter (2 char.) k. Re-entry Counter (2 char.) l. Changes to All Modifiable Fields (same lengths as fields changed)		
23.	Proposed handheld devices include the following premises fields with the corresponding minimum field lengths: a. Address (50 char.) b. Cycle Number (2 char.)		

	Requirement	Meet (Y, N, F, C)	Module/Detailed Explanation
	c. Reading Route (8 char.) d. Read Sequence # (6 char.) e. Current Read Date (8 char.) f. Current Reading (8 char.) g. Scheduled Read Date (8 char.) h. Previous Reading (8 char.) i. Premises Number (8 char.) j. Premises Status (1 char.) k. High 1 Reading (8 char.) l. High 2 Reading (8 char.) m. Low 1 Reading (8 char.) n. Low 2 Reading (8 char.) o. Premises Hazard Code (2 char.) p. Type of premises (25 char.)		
24.	Proposed handheld devices display warning and/or error messages which adequately describe warning and/or errors, such as: a. High or Low Reading b. Verify Reading c. Invalid Number of Dials d. Function Not Available e. System Failure: Program Loss		
25.	Proposed handheld devices include the following device inventory fields with the corresponding minimum field lengths: a. Meter Number (10 char.) b. Meter Size (5 char.) c. Meter Location (50 char.) d. Meter Location Code (4 char.) e. Number of dials on meter (10 char.) f. Number of registers (1 char.) g. Number of meters associated with premises (2 char.)		
26.	Proposed handheld devices include the following customer fields with the corresponding minimum field lengths: a. Customer Name (254 char.) b. Primary Phone Number (10 char.) c. Customer Account Number (10 char.)		
27.	Proposed handheld devices are capable of loading a minimum of eight (8) separate routes so that each route shall maintain its unique Route ID for purposes of tracking and reporting.		
28.	Proposed handheld devices compare the current read date of the selected route (for reading) against the assigned date. If the read date is outside the reading window,		

	Requirement	Meet (Y, N, F, C)	Module/Detailed Explanation
	the handheld device shall notify the user and require that a password be entered to proceed.		
29.	Proposed handheld devices do not display previous meter readings. However, the previous reading shall be a required data element used in computing the usage (consumption) and determining whether the reading passed or failed the high and low limit check.		
30.	Proposed handheld devices require users to modify the "number of dials" field to enter a reading of more or less dials. The reading entry field will then be automatically adjusted to the corrected length. This functionality should only be available if the meter number is different than what the handheld device is displaying.		
31.	Proposed handheld devices display and validates the correct number of dials to be read on each meter.		
32.	Proposed handheld devices notify users if a reading falls outside of defined consumption limits.		
33.	Proposed handheld devices allow users to either 1) correct an erroneous input or 2) override the notice and accept the input for meters that fail level 1 and level 2 (for either "high" or "low" consumption. An override shall be recorded and reported.		
34.	Proposed handheld devices have a battery capacity of a minimum of 8 hours of daily use.		
35.	Proposed handheld devices have power management capabilities to conserve power.		
36.	Proposed handheld devices include security measures that restrict users from deleting the meter reading application and meter reading routes.		