



REPORT TO MAYOR AND CITY COUNCIL

AGENDA ITEM

TO: THE HONORABLE MAYOR
AND CITY COUNCIL

DATE: September 1, 2009

SUBJECT: SCADA System Implementation, Project No 06-09; Approve Plans and Specification and Authorize Bid Advertisement

Report in Brief

The consulting firm Kennedy Jenks was selected by the City to prepare plans and specification for the installation of a Supervisory Control and Data Acquisition (SCADA) System on existing City wells. This will enable City staff to utilize the wells more efficiently while maximizing production from the wells with better water quality.

The scope of work in the bid document includes the preparation of a Pre-design Report, SCADA System design, SCADA Construction Management, SCADA Programming and Integration, and SCADA Maintenance and Technical Support.

Staff recommends that the City Council approve plans and specifications and authorize bid advertisement for the SCADA System Implementation, Project No 06-09.

Background

In 2006, Westin Engineering Inc prepared a SCADA Master plan for the City; this plan includes a description of the existing system and a strategy to achieve a fully transformed SCADA water distribution system. This SCADA system will allow the City to stabilize and enhance the water pressure to provide improved residential, business, and fire flow capabilities. The SCADA system will also help improve the operation of the water distribution system and enhance regulatory compliance, capacity management and security maintenance of the system. The main focus of the SCADA Master Plan was to define how to integrate the City's entire system, capture process data for analysis, increase system efficiency, reduce labor costs, improve alarm notification to operations, and increase response time efficiency.

Discussion

The City currently operates 19 water production wells; these wells are controlled by a system of glass vials filled with mercury that tilt and turns the system on when the pressure is low in the distribution system. All current monitoring and controls are done by maintenance crews visiting each well site everyday. As a result, data, such as well production flow, reservoir levels, and alarms are not available remotely or automatically recorded.

The new SCADA System will include selection menus which will be used to manage well controls; such features would include: time schedule, water quality, energy management, well alternation, well draw-down monitoring, and well efficiencies. The SCADA system will consist of a control system, an antenna, a radio transceiver, wiring conduits, power monitor and a local monitor interface at each well. The system will also include a trouble shooting system for diagnosing immediate and future problems. It would also have the capacity to be expanded in the future to incorporate additional utilities when necessary. The proposed SCADA System can also be used to monitor actual production costs with additional equipment added as needed.

Fiscal Impact

This project is fully funded by the water enterprise fund; the total estimated cost of construction is approximately \$1.6 million as indicated in Table 1 below. The budgeted amount for design and construction as approved on June 10, 2008 is \$1,729,946; this includes \$550,000 for design and \$1,179,946 for construction.

Table 1

Item	Features	Total Cost of Construction
Base bid	Basic SCADA System	\$874,000
Base bid plus alternate 1	Basic SCADA System with optional flow and Pressure	\$930,000
Base bid plus alternate 2	Basic SCADA System with optional level recorder, flow, nitrate, power monitor, and local human machine interface	\$1,615,000

The basis of award would be the base bid only; the alternates will only be considered if there are sufficient funds available to implement them in the budget depending on the outcome of the bidding process.

Public Contact

An issue of the “Woodland Water News” prepared by the Utility Engineering Division and inserted into Utility bills has been the primary source of public communication. The insert provided information on present and future projects.

The City Council agenda was posted.

Recommendation for Action

Staff recommends that City Council approve plans and specifications and authorize bid advertisement for the SCADA System Implementation, Project No 06-09.

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