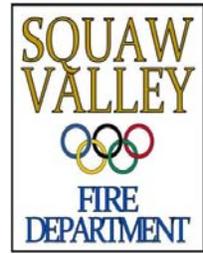




SQUAW VALLEY PUBLIC SERVICE DISTRICT



2016-2017 SCADA Improvements Project

DATE: August 30, 2016

TO: District Board Members

FROM: Dave Hunt, District Engineer
Brandon Burks, Operations Superintendent

SUBJECT: 2016-2017 SCADA Improvements Project

BACKGROUND: The District operates and maintains a Supervisory Control and Data Acquisition System (SCADA) to control the operation of the water supply and distribution systems and monitor several sewer meters. The present system was installed in 2001 and has become obsolete over time. Anticipating upgrade and replacement needs the District prepared a SCADA Master Plan (September 2014). Implementation of the plan is contemplated in multiple phases in order to distribute cost and manpower to accomplish the project over several years.

Phase I of the project was completed by Sierra Controls, LLC (SC) in 2015 and included replacement of the main terminal human machine interface (HMI) and the operating software was recently completed along with the framework for the proposed communications upgrade. Phase II was recently completed by SC and included an upgrade of the remote terminal units (RTU's) and replacement of the older analog radios with modern Ethernet radios.

DISCUSSION: This phase of the SCADA improvements includes further enhancements to the District's SCADA system to ensure operational reliability. Staff has continued to work with SC to prioritize SCADA system improvements based on the recommendations in the 2014 SCADA Master Plan. Specific tasks for this project are detailed in the attached SC proposal and include:

1. Provide virtualized remote access to historical SCADA data currently stored on an obsolete server;
2. Replace and relocate the antenna at the Mountain Run sewer flow meter site;
3. Configure SCADA alarms to call out to the fire station as well as the on call

operator;

4. Provide programming to include autonomous control between pumping sites and controlling sites within the system;
5. Provide PLC programming at the West Tank site;
6. Provide additional watchdog capabilities for the sewer manhole float;
7. Purchase a spare parts package to include essential system components.

FISCAL/RESOURCE IMPACTS: Staff budgeted \$24,000 for implementation of the SCADA improvements for FY 2017 from the Fixed Asset Replacement Fund (FARF). The cost of the project is split between the Water (77%) and Sewer (23%) System FARF. The proposal amount of \$22,085 will reduce the FARF by an equal amount.

- ALTERNATIVES:**
1. Accept the proposal from SC in the amount of \$22,085 and complete the project as presented in the 2014-2015 Capital Projects Budget, not to exceed \$24,000.
 2. Reject the proposal from SC and seek alternate ways of keeping the SCADA system operational at potentially higher cost.

RECOMMENDATION: Staff recommends Alternative 1, approving the proposal from SC. Staff recommends the Board authorize the General Manager to enter into contract with Sierra Controls LLC in the amount not to exceed \$24,000.

ATTACHMENTS: Sierra Controls, LLC T&M Estimate No. 9758 Rev 2 (August 18, 2016)

Sierra Controls, LLC 2016-2017 Budget Items (Pre Phase 3) Project Schedule

DATE PREPARED: August 24, 2016