



Agenda Item No. _____

File Code No. 540.01

CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: May 13, 2008

TO: Mayor and Councilmembers

FROM: Water Resources Division, Public Works Department

SUBJECT: Approval Of Contract For Supervisory Control And Data Acquisition System Master Plan

RECOMMENDATION:

That Council authorize the Public Works Director to execute a contract with Brown and Caldwell in the amount \$161,804, to develop a Supervisory Control and Data Acquisition System (SCADA) Master Plan for the SCADA systems operated by the Water Resources Division facilities, and authorize the Public Works Director to approve expenditures up to \$16,181 to cover cost increases that may result from unanticipated changes to the scope of work.

DISCUSSION:

Water Resources Division facilities include the Cater Treatment Plant, the water distribution system, the wastewater collection system, the El Estero Wastewater Treatment Plant, the recycled water plant and the recycled water distribution system. Each of these facilities relies on Supervisory Control and Data Acquisition (SCADA) systems for automation of operations and for collection of data required for regulatory reporting and permit compliance. SCADA systems are complex integrated systems with elements of computer programming, fiber optic networks, complex databases, and human-machine interface screens.

Through SCADA, staff can remotely monitor system equipment to ensure it is operating within pre-set ranges, and receive notice of equipment failures via remotely sent alarms. This has eliminated the need to staff the treatment plants during off-peak hours, and has improved emergency response time to equipment failures at facilities located throughout the distribution and collection systems. Regulatory agencies have made SCADA system data collection an industry standard for water and wastewater facilities.

Over the past twenty years, the Water Resources Division has developed four discrete SCADA systems with a limited interface between them. The equipment and labor needed for expansion and maintenance of these systems can be expensive. At this time, we desire to evaluate the SCADA systems to look for opportunities for standardization of

critical equipment, and an evaluation of how best to provide the resources required to maintain and replace these critical systems.

For this purpose, staff requested proposals for the development of a SCADA Master Plan for Water Resources from qualified companies. The primary objectives of the Master Plan will be to review the SCADA systems' functionality, life cycle costs, and technical needs for the next six year period; establish a business-based vision of SCADA performance and support; and to review SCADA system staffing levels. The resultant product will identify any gaps in the existing SCADA systems, make recommendations for standardization and operation of SCADA systems, and provide estimates of future SCADA related costs for staffing and budgeting purposes.

Three firms submitted proposals. Staff reviewed the proposals and selected Brown and Caldwell as the most responsive to the request for proposal. Brown and Caldwell has extensive experience in this area and has provided a strong project team with an experienced project manager. Staff has negotiated an acceptable proposal in the amount of \$161,804. Staff is also requesting change order authority in an amount of \$16,181, or ten percent of the contract amount, which is typical for work of this kind.

BUDGET/FINANCIAL INFORMATION:

Funds for completion of the SCADA Master Plan are included in the Water and Wastewater Fund budgets. The resultant Master Plan will include information that will allow us to better plan the next six year Capital Plan for the Water and Wastewater Funds.

SUSTAINABILITY CONTEXT:

SCADA systems allow remote monitoring and operation of critical equipment. This allows for more efficient operation of water and wastewater facilities. Additionally, remote monitoring provided by SCADA systems has eliminated the need for around the clock staffing at the treatment plants, thus reducing staffing needs and consequent vehicle trips. Finally, the use of SCADA helps alert staff to issues such as main breaks, pump breakdowns or other equipment failures, which can have adverse environmental impacts.

PREPARED BY: Rebecca Bjork, Acting Water Resources Manager/RB/spm

SUBMITTED BY: Paul Casey, Acting Public Works Director

APPROVED BY: City Administrator's Office