

TO: Andrew P. Powers, City Manager

FROM: Clifford G. Finley, Public Works Director

DATE: October 8, 2024

SUBJECT: **Supervisory Control and Data Acquisition System Optimization (MI 2665)**

RECOMMENDATION:

1. Approve single-source designation and Professional Services Agreement with AECOM Technical Services, Inc. (AECOM) of Westlake Village, CA, for engineering services on the Supervisory Control and Data Acquisition (SCADA) System Optimization Project (MI 2665) in the not-to-exceed amount of \$293,050, plus extra services of \$29,300, with a term ending December 31, 2025.
2. Approve budget appropriation in the amount of \$183,000 from A/C #613-0000-341-9900 (Water Capital Fund - Net Position) to A/C #613-5310-682-5300 (MI 2665 - Water Capital Fund, Design and Engineering).
3. Authorize expenditure in the amount of \$327,350 (\$293,050 agreement, plus \$29,300 extra services, and \$5,000 for City furnished materials and supplies) from A/C #613-5310-682-5300 (MI 2665 - Water Capital Fund, Design and Engineering).
4. Find that this action is not a project as defined under the California Environmental Quality Act (CEQA).

LEVINE ACT ITEM: Yes

FINANCIAL IMPACT:

\$183,000 Increase to Adopted FY 2024-25 Water Capital Fund Budget. \$144,398 is available in carryover budget in FY 2024-25 Water Capital Fund Budget for MI 2665.

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BACKGROUND:

The City's water system serves approximately 17,000 customer accounts and a population of 53,000. The City receives imported water through 11 metering facilities (turnouts) from the Calleguas Municipal Water District (CMWD) and distributes it to approximately 36 percent of the City. Customers are served via 16 water storage reservoirs with a total capacity of 35.5 million gallons, 16 booster pump stations, approximately 240 miles of pipeline, and 1,900 fire hydrants.

The City's SCADA system is the central control system for the City's water storage and distribution network. The SCADA system facilitates the reception of information across all water facilities, including pump stations, CMWD turnouts, and reservoirs. This system enables the City's operations staff to efficiently and remotely control, monitor, and adjust operational settings from the City's Municipal Service Center (MSC) ensuring the uninterrupted high-quality potable water to residents for domestic use and firefighting. Additionally, the SCADA system includes alarms for intrusion, malfunction, and unusual system operations, with notifications sent to standby/on-call personnel after normal working hours.

In 2023, the City upgraded the water SCADA system, which included a new SCADA software package, a new and more reliable communications network, and updated Programmable Logic Controllers (PLCs) at pump stations and reservoirs. The new SCADA system operates on the Ignition platform, provided by Inductive Automation, Inc. This software captures and stores data such as chlorine and ammonia concentrations, pressures, flows, levels, and equipment status from remote sites using PLCs. It then displays this data and related alarms in near real-time to MSC operations staff via graphical human-machine interface (HMI) screens on computer monitors.

Although the new SCADA system is fully functional, the programming and data presentation on City's HMI screens were based on requirements defined in 2019. Since then, the City's SCADA system's needs have evolved. Additional system programming is required for the data to be more clearly provided on the HMI screens at the MSC and pump stations and reservoirs. Optimization of the overall system will provide water operations staff the full and highest use of the new system's features and capabilities to best use the various improvements and new capabilities of the software added since 2019.

DISCUSSION/ANALYSIS:

The optimization project will enhance the existing PLC and SCADA programming to enable local control of remote sites through the current installations. The goal is to increase the reliability of the water SCADA system and improve its operational capabilities to help City staff best manage this critical infrastructure.

AECOM was previously selected through a competitive process for the multi-year design project and the construction management for the upgrade of the City's SCADA system that was completed in 2023. Additionally, AECOM recently completed a task order providing an assessment report on the current SCADA system optimization options. As such, AECOM is uniquely and highly qualified to perform the proposed optimizations of the system based on their expertise and intimate knowledge of the City's SCADA system, its software capabilities, and overall City water system configuration and telemetry communication setup.

Staff recommends approving a single-source designation and awarding the Professional Services Agreement to AECOM for \$293,050 (Attachment #1), to provide engineering services for optimizing the existing SCADA system.

The following are the estimated project costs:

ITEM	COST
SCADA System Assessment (completed – AECOM task order)	\$ 30,602
SCADA System Optimization (this action – AECOM agreement)	\$293,050
Extra Services (this action)	\$ 29,300
City Furnish Materials and Supplies (this action)	\$ 5,000
Total Project Cost	\$357,952

The anticipated project completion is July 2025.

This action is not a project as defined under the CEQA because this action will not result in a direct or foreseeable indirect physical change in the environment [14 CCR 15060(c)].

Community Outreach: The project will take place on City properties with no impacts on traffic, general public, or water related services that City provides.

This project meets City Council's Top Ten Priorities #7, "Public Works + Infrastructure Investments across the community."

CIP PROJECT PRIORITY: (as outlined in FY 2023-24 and FY 2024-25 CIP Program Budget)

Priority Two – Necessary, but not essential, and there could be consequences if deferred.

LEVINE ACT (California Government Code § 84308):

This item is subject to the Levine Act. City Councilmembers who have received a campaign contribution of more than \$250 (aggregated) within the preceding 12 months from a party or their agent/representative, or a financially-interested participant involved in this proceeding may do either of the following: (1) disclose the contribution on the record and recuse themselves from this proceeding; or if applicable (2) return the portion of the contribution that exceeds \$250 within 30 days from the time the official knew or should have known about the contribution, and participate in the proceeding.

All parties and their agents/representatives must disclose on the record of this proceeding any aggregated contribution of more than \$250 made to any Councilmember within the preceding 12 months. Councilmembers are prohibited from accepting, soliciting, or directing a campaign contribution of more than \$250 (aggregated) from a party, their agent/representative, or a financially-interested participant during a proceeding and for 12 months following the date a final decision is made. In addition, a party, their agent/representative, or a financially-interested participant is prohibited from contributing more than \$250 (aggregated) to a Councilmember during a proceeding and for 12 months following the date a final decision is made.

COUNCIL GOAL COMPLIANCE:

Meets the following City Council goals:

C. Operate City government in a fiscally and managerially responsible and prudent manner to ensure that the City of Thousand Oaks remains one of California's most desirable places to live, work, visit, recreate, and raise a family.

F. Provide and enhance essential infrastructure to ensure that the goals and policies of the Thousand Oaks General Plan are carried out and the City retains its role and reputation as a leader in protecting the environment and preserving limited natural resources.

PREPARED BY: Roner DelCastillo, Associate Engineer

Attachments:

Attachment #1 – Professional Services Agreement, AECOM