

City of Sacramento

Legislation Details (With Text)

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Title: Change Order and Supplemental Agreements for Shasta Park Reservoir and Pump Station Project
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Date	Ver.	Action By	Action	Result
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Title:
Change Order and Supplemental Agreements for Shasta Park Reservoir and Pump Station Project

File ID: 2019-00316

Location: District 8

Recommendation:

Pass a Motion: 1) authorizing the City Manager or the City Manager’s designee to execute Change Order No. 13 to City Agreement No. 2016-1073 with Sierra National Construction, Inc., for an amount not-to-exceed \$536,520, bringing the agreement’s total not-to-exceed amount to \$14,740,533; 2) resetting the City Manager’s authority to issue Change Orders for Agreement No. 2016-1073; 3) authorizing the City Manager or the City Manager’s designee to execute Supplemental Agreement No. 8 to City Agreement 2012-0654 with Wood Rodgers for an amount not-to-exceed \$254,584, bringing the agreement’s total not-to-exceed amount to \$1,410,026; 4) resetting the City Manager’s authority to issue Supplemental Agreements for Agreement No. 2012-0654; 5) authorizing the City Manager or the City Manager’s designee to execute Supplemental Agreement No. 6 to City Agreement No. 2016-1011 with West Yost Associates, for an amount not-to-exceed \$129,109, bringing the agreement’s total not-to-exceed amount to \$1,456,292; and 6) resetting the City Manager’s authority to issue Supplemental Agreements for Agreement No. 2016-1011.

Contact: Peter Wright, Project Manager (916) 808-1433; Michelle Carrey, Supervising Engineer (916) 808-1438; Dan Sherry, Engineering & Water Resources Division Manager, (916) 808-1419; Department of Utilities

Presenter: None

Attachments:

- 1-Description/Analysis
- 2-Change Order No. 13, Sierra National Construction, Inc.
- 3-Supplemental Agreement No. 8, Wood Rodgers
- 4-Supplemental Agreement No. 6, West Yost

Description/Analysis

Issue Detail: Staff recommends Council approve Change Order No. 13 with Sierra National Construction, Inc., for modifications due to design changes and to improve operations and constructability.

Staff recommends Council approve Supplemental Agreement No. 8 with Wood Rodgers to further assist with obtaining permits and preparing operation and maintenance manuals on the Shasta Park Reservoir and Pump Station project.

Staff recommends approval of Supplemental Agreement No. 6 with West Yost to extend the contract for construction management and inspection services through December 2019 on the Shasta Park Reservoir and Pump Station project to accommodate the amended construction completion.

Policy Considerations: The change order and supplemental agreements exceed the City Manager's approval authority and require Council approval.

Economic Impacts: The change order with Sierra National Construction Inc., in the amount of \$536,520 is expected to create 2.15 total jobs (1.24 direct jobs and 0.91 jobs through indirect and induced activities) and create \$331,266.23 in total economic output (\$208,799.63 of direct output and another \$122,466.60 of output through indirect and induced activities).

The indicated economic impacts are estimates calculated using a calculation tool developed by the Center for Strategic Economic Research (CSER). CSER utilized the IMPLAN input-output model (2009 coefficients) to quantify the economic impacts of a hypothetical \$1 million of spending in various construction categories within the City of Sacramento in an average one-year period. Actual impacts could differ significantly from the estimates and neither the City of Sacramento nor CSER shall be held responsible for consequences resulting from such differences.

Environmental Considerations: An Initial Study, Mitigated Negative Declaration, and a Mitigation Reporting Program were prepared for this project in accordance with the California Environmental Quality Act (CEQA). The City Council adopted the Mitigated Negative Declaration and Mitigation Reporting Program on May 22, 2012 (Resolution No. 2012-0138). No additional environmental

review is required.

Sustainability: The project has been reviewed for consistency with the goals, policies, and targets of the 2035 General Plan. The project will advance these goals, policies, and targets by ensuring that the City continues to provide a safe, clean, and reliable water supply to its customers.

Commission/Committee Action: Not applicable.

Rationale for Recommendation: The original project included a four million-gallon water reservoir, a groundwater well (Well No. 165), a water treatment system, and a pump station. During construction a decision was made to add another groundwater well (Well No. 167) and a filter, which was previously planned for another site, to the Shasta Park Reservoir and Pump Station project. This allowed the City to meet the deadline for fully utilizing the United States Bureau of Reclamation. Proposition 84 Implementation Grant funding for the extra well.

Supplemental Agreement No. 8 with Wood Rogers is needed for several tasks. Permits are needed because the facility will not be able to operate until they have been issued. Additionally, the preparation of operations manuals and standard operating procedures will verify complete installation of all equipment and allow City operations and maintenance personnel to smoothly transition into the Shasta facility once the city takes ownership. Finally, water quality testing and reporting services are needed.

Supplemental Agreement No. 6 with West Yost is needed to extend the construction management and inspection services timeframe to accommodate the duration of the amended construction schedule.

Financial Considerations: The original Shasta Park Water Facility contract had a not-to-exceed amount of \$11,595,790. The net change by previous Change Orders, in the amount of \$2,608,223, increased the contract not-to-exceed amount to \$14,204,013. The proposed Change Order No. 13 with Sierra National Construction, Inc. in the amount of \$536,520 would increase the contract not-to-exceed amount to \$14,740,533.

The original Shasta Park Reservoir Booster Pump Station and Groundwater Well agreement with Wood Rodgers had a not-to-exceed amount of \$301,000. The net change by previous supplemental agreements, in the amount of \$854,442, increased the contract not-to-exceed amount to \$1,155,442. The proposed Supplemental Agreement No. 7 with Wood Rodgers is for a not-to-exceed amount of \$254,584, for a new total agreement amount not-to-exceed \$1,410,026.

The original Shasta Park Water Facility agreement with West Yost had a not-to-exceed amount of \$933,510. The net change by previous supplemental agreements, in the net amount of \$393,673, increased the contract not-to-exceed amount to \$1,327,183. The proposed Supplemental Agreement No. 4 with West Yost is for a not-to-exceed amount of \$129,109, for a new total agreement amount

not-to-exceed \$1,456,292.

Sufficient funding is available in the Shasta Park 4MG Reservoir and Pump Station Project (Z14005400) for these change orders.

There are no General Funds allocated or planned for these projects.

Local Business Enterprise (LBE): Sierra National, Wood Rodgers and West Yost are all LBEs.

Background: The Shasta Park Reservoir, Booster Pump Station and Groundwater Well project was originally conceived to improve system water pressure in the southwest portion of the City at times of peak water usage. The 2005 Water Master Plan concluded that a finished water reservoir should be constructed in the southeast portion of Sacramento to help maintain service pressure, and to provide additional emergency and fire suppression water supply.

The project includes the construction, operation, and maintenance of an above-ground 4 million-gallon (MG) water reservoir, two groundwater wells, a water treatment system, and a pump station. Other site improvements include a perimeter wall and landscaping on the 5.3-acre parcel. Originally, the design of this facility incorporated one well and the site improvements were planned to accommodate an additional well to be built in the future. Each groundwater well will have a capacity of 2 MG per day.

The Shasta Park Water Facility Project was awarded on September 9, 2016, to Sierra National Construction, Inc in the amount of \$11,595,790.

The agreement for design services for the Shasta Park Water Facility Project was awarded on July 24, 2012 to Wood Rodgers in the amount of \$301,000. The scope of this agreement included assessment, study and design of the groundwater wells and associated equipment, piping and treatment system.

The agreement for construction management for the Shasta Park Water Facility Project was awarded on August 9, 2016 to West Yost in the amount of \$933,510. The scope of this agreement included construction management and inspection services.

The additional contract work related to the second well and third filter at the Shasta Park Reservoir

and Pump Station project was broken into several phases by the contractor. The costs for each phase have been submitted individually to the City, negotiated, and then approved through several change orders. Change Order No. 13 includes the costs associated with the last phase of work for Well No. 167. Additionally, due to the complexity of the project, as the contractor progressed with the work, further necessary changes became evident from previous phases of additional contract work. This resulted in additional items being added to Change Order No. 13, beyond the work that needed to be done to complete the last phase of work on Well 167. Taking this into account, excluding the addition of Well No. 167 and the additional filter to the project, costs incurred for change orders to the original contract compared to the total construction cost are within reason at 9.2%.

Change Order No. 13 with Sierra National Construction will modify several items related to the construction of the project. The following items were added to the project because they were not included in the original design and are needed to improve operations:

- Automation of the drain system for the backwash water recycle tank. Automation will save staff time and is also needed for monitoring purposes to meet the requirements for the discharge permit.
- Modification of methane sump piping. The original design didn't allow for direct pumping to the wastewater system and the proposed modification will allow the piping to by-pass the filters and pump to waste.
- Backflow prevention for the on-site water system for protection against contamination.
- Installation of the security camera system. The purchase and installation of these components was intentionally not included in the original contract as security equipment is continually upgraded and staff wanted to install the most up-to-date technology.
- Replacement of antenna tower for structural stability. The original design of the tower was determined to be insufficient due to the equipment attached to the tower.
- Addition of pressure gauges to the chlorine gas containment system for safety purposes.

The following items are needed to improve constructability and operability:

- Design and construction of a cast in place vault. The originally designed precast structure was not commercially available.
- Relocation of check valves at both wells to prevent possible backflow contamination of each well column from the entire downstream system caused design changes to the above-ground piping downstream of both wells.

Additional items in the Change Order include:

- Overhead costs not included in prior change orders. These costs are justified by Public Contract Code. When the second well and third filter were added to the contract, the contractor needed time to identify the impacts to the schedule so the inclusion of overhead in the prior change orders was temporarily suspended.
- Installing Well 167 pump and the electric motor, which has not been included in any change orders to date.

Below is a table identifying the previously approved change orders for Sierra National:

C.O. #	Award Date	Amount	Additional Scope
1	10/25/2016	\$0	Completion of additional paperwork required for the Prop 84 grant.
2	3/3/2017	\$49,391	Excavate and install fabric and aggregate base to weatherize the site access road and staging areas, relocate remote flow transmitter., increase motor power, provide two magnetic flowmeters and add two flexible couplings.
3	5/16/2017	\$18,570	Beam dimension change, network panel change, additional equipment, change to concrete and equipment changes, and OT labor costs.
4	6/28/2017	\$655,623	Credit for flow switch change, additional conduits, credit for vertical metered rack power distribution units, water testing of methane treatment structure, add a sump, enlarge filter tank foundation slab, add conduit, modify control building, drill well and ass a 200HP soft starter.
5	9/22/2017	\$45,601	Exchange level transmitters and floats, change door hardware in control building, remove clay from various locations, additional coating for reservoir tank and additional conductor drilling and casing.
6	12/13/2017	\$62,768	Modifications to the control panel and additional well instrumentation.

7	4/3/2018	\$1,109,120	Addition of third filter, secondary fluoride containment, SCADA computer and monitor, lower fluoride room floor to create a sump, additional fire protection, well pump control modifications, motor control center modifications, additional fluoride room conduits, well column pipe exterior coating, SCADA modifications, well 167 surface facilities, ARV drains at well 165 & 167, well 167 interconnection site and accessory piping, camera panel design, additional paving, cathodic protection for 24", potholing for SMUD line, relocating storm drain in Imagination Parkway, and add MOV at well 165.
C.O. # Award Date Amount Additional Scope			
8	4/26/2018	\$98,293	Fluoride injection and piping revisions, electrical and control additions, cabinet extensions and additional electric for fluoride feed system.
9	5/1/2018	\$94,876	Reservoir interior coating, microwave radio manufacturer change.
10	6/7/2018	\$97,027	Surface facilities and electrical additions to well 167, an extension of the telephone conduit, and providing a stainless-steel enclosure for the gas detectors
11	7/24/2018	\$296,612	Install well 167 surface facilities, fluoride feed system and sump modifications, chlorine system modifications, and modifications to the sewer line
12	11/30/2018	\$80,342	Upsize well 165 conduit box, procure pipe spool for overflow vault, install additional bollards, replace the flowmeter vault lid with a traffic-rated lid, add a flowmeter and plug valve at the backwash tank, modifications to the chlorine system, aerator sump ladder coating, install additional cathodic protection, modifications to the control building including using smooth faced block, added bathroom accessories, and install metal furring and a vapor barrier, upgrade the methane sump deck with NSF-61 approved concrete, and receive a credit for modifications to the fiber optic conduit.

CHANGE ORDER SUB TOTAL:	\$2,608,223	
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Below is a table identifying all of the approved supplemental agreements, to date, for design services with Wood Rodgers:

S.A. #	Awarded Date	Amount	Additional Scope
1	6/25/2013	\$329,400	Complete the design of the groundwater well treatment and pumping components.
2	3/3/2015	\$124,982	Additional construction management services related to the well, analyze the costs and benefits to expand groundwater production from 2MGD to 4MGD, and modify the treatment system and control building design to accommodate the increased water supply to 4 MGD
3	4/5/2016	\$65,385	Development, coordination, review, modification, and completion of the control strategies for project automation and controls.
4	3/7/2017	\$0	N/A -Updated Rate Schedule
5	6/20/2017	\$205,765	Complete the design for a second groundwater well at the Shasta Park Reservoir facility, well no. 167.
6	12/15/2017	\$56,000	Modifications to chlorine and fluoride systems, coordinate site layout with West Yost, and update groundwater assessment.
7	8/14/2018	\$72,910	Assist the city in obtaining permits, prepare the risk management plan, and evaluate the required level of operator certification for the facility.
SUPPLEMENTAL SUB TOTAL:		\$854,442	

Below is a table identifying all of the approved supplemental agreements, to date, for construction management with West Yost.

S.A. #	Awarded Date	Amount	Additional Scope
1	12/16/2016	\$0	N/A -Updated Rate Schedule
2	6/28/2017	\$150,000	CM and Inspection for additional well 167
3	12/15/2017	\$0	N/A -Updated Rate Schedule
4	7/24/2018	\$173,381	Extend CM and Inspection services through 10/31/2018
5	11/13/2018	\$70,292	Extend CM and Inspection services through 3/31/2019
SUPPLEMENTAL SUB TOTAL:		\$393,673	