



Agenda Report

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FROM: Robert Thompson, General Manager
Originator: Mike Dorman, Director of Engineering

SUBJECT:

SUNFLOWER PUMP REPLACEMENT AT PLANT NO. 1, PROJECT NO. FE19-04

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

Approve a contingency increase of \$318,480 (15%) to the construction contract with GSE Construction Company Inc. for Sunflower Pump Replacement at Plant No. 1, Project No. FE19-04, for a total construction contingency of \$530,800 (25%).

BACKGROUND

The Orange County Sanitation District (OC San) Sunflower Pump Station transfers flows into Headworks from the deepest of the trunk sewers feeding Plant No. 1. The pump station uses two 40 million gallon per day screw pumps to lift flow from the Sunflower Trunk into Plant No. 1. The screws for those pumps are approximately 32 feet long, have a 9-foot diameter, and are driven through a large gearbox to reduce the speed of the 150-horsepower motor down to 28 revolutions per minute. These pumps are subject to erosion of the screws, corrosion from the sewer gas, and wear and tear on bearings submerged in wastewater.

RELEVANT STANDARDS

- Protect OC San assets
- Maintain a proactive asset management program
- 24/7/365 treatment plant reliability

PROBLEM

The original contract included the replacement of the Pump 1 screw pump and the replacement of the grout and polyurethane coating in the trough area underneath the pump. During the removal of the screw pump, the contractor discovered extensive damage to the concrete and coating in the area above the trough, which is not part of the project scope. In addition, during construction it was discovered that an existing control and signal duct bank for the screw pumps is not correctly shown on existing as-built drawings and interferes with a future stairway constructed for the existing Metering and Diversion Structure by Project No. P1-105, Headworks Rehabilitation at Plant No. 1,

and needs to be rerouted. Replacing these interfering cables and conduits under this project will eliminate a future pump outage.

PROPOSED SOLUTION

Approve a contingency increase of \$318,480 to repair the concrete and coating system above the trough for Pump 1 and replace the existing control and signal cables and conduits to both screws pumps, which are outside the current scope of work. This will provide sufficient contingency for contract work.

TIMING CONCERNS

Pump 1 is currently being replaced by this project. It is critical that the work on Pump 1 continue without interruption so it can be returned to service prior to the start of the wet weather season in October to provide sufficient pumping capacity.

RAMIFICATIONS OF NOT TAKING ACTION

Pump 1 will need to be put back into service without the repairs. The repair work will need to be done under a future project, resulting in increased repair costs to remove the screw pump to perform the repairs.

PRIOR COMMITTEE/BOARD ACTIONS

October 2021 - Awarded a Construction Contract to GSE Construction Company Inc. for Sunflower Pump Replacement at Plant No. 1, Project No. FE19-04, for a total amount of not to exceed \$2,123,200; and approved a contingency of \$212,320 (10%).

ADDITIONAL INFORMATION

N/A

CEQA

The project is exempt from CEQA under the Class 1 categorical exemptions set forth in California Code of Regulations Section 15301.

FINANCIAL CONSIDERATIONS

This request complies with the authority levels of OC San's Purchasing Ordinance. This item has been budgeted (Budget Update, Fiscal Year 2023-2024, Appendix A, Page 8, Small Construction Projects Program, Project No. M-FE) and the budget is sufficient for the recommended action.

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Presentation