

CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES

TO: CHAIR AND BOARD MEMBERS
FROM: TRACY DUENAS, SUPERVISING ENGINEER
CAPITAL PROJECTS ENGINEERING
SUBJECT: CHANGE IN SCOPE CHANGE ORDER AND CONTINGENCY
INCREASE FOR LAGUNA TREATMENT PLANT CHILLERS AND
CLIMATE CONTROL UPGRADES AT ADMINISTRATION AND
ANNEX BUILDING, CONTRACT NO. C02105

AGENDA ACTION: MOTION

RECOMMENDATION

It is recommended by the Transportation and Public Works Department and Santa Rosa Water that the Board of Public Utilities, by motion, approve a change in scope change order, pursuant to Council Policy No. 100-07, and a contingency increase of \$90,000 for Construction Contract No. C02105 Laguna Treatment Plant Chillers and Climate Control Upgrades at Administration and Annex Building, for a total contract amount of \$1,268,841.60.

EXECUTIVE SUMMARY

This motion will approve a change in scope change order, pursuant to Council Policy No. 100-07, Authorization of Contract Change Orders on Public Works Contracts, to perform additional programmable logic controller (PLC) upgrades and an increase of \$90,000 in the contingency amount for the Laguna Treatment Plant Chillers and Climate Control Upgrades at Administration and Annex Building Project, Contract No. C02105 (Project). The proposed change in scope change order is for PLC upgrades to the laboratory facility within the Administration Building, located outside the physical working limits and beyond the work scope of Contract No. C02105 with a cost proposal of \$51,992.62. The additional \$38,007.38 will provide means to perform additional minor repairs of ancillary HVAC piping (valued at \$11,890.13) and replenish the contingency balance in the amount of \$26,117.25 should additional unforeseeable work be required to complete the Project.

BACKGROUND

In 2019, the Board of Public Utilities approved Laguna Treatment Plant (LTP) Chillers and Climate Control Upgrades at Administration and Annex Building Project (Project), Contract No. C02105, which replaced two 50-ton chillers serving the administration

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building and the 15-ton chiller serving the annex building at LTP. (See Attachment 1). The scope also included installation of two condensing boilers serving the administration building, and automation upgrades to the existing programmable logic controller (PLC) network associated with the newly installed mechanical equipment.

The LTP laboratory facility (Lab), located within the administration building, is a state-accredited facility that analyzes drinking water, sewage, and industrial waste to ensure compliance with applicable federal, state, and local environmental regulations. The City of Santa Rosa (City) has deemed the Lab as a critical facility within LTP. During the summer of 2020, the efficiency of the heating, ventilation and cooling system (HVAC) serving the Lab had diminished to approximately 50%. Thus, under high heat conditions, the Lab was vulnerable to ambient temperature fluctuations, which posed a risk of LTP being noncompliant with mandated state permits and regulatory environmental protocols. For those reasons, LTP staff deemed repair of the system a critical priority and requested expedited replacement of the failing HVAC equipment.

In 2020, pursuant to Santa Rosa City Code Sections 3-44.080(A) and 3-44.110(C), the City Manager made a determination to forgo competitive bidding for the replacement work of the failing HVAC equipment serving the Lab and approved a minor public works construction contract for the Laguna Treatment Plant Lab Expansion Chiller Replacement project, Contract No. C02344, to Peterson Mechanical, of Sonoma, California. Contract No. C02344 upgraded the existing, antiquated climate control equipment serving the Lab with a new 60-ton chiller, 5 HP motor, motor heaters, and ancillary piping. Due to the need to replace the failing equipment as expeditiously as possible, there was no additional consideration for other upgrades at the Lab that would have required a longer design and contract development schedule. Therefore, Contract No. C02344 focused strictly on the replacement of climate control equipment and not on system automation. The work under Contract No. C02344 was completed in September 2022 and the system is currently operating.

PRIOR BOARD OF PUBLIC UTILITIES REVIEW

On August 15, 2019, the Board of Public Utilities (Board), by Resolution No. 1203, approved the sole source specification of the Siemens S7 Series PLCs for the climate control system for the Project, Contract No. C02105.

On October 17, 2019, the Board, by motion, approved construction Contract No. C02105 for a contract amount of \$873,216 and contingency amount of \$130,982.40 (15%) for a total contract amount of \$1,004,198.40 to the lowest responsive bidder, Matrix HG, Inc. (Contractor), of Novato, California for Contract No. C02105.

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On July 16, 2020, the Board, by Resolution No. 1230, approved a subcontractor addition for Wunderlich-Malec Engineering (Subcontractor), of California for Contract No. C02105.

On March 4, 2021, the Board, by motion, approved an increase contingency amount of \$130,982.40 (15%) for a total contract amount of \$1,135,180.80 for Contract No. C02105.

On November 17, 2022, the Board, by motion, approved an increase contingency amount of \$43,660.80 (5%) for a total contract amount of \$1,178,841.60 for Contract No. C02105.

ANALYSIS

Contract No. C02105 is nearly complete, as the chiller and boiler equipment are installed and operating, and PLC integration is near finalization.

The following table provides Board authorized contract amounts for Contract No. C02105:

Contract amount	\$ 873,216.00
15% original contingency	\$ 130,982.40
Total Contract Award (October 2019)	\$ 1,004,198.40
Increase 15% contingency	\$ 130,982.40
Revised Total Contract amount (March 2021)	\$ 1,135,180.80
Increase 5% contingency	\$ 43,660.80
Revised Total Contract amount (November 2022)	\$ 1,178,841.60

The following table provides a summary of the authorized contingency balance for Contract No. C02105:

Total authorized contingency	\$ 305,625.60
Total contract change orders spent	\$ 300,871.50
Remaining authorized contingency	\$ 4,754.10

Project completion was delayed due to design deficiencies associated with the automated climate control work, primarily with the PLC equipment and programming. Thirteen (13) contract change orders (CCO) were executed for the Project, with 16% resulting from unforeseen conditions and 84% resulting from design deficiencies and modifications. Sixty-six percent (66%) of contingency spent was associated with automated climate control related work. An authorized contract contingency amount of \$4,754.10 remains.

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Change In Scope (Additional Work): During the final automation integration phase of Contract No. C02105, LTP staff inquired as to the feasibility of upgrading the existing automation system controlling the HVAC and related equipment recently installed under Contract No. C02344. Although the upgrades installed under Contract No. C02344 have minimized the concern of problematic temperature spikes and the potential for large disruptions to analytical laboratory procedures, the existing automation in use is not sufficient for LTP staff to consistently establish and maintain acceptable temperature ranges within the Lab.

The contractor has provided a contract change of scope change order cost proposal to provide the additional electrical work and PLC network upgrades, as required, to enhance the existing climate control automation and control method to maintain consistent discharge air temperature within the Lab. Work will include engineering, documentation, PLC programming, commissioning, testing, and support. The requested contract change order cost is \$51,992.62 defined as pending CCO14.

Council Policy No. 100-07, Definitions (H), establishes a change order to a Public Works Contract that materially changes the character of work prescribed in the contract plans and specifications is considered a change in scope change order. (See Attachment 2). Council Policy No. 100-07, Policies (E) requires that change in scope change orders be returned to the original award authority for approval. The Board was the original award authority for Construction Contract No. C02105.

Given the interrelated operations between the climate control systems serving the administration building and the Lab, the subcontractor's availability, the overall need, and assumed savings relative to future cost inflation, staff has determined that performing this additional change in scope work under Contract No. C02105 is in the best interest of the City of Santa Rosa.

Minor repair of ancillary HVAC piping has also been identified and requested by LTP staff to be included with the aforementioned upgrades. The requested contract change order cost is \$11,890.13 defined as pending CCO15.

FISCAL IMPACT

Approval of this contingency has no additional impact on the budget. Funds for this project have been previously appropriated with the Capital Improvement Program budget.

ENVIRONMENTAL IMPACT

This action is categorically exempt from (CEQA), pursuant to Sections 15301 and 15303 of CEQA Guidelines (Title 14, Division 6, Chapter 3 of California Code of Regulations), as the Project consists of a minor alteration of an existing public sewerage facility and the improvements are all located within the developed area of the Laguna Treatment Plant.

BOARD/COMMISSION/COMMITTEE REVIEW AND RECOMMENDATIONS

Not applicable

ATTACHMENTS

- Attachment 1 – Site Map
- Attachment 2 – Council Policy No. 100-07

PRESENTER

Tracy Duenas, Supervising Engineer