

CRESTLINE SANITATION DISTRICT

MEMORANDUM

DATE: August 13, 2020

TO: BOARD OF DIRECTORS
Crestline Sanitation District

FROM: Rick Dever
General Manager

SUBJECT: Cost Increase for Huston Creek Wastewater Primary Clarifier
and Dewatering Building Improvements (“Project”)

A. RECOMMENDATION

I am recommending a contract cost amendment to increase the budgeted amount for the Project by \$50,000.00.

B REASON FOR RECOMMENDATION

It has been found that there are incorrect drawings of existing utilities throughout the Project area which have resulted in unforeseen and unanticipated Project changes, as well as some redesigns based on those findings.

C. OTHER INFORMATION

The changes that require additional work for the Project are:

Civil/Drainage Design

Structural Design

Mechanical Design

Architectural Design

Details are on the request submitted by Dudek

D. FISCAL INFORMATION

The cost increase requested is \$50,000.00, equal to 6% of the budget for the Project.

E. ATTACHMENTS

Request for Contract Amendment letter from Dudek

August 13, 2020

Rick Dever, General Manager
Crestline Sanitation District
24516 Lake Dr
Crestline, CA 92325

Subject: Request for Contract Amendment for Huston Creek WWTP Dewatering Building and Primary Clarifier Design Project

Dear Mr. Dever,

Dudek is in the final stages of completing final design and production of complete construction bid documents for the Huston Creek WWTP Dewatering Building and Primary Clarifier project. During the course of the project, our design team has exceeded the allocated budget from our original proposal. As you are aware, we prepared the scope and level of effort for the design based on the general design concept and information available to us at the time, and there were certain unforeseen and unanticipated project changes that affected our work and ability to complete the project within the allocated budget. We request a contract amendment for \$50,000 for these unforeseen and unanticipated project changes. This equates to approximately 6% of the overall design fee.

Below are a list of unanticipated and unforeseen project changes that required additional work beyond the allotted budget:

Civil/Drainage Design

- Existence of unknown existing drainage systems, including unsuitable hidden drain capturing flow from the driveway adjacent to new dewatering building and sludge holding tank. Discovery of drain required re-engineering for drainage pipes and channels to accommodate flow, as well as re-engineering of driveway grading to allow for proper drainage of the driveway.
- Existing drainage outlets were not suitable to accommodate flows from relocated drains, new buildings, and structures, requiring additional engineering beyond the anticipated drainage facilities. Records of the drainage outlets are not provided on the record drawings, therefore the information was not available to the design team during development of the proposal.
- Steep slopes exist on the site, including driveways that exceed a 10% grade, which is the limit for best practice in design of these facilities. Additional engineering was required to smooth driveway slopes and maintain safe and suitable driveways within the project area.

Structural Design

- Structural design for the thickened sludge transfer vault that was negated in lieu of utilizing existing building for new pumps. The recommendation to use the existing building was well founded and made by staff during the course of the project as a means to reduce the capital cost of the project. However, the change resulted in additional structural design.

- Re-design of splitter box to accommodate existing end splitter section and primary influent pipes. Our original design for the splitter box assumed full replacement, however, staff suggested that we keep the end section for splitting. The changes were accommodated but re-engineering was required.
- Additional structural design for stairs and storage mezzanine within new dewatering building. The storage mezzanine was not part of our original proposal for the building, and it was requested by staff during the project to allow for additional usable space within the building. The change required structural design of a new stairway and structural framing and supports for the new mezzanine.

Mechanical Design

- Mechanical design of thickened sludge transfer vault mechanical system that was negated in lieu of utilizing existing building for new pumps. Similar to structural design, the mechanical design team designed a below-grade sludge transfer pumping system before the suggestion by staff to move the transfer pumps inside the existing dewatering building. To accommodate this change, re-engineering of piping connections, replacement of the existing pumps, as well as a new below grade piping design was required to transfer sludge over to the new sludge holding tank. This change will ultimately save the District money in construction cost, but re-engineering was required to accommodate the change.
- Replacement of existing hydrogen peroxide pump with new pumps. No modifications to the hydrogen peroxide system was scoped out in the design. After discussing with staff, the District requested that the hydrogen peroxide pump be replaced, and the design team felt that utilizing the existing hydrogen peroxide system for sulfide control in the new sludge holding tank would be the most cost-effective construction solution. The design change required re-engineering of chemical pumps and piping.
- Splitter box hydraulic design and connections underwent multiple re-engineering iterations because of challenges related to proximity of existing building, spatial limitations to accommodate new channels, and presence of existing utilities not shown on record drawings. Each change in the design of the splitter box required updates to the open channel hydraulic calculations, structural, and mechanical design changes. Electrical and HPE utilities exist in the location of the new splitter box that are not shown on the record drawings and the design team was not aware of relocation requirements in this area.
- Incorrect record drawings of existing utilities throughout the project area requiring substantial coordination with District to most accurately update and design required utility relocations. Re-engineering of utility relocation in both the dewatering building and primary clarifier areas underwent numerous changes as potholing done by the District revealed: presence of utilities not known by staff or shown on record drawings; and locations of utilities shown on record drawings were incorrect. As a result, updates to demolition drawings and relocation drawings were re-engineered numerous times as input came in from District staff. In addition, points of connection and strategies for maintaining service to utilities that were not shown on drawings had to be coordinated with the District, which also changed a few times over the course of the project.

Architectural Design

- Additional architectural design and safety features were required for the addition of the storage mezzanine above electrical room, which was not part of the scope of the original project.

Mr. Dever

Subject: Contract Amendment for the Huston Creek WWTP Dewatering Building and Primary Clarifier Project

We appreciate the District's consideration for a contract amendment for these changes. We have and will continue to support the District with high quality professional engineering consulting services for this project as we look forward to completing design and support bidding and construction. Please do not hesitate to contact me with any questions or comments about this contract amendment request at 760.479.4173 or pgiori@dudek.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Phil Giori".

Phil Giori, PE
Project Manager