



Pinellas County

Staff Report

File #: 23-1704A, Version: 1

Subject:

Change Order No. 1 with PCL Construction for the Dunn Water Reclamation Facility Filtration and Disinfection Improvement Design-Build project.

Recommended Action:

Approval of Change Order No. 1 with PCL Construction for the Dunn Water Reclamation Facility Filtration and Disinfection Improvement Design-Build project.

- This contract was awarded by the Board of County Commissioners (Board) to PCL Construction on August 6, 2019, in the amount of \$1,270,796.00 for Phase 1 Design Services. The Phase 2 Construction agreement was awarded by the Board on September 9, 2021, in the amount of \$11,921,504.00 (Amendment No. 1) for a total contract amount of \$13,192,300.00.
- The work included replacing the existing shallow bed sand filters with new Aqua-Diamond cloth media filters and constructing a new sodium hypochlorite disinfection facility.
- This Change Order increases the contract by \$1,919,672.00 for a revised total contract amount of \$15,111,972.00.
- This change order includes additional geotechnical and geophysical testing performed at the site to determine the best method of site remediation after a soil depression formed during deep foundation drilling operations for the disinfection facility.
- Other work included pumping approximately 1,200 cubic yards of concrete to remediate the site and replacing the failed 12-inch gravity drain line with a small duplex pump station and associated force main to maintain required storage in the reclaimed water reject pond at the facility.
- This soil depression was due to an unforeseeable cause/act of nature beyond the control of Design Builder.
- Time for completion will be increased by 42 days to 1,164 calendar days, with substantial completion on January 14, 2024.
- Funding is available under Project 003122B Dunn Filtration and Disinfection Improvements, included in the Capital Improvement Plan, funded by the Sewer Renewal and Replacement Fund.

Contract No. 178-0407-NC; Change Order No. 1 increase in the amount of \$1,919,672.00 for a revised total contract amount of \$15,111,972.00; Authorize the Chairman to sign and the Clerk of the Circuit Court to attest.

Strategic Plan:

Foster Continual Economic Growth and Vitality

4.4 Invest in infrastructure to meet current and future needs

Deliver First Class Services to the Public and Our Customers

5.3 Ensure effective and efficient delivery of county services and support

Summary:

During deep foundation drilling operations for the disinfection facility, a depression formed on September 19, 2022. The depression grew until approximately 3:00pm, reaching an approximate size of 25 feet by 30 feet by 12 feet deep. The depression/sinkhole exposed several critical utilities (24-inch force main, 6-inch RCW main, electrical duct bank) which were immediately supported by using one of the 40-foot casing pipes. These utilities were later supported by 60 foot I-Beams obtained by PCL and the County.

Also, emergency procedures were set in place by the Design Build (D/B) team and the County to contain any spill if the 24-inch force main failed due to the sinkhole event. The sinkhole also caused the 12-inch reject pond drain line to collapse into the sinkhole. This pipe was 15 feet deep and could not be repaired.

The D/B team performed additional geotechnical and geophysical testing at the site to determine the best method of site remediation. Based on the results from the additional geotechnical testing, it was recommended by the D/B team (and agreed to by the County) to pressure grout concrete into the ground in the entire area of the disinfection facility.

Based on the D/B team recommendation, PCL pumped over 1,200 cubic yards of concrete into the ground to stabilize the area such that the disinfection facility could be constructed. It was decided by the D/B Team and the County to replace the deep 12-inch gravity drain line with a small duplex pump station and forcemain to maintain the required storage in the reject pond.

Background Information:

This contract was awarded by the Board of County Commissioners (Board) to PCL Construction on August 6, 2019, in the amount of \$1,270,796.00 for Phase 1 Design Services. The Phase 2 Construction agreement was awarded by the Board on September 9, 2021, in the amount of \$11,921,504.00 (Amendment No. 1) for a total contract amount of \$13,192,300.00.

The filtration and disinfection facilities were originally constructed in 1989. In November of 2017, an evaluation of Dunn Water Reclamation Facility's filtration and disinfection systems was performed. The evaluation identified potential improvements and/or replacement of the existing filters and disinfection systems that could improve system performance and extend the useful life of the facility. As a result of the evaluation, it was recommended that the County replace the existing shallow bed sand filters with higher capacity Aqua-Diamond cloth media filters. The Aqua-Diamond filters are more efficient and require less maintenance. The evaluation also recommended to replace the gas chlorine system with a less dangerous liquid sodium hypochlorite system. Both the filtration and disinfection systems were at the end of their useful life.

Fiscal Impact:

Funding is available under Project 003122B Dunn Filtration and Disinfection Improvements in the amount of \$3,110,000 for FY24, included in the Capital Improvement Plan, funded by the Sewer Renewal and Replacement Fund.

Contract Amount

Original Agreement Amount:	\$1,270,796.00
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Amendment No. 1:	\$11,921,504.00
Amendment No. 2 (time only):	\$0.00
<u>Change Order No. 1:</u>	<u>\$1,919,672.00</u>
Revised Agreement Amount:	\$15,111,972.00

Staff Member Responsible:

Jeremy Waugh, Director, Utilities

Merry Celeste, Division Director, Purchasing and Risk, Administrative Services

Joe Lauro, Director, Administrative Services.

Partners:

N/A

Attachments:

Change Order No. 1