



Legislation Text

File #: 2024-036, Version: 1

Contract No. 2204605
Freud Pump Station Improvements
CIP #232002/BCE Score: 94.1

Agenda of: February 28, 2024
Item No.: **2024-036**
Amount: \$138,780,000.00

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Suzanne R. Coffey, P.E.
Chief Executive Officer
Great Lakes Water Authority

DATE: January 29, 2024

RE: **Contract No. 2204605**
Freud Pump Station Improvements
Vendor: Kokosing Industrial, Inc.

MOTION

Upon recommendation of Navid Mehram, Chief Operating Officer - Wastewater Operating Services, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), authorizes the Chief Executive Officer (CEO) to **enter into Contract No. 2204605, "Freud Pump Station Improvements" with Kokosing Industrial, Inc., at a cost not to exceed \$138,780,000.00 for a duration of 1,582 days;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The eastern portion of GLWA conveyance system is very complex, involving eight interceptors/sewers, multiple regulating structures, three large pump stations, and a Combined Sewer Overflow (CSO) treatment facility. The conveyance system has grown and been modified numerous times over the past 100 years, with the last major improvement being the

construction of the Conner Creek CSO Facility, which was placed into operation in 2005.

The Freud and Conner Creek Pumping Stations are key facilities for relaying wastewater and storm water generated in the eastern portion of the regional system. The dry weather flow is conveyed through sanitary pumps at the Freud Pump Station, the Conner Creek Pump Station, and the Fairview Pump Station, ultimately to the Water Resource Recovery Facility (WRRF). While wet weather flow is conveyed through the storm portions of the Freud and Conner Creek Pump Stations to the Conner Creek CSO Facility for treatment and discharge to the Detroit River. The operation of these facilities is critical to convey dry and wet weather flows to protect public health.

The Freud Pump Station was constructed in the mid-1950s to work in conjunction with the Conner Creek Storm Pump Station. As the storm water enters the system and the water levels rise in the East Jefferson Relief Sewer (eastern portion of the Detroit River Interceptor), the water overflows into the Fox Creek Relief Sewer and Ashland Relief Sewer. The Fox Creek Relief Sewer and Ashland Relief Sewer convey flow to the Freud Pump Station. The pump station has eight storm water pumps with a storm pumping capacity of approximately two billion gallons per day (BGD). The station also includes two dewatering pumps in the center of the wet well that convey dry weather flow and remove the remaining water in the interceptors (post-storm) that is below the large pumps' ability to pump out of the station. The Conner Creek and Freud pumps convey the wet weather flow to the Conner Creek CSO Facility for screening, settling and disinfection prior to discharge to the Detroit River.

JUSTIFICATION

The purpose of this project, the Freud Pump Station Improvements Project, is to improve operability, reliability, integrity, and maintainability of the station over the life of the facility. The Freud Pump Station is critical for successful conveyance of dry and wet weather flow from the eastern portion of the regional system.

Primary scope items include rehabilitation of the eight storm pumps and construction of a new sanitary pump station approximately 1.5 blocks east of the existing pump station. The improvements to the existing pump station include replacement of the pump rotating assemblies, line shafts, and concrete pump supports, installing new dewatering pumps with an approximate 10.8 million gallons per day (MGD) capacity, providing dedicated access to the station wet well to allow for draining, cleaning, inspections, and maintenance.

The new sanitary pump station will have a capacity of 30 MGD and will be constructed over the two 16-foot diameter tunnels that convey flow to the existing Freud Pump Station. The new sanitary station will provide reliable sanitary conveyance from the system while allowing for isolation of the Freud Storm Pump Station wet well. This will enable GLWA to inspect, clean and maintain the existing wet well.

The proposed project will improve the reliability of the station in both dry and wet weather conditions. It will reduce the risk of the collection system surcharging and combined sewage backups into basements. The pump station improves water quality during storm events by reliably conveying flow to the Conner Creek CSO Facility for treatment prior to discharge into the Detroit River.

FINANCIAL PLAN IMPACT

Summary: Sufficient funds are provided in the financial plan for this project.

Funding Source: Wastewater Construction Fund

Cost Center: Wastewater Field Engineering

Expense Type: Construction (5421-892211.000-616900-232002)

Estimated Cost by Year and Related Estimating Variance: See table below.

Fiscal Year

| | |
|-------------------------|-----------------------|
| FY 2024 Plan | \$ 1,542,000.00 |
| FY 2025 Plan | 18,767,000.00 |
| FY 2026 Plan | 18,767,000.00 |
| FY 2027 Plan | 18,767,000.00 |
| FY 2028 Plan | 18,818,000.00 |
| FY 2029 Plan | 18,767,000.00 |
| FY 2030 - 2034 Plan | <u>27,970,000.00</u> |
| Financial Plan Estimate | \$123,398,000.00 |
| Proposed Contract Award | <u>138,780,000.00</u> |
| Estimating Variance | \$ (15,382,000.00) |

The award of this contract provides a negative variance of \$15,382,000.00. The amounts above are per the FY2025-2029 CIP Plan Draft 2 for Freud Pump Station Construction (Phase 2). The negative estimating variance to be funded from the Connor Creek Pump Station Construction (Phase 3) portion of CIP No. 232002.

COMMITTEE REVIEW

This item was presented to the Operations and Resources Committee at its meeting on February 14, 2024. The Operations and Resources Committee unanimously recommended that the GLWA Board adopt the resolution as presented.

SHARED SERVICES IMPACT

This item does not impact the shared services agreement between GLWA and DWSD.