Legislation Text

File #: 2022-332, **Version:** 1

Contract No. 2100239

Water Resource Recovery Facilities Structural Evaluation and Repairs

Vendor: Kokosing Industrial, Inc

Agenda of: August 24, 2022

Item No.: **2022-332**

Amount: $12,639,000.00

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: **July 29, 2022**

RE: **Contract No. 2100239**
Water Resource Recovery Facilities Structural Evaluation and Repairs
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. 2100239, "Water Resource Recovery Facilities Structural Evaluation and Repairs" with Kokosing Industrial, Inc., at a cost not to exceed $12,639,000.00 for a duration of 1,735 days;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The Water Resource Recovery Facility (WRRF) was built in the 1940s and is the largest single-site wastewater treatment facility in the United States with a primary treatment capacity of 1,700 million gallons per day (MGD). The WRRF includes 18 primary clarifiers, 25 circular secondary clarifiers, six primary sludge thickeners (Complex A), six secondary sludge thickeners (Complex B), six sludge storage tanks (Complex A), four covered aeration decks, a chlorination facility for effluent disinfection, a Dechlorination facility, and an administration building.

In the summer of 2021, GLWA initiated structural inspections of the WRRF Facility by a structural engineering firm which resulted in the identification of various improvements needed for each facility to ensure the resiliency and proper operation of our facilities for the next 30 years.

The inspection identified several items including settling brick/block walls in need of support, spalling concrete, concrete joints missing protective layers, an efflorescence of brick/block walls, and cracked concrete which allows water infiltration and exfiltration. These defects can create structural instability if left unrepaired over time. To improve delivery time and respond to the complexity of structural repairs while operating a recovery facility the design team elected to use the design-build delivery method to respond to repairs efficiently and quickly. The facilities included in this project are noted in the table below:

WRRF Facility Name	Year Constructed
Primary Clarifiers No. 17 and 18	2000
Aeration Facility Tanks No. 1 through 4	1974
Complex A Thickener Tanks No. 1 through 6	1971
Complex A Sludge Storage Tanks No. 1 through 6	1971
Complex B Gravity Thickener Tanks No. 9 through 14	1976
Secondary Clarifier B-houses No. 4, 9, 17, 23 and 30	1970-75
Administration Building (Old and New)	1970 (Old) 2000 (New)
Chlorination and Dechlorination Buildings	2000

Other facilities may be considered depending on the needs of the WRRF and will be prioritized in terms of needed repairs and within the budget of the project.

JUSTIFICATION

In consideration that many of these assets are brick, block, concrete, and steel, they do not require maintenance at a regular frequency because their rate of deterioration is substantially slower than mechanical equipment. However, as concrete, or similar structures age they may develop cracks or

other defects due to the environment and other conditions they are subjected to constantly while in service (and even out of service from weather or wastewater gases). While they are generally designed to handle these conditions, over time they require periodic inspection and improvements to ensure the reliability and resiliency of the structures.

In an effort to prepare these facilities for future uninterrupted service, the Design-Build Team (D/B Team) will perform a complete structural assessment of the WRRF buildings and structures mentioned above. The assessment report shall identify and prioritize all structural repairs that are required to ensure a continued useful service life of a minimum of 30 years and provide estimated quantities for each type of repair. Following the assessment period, the D/B Team will work with GLWA to develop a three-year plan to design and repair defects working from the highest priority to the lowest within the funding available, based on established unit prices under this Contract. Based upon GLWA's agreement, D/B Team will provide a design document for repairs to be implemented, including but not limited to drawings, technical specifications, and calculations.

FINANCIAL PLAN IMPACT

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

Funding Source: Sewer Construction Fund

Cost Center: Wastewater

Expense Type: Design (5421-892211.000-616900-216011)

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

Fiscal Year	
FY 2023 Plan	$342,000.00
FY 2024 Plan	2,439,000.00
FY 2025 Plan	2,440,000.00
FY 2026 Plan	2,440,000.00
FY 2027 Plan	2,439,000.00
FY 2028+ Plan	1,024,000.00
Financial Plan Estimate	$11,124,000.00
Proposed Contract Award	12,639,000.00
Estimating Variance	($1,515,000.00)

The amounts above are per the FY2023-2027 CIP Plan. The award of this contract creates a negative estimating variance of ($1,515,000.00). This variance will be funded from Capital Reserves.

COMMITTEE REVIEW

This item was presented to the Operations and Resources Committee at its meeting on August 10, 2022. 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.