Legislation Text

File #: 2018-634, **Version:** 1

GLWA-DB-226

Repair and Rehabilitation of Detroit River Interceptor (DRI) from Alter Road to Water Resource Recovery Facility (WRRF)

Agenda of: March 14, 2018
Item No.: **2018-634**
Amount: $19,845,500.00

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Sue F. McCormick
Chief Executive Officer
Great Lakes Water Authority

DATE: **March 7, 2018**

RE: **Contract No.: GLWA-DB-226**
Repair and Rehabilitation of Detroit River Interceptor (DRI) from Alter Road to Water Resource Recovery Facility (WRRF)
Vendor: Jay Dee Contractors, Inc.

MOTION

Upon recommendation of Cheryl Porter, Chief Operating Officer - Water and Field Services, the Board of Directors (Board) of the Great Lakes Water Authority (GLWA), authorizes the Chief Executive Officer (CEO) to **enter into Contract No. GLWA-DB-226, "Repair and Rehabilitation of Detroit River Interceptor (DRI) from Alter Road to Water Resource Recovery Facility (WRRF)" with Jay Dee Contractors, Inc. at a cost not to exceed $19,845,500.00 for a duration of five (5) years;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The GLWA Conveyance System consists of a network of sewers which collect and transfer wastewater through major interceptors to the Water Resource Recovery Facility (WRRF). There are three major interceptors - Detroit River Interceptor (DRI), North West Interceptor (NWI), and North Interceptor East Arm (NIEA). The DRI runs parallel to the

Detroit River. The pipe size varies from 8 ft. to 16 ft. in diameter and carries about 36% of the total flow to the WRRF. The NWI runs parallel to the Rouge River. The pipe sizes are up to 13.5 ft. and carries about 35% of the flow. NIEA is 15 miles long and works as a relief to the DRI. The pipe size varies from 12 ft. to 17.5 ft. and it carries about 29% of the flow. The Detroit River Interceptor (DRI) starts at Alter Road and runs downstream to Pump Station No. 1 at the WRRF.

The DRI is the oldest of the three interceptors, constructed in 1927. The purpose of the DRI was to bring the majority of Detroit's sewage to a common point to prevent newly constructed sewers from discharging directly into the river. It also allowed the sewage to be discharged further downriver from the water supply inlet.

Since the original construction of the DRI, this critical piece of infrastructure requires detailed comprehensive inspection, repair, and rehabilitation. In an effort to avoid a critical and possibly catastrophic failure, the GLWA is undertaking the DRI project to address these issues. Inspections will be performed utilizing the National Association of Sewer Service Companies (NASSCO) pipeline assessment and certification program (PACP) industry standard. Inspection of the sewers will be phased, and where repair and rehabilitation are identified, the most critical pieces will be prioritized based on review of the PACP reports.

In addition to this project, the DRI has been the subject of two emergency repair contracts, DWS-876 (2012) and DWS-889 (2016), which included inspections in their scope. GLWA contract GLWA-CS-068 (2016) is a comprehensive inspection project, with the DRI being a major component.

A Closed-Circuit Television (CCTV) inspection and PACP inspection of the DRI was completed in February to March of 2016. This inspection raised concerns due to high PACP ratings, indicating structural and corrosion issues within the interceptor. Stretches of the DRI had again manual entry inspections completed on them in December 2016 and January 2017.

Repairs are also being conducted as part of GLWA-CON-183 (2017) on the DRI. This portion of work is excluded from GLWA-DB-226.

JUSTIFICATION

The DRI is a critical component of the overall GLWA conveyance system, as it conveys approximately 55% of the Detroit drainage and 36% of the total GLWA flow to the WRRF. Maintaining a reliable and efficient DRI is a key factor in maintaining the GLWA wastewater conveyance system and is also a major component of mitigating historical problems such as Combined Sewer Overflow (CSO) discharges to the Detroit River and residential basement flooding. Furthermore, major structural failures of large interceptors such as the DRI can create large sinkholes that cause major destruction to surface structures such as roads, homes, buildings, and other utilities and infrastructure.

These construction services will be conducted in a manner that will address all critical sections of the DRI and will result in a more reliable DRI capable of conveying capacity flows to the WRRF. Another benefit of this project will be to address major blockage in the DRI caused by debris and other large objects that become lodged in the interceptor, reducing the capacity. All investigation and construction phases will include provisions for the complete removal of debris and cleaning of all sections of the interceptor included in the project.

The purpose of the project is to rehabilitate the DRI from Alter Road to the WRRF.

BUDGET IMPACT

The proposed project Detroit River Interceptor (DRI) from Alter Road to Water Resource Recovery Facility was included in the Board Approved 2018 Capital Improvement Plan under CIP 222002. The proposed contract award of $ 19,845,500.00 will be funded under the CIP 222002 and is within the $29,000,000.00 budget.

STATE REVOLVING FUNDS (SRF) FINANCED

The SRF interest rate is 2% versus 4% for equivalent 20-year open issue financing. This project is eligible for SRF funds and we are currently applying for these funds.

COMMITTEE REVIEW

This item was presented to the Operations and Resources Committee at its meeting on March 14, 2018. 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.