



Legislation Details (With Text)

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Title: Contract No. 1803258
Design Build Services for Northeast Flow Control Facility
CIP# 122003 / BCE 62.4

Sponsors: Cheryl Porter, Grant Gartrell

Indexes: Water Operations

Code sections:

Attachments: 1. 1803258 Procurement Report, 2. 1803258 Original Fees Proposed, 3. 1803258 CIP Attachment, 4. NEFCF Gap Analysis, 5. Memo 6/19/2019 NE Flow Control Facility Cost Benefit Analysis

Date	Ver.	Action By	Action	Result
6/26/2019	1	Board of Directors	Approved	Pass
6/12/2019	1	Operations and Resources Committee	Recommended for Approval	Pass

Contract No. 1803258

Design Build Services for Northeast Flow Control Facility

CIP# 122003 / BCE 62.4

Agenda of: June 26, 2019
Item No.: **2019-217**
Amount: \$24,443,619.00

TO: The Honorable
Board of Directors
Great Lakes Water Authority

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

DATE: June 4, 2019

RE: **Contract No. 1803258**
Design Build Services for Northeast Flow Control Facility
Vendor: Walsh Construction Company II, LLC

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. 1803258 “Design Build Services for Northeast Flow Control Facility” with Walsh Construction Company II, LLC, at a cost not to exceed \$24,443,619.00 for a duration of 1,095 days;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

There are two historic issues that have led to the need for the proposed Flow Control Facility at the Northeast Water Treatment Plant (WTP) site:

1. Need for Finished Water Supply Redundancy

On February 28, 2017, a boil water advisory was issued to a large part of the City of Detroit, Hamtramck, and Highland Park due to a drop in system pressures in the service area. The drop in system pressures were caused by an equipment malfunction at the Water Works Park Water Treatment Plant. This operational issue highlighted some inherent redundancy issues within the GLWA water supply system. The Water Works Park and Northeast WTP sites have limited redundancy in the event of loss of service to either water treatment plant service area.

The Northeast Flow Control Facility (Contract No. 1803258) proposed as part of this project is critical to provide additional redundancy to both the Northeast and Water Works Park WTP service areas. The Northeast Flow Control Facility will enable finished water flows from either the Springwells or Water Works Park WTP sites to be transmitted to the Northeast WTP reservoirs to provide a backup finished water supply to the Northeast service area. Furthermore, the Northeast Flow Control Facility will enable flows from the Springwells WTP to be transmitted to provide a backup finished water supply to the Water Works Park service area. The Northeast Flow Control Facility has been planned to accommodate flows from the Springwells and Water Works Park sites through the existing transmission mains within the City of Detroit.

2. Re-alignment of Treatment Capacity with Projected Water Demands

Historically, GLWA has periodically studied the regional water transmission system demands and capacity as part of its water master planning, capital improvement planning and asset management processes. The 2015 GLWA Water Master Plan update indicated that the regional system has significant excess capacity for water treatment compared to projected water demand. To address this imbalance, the Water Master Plan update recommended a program to reduce the regional treatment capacity to better align it with future system water demands. The new transmission main between the Water Works Park WTP and the Northeast WTP will serve to provide finished water to the Northeast site from the Water Works Park WTP. The proposed Northeast Flow Control Facility is sized to accommodate the new flows from the Water Works Park WTP under a future scenario where treatment is decommissioned at the Northeast WTP.

This project will be funded using a State of Michigan Drinking Water Revolving Fund (DWRF) loan and will meet the State's loan funding deadlines for 4th quarter FY2019. This project will be delivered using a design-build project delivery to design and construct the Northeast Flow Control Facility. The Northeast Flow Control facility includes 84-inch diameter and 42-inch supply yard piping, a 96-inch diameter discharge pipeline with connection to a junction chamber feeding the Northeast reservoirs, related pipeline appurtenances, a flow control structure with control valves, related piping, equipment, and connections to the plant's existing finished water system. The flow control structure includes a reinforced

concrete subgrade structure and building.

A comparison of the adjusted budget (with yard piping re-allocated to phase1) to the requested contract value indicates a remaining estimating variance of \$5,024,619.00 or about 26% of the adjusted budget amount. Please refer to attached memorandum which provides background information and a gap analysis of the variance between the GLWA Board requested-contract value and the Capital Improvements Plan Budget for the Phase 1 of the Water Works Park to Northeast Transmission Main Project.

JUSTIFICATION

The proposed Northeast Flow Control Facility will provide needed additional finish water supply redundancy to the Northeast and Water Works Park service areas to avoid loss of service scenarios in the future. Additionally, it is a predecessor project to decommissioning treatment at the Northeast WTP necessary to align installed treatment capacities with overall system demands. It should be noted that due to some member partner concerns raised over the proposed decommissioning of treatment at Northeast during Analytical Work Group (AWG) meetings, GLWA Water Supply Operations Engineering is re-evaluating the life cycle cost of decommissioning treatment versus rehabilitation of treatment facilities at the Northeast WTP. Regardless of the conclusions of the updated life cycle cost evaluation, the proposed Northeast Flow Control Facility is justifiable because it will provide a new, redundant finished water supply to the Water Works Park and Northeast service areas.

FINANCIAL PLAN IMPACT

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

Funding Source: Water Construction Bond

Cost Center: Water Engineering

Expense Type: Construction (5519-882111.000-616900-122003)

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

Fiscal Year

FY 2021 Plan - Phase I	\$10,000,000.00		
FY 2022 Plan - Phase I	<u>2,200,000.00</u>		
Total Plan - Phase I	\$12,200,000.00		
FY 2021 Plan - Phase II (Partial)*	5,215,000.00		
FY 2022 Plan - Phase II (Partial)*	<u>2,004,000.00</u>		
Total Plan - Phase II (Partial)*	\$7,219,000.00		
Total Plan - Phase I	\$12,200,000.00		
Total Plan - Phase II (Partial)*	<u>\$7,219,000.00</u>		
Financial Plan Estimate	\$19,419,000.00		
Proposed Contract Award	<u>24,443,619.00</u>		
Negative Estimating Variance		\$	(5,024,619.00)

*A portion of Phase II work was pulled ahead and included in the scope of this award as identified in Timothy Kuhns gap analysis documentation provided.

This negative estimating variance to be funded from capital reserves.

SAVINGS, COST OPTIMIZATION, AND REVENUE ENHANCEMENT IMPACT

The cost savings are not determinable at this time.

COMMITTEE REVIEW

This item was presented to the Operations and Resources Committee at its meeting on June 12, 2019. The Operations and Resources Committee unanimously recommended that the GLWA Board adopt the resolution as presented, subject to receiving a benefit analysis.

SHARED SERVICES IMPACT

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