



## Legislation Details (With Text)

**File #:** 2021-318      **Version:** 1      **Name:**  
**Type:** Resolution      **Status:** Passed  
**File created:** 8/4/2021      **In control:** Board of Directors  
**On agenda:** 9/1/2021      **Final action:** 9/1/2021  
**Title:** Proposed Amendment No. 2  
Contract No. 1802448  
Engineering Services for the 14 Mile Transmission Main Loop  
CIP# 122013 / BCE Score: 58.4  
**Sponsors:** Cheryl Porter, Grant Gartrell  
**Indexes:** Water Operations  
**Code sections:**  
**Attachments:** 1. Response to Board regarding 1802448 Proposed Amendment 2

Date	Ver.	Action By	Action	Result
9/1/2021	1	Board of Directors	Approved	Pass
8/11/2021	1	Operations and Resources Committee	Recommended for Approval	Pass

### Proposed Amendment No. 2

### Contract No. 1802448

### Engineering Services for the 14 Mile Transmission Main Loop

### CIP# 122013 / BCE Score: 58.4

Agenda of: September 1, 2021

Item No.: **2021-318**

Amount:	Original Contract	\$6,819,890.00
	Amendment No. 1	1,150,000.00
	Proposed Amendment No. 2	1,662,726.00
	Total Revised Contract	\$9,632,616.00

**TO:** The Honorable  
Board of Directors  
Great Lakes Water Authority

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

**DATE:** August 4, 2021

**RE:                    Proposed Amendment No. 2**  
**Contract No. 1802448**  
**Engineering Services for the 14 Mile Transmission Main Loop**  
**Vendor: Brown and Caldwell, 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. 1802448 Proposed Amendment No. 2 “Engineering Services for the 14 Mile Transmission Main Loop” with Brown and Caldwell, LLC with an increased cost of \$1,662,726.00 for a total cost not to exceed \$9,632,616.00 and an increased duration of 365 days for a total contract duration of 2,132 days;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

**BACKGROUND**

The 14 Mile Road transmission main is a single line that supplies drinking water to the communities of Novi, Farmington Hills, West Bloomfield, Commerce, Walled Lake, and Wixom. If a disruption to service occurs on the 14 Mile transmission main (e.g., air valve break, blow-off valve break, water main break), then these communities will experience substantial loss in water pressure or complete loss of supply depending on the severity of the disruption. Therefore, GLWA launched this capital improvement program (CIP) project to provide new transmission main that connects 14 Mile Road and 8 Mile Road transmission systems together, and a new parallel transmission main along 14 Mile Road west of M-5. The interconnection or “loop” between the 8 Mile Road and 14 Mile Road transmission systems along with the new parallel main west of M-5, when completed, will provide redundancy to the 14 Mile Road transmission main.

The engineering services contract for this CIP project was awarded to Brown and Caldwell in February of 2019. This engineering services contract includes provisions to deliver the construction in two phases, as follows:

- Phase 1 involves installing approximately 1.0 mile of 24-inch transmission along 14 Mile from M-5 to Decker Road. Design for this phase was completed in January of 2020. Construction bids for this phase were received in March of 2020 and the GLWA board awarded the construction contract (Contract No. 1903312) to Major Cement Company in May of 2020.
- Phase 2 involves installing approximately 7.5 miles of 54-inch transmission main loop between 8 Mile and 14 Mile. Design for this phase is complete. Construction bids for this phase were received in May of 2021 with GLWA Board approval in June 2021.

This proposed amendment requests that funds be added to tasks 7 and 8 of this engineering services contract due to the additional scope of services described below.

Task 7, Construction Assistance - The route for new pipeline to complete the loop between the 8 Mile Road and 14 Mile Road transmission systems was based on the shortest route (approximately 6 miles of 48-inch main) referred to as the “Haggerty-Halsted” corridor. This route was used as the basis for the engineer’s construction assistance budget and only included one tunneling operation. The actual route selected during the route study portion of this project, however, is located within Michigan Department of Transportation (MDOT) right of way (ROW) and involves a total of 7 tunneling operations. The shorter Haggerty-Halsted route was not selected mainly due to member partner (i.e., Farmington Hills) concerns regarding roadway reconstruction along Halsted Road since it had recently been repaved. The selected route is approximately 8 miles long and requires a 54-inch diameter main. The tunneling operations will require additional

engineering office and field work such as more tunneling technical submittal reviews, record drawing development, coordination and meetings with MDOT, additional permitting, and specialized field inspection work associated with the tunneling operations. Other additional engineering services that are needed for Task 7 include: (a) construction administration efforts that will be needed in an area of extensive utility relocations, (b) geotechnical field engineering in an area of weak soils, and (c) environmental engineering effort in areas with arsenic-contaminated soils and where wetlands are present. The total amount requested to add to Task 7 in this amendment is \$871,000.00.

Task 8, Resident Project Representative (RPR) Services - additional RPR services are needed to monitor and document the progress and quality of work during construction because the selected route is approximately 2 miles longer than the concept route and more earthwork will be needed because of the larger pipe on which the consultant's RPR scope and cost were based. The total amount requested to add to Task 8 in this amendment is \$791,726.00.

Lastly, this proposed amendment requests that the contract time be extended by 12 months to establish a new completion date of January 12, 2025. Contract No. 2004456 "14 Mile Road Transmission Loop Phase II" was approved by the Board on June 23, 2021 and involves the construction of the phase II loop. This engineering services contract (Contract No. 1802448) provides the engineering services, including construction administration and RPR, to oversee the construction of the phase II loop.

### **JUSTIFICATION**

The engineering services budgets for Tasks 7 and 8 were based on a new pipeline route that was 2 miles shorter than the route selected for construction, on a smaller diameter pipe that required less earthwork, and on one tunneling operation compared to seven that are now required. The base engineering services budgets for Tasks 7 and 8 are also not sufficient to adequately address the weak soils and extensive utility relocations that will be required in certain areas of the project. These additional engineering services are needed to provide the requisite engineering quality assurance measures in the construction of the new pipeline that will complete the 8 Mile Road and 14 Mile Road transmission system loop.

### **PROJECT MANAGEMENT STATUS**

Original Contract Time	1,767 days
Amendment No. 1	0 days
Proposed Amendment No. 2	365 days
New Contract Time:	2,132 days

### **PROJECT ESTIMATE**

Original Contract Price	\$6,819,890.00
Amendment No. 1	1,150,000.00
Proposed Amendment No. 2	1,662,726.00
New Contract Total	\$9,632,616.00

### **FINANCIAL PLAN IMPACT**

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

**Funding Source:** Water Construction Bond

**Cost Center:** Field Engineering

**Expense Type:** Construction (5519-882111.000-617950-122013)

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

Original Contract Price	\$6,819,890.00
Amendment No. 1	1,150,000.00
Proposed Amendment No. 2	<u>1,662,726.00</u>
New Contract Total	9,632,616.00
Amended Financial Plan Estimate	<u>7,969,890.00</u>
Estimating Variance	(\$1,662,726.00)

The award of this amendment to the vendor creates a negative estimating variance of \$1,662,726.00. 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 11, 2021. The Operations and Resources Committee unanimously recommended that the GLWA Board adopt the resolution, subject to receiving additional information regarding construction cost increase, as a result of route change.

#### **SHARED SERVICES IMPACT**

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