



## Legislation Details (With Text)

**File #:** 2018-688      **Version:** 1      **Name:**  
**Type:** Resolution      **Status:** Passed  
**File created:** 4/5/2018      **In control:** Board of Directors  
**On agenda:** 4/25/2018      **Final action:** 4/25/2018  
**Title:** GLWA-CS-165 Change Order No. 1  
Professional Services for Route Study, Condition Assessment and Design-Build Contractor Oversight  
for 96-Inch Water Main Relocation  
**Sponsors:** Cheryl Porter  
**Indexes:** Water Operations  
**Code sections:**  
**Attachments:** 1. GLWA-CS-165 CO 1 Procurement Checklist, 2. GLWA-CS-165 CO 1 Procurement Report

Date	Ver.	Action By	Action	Result
4/25/2018	1	Board of Directors	Approved	Pass
4/11/2018	1	Operations and Resources Committee	Recommended for Approval	Pass

### GLWA-CS-165 Change Order No. 1

#### Professional Services for Route Study, Condition Assessment and Design-Build Contractor Oversight for 96-Inch Water Main Relocation

**Agenda of:** April 25, 2018  
**Item No.:** **2018-688**  
**Amount:** N/A

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

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

**DATE:** **April 4, 2018**

**RE:** **Contract No. GLWA-CS-165 Change Order No. 1**  
***Professional Services for Route Study, Condition Assessment and Design-Build Contractor Oversight for 96-Inch Water Main Relocation***

**Vendor: CH2M Hill Engineers, 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-CS-165 Change Order No. 1, “Professional Services for Route Study, Condition Assessment and Design-Build Contractor Oversight for 96-Inch Water Main Relocation” with CH2M Hill Engineers, Inc. for a time extension of 365 days at no additional cost for a total contract duration of 730 days;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

**BACKGROUND**

CH2M Hill Engineers, Inc. (CH2M) started work on March 6, 2017, for engineering services related to the relocation of the 96-inch water transmission main outside of the closed G&H Industrial Landfill site. It was initially planned that the relocation of the 96-inch water transmission main would be conducted in two phases. Phase 1 involved installing two new tie-in connections with new isolation valves on the existing 96-inch water main. The new isolation valves/tie-ins would be located upstream (north) and downstream (south) of the closed G&H Industrial Landfill site. These new tie-ins would be made using live-taps and would serve as future connections for the new 96-inch relocated main. The two new valves were to be used to isolate the 96-inch main between the Rochester Booster Pump Station and the North Service Center pumping/reservoir facility. This section of main would have been dewatered and inspected to assess its condition. Phase 2 involved constructing the approximately 2.5 miles of relocated 96-inch main and connecting it to the two tie-in locations installed during Phase 1.

As GLWA and CH2M evaluated the technical feasibility and risks associated with live tapping the 96-inch water main, which is prestressed concrete cylinder pipe (PCCP) with a relatively thin embedded steel cylinder, we mutually determined that there was excessive risk associated with live tapping the 96-inch PCCP and that other alternatives to tie into the existing main were needed. The alternatives considered for tying into the existing 96-inch water main have been referred to as “implementation strategies”. Evaluation of the implementation strategies have required significant engagement from GLWA’s member partners because of impacts to their level of service during construction. Similarly, as more information about the contamination in the closed landfill and previous stockpiling of excessive soils on top of the 96-inch transmission main became apparent, GLWA determined that it was best to first construct the new, relocated main, tie it into the existing main, and lastly abandon the 96-inch main within the limits of the closed landfill. Therefore, the existing 96-inch transmission main beneath or near the closed landfill would not be taken out of service for a condition assessment due to the risks associated with the main developing leaks or breaks if it was depressurized.

These decisions set forth a new direction for the project. As a result, GLWA operations and engineering has directed CH2M to continue to execute the on-going tasks listed in Table 1 because of the importance associated with (a) getting the 96-inch main out of a contaminated landfill site, thereby protecting public health, and (b) providing redundancy that is absent today to our customers served off the 96-inch main between Romeo and North Service Center.

<b>Table 1 Contract No. CS-165 On- Going Major Tasks</b>
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On-Going Major Tasks		Status	Target Date
1	Continued agency coordination (EPA), Michigan Department of Transportation, Macomb County Department of Public Works, Commission for Oakland County, Michigan Resources Commissioner, Michigan Department of Transportation Works Office (MCPWO), and others), including utilities (Sunoco, OCWRC, etc.) and the Commission, Clinton River Water Alliance, Southeastern Michigan Council of Governments (SEMCOG).	On-going	NA
2	Finalize scope of "opportunistic" projects for County Road Department	On-going	April 2018
3	Conduct aerial survey of the locations	On-going	April 2018
4	Develop construction sequence and place new and existing Romeo and North Service	On-going	July 2018
5	Prepare concept design and Loop temporary booster pump	On-going	July 2018
6	Select the alignment of the coordination with Yates C	On-going	July 2018
7	Prepare service restoration separation, schedule restoration	On-going	July 2018
8	Identify temporary and permanent	On-going	July 2018
9	Prepare preliminary drawings of vaults that will improve reach the 96" water main south of	On-going	July 2018
10	Verify East Pond Creek discharge capacity of the creek for M	On-going	July 2018
11	Conduct geotechnical and selected pipeline alignment	On-going	October 2018
12	Locate utilities along the "shooting" techniques.	On-going	October 2018
13	Conduct detailed surveying alignment.	On-going	October 2018
14	Verify operation of critical needed to drain the pipeline requirements; determine u	On-going	December 2018
15	Verify Bruce Twp., Romeo ability to back each other extended time periods (i.e. construction).	On-going	January 2019

Although this is a no-cost change order, it is noted that the tasks associated with this professional engineering services contract are budgeted and being managed as shown in Table 2. Two tasks from

the originally executed contract will remain open, **Task 1.1. Project Administration** and **Task 2.1. Agency Coordination**. Remaining budgets for these two tasks will remain unchanged (\$23,068.12 for Task 1.1 and \$14,276.05 for Task 2.1). The remaining unspent budgets from the other tasks will be reallocated to a new task, **Task 1.5: Pre-Design** (\$1,205,702.10). All other tasks will be closed out. The total remaining budget through February 28, 2018, is \$1,243,046.27.

Table 2 Re-Allocated Budget by Task					
Task	Description	Original Contract Budget	Total Spent	Remaining Budget	Re-Allocated Budget
<b>Task 1</b>	<b>Phase 1: Route Evaluation and Selection</b>				
1.1	Project Administration	\$68,840.00	\$45,771.88	\$23,068.12	\$23,068.12
1.2	Pipeline Route Evaluation	\$279,800.00	\$656,874.89	(\$377,074.89)	\$
1.3	Tie-in Configuration	\$62,190.00	\$15,313.01	\$46,876.99	\$
1.4	Design Submittal Review	\$102,735.00	\$	\$102,735.00	\$
1.5	Pre-Design	NA	NA	NA	\$1,205,702.10
<b>Task 2</b>	<b>Phase 2: Agency Coordination</b>				
2.1	Agency Coordination	\$52,650.00	\$38,373.95	\$14,276.05	\$14,276.05
<b>Task 3</b>	<b>Phase 3: Construction Administration</b>				
3.1	Construction Administration	\$455,635.00	\$	\$455,635.00	\$
3.2	Condition Assessment Water Main Segments	\$540,730.00	\$	\$540,730.00	\$
3.3	Valve Witness Test	\$11,000.00	\$	\$11,000.00	\$
3.4	Full-Time RPR	\$425,800.00	\$	\$425,800.00	\$
	<b>Total</b>	<b>\$1,999,380.00</b>	<b>756,333.73</b>	<b>1,243,046.27</b>	<b>1,243,046.27</b>

### JUSTIFICATION

A portion of GLWA's 96-inch water transmission main is located within the limits of the closed G&H Industrial Landfill site, a United States Environmental Protection Agency (USEPA) Superfund site of contamination. This current situation poses a risk to water quality to those served by the 96-inch water transmission main, which is the principle driver to relocate the 96-inch water transmission main out of the closed landfill.

The original scope and schedule was predicated on executing a live-tap on the 96-inch water main, which has been determined to be a method that exposes GLWA and its member partners to unacceptable risk. As a result, the new approach that has been developed and is being engineered by the professional engineering consultant (CH2M, now JACOBS) reduces the risk of water service disruptions to member partners and continues the push to deliver a solution to remove the portion of the 96-inch water transmission main from the closed G&H Industrial Landfill site.

### **FINANCIAL PLAN IMPACT**

Proposed change order number one is an extension of time only and has no overall financial plan impact.

### **COMMITTEE REVIEW**

This item was presented to the Operations and Resources Committee at its meeting on April 11, 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.