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Title: GLWA-CON-253
Springwells Water Treatment Plant Reservoir Fill Line Improvements

Sponsors: Cheryl Porter

Indexes: Water Operations

Code sections:

Attachments: 1. GLWA-CON-253 Procurement Board Summary, 2. GLWA-CON-253 Bid Tabulation, 3. GLWA-CON-253 Procurement Checklist

| Date | Ver. | Action By | Action | Result |
|-----------|------|------------------------------------|--------------------------|--------|
| 3/28/2018 | 1 | Board of Directors | Approved | Pass |
| 3/14/2018 | 1 | Operations and Resources Committee | Recommended for Approval | Pass |

GLWA-CON-253

Springwells Water Treatment Plant Reservoir Fill Line Improvements

Agenda of: March 28, 2018
Item No.: **2018-637**
Amount: \$4,270,500.00

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-CON-253**
Springwells Water Treatment Plant Reservoir Fill Line Improvements
Vendor: Ric-Man Construction, 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-CON-253, "Springwells Water Treatment Plant Reservoir Fill Line Improvements" with Ric-Man Construction, Inc. at a cost not to exceed \$4,270,500.00 for a duration of 450 calendar days;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

The addition of a reservoir fill line at the Springwells Water Treatment Plant (Springwells) is necessary to provide a redundant finished water supply to the Springwells service area, notably its high-pressure zone.

The following communities receive their water from the Springwells high-pressure zone: Farmington, Livonia, Northville, Northville Township, and the Southeastern Oakland County Water Authority (SOCWA), which is inclusive of Berkley, Beverly Hills, Bingham Farms, Birmingham, Bloomfield Hills, Clawson, Huntington Woods, Lathrup Village, Pleasant Ridge, Royal Oak, Southfield, and Southfield Township.

The Southwest Water Treatment Plant (Southwest) will be able to deliver finished water directly to the Springwells finished water reservoirs once a reservoir fill line is built. If treatment capabilities were ever completely lost at Springwells, the reservoir fill line would be placed into service so that the high-service pumping station at Springwells could transmit finished water to its high-pressure zone service area. The reservoir fill line would stay in service while treatment capabilities were being re-established at Springwells.

Loss of the raw water supply to the Springwells would cause a complete loss of treatment at the plant. GLWA's raw water intakes, tunnels and ancillary equipment were all inspected under Contract CS-1623, "Inspection, Condition Assessment and Engineering Evaluation of Raw Water Intakes, Tunnels and Related Facilities" to assess the raw water system's condition. Significant cracking and ovality was observed in some segments of the raw water tunnels serving the Northeast and Springwells Water Treatment Plants. The most serious tunnel stresses were observed in the Springwells tunnel. Rehabilitation of the stressed sections of raw water tunnels will be implemented under Contract GLWA-DB-150, "Design-Build/Repair for Portions of the Pennsylvania, Springwells and Northeast Raw Water Tunnels" (awarded by the Board of Directors December 13, 2017).

The reservoir fill line at Springwells must be constructed and readied for service prior to executing physical rehabilitation work to the raw water tunnels under Contract GLWA-DB-150. In this way, if a problem occurs during construction that causes a disruption to raw water supply to Springwells, the reservoir fill line would be placed into service to minimize disruptions to the finished water supply. Similarly, it is possible that the raw water tunnel serving Springwells may have to be taken out of service and dewatered to effect final and permanent restoration of the stressed tunnel segments. If this is the case, then the reservoir fill line would be used to maintain finished water supply to the Springwells high-pressure zone.

JUSTIFICATION

The addition of a reservoir fill line at the Springwells Water Treatment Plant will provide a redundant finished water supply to this plant's high-pressure zone that does not exist today. This improvement in redundancy must be constructed and readied for service in advance of executing the rehabilitation work to the raw water tunnel. This sequencing is needed because the tunnel rehabilitation work could necessitate temporary shutdowns of the raw water feeding Springwells, which shutdowns the ability to produce finished drinking water.

BUDGET IMPACT

The proposed Springwells Water Treatment Plant Reservoir Fill Line Improvements project is included in the current Board approved 2018-2022 Capital Improvement Plan as CIP #1389. The proposed construction phase contract award of \$4,270,500.00 is within the estimated construction budget of \$7,200,000.00 creating a positive estimate variance of

\$2,929,500.00. The proposed contract award has no impact on actual budget.

COMMITTEE REVIEW

This matter was reviewed by the Operations and Resources Committee at its March 14, 2018 meeting. The Operations and Resources Committee unanimously recommended that the GLWA Board adopt the resolution subject to receiving information on the allowances and how that impacts the budget.

SHARED SERVICES IMPACT

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