

Report to Civic Works Committee

To: Chair and Members
Civic Works Committee

From: Kelly Scherr, P.Eng., MBA, FEC
Deputy City Manager, Environment & Infrastructure

Subject: Contract Price Increase: Springbank Reservoirs 1 & 3 Roof
Membrane Replacement and Repairs Project

Date: June 13, 2023

Recommendation

That, on the recommendation of the Deputy City Manager, Environment and Infrastructure, the following actions **BE TAKEN** with respect to the Springbank Reservoirs 1 & 3 Roof Membrane Replacement and Repairs project:

- a) Springbank Reservoirs 1 & 3 Roof Membrane Replacement and Repairs (Tender RFT 2022-016) construction contract value with Stone Town Construction Limited **BE INCREASED** by \$1,499,636.96 for a total contract value of \$10,768,014.71 (excluding HST) in accordance with Section 20.3 (e) of the Procurement of Goods and Services Policy;
- b) the financing for these projects **BE APPROVED** as set out in the Sources of Financing Report attached hereto as Appendices 'A.'
- c) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with these projects; and,
- d) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

Executive Summary

The City of London Water Supply System includes several water storage reservoirs used for balancing flows for domestic drinking water, emergency firefighting needs, or to provide storage in the event of an interruption from the Lake Huron Area Water Supply System or the Elgin Area Water Supply System. Three of these reservoirs are located within the Springbank complex.

Previous leakage tests and inspections identified the need to replace the roof membranes on Springbank Reservoirs #1 and #3 and to perform repairs to the roof structures of both reservoirs within the next five years.

The rehabilitation of Springbank #1 was successfully completed in 2022, with the installation of the roof cover and the repairs to the reservoir being within the expected scope identified during the design phase and accounted for in the contract.

As work began on Springbank #3, it was found that there were significantly more repairs needed than were identified in the contract. In addition to the roof repairs, several valves that control the flow of water in and out of the reservoir were found to be leaking and should be repaired at this time.

Completing these repairs now through increasing the value of the contract is necessary to ensure the longevity and operability of this critical drinking water asset.

Linkage to the Corporate Strategic Plan

This recommendation supports the following 2023-2027 Strategic Plan areas of focus:

- Climate Action and Sustainable Growth:
 - Infrastructure is built, maintained, and secured to support future growth and protect the environment.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

Civic Works committee - October 20, 2020 - Award of Consulting Engineering Services for Detailed Design of the Springbank Reservoir 1 and 3 Roof Membrane Replacement and Reservoir Repairs RFP 20-44

Civic Works Committee – May 10, 2022 – Contract Award: Tender RFT 2022-016 Springbank Reservoirs 1 & 3 Roof Membrane Replacement and Repairs Project – Irregular Result

2.0 Discussion and Considerations

2.1 Discussion

This overall project is to rehabilitate two separate reservoirs – Springbank Reservoir #1 and Springbank Reservoir #3. The work primarily consists of replacing the roof cover that provides waterproofing for the reservoirs as well as making required concrete repairs within the reservoir.

Due to the inherent difficulties in accurately inspecting the internal side of the roof of a live, in-ground drinking water reservoir, there was some uncertainty in the scope of the reservoir repairs. The number of and types of repairs required on the inside of the reservoir were estimated based on what was observed during the visual inspection as well as the experience of the consultant on previous projects.

In 2022, Springbank Reservoir #1 was rehabilitated, which included completing concrete repairs inside the reservoir as well as the full replacement of the roof waterproofing cover. This work was completed in late 2022 and the number of repairs needed was generally consistent with the estimates included in the contract.

Recently, after Springbank Reservoir #3 was drained and equipment was set up to inspect the inside of the roof, it was observed that there were more repairs needed than originally anticipated in the contract. The required repairs are mostly on the structural concrete that make up the roof of the reservoir. Most of these additional repairs are in locations that could not be seen during the design-phase inspection under live conditions.

If these repairs are not addressed, it is expected that the deterioration of the roof will continue and accelerate in places, eventually risking the structural integrity of the roof. The repairs are expected to keep the reservoir in a good state of repair for several decades, ensuring that we are maintaining this critical asset for the future. The

additional cost of these repairs is \$1,098,817.76 excluding HST.

Additionally, when Reservoir #3 was drained to prepare for the rehabilitation, it was found that some of the valves that control the flow in and out of the reservoir were leaking. There is a financial and operational advantage to the City in replacing these valves during this project while the reservoir is already drained. The valves can only be replaced while the reservoir is empty and draining the reservoir costs between \$20,000 and \$40,000 in water costs, not including staff time. There is also an operational impact when the reservoir is drained and out of service. The additional cost associated with the replacement and installation of these valves is \$400,819.20 excluding HST.

3.0 Financial Impact/Considerations

While some of the repair and valve costs will be covered by the project contingency, additional funds are needed for the full cost of this additional work.

Reservoir Repairs

An additional \$1,098,817.76 for our contract with Stone Town Construction Limited is required to complete the repairs to the reservoir. The funding is available in the Water Capital Asset Renewal & Replacement Reserve Fund per the Source of Financing attached as Appendix 'A'.

Reservoir Valve Replacement

An additional \$400,819.20 for our contract with Stone Town Construction Limited is required to complete the replacement of several valves that control the flow in and out of the reservoir. The funding is available in the approved water capital budgets per the Source of Financing attached as Appendix 'A'.

Conclusion

In accordance with Section 20.3 (e) of the Procurement of Goods and Services Policy, it is recommended that the contract value be amended for Springbank Reservoirs 1 & 3 Roof Membrane Replacement and Repairs Project.

Prepared by: Aaron Rozentals, P.Eng., GDPA,
Division Manager, Water Engineering

Submitted by: Ashley M. Rammeloo, MMSc., P.Eng.
Director, Water, Wastewater, and
Stormwater

Recommended by: Kelly Scherr, P. Eng., MBA, FEC
Deputy City Manager, Environment and
Infrastructure

Attach: Appendix 'A' – Sources of Financing

cc: John Simon, Division Manager, Water Operations
Gary McDonald, Budget Analyst, Finance & Corporate Services

Appendix "A"

#23123

June 13, 2023
(Contract Price Increase)

Chair and Members
Civic Works Committee

RE: RFT2022-016 Springbank Reservoirs 1 and 3 Roof Membrane Replacement and Repairs Project
(Subledger FW200001)
Capital Project EW3583 - Springbank Reservoir 1 and 3 Protective Membrane
Stone Town Construction Limited - \$1,499,636.96 (excluding HST)

Finance Supports Report on the Sources of Financing:

Finance Supports confirms that the cost of this project cannot be accommodated within the financing available for it in the Capital Budget, but can be accommodated with an additional drawdown from the Water Works Renewal Reserve Fund and that, subject to the approval of the recommendation of the Deputy City Manager, Environment and Infrastructure, the detailed source of financing for this project is:

Estimated Expenditures	Approved Budget	Additional Funding Requirement	Revised Budget	Committed To Date	This Submission
Engineering	1,147,278	0	1,147,278	1,147,278	0
Construction	9,431,501	1,526,037	10,957,538	9,431,508	1,526,031
City Related Expenses	0	18,627	18,627	18,627	0
Total Expenditures	\$10,578,779	\$1,544,664	\$12,123,443	\$10,597,413	\$1,526,031

Sources of Financing

Drawdown from Water Works Renewal Reserve Fund (Note 1)	10,578,779	1,544,664	12,123,443	10,597,413	1,526,031
Total Financing	\$10,578,779	\$1,544,664	\$12,123,443	\$10,597,413	\$1,526,031

Financial Note:

Contract Price Excluding Taxes	\$10,768,015
Less Previous Price Excluding Taxes	<u>\$9,268,378</u>
	\$1,499,637
Add: HST @13%	<u>194,953</u>
Total Contract Price Including Taxes	1,694,590
Less: HST Rebate	<u>-168,559</u>
Net Contract Price	<u>\$1,526,031</u>

Note 1: The additional funding requirement for this project is available as a drawdown from Water Works Renewal Reserve Fund. The uncommitted balance in the reserve fund will be approximately \$64.3 million with the approval of the project. The additional funding requirement also accounts for approximately \$18,000 of miscellaneous project expenditures.

Kyle Murray
Director, Financial Planning & Business Support

hb