
Subject: Award of Contract 2018-T-116: Niagara Falls Water Treatment Plant Phase II Upgrades

Report to: Public Works Committee

Report date: Tuesday, September 10, 2019

Recommendations

1. That Contract 2018-T-116 Niagara Falls Water Treatment Plant Phase II Upgrades **BE AWARDED** to Maple Reinders Constructors Ltd. at their bid price of \$12,667,413.00 (including 13% HST).
2. That the gross budget for the Niagara Falls Water Treatment Plant Phase II Upgrades project **BE INCREASED** by \$2,637,129.00 and that the increase **BE FUNDED** from the Capital Variance - Water Reserve.

Key Facts

- The purpose of this report is to seek Council's approval for an increase to the gross budget for project 20000460 (Niagara Falls Water Treatment Plant Phase II Upgrades) and to award contract 2018-T-116 to Maple Reinders Constructors Ltd. at their bid price of \$11,210,100.00 (excluding 13% HST).
- Schedule B of Niagara Region Procurement By-law 02-2016 as amended on February 28, 2019 requires Council approval for all Tender awards in excess of \$5,000,000.
- A gross budget increase of \$2,637,129.00 is required due to higher than estimated tender prices resulting from unknown risks associated with structural restoration, seasonal demands and process upgrades, as well as to ensure the project is completed on time to meet funding requirements.
- Proposed upgrades include structural rehabilitation and process and mechanical replacements of the interior of the filter buildings (plants 1 and 2), and structural rehabilitation of the exterior of high lift pumping station building and chemical storage building.
- Construction is scheduled from October 2019 to July 2020, with a milestone completion on March 31, 2020 (for funding purposes).
- On July 3, 2019 Niagara Region initiated a competitive public tender process (2018-T-116), to solicit competitive bids from General Contractors for these works. The tender closed on August 8, 2019. The tender opening was deferred until September 4, 2019. Three (3) bids received, two (2) bids were opened with the lowest compliant bid being received from Maple Reinders Constructors Ltd. at their bid price of \$11,210,100.00 (excluding 13% HST and including 10% construction contingency, excluding provisional items).

- This project is eligible for funding from the CWWF for a combined federal and provincial contribution of \$2,808,000.00. The Contract includes provision to ensure that the value of work required to receive the full remaining eligible funding is complete by the funding deadline of March 31, 2020.

Financial Considerations

Project 20000460 (NFWTP Phase II Upgrades) has a previously approved capital budget of \$10,115,000. Partial Federal and Provincial funding of \$2,808,000 has been awarded to this project through the Clean Water and Wastewater Fund (CWWF).

While reconciling the overall project costs to date with the construction related costs, a budget increase of \$2,637,129.00 (inclusive of 1.76% non-refundable HST) is required. The increase is required as the low bid tender price came in higher than the original tender estimate due construction risks associated with structural restoration, seasonal demands and process upgrades of the aging infrastructure at the facility. The project must be completed on time to meet funding requirements. In addition, consulting engineering services for WSP and speciality inspection as well as internal staff are expected to increase given the complexity of work, highly regulated environment and unknown risks.

This will increase the total project budget to \$12,752,129.00 and is to be funded from the Capital Variance Reserve – Water. The recommended budget increase will not impact the previously approved CWWF funding, however a provision has been included in the contract to ensure the work required for the eligible funding is completed by the funding deadline of March 31, 2020.

A full budget breakdown can be found in Appendix 3 – Total Estimated Project cost.

It should be noted that from January 1, 2019 to September 5, 2019, there was \$3,130,733 returned to the Capital Variance Reserve - Water and requests totalling \$847,110, resulting in a net return of \$2,283,623 to the Capital Variance Reserve – Water. As of September 5, 2019 the Capital Variance Reserve – Water has an uncommitted balance of \$3,284,115.

Analysis

Niagara Region owns and operates the Niagara Falls Water Treatment Plant (NFWTP) located at 3599 Macklem Street in the City of Niagara Falls. The NFWTP was originally constructed in 1932 (Plant 1) and expanded in 1950 (Plant 2) with further modifications in 1980 and in 2005. The plant is rated at 145.5 ML/d and services the City of Niagara Falls, and parts of the City of Thorold and the Town of Niagara-on-the-Lake via a water main network, pumping stations, and service reservoirs. The raw water intake draws

from the Welland River at the mouth of the Niagara River. Appendix 1 includes a key plan of the NFWTP.

The 2017 Master Servicing Plan (MSP) shows that the existing service area for the NFWTP is approximately 163,000 people (combined residential and employment), which includes the Decew WTP interconnections. Growth is anticipated to be approximately 60,000 by 2041 (combined residential and employment). Although demands will increase, the NFWTP has surplus capacity to support the growth within Niagara Falls, Niagara-on-the-Lake and South Thorold. System storage optimization and increased transmission capacity is required to accommodate growth and will be included in separate projects.

Plant 1 and 2 require sustainability improvements, specifically in the filter rooms and pipe galleries. The Contract also includes exterior building works that have been included due to similarities in scope to that of the filter improvements. The following is the scope of work for this project:

Proposed interior works include:

- Lead paint removal and abatement for all interior concrete surfaces (including Filter Plant 1 and 2, Plant 1 Pipe Gallery and Backwash Water Pump Room);
- Application of a high performance epoxy coating for above-tank walls, columns and ceilings;
- Filter room miscellaneous upgrades (floor coating and handrail);
- Filter troughs replacement and rehabilitation;
- Inlet sluice gates and drain gates replacement (Plant 2 only);
- Filter underdrain inspections (during construction);
- Structural rehabilitation and application of durable engineered (NSF 61) cementitious coatings in filter tanks.
- Filter media replacement;
- Replacement of twelve (12) mechanical heaters on the main floor;

Proposed exterior works include:

- Structural rehabilitation, coatings and caulking of filter buildings, high lift pumping station building and chemical storage building;
- Plant entrance stairs and barrier free accessibility ramp;

The provisional items from the tender in the amount of \$396,000.00 will not be awarded at this time.

WSP Canada Inc. (WSP) was retained by Niagara Region through 2017-RFP-08 to complete the detailed design and tendering. Contract administration and inspection services were evaluated during the original RFP period, and will be awarded following award of this Contract.

In accordance with Niagara Region Procurement By-law 02-2016 as amended on February 28, 2019 and under the guidance of the Region's Procurement Department, a public tender process was initiated on Wednesday, July 3, 2019. While the tender did close on Thursday, August 8, 2019, staff advised all bidders in attendance and issued an addenda the same day, the public opening for this project was deferred. On Friday August 30, 2019, a post-closing addenda was posted, providing a 48 hour notice confirming tender opening rescheduled for September 4, 2019.

Tender opening occurred on Wednesday, September 4, 2019 and of the three (3) bids received, two (2) were opened with the lowest compliant bid being received from Maple Reinders Constructors Ltd. at their bid price of \$12,667,413.00 (including 13% HST and 10% construction contingency, excluding provisional items).

The Region's Procurement Department has reviewed and checked all opened tenders to confirm they included acknowledgment of the correct number of Addenda and requisite Bid Security (tender deposit) and Surety (Agreement to Bond).

A summary of the bid submissions which were opened is included in Appendix 2.

Contract award requires resources from Legal Services and Purchasing Services in order to execute the required contract documents. Water and Wastewater Engineering staff will be providing resources throughout the project in order to manage the contract with assistance from Corporate Services on contract/project payments.

Alternatives Reviewed

1. Proceed with contract award – This alternative would enable staff to proceed with contract award to Maple Reinders Constructors Ltd. to prolong the service life of the existing NFWTP Structure with functional and aesthetics upgrades, reduce energy consumption from obsolete equipment, improve the plant operation performance and water quality and enhance the health and safety of the plant operation staff. Proceeding with the contract award at this time will help the Region ensure that the eligible CWWF funds are secured by March 31, 2020.
2. Do Nothing – This alternative does not adequately address the operation and maintenance issues currently experienced at the NFWTP. This would also present funding risk for the CWWF funding allocation.

Staff recommend alternative 1 to proceed with Contract award to Maple Reinders Constructors Ltd.

Relationship to Council Strategic Priorities

This recommendation is related to the Fostering Growth strategic priority since the planned upgrades will ensure reliable infrastructure to support growth and economic development within the City of Niagara Falls.

Other Pertinent Reports

N/A

Prepared by:

Lisa Vespi, P.Eng., PMP
Senior Project Manager, WWW
Engineering
Public Works Department

Recommended by:

Catherine Habermehl
Acting Commissioner
Public Works Department

Submitted by:

Ron Tripp, P.Eng.
Acting Chief Administrative Officer

This report was prepared in consultation with Tony Cimino, C.E.T., Associate Director, W-WW Engineering; and Pamela Hamilton, Program Financial Specialist W-WW, and reviewed by Joseph Tonellato, P.Eng, Director W-WW; and Bart Menage, Director, Procurement and Strategic Acquisitions.

Appendices

Appendix 1	Key Plan	6
Appendix 2	Summary of Bids	7
Appendix 3	Total Estimated Project Cost	8