

Amendment to Purchase Order Number 6045927 for Detailed Design Services for the Sheppard Avenue and Leslie Street Sanitary Sewer Upgrades Project

Date: May 12, 2022

To: Infrastructure and Environment Committee

From: Chief Engineer and Executive Director, Engineering and Construction Services and Chief Procurement Officer, Purchasing and Materials Management

Wards: 17 (Don Valley North)

SUMMARY

The purpose of this report is to request authority to amend Purchase Order Number 6045927 issued to Associated Engineering (Ont.) Limited for additional detailed design services for the Sheppard Avenue East and Leslie Street Sanitary Sewer Upgrades Project. The amendment is needed to incorporate Council adopted environmental initiatives in the design of buildings associated with this Project.

The total value of the Purchase Order Amendment being requested is \$589,202 net of all applicable taxes and charges (\$599,572 net of HST recoveries), revising the current Purchase Order value from \$1,909,123 net of all applicable taxes and charges (\$1,942,724 net of HST recoveries) to \$2,498,326 net of all applicable taxes and charges (\$2,542,296 net of HST recoveries).

RECOMMENDATIONS

The Chief Engineer and Executive Director, Engineering and Construction Services and the Chief Procurement Officer, Purchasing and Materials Management recommend that:

1. The Infrastructure and Environment Committee, in accordance with Section 71-11.1.C of the City of Toronto Municipal Code Chapter 71 (Financial Control By-Law), grant authority to amend Purchase Order Number 6045927 and amend the agreement with Associated Engineering (Ont.) Limited, for the provision of additional engineering design services and additional contingency allowance funds for the Sheppard Avenue East and Leslie Street Sanitary and Watermain Upgrades project by an additional amount of \$589,202.25 (net of all taxes and charges), revising the current Purchase Order contract value from \$1,909,123 (net of all taxes and charges) to \$2,498,325.68 (net of all taxes and charges and \$2,542,296.21 net of HST recoveries).

FINANCIAL IMPACT

Funding for this Purchase Order Amendment is included in the Toronto Water Approved 2022 Capital Budget and 2023-2031 Capital Plan under WBS Element CWW480-02 with forecasted expenditures as shown in Table 1 (net of HST recoveries).

Table 1: Projected Cash Flow - Purchase Order & Amendment Number 6045927

Year	DCW - Phase 1 - Offline Storage Tank at Sheppard/Leslie CWW480-02 (net of HST recoveries)
2022	\$140,000
2023	\$ 90,000
2024	\$ 70,000
2025	\$299,572
Total	\$599,572

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

At its meeting on August 18, 2021, the Bid Award Panel adopted recommendations in staff report BA149.3 and granted authority to award Contract 20ECS-MI-01DC, Ariba Document Number 2950051301, for the construction of the Phase 1 project 675mm Sanitary Sewer and River Stabilization at 1240 Sheppard Avenue East to Drainstar Contracting Limited in the amount of \$21,481,849 (net of all applicable taxes and charges and \$21,859,929 net of HST recoveries), having submitted the lowest compliant bid and meeting the specifications in conformance with the Tender requirements. A copy of the Decision Document can be found at: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.BA149.3>

On September 6, 2017, Bid Award Panel adopted recommendations in staff report BA39.2 to grant authority to award Request for Proposal Number 9117-17-7046 to Associated Engineering (Ont.) Limited, being the highest scoring proponent meeting the Request for Proposal requirements, for the provision of preliminary and detailed design services, services during construction and post-construction services for the Sheppard Avenue and Leslie Street Sanitary and Watermain Upgrades project, in the amount of \$4,611,452 (net of all applicable taxes and charges and \$4,692,614 net of HST recoveries). A copy of the Decision Document can be found at: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.BA39.2>

COMMENTS

Background

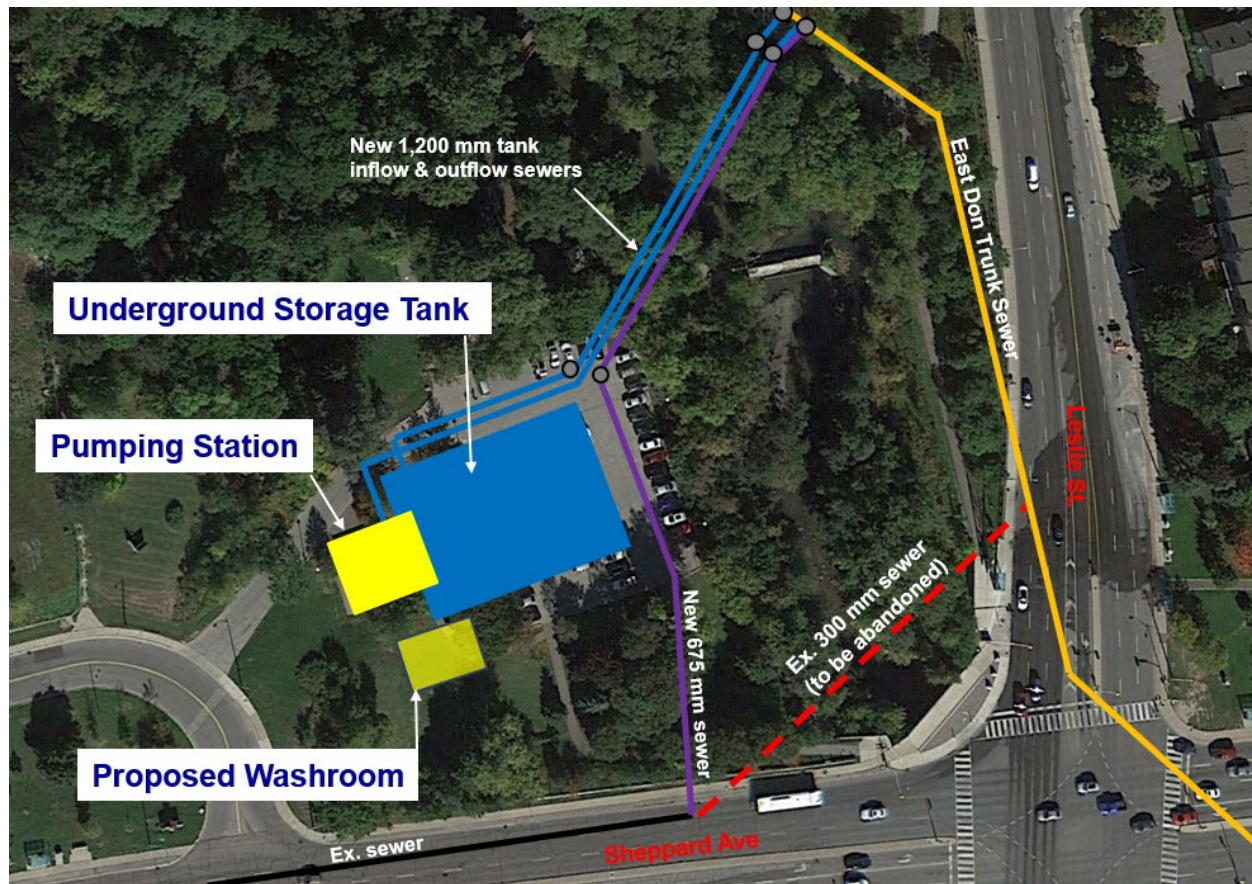
The overall scope of work for the Sheppard Avenue and Leslie Street Sanitary Sewer Upgrades Project was defined in a Municipal Class Environmental Assessment study completed in 2012, by Marshall Macklin Monaghan. The objective of the Project is to provide additional storage capacity through construction of a new off-line underground storage tank for the East Don River Sanitary Trunk Sewer. The project will also provide additional sanitary sewer capacity along Sheppard Avenue East to allow for future development growth.

The scope of work associated with this Project includes the design and construction of the following main infrastructure elements (see Figure 1):

- A 4500 cubic meter off-line dry weather storage tank, including a pumping station building to drain the tank and a 1200mm diameter sewer crossing under the East Don River to connect the tank to the East Don River sanitary trunk sewer.
- Abandonment of the existing under-sized 300mm diameter sanitary sewer crossing under the East Don River and replacement with a 675mm diameter sanitary sewer, which connects the existing 525mm sanitary sewer (running along Sheppard Avenue from Bayview Avenue to Leslie Street) with the existing 1200mm East Don River sanitary trunk sewer (running just west of and parallel to Leslie Street).

Based on the above conceptual and preliminary design work, the Request for Proposal and base scope of work in Associated Engineering's detailed design assignment included an underground storage tank located centrally under the existing East Don Parkland parking lot with a pumping station building located on the east side of the tank. An existing Parks, Forestry & Recreation public washroom and maintenance building (located west of the tank) was to be left as-is above the 100 year floodplain.

Figure 1: Site Plan – Showing components of the Sanitary Sewer Upgrades project at the East Don Parkland at the North West corner of Sheppard Avenue East and Leslie Street



Project Scope Changes During Detailed Design

The original scope of work included a tunnelled crossing of the new sanitary sewer under the East Don River. During design, it was determined that the riverbed elevation had lowered to an extent that precluded a tunnelled gravity sanitary sewer. This new design approach to open cut across the river required a series of additional geo-environmental investigations, studies, designs and permit applications for raising of the riverbed by 1 metre, temporarily re-routing of the river using a cofferdam, followed by a final realignment of the river and stream stabilization work. This additional scope of work was funded through and effectively depleted the contract contingency allowance.

Also during the design phase, a review of the preliminary design work determined that the pumping station building should, instead, be relocated to the west side of the tank, above the 100 year flood plain. This location meant that the existing public washroom building was in conflict with the pumping station and needed to be demolished and rebuilt to south-west of the tank, as shown in Figure 1.

This additional design work was approved through a Purchase Order Amendment of \$400,000 (net of all taxes and charges) on August 3, 2020, revising the design phase

Purchase Order value from \$1,509,123 (net of all taxes and charges) to \$1,909,123 (net of all taxes and charges).

Additional Detailed Design Services

As the design work advanced, Council adopted environmental initiatives which affected the design of the pumping station and the Parks Forestry and Recreation washroom buildings. These included: the Toronto Green Standard Version 4 (adopted by Council July 14, 2021 and came into effect on May 1, 2022); and the TransformTO Net Zero Strategy (adopted by Council December 15, 2021). A copy of the Council Decision Documents can be found as follows:

- Toronto Green Standard Review and Update:
<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.PH25.17>
- TransformTO – Critical Steps for Net Zero by 2040:
<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.IE26.16>

The following summarizes the features to be incorporated in the design of these buildings:

- Toronto Green Standard features: a white roof; enhanced stormwater management site features such as permeable pavement, soak-away pits and bio-swales; bird-friendly windows; the use of low greenhouse gas intensity construction materials; energy efficient equipment and low-flow plumbing fixtures; and
- TransformTO Net Zero Strategy features: a rooftop photovoltaic solar energy generation system; an energy feed-in system to direct and sell energy back into the Hydro grid; floors, walls, windows, doors and roofs designed to provide significantly increased levels of insulation and air-tightness to achieve a highly energy efficient building envelope; air source heat pumps and energy recovery systems powered without fossil fuels.

Associated Engineering has submitted a quotation for \$219,202 (net of all taxes and charges and \$227,602 net of HST recoveries) to complete the additional detailed design.

As noted above, the existing contingency allowance was utilized in the scope change for the open cut construction of the new sanitary sewer across the East Don River. The project design is at approximately 65% and staff are recommending incorporating a contingency allowance of \$370,000 (net of all taxes and charges) to address any future unforeseen design issues, which may arise during the remaining design phase of the project.

The total Purchase Order Amendment being requested is \$589,202 (net of all taxes and charges), revising the current Purchase Order contract value from \$1,909,123 (net of all taxes and charges) to \$2,498,326 (net of all taxes and charges and \$2,542,296 net of HST recoveries).

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SIGNATURE

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