

# **Amendment to Purchase Order Number 6050321 with CH2M HILL Canada Limited for Professional Engineering Services for the Port Lands Sewage Pumping Station and Forcemain/Gravity Sewer for Engineering and Construction Services**

**Date:** June 2, 2025

**To:** General Government Committee

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

**Wards:** 14 (Toronto-Danforth)

## **SUMMARY**

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The purpose of this report is to request authority to amend Purchase Order Number 6050321, awarded under Request for Proposal (RFP) Number 9117-19-7150, issued to CH2M HILL Canada Limited (Jacobs), for professional engineering services for the Port Lands Sewage Pumping Station and Forcemain/Gravity Sewer project.

The total value of the Purchase Order Amendment being requested is \$900,000 net of all taxes and charges (\$915,840 net of Harmonized Sales Tax Recoveries), revising the current Purchase Order value from \$5,094,163 net of all taxes and charges to \$5,994,163 net of all taxes and charges (\$6,099,660 net of Harmonized Sales Tax Recoveries).

The requested amendment is for professional engineering design services related to changes to the design of the Port Lands Sewage Pumping Station and Forcemain/Gravity Sewer, and to accommodate short-term and long-term operating conditions, as requested by Toronto Water. This adjustment is expected to reduce the future construction costs.

## **RECOMMENDATIONS**

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

Amendment to Purchase Order Number 6050321 with CH2M HILL Canada Limited for Professional Engineering Services for the Port Lands Sewage Pumping Station and Forcemain/Gravity Sewer

1. The General Government Committee, in accordance with section 71-11.1C of the City of Toronto Municipal Code Chapter 71 (Financial Control Bylaw), grant authority to amend Purchase Order 6050321 with Jacobs, for professional engineering services for the Port Lands Sewage Pumping Station and Forcemain/Gravity Sewer project will be increased by a value of \$900,000 net of all taxes and charges (\$915,840 net of Harmonized Sales Tax Recoveries) from \$5,094,163.00 net of all taxes and charges to \$5,994,163 net of all taxes and charges (\$6,099,660 net of Harmonized Sales Tax Recoveries).

## **FINANCIAL IMPACT**

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The total value of the Purchase Order Amendment identified in this report is \$900,000 net of all taxes and charges (\$915,840 net of Harmonized Sales Tax Recoveries).

Funding is included in Toronto Water's 2025 Capital Budget and 2026-2035 Capital Plan. Funding details with forecasted expenditures (net of Harmonized Sales Tax Recoveries) are summarized in Table 1.

**Table 1: Financial Impact Summary of Purchase Order Number 6050321**

WBS Element	Description	2025	2026	Total (net of Harmonized Sales Tax recoveries)
CWW453-03	Port Lands SPS and Forcemain/Gravity Sewer Design Services	\$765,840	\$150,000	\$915,840

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

## **DECISION HISTORY**

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At its meeting held on February 5, 2020, the Bid Award Panel adopted the recommendations in the staff report from the Chief Purchasing Officer dated February 5, 2020, and approved Item BA65.2 Award of Request for Proposal Number 9117-19-7150 to CH2M Hill Canada Limited (Jacobs) for the new Port Lands Sewage Pumping Station and Forcemain/Gravity Sewer. A copy of the Bid Award Panel document can be found at: <https://secure.toronto.ca/council/agenda-item.do?item=2020.BA65.2>

## COMMENTS

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### Background

The City of Toronto undertook the development of the Waterfront Sanitary Servicing Master Plan (WSSMP) in 2010 to identify a long-term wastewater servicing strategy for the central waterfront area of the City of Toronto. In 2017, an update to the WSSMP Environmental Assessment identified requirements for a new Port Lands Sewage Pumping Station (SPS) at 545 Commissioners Street with future expansion capacity for 2041 to reflect changes in the sanitary development plans. In 2020, RFP 9117-19-7150 was awarded to Jacobs for the engineering design and contract administration of the new Port Lands SPS.

The project is currently at 50% Detailed Design and is expected to be completed by mid 2026 (design phase). The project consists of two main elements 1) The pumping station with ultimate capacity of 1300 l/s on a long-term basis and a capacity of 550 l/s on a short-term basis; and 2) the forcemain/gravity sewer that is 1200 mm diameter and approximately 1.4 km long.

### Purchase Order Amendment 6050321 for Detailed Design Services

During the design a number of changes were identified that will benefit the City as well as the community during construction and are outlined below.

### Change in Design Flow

The original design of the Port Lands Pumping Station (defined in the RFP) was required to accommodate a flow capacity of 1,106 l/s based on population projections in the Port Lands Catchment Area. New population projections provided by the City during the design increased the required pump station capacity to 1,300 l/s based on future flow projection. As the design progressed, Toronto Water requested a change in this approach and sought change to design the pumping station and forcemain/gravity sewer for a reduced capacity of 550 l/s, due to immediate developmental and infrastructure needs, and immediate construction cost saving measures. However, the pumping station still had to be designed with provisions for the ultimate maximum capacity of 1300 l/s, as defined earlier, to accommodate the flows which will eventually increase in the future when the population in the Port Land's development reaches the originally planned level. The revised design included an increase in the size of the wet-well tank, as well as the associated changes to the pump station building mechanical equipment, electrical elements and emergency power design. This change in scope is estimated to cost \$150,000.

### Change from Open Cut to Micro-Tunneling

The original RFP design assumed open cut construction for the pumping station discharge forcemain/sewer. As this construction methodology was thoroughly evaluated during the design many construction challenges were identified considering utility

congestion and interferences that would result in full road closures and impact to local community and the environment with mud, dust and noise pollution. As a result, it was decided to change construction methodology to micro-tunneling to convey sanitary flows from the Pumping Station to the discharge point at the Carlaw Interconnection Sewer (CIS). This change in methodology will result in lower construction costs, better system performance and more efficient hydraulics. In addition, it will mitigate future operational and maintenance costs and issues, since it will accommodate both long-term and short-term servicing requirements. This change in methodology is estimated to increase the design cost by \$300,000.

### **Change in Tunneling Alignment**

Upon review of the geotechnical investigation reports, completed in the initial stages of the project as part of the base scope, Jacobs recognized unstable and mixed soil conditions along the alignment of the discharge forcemain/sewer (tunnel) which would make tunneling much more complex and costly. To mitigate this issue further geotechnical investigation had to be completed. Based on the results of the additional investigations a decision was made to change the alignment of the tunnel, by lowering the tunnel by two meters (2m) to mitigate constructability issues and a possible settlement during construction. The unforeseen soil conditions, discovered through the geotechnical investigation, which the consultant could not have anticipated, are estimated to increase in the design costs by \$100,000.

### **Sewer Discharge Point and New Structure**

The RFP base scope included a discharge point at an existing chamber near the CIS, however after further investigations of the chamber, during the design, poor conditions were discovered, and it was concluded that the chamber integrity may be compromised during construction and made a decision to modify the connection point and instead have the new sewer discharge connected to the CIS directly. This change requires a design of the new connection structure and hence is an additional effort. This approach will reduce construction costs and avoid unforeseen risks and construction delays and will also significantly reduce traffic interruption and prevent road closure and avoid impact to local residents. This change in base scope is estimated to cost \$50,000.

This is the second amendment request for additional funding of 900,000 net of all taxes and charges (\$915,840 net of Harmonized Sales Tax Recoveries). The previous amendment of 500,000 net of all taxes and charges was processed on February 24, 2023.

The requested amendment is to cover scope changes that require additional design engineering services. The amendment also includes a reserved allowance should any unknown additional work be required during the remainder of the design.

## **CONTACT**

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## **SIGNATURE**

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