



REPORT FOR ACTION

Amendment of Purchase Order No. 6048934 to GHD Limited for the Provision of Professional Services for Humber Treatment Plant Rehabilitation and Upgrades

Date: June 18, 2020

To: Infrastructure and Environment Committee

From: General Manager, Toronto Water Division and Chief Purchasing Officer

Wards: Ward 3 – Etobicoke-Lakeshore

SUMMARY

The purpose of this report is to request the authority to amend Purchase Order No 6048934 issued to GHD Limited for Provision of Professional Services for Humber Treatment Plant Rehabilitation and Upgrades awarded under RFP No. 9117-18-7205. The amendment is needed to increase the total value of contingencies and allowances in order to mitigate risk to the project, ensuring that the desired scope is covered and to address any unforeseen issues during construction.

This report recommends that the purchase order be amended by \$750,000 net of all taxes and charges, revising the current value from \$6,232,660 net of all taxes and charges to \$6,982,660 net of all taxes and charges.

RECOMMENDATIONS

The General Manager of Toronto Water and Chief Purchasing Officer recommend that:

1. The Infrastructure and Environment 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 No. 6048934 with GHD Limited for Professional Services for Humber Treatment Plant Rehabilitation and Upgrades by an additional amount of \$750,000 net of all taxes and charges (\$763,200 net of HST recovery), revising the current purchase order value from \$6,232,660 net of all taxes and charges (\$6,342,355 net of HST recovery) to \$6,982,660 net of all taxes and charges (\$7,105,555 net of HST recovery).

FINANCIAL IMPACT

Amendment of Purchase Order No. 6048934 by an additional amount of \$750,000 net of all taxes and charges, \$847,500 including taxes (\$763,200 net of HST recovery) will increase the current purchase order value from \$6,232,660 net of all taxes and charges,

\$7,042,906 including taxes (\$6,342,355 net of HST recovery) to \$6,982,660 net of all taxes and charges, \$7,890,406 including taxes (\$7,105,555 net of HST recovery).

Funding availability is included in the Toronto Water 2020 Approved Capital Budget and 2021-2029 Approved Capital Plan as summarized in Table 1 below.

Table 1 - Financial Impact Summary

WBS Element	Description	2021	2022	Total (net of HST recovery)
CWW037-18	HTP Process Upgrades	\$254,400	\$508,800	\$763,200

The Chief Financial Officer and Treasurer has reviewed this report and is aware of the financial impact information.

DECISION HISTORY

Bid Award Panel adopted Item No. BA22.6 at its meeting held on April 24, 2019, thereby authorizing the award of Contract TW-CWD-19-05604, RFP No. 9117-18- 7205 for Humber Treatment Plant Rehabilitation and Upgrades to GHD Limited, in the amount of \$6,232,660 net of all taxes and charges, from the date of award for a 248 week period. The Bid Award Panel decision can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.BA22.6>

Purchase Order 6048934 to GHD Limited was issued in the amount of \$6,232,660 net of all taxes and charges.

COMMENTS

1. Humber Treatment Plant Rehabilitation and Upgrade Project

The Humber Treatment Plant (HTP) is one out of four (4) wastewater treatment plants serving the City of Toronto. The HTP is a secondary treatment facility located on 45.3 hectares at the mouth of the Humber River. The HTP services a population of approximately 651,000 to the west portion of the City and a small portion of the City of Mississauga. The plant is rated at an average day flow of 473,000 m³/day and operates continuously throughout the year.

The City has embarked on a comprehensive project to rehabilitate and upgrade plant wide process and maintenance support services at the HTP and has retained GHD Limited to provide professional services related to this project. The scope of work includes all the engineering services related to design, construction and post-construction engineering services for upgrades to the following existing facilities and processes:

- a) Plant-wide hot water system;
- b) Plant-wide HVAC system
- c) Digesters;
- d) Sludge thickening;
- e) South primary;
- f) Head house;
- g) North grit;
- h) Rehabilitation and transformation of the old substation into a workshop;
- i) Secondary Treatment; and
- j) Miscellaneous related upgrades.

The duration of this project is currently estimated at five (5) years (2019-2025) allowing two (2) years for design and three (3) years for construction.

2. Amendment of Purchase Order No. 6048934 to GHD Limited

Work on this project began in 2019 and is currently at the end of preliminary design phase. The detailed design phase is about to begin.

The total value of contingencies and allowances under Purchase Order 6048934 issued to GHD Limited is \$657,000 net of all taxes (10.5% of the purchase order value) for both design and construction phases. Contingency allowances support a project's overall risk management strategy by making an allowance for any cost changes. These pre-determined sums or percentage allowances are included in the cost estimate to allow for unpredictable changes in the project. The City holds the budget for use by the designers to ensure that all desired scope is covered.

Since the start of work, change orders have been issued for additional scope totalling \$669,852 net of all taxes. The most significant changes were as follows:

(i) Additional Services Related to the New North Boiler Building

The base scope of work included replacement of the existing boilers located in the North Boiler Building with larger capacity boilers in order to meet the plant's demand. During preliminary design, after the new boiler selection, it was concluded that the existing North Boiler Building is too small to accommodate the new boilers and a new building is required. The cost of this additional work is \$328,060 net of all taxes and includes professional services for both design and construction phases.

(ii) Additional Services Related to Air Handling

In order to improve monitoring of the Humber Treatment Plant (HTP) systems it is necessary to upgrade and integrate the Engine House with a new, plant wide Building Automation System (BAS). The Engine House heating and ventilation system is a complex system with large quantities of ventilation and heating equipment. The system has many process interlocks, and the plant heating system within it is required to keep the treatment process operational at the plant. A new BAS is required with hardwired safety including combustible gas detection and fire alarm interlocks, and software

interlocks for various fan settings. The cost of this additional work is \$179,414 net of all taxes and includes professional services for both design and construction phases.

(iii) Additional Services Related to Structural Upgrades

During the preliminary design, structural upgrades to provide access to three additional locations were identified that were beyond the base scope: additional exterior roof access; additional rooftop guards for the engine house; and access lighting in the Gas Compressor Building. The cost of this additional work is \$84,144 net of all taxes and includes professional services for both design and construction phases.

Given that the project is currently at the end of preliminary design phase, additional change orders may be needed during detailed design and construction phases over the next four (4) years to ensure that the desired scope is covered and to address any unforeseen issues during construction. In order to mitigate risk to the project, it is recommended to increase the total value of contingencies and allowances by \$750,000 to \$1,407,000 net of all taxes (20.2% of the amended purchase order value).

CONTACT

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SIGNATURE

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General Manager, Toronto Water

Michael Pacholok
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