

Amendment to Purchase Order No. 6047050 with AECOM Canada Limited for the Construction of the King-Liberty Pedestrian/Cyclist Bridge over the Metrolinx Rail Corridor

Date: September 1, 2020

To: Infrastructure and Environment Committee

From: Chief Engineer and Executive Director, Engineering and Construction Services Division and Chief Procurement Officer

Wards: 10

SUMMARY

The purpose of this report is to request authority to amend Purchase Order No. 6047050 with AECOM Canada Limited for professional services associated with contract administration and site inspection services for the construction of King-Liberty Pedestrian/Cyclist Bridge over the Metrolinx Rail Corridor. This amendment is being requested due to project delays caused by COVID-19 impacts, the Metrolinx permitting process, and complex elevator construction issues, which has resulted in the need for 39 additional weeks of contract administration services for the successful completion of the project.

The total value of the Purchase Order Amendment being requested is \$256, 815 net of all taxes and charges (\$261,335 net of HST recoveries), revising the current purchase order value from \$882,481 net of all taxes and charges (\$898,013 net of HST recoveries) to \$1,139,296 net of all taxes and charges (\$1,159,348 net of HST recoveries).

RECOMMENDATIONS

The Chief Engineer and Executive Director of Engineering and Construction Services Division and the Chief Procurement Officer 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 No. 6047050 with AECOM Canada Ltd. for the provision of professional services associated with contract administration and site inspection for the construction of the King-Liberty Pedestrian/Cyclist Bridge in the

amount of \$256,815 net of all taxes and charges (\$261,335 net of HST recoveries), revising the current purchase order value from \$882,481 net of all taxes and charges (\$898,013 net of HST recoveries) to \$1,139,296 net of all taxes and charges (\$1,159,348 net of HST recoveries).

FINANCIAL IMPACT

The Purchase Order Amendment request included in this report will increase the total value of the professional contract administration services assignment by \$256,815 net of all taxes and charges (\$261,335 net of HST recoveries). This revises the current purchase order value from \$882,481 net of all taxes and charges (\$898,013 net of HST recoveries) to \$1,139,296 net of all taxes and charges (\$1,159,348 net of HST recoveries).

Funding for the purchase order amendment is available in the 2020-2029 Approved Capital Budget and Plan for Transportation Services (City Bridge Rehabilitation Program and City Bridge Rehabilitation Critical Program) as summarized in Table 1 below (net of HST recoveries):

Table 1: Financial Impact Summary for Purchase Order No. 6047050

Year	CTP815-60-01 (King Liberty Pedestrian/Cyclist Bridge)
2020	\$180,925
2021	\$80,410
Total	\$261,335

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

DECISION HISTORY

On June 1, 2016, by authority of the Bid Committee, the City retained AECOM Canada Limited for the provision of professional engineering services associated with Request for Proposal No. 9117-16-5008 for the design, contract administration and post construction services for the King-Liberty Pedestrian/Cyclist Bridge over Metrolinx Rail Corridor. The total fee for this professional engineering services assignment was \$833,245 (net of all taxes and charges). Two purchase orders were subsequently issued to AECOM Canada Ltd. under this assignment: Purchase Order No. 6043863 for design services in the amount of \$443,956 (net of all taxes); and Purchase Order No. 6047050 for contract administration services in the amount of \$385,725 (net of all taxes). A Purchase Order for post construction services in the amount of \$3,564 (net of

all taxes) will be subsequently issued towards the end of the warranty period. A copy of the Bid Committee Decision Document can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.BD85.1>

On June 6, 2018, by authority of the Bid Award Panel, Contract No. 17ECS-TI-01BE (Tender Call No. 56-2018) for construction of King-Liberty Pedestrian/Cyclist Bridge over Metrolinx Rail Corridor, was awarded to Grascan Construction Ltd./Torbridge Construction Ltd., in the amount of \$11,436,000 (net of all taxes and charges). A copy of the Bid Award Panel Decision Document can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2018.BA80.6>

COMMENTS

Background

In 2011 Transportation Services completed a Municipal Class Environmental Assessment (EA) for a new pedestrian/cyclist crossing of the Metrolinx Rail Corridor in the Liberty Village area. The recommended pedestrian/cycling bridge, known as the King-Liberty Pedestrian/Cyclist Bridge, connects Douro Street on the north side and Western Battery Road on the south side, west of Strachan Avenue over the Metrolinx Rail Corridor, as shown in Attachment 1. A key design feature of this new pedestrian/cycling bridge is the use of elevators rather than ramps to provide access to users. Elevators (and stairs) on both the north and south sides provide 24-hour, barrier-free access, and, yield the smallest footprint and least impact to adjacent properties and streets. Detailed design of the new bridge and elevator buildings commenced after Metrolinx completed its nearby Strachan Avenue overpass project in 2015.

In June, 2016 the City retained AECOM Canada Ltd. (AECOM) through a Request for Proposal (RFP) for the professional services related to design, contract administration during construction, and post construction services for the King-Liberty Pedestrian/Cyclist Bridge over the Metrolinx Rail Corridor. The scope of the work included an estimated 40 weeks of contract administration during construction.

Previous Purchase Order Amendment (POA) for Contract Administration Services

Upon completion of the design assignment of the King-Liberty Pedestrian/Cyclist Bridge the estimated duration for the construction of the above bridge was revised from 40 weeks to 50 weeks. In order to provide continuous contract administration and full time site inspection, a Change Order was issued to AECOM to extend the contract administration services during construction by 10 weeks from 40 weeks (estimated in the original RFP) to 50 weeks duration.

The City awarded Contract 17ECS-TI-01BE to Grascan Construction Ltd./Torbridge Construction Ltd. (Grascan/Torbridge) on June 8, 2018 to provide construction services for the construction King-Liberty Pedestrian/Cyclist Bridge via competitive tendering process. The construction duration established in the tender documents was 50 weeks of construction.

Following the commencement of construction Engineering and Construction Services Division staff encountered a number of complex challenges and issues associated with the construction of the new bridge. These challenges and issues are summarized below.

During the early stages of construction, Grascan/Torbridge worked to obtain the necessary permits from Metrolinx (MX) that were required to complete the bridge work adjacent and over the Metrolinx Rail Corridor. Five separate permit applications were required by MX, each requiring several iterations of submissions. The timelines and effort on behalf of both the Contractor and Consultant were far beyond what was anticipated and/or planned by the City which was based on the experience from other past projects. As a result, the City approved an extension of time of 12 weeks to the Contractor as a result of the delays to the schedule caused by the MX permitting process.

During the initial phase of the project, the Contractor assessed the constructability of the bridge which was anticipated to be placed over the Rail Corridor in a single unit in the original design. Following a detailed review of the site constraints, including the available laydown areas, a revision to the design was prepared by AECOM that allowed for transportation of the bridge to the site in 4 sections. The revision allowed 2 sections of the bridge to be connected on Douro Street on the north side and 2 sections to be connected on Western Battery Road on the south side. The 2 parts of the bridge were then assembled within the rail corridor just prior to hoisting into place. The new design alternative caused additional delays related to finalizing the shop drawings and commencing the steel truss fabrication.

After encountering the above delays, MX established a summer construction black-out that did not allow the Contractor to apply for a permit to hoist the bridge into place in July or August, 2019. As a result, the steel truss for the bridge was hoisted into place over the rail corridor on September 15, 2019, as shown in Attachment 2.

In the period following the truss installation the Contractor required additional MX permits for placement of roofing panels, pouring deck concrete and glazing and framing work over the live rail corridor. Each permit application resulted in multiple iterations and corresponding delays.

There were also delays related to a number of challenges encountered due to the unique nature of the construction of the elevator facility. The elevator construction required building permits to be obtained by the Contractor and the associated inspections for HVAC, sump pump connections, etc. also resulted in delays to the project progress.

The combined effect of these delays resulted in the work having to be undertaken during an additional season of winter weather (2019/2020), beyond the original planned 2018/2019 winter season. This resulted in additional delays to the project completion due to inclement weather.

The contract administration services contemplated in the original RFP accounted for one full time inspector for the duration of construction. However, during the Amendment to PO #6047050 for King-Liberty Pedestrian/Cyclist Bridge Construction

simultaneous construction of the substructure and elevator shafts at both Douro St. (north) and Western Battery Rd. (south) it was determined that a second full time site inspector was required as the two locations are approximately 1.2 km walking distance apart making it unreasonable for one inspector to cover both work sites simultaneously. Two inspectors were found necessary for 45 weeks of construction.

AECOM requested additional fees to provide full time inspection and contract administration services to an anticipated project completion date of June 28, 2020 in the amount of \$496,756. A POA of \$496,756 was issued on May 14, 2020, which increased the funding for the contract administration services purchase order from \$385,725 to \$882,481, excluding taxes.

Additional Contract Administration Services Required to Complete the Construction

In addition to project complexities outlined herein, the COVID-19 pandemic caused significant schedule impacts on this project including delays to the art-glass installation on the two elevator shaft buildings (shown in Attachment 3), as the supplier is located in Quebec and was mandated to shut-down production, and then experienced delays in material supplies from their international supply chain (especially USA); and the availability of speciality crews for elevator installation. At the start of the pandemic, due to the nature of elevator construction with typically 4-person crews working in the confined spaces of the elevator shafts, work was limited to emergency operations only. As the Province lifted work restrictions over the summer of 2020, health and safety measures reduced the number of workers permitted within the elevator shafts from 4-person to 2-person crews, thereby reducing the speed of construction by 50%.

Grascan/Torbridge have recently provided an updated schedule that indicates construction completion is anticipated on March 4, 2021. As a result, AECOM has submitted a request for additional compensation for 39 weeks to provide contract administration services for the complete duration of construction.

The amendment to PO No. 6047050 with AECOM Canada Ltd., for the additional professional services required to complete the construction of the King-Liberty Pedestrian/Cyclist Bridge over the Metrolinx Rail Corridor, by an amount of \$256,815 net of all taxes and charges (\$261,335 net of HST recoveries) will revise the PO value from \$882,481 net of all taxes and charges (\$898,013 net of HST recoveries) to \$1,139,296 net of all taxes and charges (\$1,159,348 net of HST recoveries).

CONTACT

Frank Clarizio, P.Eng. Director, Transportation Infrastructure, Engineering and Construction Services, Tel: 416-392-8412, Email: Frank.Clarizio@toronto.ca

Sabrina Dipietro, Acting Manager, Construction Services, Purchasing and Materials Management, Tel: 416-397-4809, Email: Sabrina.Dipietro@toronto.ca

SIGNATURE

Michael D'Andrea, M.E.Sc., P.Eng.
Chief Engineer and Executive Director, Engineering and Construction Services

Michael Pacholok, JD.
Chief Purchasing Officer

ATTACHMENTS

Attachment 1: Location Map
Attachment 2: Bridge erection over Metrolinx Rail Corridor
Attachment 3: Elevator building art-glass installation