



For Action

Line 2 East Extension (Formerly Scarborough Subway Extension) Purchase Order Authorization Amendment

Date: April 11, 2019
To: TTC Board
From: Chief Transit Expansion Officer (Acting)

Summary

This report requests the Board's approval to amend Contract FE85-2 Tunnel Design pursuant to the City Decision to proceed with the extension of Line 2 (Bloor-Danforth), with one new station at Scarborough Centre.

The purpose of this report is to reset the authorization amount initially set for this contract due to additional scope of work added to the design work.

Recommendations

It is recommended that:

1. The Board authorizes the contract amendment to Hatch Corporation (Hatch), increasing the contract award value for Contract FE85-2 Tunnel Design by \$7.5M bringing the total upset limit amount to \$40.1M. This is in addition to an interim authorization (Contract Amendment No.6) that was issued to Hatch in January 2019 in the amount of \$2M.

Financial Summary

The TTC's 2019-2028 Capital Budget and Plan includes an estimated cost of \$3,560 million for the Line 2 East Extension as approved by Council on March 7, 2019. Council authorized funding of \$558 million, of which \$190 million has been spent to date. No work beyond what can be accommodated within the approved funding will be initiated, unless additional project approval funds are made available.

FE85-2 HATCH - DESIGN COST SUMMARY	
<i>Original contract upset limit:</i>	\$ 30,000,000.00
<i>Contract Amendment no.1</i>	\$ -
<i>Contract Amendment no.2</i>	\$ -
<i>Contract Amendment no.3</i>	\$ -
<i>Contract Amendment no.4</i>	\$ 477,388.35
<i>Contract Amendment no.5</i>	\$ 118,650.00
<i>Contract Amendment no.6</i>	\$ 2,000,000.00
<i>Authorized contract upset limit:</i>	\$ 32,596,038.35
TOTAL RELEASED TO DATE	\$ 30,588,838.71
INCLUDING:	
Cost of 0%-100% Design-Bid-Build Scope of Work	\$ 28,057,981.99
Cost of Design Changes/Additional Scope to 26 Feb 2019	\$ 2,530,856.72
BALANCE TO UPSET LIMIT	\$ 2,007,199.64
Balance of Funds to Complete Phase 3 Design to Award for Base Scope	\$ 7,840,000.00
Funds to Complete Additional Phase 3 Scope of Work	\$ 1,630,000.00
TOTAL FUNDS NEEDED TO COMPLETE PHASE 3 TO CONTRACT AWARD	\$ 9,470,000.00
TOTAL ADDITIONAL AUTHORIZATION NEEDED	\$ 7,462,800.36
SAY:	\$ 7,500,000.00

The Chief Financial Officer has reviewed this report and agrees with the financial summary / information.

Equity/Accessibility Matters

The Line 2 East Extension is being designed to be accessible in accordance with the accessibility for Ontarians with Disabilities Act 2005 (AODA) and the Ontario Building Code.

Decision History

The design scope of the tunnel and Kennedy Station Integration for the Line 2 East Extension awarded to Hatch has changed significantly, as Contract FE85-2 was based on twin tunnels and no preferred alignment had been selected at the time of award in 2015.

Further, the procurement model changed from Design-Build-Finance (DBF) to traditional Design-Bid-Build (DBB) part-way through the design.

Since the award of the contract in May 2015, numerous decisions were made which resulted in changes to the design effort required for the contract, including but not limited to: studying single bore vs twin bore alternatives, studying the different diameter of the single bore, studying different alignment options, etc. These design changes were incorporated into the design estimate that was approved by Council in March 2017. Council approved the design model to be DBF in the same meeting.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.EX23.1>

Since Council approval of a single station extension, the following items have been added to Hatch's scope of work: additional ventilation studies which identified the need for additional fire ventilation infrastructure at EEB3 and Kennedy Station, modifications to protect for a future Eglinton East LRT (EELRT) interface east of Kennedy Station, relocation of TPSS#2 to the Hydro One corridor, support of SRT piers during construction, design of private utilities relocations, signage and wayfinding for Scarborough Centre Station (SCS), etc.

Issue Background

The largest design components of the Line 2 East Extension are the tunnel and station. This report addresses the scope of the tunnel design consultant.

The budget for the Line 2 East Extension tunnel design contract was based on twin tunnels with internal diameters of approximately 5.2m to 5.4m and precast concrete liners. The consultant was asked to study 12.9m and 10.7m internal diameter single bore tunnel concepts, as well as a combination of the two prior to the start of formal detailed design. The 10.7m internal diameter was ultimately selected by TTC.

While the contract referenced "a possible alignment up McCowan Road to Sheppard Avenue", over 50 alignment options were studied by the consultant before Council approved the McCowan Corridor alignment in March 2017. The current published version of the Alignment is Revision P.

At the Council meeting held in March 2017, the procurement model of the design work was approved as Design-Build-Finance (DBF), pending agreement between Infrastructure Ontario (IO) and TTC. Design work proceeded on that basis until September 2017, when the direction to the design team was that the procurement model would change to Design-Bid-Build (DBB). Consequently, the tunnel design deliverables requirements changed from having only to reflect a Reference Concept Design (RCD) to a fully detailed set of 30%, 60%, 100% and tender ready documents, complete with specifications.

Numerous scope changes were added to the tunnel and Kennedy Station Integration design work that were not captured in the original contract. In summary, a total of \$7.5 million is estimated to be required to complete the current tasks that had been approved, as well as to cover the known additional tasks that are being reviewed and/or in the process of being approved.

Comments

This request covers the design requirements to complete the tender-ready documents as well as support activities until contract award. An additional authorization request will follow for design consultant support during construction (Phase 4).

It is noted that design of the tunnel and Kennedy Station Integration is scheduled to be completed in advance of the station (SCS) design, as well as the Systems design. As the design work of the latter two components progress additional scope items or design changes scope(s) may arise as a result of such work, and further reports may be submitted accordingly.

Contact

Gary Downie, Chief Transit Expansion Officer (Acting)
416-590-6218
Gary.Downie@ttc.ca

Signature

Gary Downie
Chief Transit Expansion Officer (Acting)

Attachments

n/a