



Automatic Train Control Consultant Contract Amendment

Date: April 11, 2019
To: TTC Board
From: Chief Capital Officer

Summary

The purpose of this report is to outline a required contract amendment for the Line 1 Automatic Train Control (ATC) project. ATC has been successfully implemented on Phases 1, 2, and 2ABC which accounts for 40% of Line 1 from Vaughan Metropolitan Centre to Dupont, including the Wilson Yard main line interface. The ATC project consists of an integrated team of TTC staff including expert consultants from Parsons Inc. (Parsons). To maintain the expertise required to complete the remaining phases of ATC on Line 1, the existing Parsons contract for specialized engineering consulting services requires an increase to the upset limit and a contract extension.

The ATC project has been re-baselined which has extended the in-service date to September 2022. This is the subject of a separate Report to the Board.

Recommendations

It is recommended that:

1. The Board authorize an amendment to contract C31PV06860 to extend the schedule time and to increase the upset limit amount by \$13,000,000 CAD for Parsons to continue the specialized engineering consultant services required to support the Line 1 Automatic Train Control project for an in-service date of September 2022 for TTC's Line 1.

Financial Summary

Sufficient funds for this expenditure have been included in Project 2.4, YUS ATO Re-signaling in the State of Good Repair/Safety category, as set out on the 2019-2028 TTC Capital Program and approved by City Council on March 7, 2019.

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

Equity/Accessibility Matters

A cornerstone of the TTC's Corporate Plan 2018-2022 is accessibility, and as a proud leader in providing accessible public transit in the city of Toronto, we are committed to ensuring reliable, safe and inclusive transit services for all our customers. This is supported through the continued work of the ATC Project which will allow increased capacity for TTC's Line 1.

The TTC is working toward achieving a more inclusive and accessible transit system that meets the needs of all of its customers.

Decision History

2008: Review During ATC Implementation (Contract C31PV06860)

Approval was received from the Board in November 2008 to increase the consultant services contract upset limit amount by \$15,843,380 USD (\$18,814,014 CAN) to support the implementation of ATC. Minutes of the Board meeting are available on the TTC website. Refer to: Agenda Item 5 in the following link:

[http://www.ttc.ca/About the TTC/Commission reports and information/Commission meetings/2008/Nov 26 2008/Agenda/index.jsp](http://www.ttc.ca/About%20the%20TTC/Commission%20reports%20and%20information/Commission%20meetings/2008/Nov%2026%202008/Agenda/index.jsp)

2010: Continuation of Review During ATC Implementation (Contract C31PV06860)

Approval was received from the Board in September 2010 to increase the consultant services contract upset limit amount by \$11,477,804.00 USD (\$11,936,915 CAN) to support the implementation of ATC. Minutes of the Board meeting are available on the TTC website. Refer to Agenda Item 18 in the following link:

[http://www.ttc.ca/About the TTC/Commission reports and information/Commission meetings/2010/Sept 30 2010/Supplementary Agenda/index.jsp](http://www.ttc.ca/About%20the%20TTC/Commission%20reports%20and%20information/Commission%20meetings/2010/Sept%2030%202010/Supplementary%20Agenda/index.jsp)

Issue Background

Parsons was awarded the Engineering Review of Automatic Train Control Technology contract on December 29, 2006, based on a competitive Request for Proposal and has continued to provide specialized engineering services to support staff with the implementation of ATC on Line 1. Parsons has provided the expertise to create the conceptual design, prepare the ATC technical specifications, assist with the review of supplier bid submissions, conduct technical engineering reviews of the design documents, analyze the implementation plans, and review and support the testing and commissioning activities.

To complete the remaining phases of the ATC project on Line 1, Parsons is required to continue with the engineering review of the design documents, analyze the implementation plans, and support the testing and commissioning activities. Parsons technical consultants are embedded in the ATC project team with TTC staff. Their expert engineering knowledge in ATC includes:

- systems engineering;
- data communications systems;
- onboard train systems;
- reliability, availability, maintenance, and safety assessments;
- installation;
- testing and commissioning; and
- system quality assurance.

This expertise is required to continue the delivery of the remaining phases of the work. These specialized skills are limited industry wide, and proficiency in ATC systems requires several years of directly related work experience. In addition, it would be disruptive to undertake a competitive procurement process given the experience Parson's has built up with the TTC's specific infrastructure. As such, a contract extension and increase is recommended.

Comments

To date, ATC has been successfully implemented on Phases 1, 2, and 2ABC (Wilson Yard) which accounts for 40% of Line 1. The ATC system has been proven to have high reliability and availability levels along with headway improvements. The ATC Project has been re-baselined which has extended the schedule for an in-service date of September 2022. This is the subject of a separate Report to the Board.

The scope of work in the Parsons contract includes 6 phases as indicated below:

- Phase 1: Preparation of Work Plan;
- Phase 2: Development of Conceptual Design;
- Phase 3: Development of Detailed Specification;
- Phase 4: ATC Procurement;
- Phase 5: Technical Engineering Review during Implementation; and
- Phase 6: Testing & Commissioning.

Parsons has completed work on Phases 1, 2, 3, & 4 and is now actively working on Phases 5 & 6 to provide both technical engineering reviews and testing & commissioning support for the implementation of ATC on the remainder of Line 1.

Since the commencement of the contract, Parsons has acquired a Canadian company, so the amendment of this contract will include a request to change the payment from American to Canadian funds on a go forward basis. Parsons has agreed to this change along with the extension of scheduled time for their services.

The Contract details are as follows:

Current Contract Amount	\$44,298,298
Recommended Contract Amendment	\$13,000,000
Total Revised Contract Upset Limit Amount	\$57,298,298

Staff recommend increasing the Engineering Review of Automatic Train Control Technology Contract upset limit amount by \$13,000,000 to provide the funds required to continue their work as an integral part of the project delivery team for the extended schedule. This will provide TTC with the expertise required to support the implementation of ATC on the remainder of Line 1.

The amendment of the Parsons contract to extend the schedule time and increase the upset limit amount will support the implementation of ATC for an in-service date of September 2022 for TTC's Line 1.

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Signature

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