

TORONTO TRANSIT COMMISSION REPORT NO.

MEETING DATE: July 14, 2010

SUBJECT: PROCUREMENT AUTHORIZATION AMENDMENT-
AUTOMATIC TRAIN CONTROL (ATC) INTEGRATION
ON THE TORONTO ROCKET TRAIN SETS
(YUS ATO RESIGNALLING)

ACTION ITEM

RECOMMENDATION

It is recommended that the Commission authorize:

- 1) Contract Amendment No. 19 to Bombardier Transportation Canada Inc. (Bombardier), in the amount of \$27,774,003.32 (\$CDN) including taxes, for the integration of the Automatic Train Control (ATC) equipment and required functional improvements on the base order of 39 Toronto Rocket trains, the additional 21 trains for the H6 replacement and 10 additional trains for the Toronto York Spadina Subway Extension (TYSSE). The Contract Amendment represents an increase of \$25,274,003.32 to the previously approved Change Directive of \$2,500,000.00 (\$CDN) to commence the engineering work.
- 2) The expenditure of funds up to a total allowance amount of \$3,266,971.00 (\$CDN), inclusive of all applicable taxes, with respect to this Contract Amendment, for Escalation Adjustment and Contract Security resulting in a total authorized expenditure of up to \$31,040,974.32 (\$CDN). Net project costs will include tax recoveries under HST from this contract authorized amount.

FUNDING

Sufficient funds for this ATC related expenditure for the base 39 plus 21 additional H6 replacement train sets were included as set out in Project 2.4 – YUS ATO Resignalling Line on pages 433 - 437 of the TTC 2010-2014 Capital Program as approved by the City of Toronto Council on December 8, 2009.

Sufficient funds were included under the Toronto York Spadina Subway Extension (TYSSE) as outlined on pages 1439 to 1442 of the TTC 2010-2014 Capital Program as approved by the City of Toronto Council on December 8, 2009 for the 10 train sets ordered for this project. Full project funding exists for the YYSSE from the Move Ontario Trust, the Federal Government and the municipalities of the City of Toronto and Region of York. The funding for the ATC Integration was included as part of the contingency allowance from the total

project Estimated Final Cost (EFC) of \$160 million.

BACKGROUND

In December 2006, a contract for the supply of 39 new subway trains was awarded to Bombardier. In May 2010, a specified Contract option was exercised for an additional 21 train sets to replace 126 H6 subway cars and to supply 10 train sets for the TYSSE. In May 2009, a contract for the Design and Supply of Radio Based ATC/CBTC for the YUS Subway was awarded to Alstom.

ATC is a state-of-the-art technology that has been deployed on transit systems around the world as a means of increasing overall system capacity and improving operational performance. ATC utilizes continuous communication between each train and the trackside to accurately monitor and control the movement of all trains along the YUS line. Thus ATC equipment must be installed on TR train sets that will be used to service the YUS line.

DISCUSSION

The ATC integration in the Toronto Rockets is a complex commercial and engineering process and is best done during the initial production/manufacture of the Trains. TTC has worked closely with Bombardier and Alstom (ATC supplier) to define the required integration. Bombardier has agreed, with no additional delays to the current TR production schedule, to cut-in the first ATC ready train at Train Set number 9 and continue to produce ATC ready train sets for the remainder of all train sets. The first 8 train sets from the base order will require extensive retrofit work and will not be done until the completion of the production run, the cost for which has been included in this Contract Amendment. This is required so that the production schedule is not interrupted.

The Amendment amount as recommended includes a negotiated 2% discount on the price of the 70 train sets outfitted with ATC for a saving of \$566,817.04, including taxes, and is conditional on TTC exercising the Amendment work for all 70 train sets by July 20, 2010. These prices are subject to adjustment for escalation in accordance with the terms stated in the contract documents. A one-time adjustment for foreign exchange rate variance applies to 9.8% of the price for the base train sets and 8.0% of the price for the option train sets, (H6 replacement and TYSSE). The rate variance is calculated based on Bombardier's proposed base exchange rate of the Canadian Dollar versus the U.S. Dollar and the noon spot exchange rate quoted by the Bank of Canada, on the date of formal Notice to Proceed with the work of this Contract Amendment. Funds to cover foreign exchange rate variance, in case the Canadian dollar weakens to below the base rate quoted in Bombardier's Proposal (1 CAD=0.9525 USD), have not been provisioned for; however, it is anticipated by staff that in fact this adjustment will be neutral to the Commission, as long as the currency exchange rate remains close to its current level.

However, even if the Canadian dollar weakens from current levels, the impact of each 1 cent variance is approximately \$24,000.00 and any negative variance will be accommodated through the contract change allowance.

A Change Directive was previously issued and approved in the amount of \$2,500,000.00.

The Change Directive is based on an approved "Scope of Work" as negotiated with Bombardier that is critical to the ATC Integration implementation and consists mainly of advanced engineering work that is necessary to proceed now in order to maintain the current production schedule and upon which the price of the Amendment and cut-in of train set number 9 is based.

Contract details are as follows:

Contract C31PD05761

Original Contract Amount	\$624,567,602.52
Previous Approved Amendments	\$395,390,263.57
Previous Approved Change Directive	\$ 2,500,000.00
Amount of this Amendment (less the previous Change Directive value of \$2,500,000)	\$ 25,274,003.32
Revised Contract Amount	\$1,047,731,869.41

JUSTIFICATION

The integration of ATC on the TR train sets is necessary to enable the ATC to operate as designed.

June 9, 2010
6-52-374