

TORONTO TRANSIT COMMISSION REPORT NO.

MEETING DATE: January 23, 2008

SUBJECT: PROCUREMENT AUTHORIZATION –
CONTRACT AMENDMENT
ATC PROVISIONS ON THE TR TRAINS
YUS ATO RESIGNALLING

RECOMMENDATION

It is recommended that the Commission authorize Contract Amendment No. 4 to Bombardier Transportation Canada Inc. (Bombardier), in the amount of \$3,744,727.15 including taxes, or \$96,018.64 per train, for additional provisions to facilitate more effective future fitment of Automatic Train Control (ATC) equipment on the base order of 39 Toronto Rocket trains. The Contract Amendment represents an increase of \$3,644,727.15 to the previously approved Change Directive of \$100,000.00

FUNDING

Sufficient funds for this expenditure have been included in Project 2.4, of YUS ATO Resignalling in the State of Good Repair/Safety category as set out on pages 499-508 of the 2008-2012 TTC Capital Program, as approved by the Commission on November 14, 2007.

BACKGROUND

Automatic Train Control (ATC) will allow more trains to be run on the line at the same time, and will therefore provide extra passenger capacity. ATC requires installation of various electronic subsystems and equipment on board the new Toronto Rocket (TR) trains. The TR trains being procured under Contract C31PDO5761 have limited provision for fitment of on-board ATC equipment. Due to the finalization of the technical requirements for the ATC system, staff are now able to identify the specific needs relating to wiring, space, and mounting facilities to accept available ATC equipment without precluding any known suppliers thereby continuing to ensure a fair competitive tender process for the ATC system. Specifications for the ATC system are being developed for tender in 2008.

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Contract Details are as follows:

Original Contract Amount	\$624,567,602.52
Previously Authorized Contract Amendments (Includes \$100,000.00 for Change Directive CA4) \$	100,000.00
Increased Amount for Contract Amendment #4	<u>\$ 3,644,727.15</u>
Revised Contract Amount	\$628,312,329.67

Work under Change Directive Change Amendment #4 is approximately 1% complete.

DISCUSSION

In order to finalize the ATC specification, TTC staff obtained, from potential ATC suppliers, the requirements for installing ATC equipment on the TR train. A Request For Quotation (RFQ) was subsequently prepared and issued to Bombardier for the incorporation of the necessary provisions on the TR trains. These provisions will allow the ATC equipment from potential suppliers to be installed in allocated space on the train, and to be connected to at-build-installed wiring at allocated terminals. The ATC provisions include space and mounting provisions for axle sensors, ATC radio antenna, ATC position antenna, electronic racks and switches. Also included is wiring from one end of the train to the other, circuit wiring changes, and console wiring. Bombardier were not able to provide a cost for changing the vehicle software to accommodate ATC due to the unknown scope of this work. The scope for this software integration will be known once the future ATC contract is awarded, and will therefore be an additional cost in the future.

Bombardier submitted an initial quotation of \$3,246,129.42 including taxes for incorporating these provisions, during the manufacture of the TR trains. Staff evaluated Bombardier's quotation, and sought clarification from Bombardier for both technical and commercial issues. Staff also requested Bombardier to include in their quotation an additional ATC provision, namely the ATC console display units required in the cab. Bombardier subsequently responded with a revised quotation in the amount of \$3,744,727.15 including taxes (GST @ 5% and ORST @ 8%), based upon payment at notice to proceed. Staff have evaluated the revised quotation and considers it both technically and commercially acceptable. Bombardier provided an alternate quotation of \$3,956,185.30 including taxes, based on payment at time of train delivery. Staff do not recommend the alternate quotation, due to the added escalation costs of \$187,131.11 (\$211,458.15 including taxes). (In the new revised quotations, Bombardier did significantly reduce their mark-up rate for profit from 15% to 10%, which is in-line with the mark-up rate for changes in the T1 Subway Cars Contract.)

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There is a potential for delay in the Toronto Rocket Project in the order of 3 weeks to accommodate the additional design work prior to the commencement of vehicle build process. A Contract Directive in the amount of \$100,000.00 has already been issued to Bombardier by staff in order to allow necessary design work to commence, and to minimize the potential for delay. Bombardier are developing plans to streamline the manufacturing process to ensure that the 39th and final train of the base order is delivered to the agreed timeframes.

JUSTIFICATION

It would be very difficult, costly, and time consuming to obtain the required space, install the required wiring and mounting facilities, and to make the necessary electrical circuit changes after delivery of the TR trains. With these additional ATC provisions being incorporated during the manufacturing of the TR trains, the future installation of the ATC equipment will be quicker and easier. This will also result in reduced costs, increased availability of the TR trains, and minimized disruption during the ATC installation period.

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