

TORONTO TRANSIT COMMISSION REPORT NO.

MEETING DATE: February 24, 2014

SUBJECT: PROCUREMENT AUTHORIZATION
TORONTO-YORK SPADINA SUBWAY EXTENSION PROJECT
WILSON YARD CONNECTION AND
WILSON YARD SIGNAL SYSTEM MODIFICATIONS
CONTRACT NUMBERS A70-14 AND A70-18

ACTION ITEM

RECOMMENDATION

It is recommended that the Board authorize a total expenditure up to \$36,109,922.25 for Wilson Yard Connection and Wilson Yard Signal System Modifications, as set out below and detailed in Appendix A, Appendix B and Appendix C.

1. The award of a Contract, designated as A70-14, to Thales Canada, Transportation Solutions (Thales) in the amount of \$11,755,189.81, inclusive of HST, for Toronto-York Spadina Subway Extension - Wilson Yard Connection and Wilson Yard Signal System Modifications, which includes a credit of \$3,928,800.00 to eliminate Downsview service track (Appendix A, Option 4).
2. The award of a Contract, designated as A70-18, to Thales in the amount of \$24,354,732.44, inclusive of HST, for T1/TR - Wilson Yard Connection and Wilson Yard Signal System Modifications, including the following specified options:
 - a) Re-Signalling of Wilson Yard in the amount of \$12,850,182.00 (Appendix B, Option 3), and
 - b) Relocation of Zone Control Panel in the amount of \$179,704.00 Canadian dollars (Appendix B, Option 5).

FUNDING

Funding for the expenditures under Contract A70-14 and Contract A70-18 will be shared between the Toronto York-Spadina Subway Extension Project, the Toronto Rocket/T1 Rail Yard Accommodation Project and the Wilson Yard Re-signalling Project.

Sufficient funds are available for contract A70-14 as detailed below:

Toronto-York Spadina Subway Extension (TYSSE) Project: sufficient funds for 66.7% of this expenditure have been included in the Toronto-York Spadina Subway Extension (TYSSE) project, as set out on pages 1007 to 1010 of the TTC 2014-2023 Capital Program (Category – Expansion) which was approved by the Board on November 20, 2013 and by City Council on January 29/30, 2014.

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Toronto Rocket/T1 Rail Yard Accommodation Project: sufficient funds for 33.3% of this expenditure have been included in the Toronto Rocket/T1 Rail Yard Accommodation project as detailed in pages 563 to 568 of the TTC 2014-2023 Capital Program (Category 3.9 Building and Structures Projects) which was approved by the Board on November 20, 2013 and by City Council on January 29/30, 2014.

Sufficient funds are available for contract A70-18 as detailed below:

Toronto-York Spadina Subway Extension (TYSSE) Project: sufficient funds for 31.9% of the base contract expenditures, excluding options have been included in the Toronto-York Spadina Subway Extension project, as set out on pages 1007 to 1010 of the TTC 2014-2023 Capital Program (Category – Expansion) which was approved by the Board on November 20, 2013 and by City Council on January 29/30, 2014.

Toronto Rocket/T1 Rail Yard Accommodation Project: sufficient funds for 68.1% of the base contract expenditures, excluding options and for 100% of Appendix B, Option 5 Relocation of Zone Control Panel expenditures have been included in the Toronto Rocket/T1 Rail Yard Accommodation project as detailed in pages 563 to 568 of the TTC 2014-2023 Capital Program (Category 3.9 Building and Structures Projects) which was approved by the Board on November 20, 2013 and by City Council on January 29/30, 2014.

Wilson Yard Re-signalling Project: sufficient funds for 100% of the expenditures for Appendix B, Option 3 Re-Signalling of Wilson Yard have been included in the Wilson Yard Re-signaling Project as detailed in pages 371 to 373 of the TTC 2014-2023 Capital Program (Category 2.4 Signal Systems State of Good Repair) which was approved by the Board on November 20, 2013 and by City Council on January 29/30, 2014.

BACKGROUND

The TTC is constructing a new 8.6 km long subway line from the existing Downsview Station on the Spadina Line located in the city of Toronto, to the proposed Vaughan Metropolitan Centre located in the city of Vaughan, Region of York.

The work consists of two contract packages A70-14 and A70-18 which are both for a new signal system for: the TYSSE project and the interface into the existing system at Wilson Yard and the signal system to support the Wilson Yard. Each package has its own set of contract specifications and drawings and will be administered by a separate project team.

As a result of TTC procuring new Toronto Rocket vehicles to alleviate congestion on the Yonge-University-Spadina subway line, the storage capacity of the YUS at Wilson Yard needs to be expanded to accommodate the increase in vehicles driven by these two projects.

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To ensure a uniform signal control system in the yard the requirements for both of these projects were tendered together:

- Contract A70-14 for the TYSSE requirements, and
- Contract A70-18 for the Toronto Rocket/T1 Rail Yard Accommodation Project

The work is located at Wilson Yard, Downsview Subway Station and the running structures of the Toronto-York Spadina Subway Extension from Downsview Station to Wilson Yard. The work includes interfaces to the existing signal system at Wilson Yard and Downsview Station.

DISCUSSION

The work for contract A70-14 includes, but is not limited to, detail design, manufacture, delivery, installation supervision, testing and commissioning of the Auxiliary Wayside Signal system (AWS), for the new running structure between Downsview Station and Wilson Yard, as well as the TYSSE modifications in the yard.

The contract implements the latest in processor based signal control systems and is compatible with the Automatic Train Control (ATC) system currently being rolled out on the YUS.

The work for contract A70-18 is similar to that provided under contract A70-14 for its portion of the yard and includes a new computer based control panel for the new signal system.

A request for proposals was publicly advertised on the Merx web site as well as the TTC's web site on September 10, 2013. Twenty-three companies downloaded copies of the proposal documents out of which two submitted a proposal, as summarized in Appendix A and B.

The proposal documents state that it is the TTC's intent is to award two separate contracts.

The specified options submitted with both proposals are listed in Appendix A and B

The evaluation process included in the proposal documents has been completed in four stages, as follows:

- (i) Stage 1 - evaluation of the proponents experience and capability - it was pre-determined that all proponents with a score higher than 80% will be further evaluated;
- (ii) Stage 2 - pass/fail criteria test based on very specific technical information - it was pre-determined that proponents with a pass score will be further evaluated;
- (iii) Stage 3 - technical assessment of the proposals - it was pre-determined that all proponents with a score higher than 80% will be deemed equally qualified and have their pricing envelopes opened;

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(iv) Stage 4 – evaluation of the separately submitted sealed pricing envelopes.

Both proposals were considered qualified after stage 3, and had their pricing envelopes opened.

Award of the contracts will be based on the lowest priced qualified proposal.

Thales submitted the lowest price and their proposal is considered acceptable. They have satisfactorily completed work of a similar size and nature for the TTC in the past.

Ansaldo STS USA, Inc. was deemed qualified; however their price was higher than the price submitted by Thales.

The Agreement to Bond submitted by Thales covers both the Labour and Material Payment Bonds, and Performance Bonds, and was submitted by Zurich Insurance Company LTD, who has been verified as a Surety Company licensed to transact business under the Insurance Act of Ontario. They are considered financially capable of performing the work.

The successful proponent will be required to execute one Performance Bond and one Labour and Material Bond for each contract, each bond in the amount of 50% of each contract value.

JUSTIFICATION

The work for the Wilson Yard Connection and the Wilson Yard Signal System Modifications is required to ensure the safe and efficient movement of trains in and around the yard and to facilitate the increased vehicle traffic being forecast. The proposal submitted by Thales is the lowest priced qualified proposal.

Appendix A

PRICE SCHEDULE BREAKDOWN

	Thales*	Ansaldo
<u>Contract A70-14</u>		
Base Price	\$15,683,989.81	\$39,748,258.00
Specified Option 1 - Installation Work that requires an interface to the existing relay based signal system or any trackwork on the mainline or in the yard that supports revenue service if TTC forces do not do the work.	\$12,573,447.00	\$378,830.00
Specified Option 2 - All Installation Work not covered by Option 1 if TTC forces do not do the work.	\$29,210,708.00	\$2,925,479.00
Specified Option 3 - Provision of a separate bungalow for new control system, if required at a later date	\$223,904.00	\$977,279.00
Specified Option 4 - Eliminate Downsview Service Track. This work will be added to the exiting TTC contract.	(\$3,928,800.00)**	(\$4,402,642.00)
Specified Option 5 - Installation of Wayside ATC Equipment, if required at a later date.	\$48,599.04	\$56,187.00
<i>Contract A70-14 Award Amount</i>	<i>11,755,189.81</i>	

* **Recommended company**

** **Accepted options**

Contract A70-14

a). Total Base Proposal Price	\$15,683,989.81
b). Option Price No. 1.4 – Eliminate Downsview Service Track (A70-8)	-\$3,928,800.00
Total amount for Contract A70-14	\$11,755,189.81

Appendix B

PRICE SCHEDULE BREAKDOWN

	Thales*	Ansaldo
<u>Contract A70-18</u>		
Base Price	\$11,324,846.44	\$36,756,530.00
Specified Option 1 - Installation Work that requires an interface to the existing relay based signal system or any trackwork on the mainline or in the yard that supports revenue service if TTC forces do not do the work.	\$12,525,515.00	\$500,089.00
Specified Option 2 - All Installation Work not covered by Option 1 if TTC forces do not do the work.	\$29,177,542.00	\$2,364,038.00
Specified Option 3 - Re-signaling the rest of Wilson Yard. Convert to common system	\$12,850,182.00**	\$51,142,475.00
Specified Option 4 - Installation for the entire Wilson Yard. Options 1-3 inclusive, if required.	\$55,346,016.00	\$6,519,359.00
Specified Option 5 - Relocate New Zone Control Panel	\$179,704.00**	\$5,924.00
<i>Contract A70-18 Award Amount</i>	<i>24,354,732.44</i>	

* **Recommended company**

** **Accepted options**

Contract A70-18

a). Total Base Proposal Price	\$11,324,846.44
b). Option Price No. 1.3 – Re-Signalling of Wilson Yard	\$12,850,182.00
e). Option Price No. 1.5 – Relocate Zone Control Panel	\$179,704.00
Total amount for Contract A70-18	\$24,354,732.44

Total Value for Contract Nos. A70-14 & A70-18

\$36,109,922.25

Appendix C

SPECIFIED OPTIONS SUBMITTED WITH THE PROPOSALS

Contract A70-14

1. Pricing to perform the installation work described for Installer 1 in item 13 of Section 01110 – Summary of Work, Contract A70-14.
2. Pricing to perform the installation work described for Installer 2 as described in item 14 of Section 01110 – Summary of Work, Contract A70-14.
3. Pricing to provide a separate bungalow similar to that shown in drawing A70-8-SG5001 and specified in Section 13581A, and described in item 16.1 of Section 01110 – Summary of Work, Contract A70-14.
4. Credit for eliminating the work related to A70-8 as described in paragraph 17.1 of Section 01110 – Summary of Work, Contract A70-14.
5. Installation of Wayside ATC Equipment.

Contract A70-18

6. Pricing to perform the installation work described for Installer 1 in item 13 of Section 01110 – Summary of Work, Contract A70-18.
7. Pricing to perform the installation work described for Installer 2 as described in item 14 of Section 01110 – Summary of Work, Contract A70-18.
8. Pricing to re-signal the rest of Wilson Yard. Identified herein as Future Yard R-signaling as described in item 15 of Section 01110 – Summary of Work, Contract A70-18.
9. Pricing to install the whole Wilson Yard as described in item 16 of Section 01110 – Summary of Work, Contract A70-18.
10. Pricing to relocate the new computer based zone control panel up to 100 meters from the Existing Wilson Yard control room as described in item 17 of Section 01110 – Summary of Work, Contract A70-18.

Appendix D

PROPOSAL EVALUATION CRITERIA

Section I - EXPERIENCE AND CAPABILITY REQUIREMENTS

- Part A – Proven In-Service Requirement
- Part B – Re-signalling Experience Requirement
- Part C – System Adaptation Experience Requirement
- Part D – Installation Experience Requirement

Section II - TECHNICAL INFORMATION

Part A - Pass/Fail Design Requirements

- Use of Microlok II Peer protocol to interface with ATC ZC and other PBI; and Datatrain VIII protocol to interface with existing CSS - in the proposed PBI design;
- The Functional and Performance Requirements are met by the proposed design;
- The Hardware Design Requirements are met by the proposed design;
- Safety Certificates certifying Proponent's product meet the requirements in referenced paragraph in the specification.

Part B - System Design Requirements

Part C - System Design Interfaces

Part D - Design Impact to TTC

Part E - Systems Assurance

Part F - Testing and Commissioning

Section III - MANAGEMENT AND SUPPORT REQUIREMENTS