



Yonge Subway Extension - Geotechnical and Hydrogeological Consultant Services

Date: May 8, 2018
To: TTC Board
From: Chief Capital Officer

Summary

The purpose of this report is to obtain authorization for the award of Contract Y85-12 for Geotechnical and Hydrogeological Consultant Services for the Yonge Subway Extension (YSE). This work is required to determine the preliminary soil, rock and groundwater conditions along the alignment, which is then used to develop preliminary design and costing for the station and tunnel structures. Geo-environmental investigations are also part of these services in order to provide information to support property acquisition, soil and groundwater disposal, and health and safety planning.

The work of this contract will advance the preliminary design of the YSE, based on the approved alignment, to a Class 3 cost estimate and schedule. At completion of this stage, a report is scheduled to be presented to the Board and City Council in the second quarter of 2020.

Recommendations

It is recommended that the Board authorize the award of Contract Y85-12 for Geotechnical Consulting Services for the Yonge Subway Extension to the following firms, each in the noted upset limit amounts, in Canadian funds, for a two year duration from the notification of award, on the basis of the three highest total weighted scores of all qualified proponents:

Firm	Upset Limit
Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited (AMEC)	\$6,700,000
Englobe Corp. (Englobe)	\$6,700,000
Thurber Engineering Ltd. (Thurber)	\$6,600,000

Firm

Upset Limit

Total Overall Upset Limit Amount

\$20,000,000

Financial Summary

Metrolinx and the Regional Municipality of York (York Region) are responsible for all costs associated with the preliminary design of the YSE. Metrolinx, City of Toronto, TTC, York Region and York Region Rapid Transit Corporation (YRRTC) have entered into a Memorandum of Understanding, which will ensure the TTC recovers the full costs from Metrolinx and York Region.

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

Equity/Accessibility Matters

The YSE will be designed and constructed to be accessible.

Decision History

In 2009, City Council approved the submission of the Environmental Project Report for a 7.4 kilometre extension of the YSE from the current terminus at Finch Station to the Richmond Hill Centre at Highway 7 in York Region. Council also approved several key principles, including:

- The City of Toronto expects the Province of Ontario will be responsible for all capital costs, including property acquisition costs, necessary to implement the YSE;
- The City of Toronto is not responsible for net operating costs resulting from operations of the YSE;
- TTC is responsible for project management and delivery of the YSE;
- TTC will operate and maintain the subway infrastructure (including commuter parking lots) but excluding passenger pick up and drop off and bus terminals located in York Region;
- TTC will own the property, assets and subway facilities within York Region except for bus terminals and passenger pick-up and drop-off facilities/bus terminals located in York Region;
- The cost of measures to address potential capacity constraints at the Yonge-Bloor station and North York Service Road arising from the project be included as project costs; and
- Metrolinx be requested to prioritize the Relief Line noting that it is the first priority for the TTC and City of Toronto and in advance of the YSE in order to accommodate capacity issues resulting from YSE.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2009.EX28.1>

In 2013, City Council reiterated that it would not proceed with the proposed YSE until improvements are made to reduce demand on Line 1:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2013.EX31.3>

In June 2016, the Province committed \$55 million to Metrolinx to advance the detailed planning, engineering and design work for the YSE project. Subject to York Region Council and Federal Government approvals, York Region will commit its \$36.3 million allocation under the Federal Phase 1 Public Transit Infrastructure Fund (PTIF) to the project:

http://www.metrolinx.com/en/news/announcements/201610_Yonge_North_Subway.aspx
http://www.vivanext.com/project_YongeSubway

In May 2017, City Council approved the following:

- The City Manager and the TTC, in partnership with Metrolinx and York Region to advance the planning and design of YSE at no financial cost to the City of Toronto, and report to City Council at the next decision gate with a Class 3 cost estimate and schedule, anticipated to be in the fourth quarter of 2019, subject to the following:
 - a. City of Toronto/TTC will own, operate, and maintain the future YSE, recognizing it is an extension of Line 1 service, subject to satisfactory cost-sharing agreements with York Region and/or the Province of Ontario;
 - b. TTC will be responsible for project management of project planning and design;
 - c. York Region and/or Metrolinx will be responsible for the costs associated with the planning and design of the project and provide funding to the TTC;
 - d. all parties will agree to a procurement options analysis to assess the best project delivery model for the YSE project; and
 - e. TTC will be responsible for future delivery of the YSE project.
- The City Manager to enter into a Memorandum of Understanding with TTC, Metrolinx and York Region, to define roles and responsibilities, and ensure the TTC recovers the full costs from Metrolinx and York Region of undertaking work required to develop a Class 3 cost estimate and schedule for the YSE.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.EX25.1>

Issue Background

City, Metrolinx, YRRTC and TTC staff are collaborating to advance the preliminary design for the YSE project.

This report addresses the retention of firms that will perform geotechnical, geo-environmental and hydrogeological investigations, in support of the preliminary design of the YSE. This work is required to determine and assess the preliminary soil, rock and groundwater conditions along the length of the alignment. The information obtained through these preliminary investigations will be interpreted by the geotechnical engineers, and provided to the tunnel and station design teams to enable preliminary structural design and costing of the station, bridge and tunnel structures. This information is also used to establish preliminary design parameters for the tunnel boring machine.

In addition, information obtained through the preliminary geo-environmental investigations is used to assess the environmental condition and potential impacts of both the soil and groundwater along the length of the subway alignment. This information is used, along with Ministry of the Environment and Climate Change (MOECC) criteria and City By-laws, to determine the preliminary disposal requirements, including cost, for both soil and groundwater.

The geo-environmental investigations (Phase I and II Environmental Site Assessments) are also part of the due diligence for planning property acquisition.

The work of this contract is required regardless of the project delivery strategy.

Contract work will be administered on a work assignment release basis. As each required task is identified, a work plan is prepared with an estimate. Work on the task will only commence as authorized by TTC staff in the form of a work assignment release, and payment for services will be based on the actual work performed at the approved billing rates. The final allocation of the funds will be determined by the total work assignments performed by the individual firms.

Comments

A Request for Proposals was publicly advertised on the Merx website as well as the TTC's website as of February 20, 2018. Copies of the proposal documents were downloaded by 26 companies, of which 9 submitted a proposal by the closing date of March 13, 2018.

The evaluation of proposals was based on a two envelope process and consisted of qualitative and pricing components; 60 points allocated to the qualitative merit and 40 points allocated to the pricing. Proposals were first scored based on qualitative criteria and the associated weightings as set out in the proposal documents. It was pre-determined that the proposals achieving a total minimum of 48 points out of the maximum 60 points (80%) available for the qualitative evaluation would be considered qualified.

The pricing component of all qualified proponents was then evaluated with 10 points allocated to the proposed key consultant staff list, and 10 points allocated to the unit rates by position list and 20 points allocated to the price schedule. The all-inclusive hourly billing rate was multiplied by the percentage dedication for both pre-defined key staff positions, and the unit rate by position list to determine the total composite all-inclusive hourly billing rate. The total evaluated price provided in the price schedule was evaluated utilizing the estimated quantities for geotechnical services and quoted prices to determine a total evaluated price. The total weighted score was calculated as a sum of the weighted qualitative score and the weighted pricing score. The evaluation criteria are described in Appendix 1.

Peto MacCallum Ltd. submitted a proposal without their proposal form. The Commission's Services Department (CSO) was contacted requesting them to open the pricing envelope to see if the proposal form was inadvertently included in the pricing envelope. CSO confirmed that the pricing form was not in the envelope. Their proposal was deemed to be non-compliant in accordance with the TTC's Bid Irregularities – Item 13 Requested submission requirements not included in the proposal, in whole or in part, consequently their proposal was not evaluated any further.

Of the nine proposals, the following five achieved a score of 80% or more, based on the qualitative evaluation and had their pricing components evaluated:

- Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited;
- Englobe Corp.;
- GHD Limited;
- Golder Associates Ltd;
- Thurber Engineering Ltd.

Of these, the following three companies had the highest total weighted score and are recommended for award:

- Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited;
- Englobe Corp; and
- Thurber Engineering Ltd.

These three companies have satisfactorily performed previous work for the TTC.

By awarding Contract Y85-12, the geotechnical, geo-environmental and hydrogeological work will proceed in order to support the YSE preliminary design.

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Signature

Susan Reed Tanaka
Chief Capital Officer

Attachments

Appendix 1 – Evaluation Criteria

APPENDIX 1

EVALUATION CRITERIA

A. Corporate Qualifications

- Number of years in business
- Depth of available resources
- CADD facilities and compliance to TTC CADD standards
- Local in-house laboratory facilities
- Relevant corporate experience

B. Staff Qualifications/Experience

- Number of years of direct experience
- Technical qualifications
- Relevant experience

C. Pricing Evaluation

- Key Consultant Staff Unit Rates
- Unit Rates By Position
- Price Schedule

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