

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF MARCH 21, 2017

Item 15, Report No. 10, of the Committee of the Whole, which was adopted without amendment by the Council of the City of Vaughan on March 21, 2017.

**15 AWARD OF TENDER T16-462 - GLEN SHEILDS AVENUE BRIDGE REHABILITATION AND
CONTRACT AMENDMENT OF RFP14-076 - CONSULTING SERVICES FOR THE DESIGN
AND CONSTRUCTION ADMINISTRATION FOR THE REHABILITATION OF THE GLEN SHIELDS
AVENUE BRIDGE
WARD 5**

The Committee of the Whole recommends approval of the recommendation contained in the following report of the Deputy City Manager of Public Works and the Director of Infrastructure Delivery, dated March 7, 2017:

Recommendation

The Deputy City Manager of Public Works and the Director of Infrastructure Delivery, in consultation with Director of Procurement Services and Director of Financial Planning & Development Finance and Deputy City Treasurer recommend:

1. That the contract for Tender T16-462, Glen Shields Avenue Bridge Rehabilitation, be awarded to Belor Construction Ltd., in the amount of \$1,452,076.83, plus applicable taxes;
2. That a contingency allowance in the amount of \$217,900.00, plus applicable taxes, be approved within which the Deputy City Manager of Public Works or his designate is authorized to approve amendments to the contract;
3. That a Geotechnical Allowance and Material Testing in the amount of \$45,000.00, plus applicable taxes, be approved to ensure compliance with all applicable standards;
4. That the contract with Planmac Engineering Inc. for RFP14-076 be increased by \$25,000.00 to a total of \$105,198.00 plus applicable taxes, for additional costs within the Contract Administration phase;
5. That the amounts identified in the above recommendations, including all contingency allowances, applicable taxes and administration recovery be funded from Capital Project EN-1888-13 Bridge Rehabilitation – Glen Shields Avenue; and
6. That the Mayor and City Clerk be authorized to sign the appropriate documents.

Contribution to Sustainability

An integral part of a sustainable city is effective asset management. Through infrastructure investments, the risk of failure is reduced and system reliability improved, providing optimal service to residents while managing our infrastructure assets at the lowest life cycle cost. The proposed rehabilitation of this structure will maximize the return on the City's capital and operating investments and ensure that an acceptable level of service is maintained for the health and well-being of its citizens.

Economic Impact

Funding is available within Capital Project EN-1888-13, Bridge Rehabilitation – Glen Shields Avenue, for the award of Tender T16-462 and RFP14-076 (as amended)

The upset limit based on the tender and contingency for Tender T16-462 Glen Shields Avenue Bridge Rehabilitation and the amendment to the contract with Planmac Engineering Inc.

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(Planmac) can be accommodated within approved Capital Project EN-1888-13, Bridge Rehabilitation – Glen Shields Avenue as illustrated below:

Cost Summary T16-462	
	\$
Belor Construction Ltd. (excluding HST)	1,452,076.83
Add: Contingency Allowance (Approximately 15%)	217,900.00
Add: Geotechnical Allowance and Material Testing (est.)	45,000.00
Sub-Total	
1,714,976.83	
Add: Non-Recoverable HST (1.76%)	
30,183.59	
Sub-Total	
1,745,160.42 Add: 3% Administration Recovery (Note 1)	
-	
Net Total Costs - T16-462	1,745,160.42

Contract Amendment RFP14-076	
	\$
Additional Costs - Planmac Engineering Inc.	25,000.00
Add: Non-Recoverable HST (1.76%)	440.00
Sub-Total	
25,440.00	
Add: 3% Administration Recovery (Note 1)	763.20
Total Contract Amendment	26,203.20

Note 1: The 3% Administration Recovery only applies to the consulting assignment portion of the capital budget.

Financial Position - EN-1888-13	
	\$
Approved Budget	2,259,900.00
Less: Expenses/Commitments To Date	201,987.31
Available Budget	2,057,912.69
Less: Net Total Costs T16-462	1,745,160.42
Less: Contract Amendment for RFP14-076	26,203.20
Remaining Budget	286,549.07

Past experience on bridge rehabilitation projects has shown that the extent of rehabilitation work beneath the deck surface can only be determined at the time of construction, once the asphalt surface is removed in its entirety and the concrete deck thoroughly inspected. The project is

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considered to be high in complexity, of moderate duration, with a defined scope. In accordance with the Contingency Matrix (identified in Appendix 1 of the Capital Project Finance Administration and Reporting Policy), a contingency allowance of 15% has been identified as an appropriate amount to address any unforeseen work in completing the scope of this project. Any remaining funds will be returned to the original funding source.

An amendment to the contract with Planmac for RFP14-076 in the amount of \$25,000.00 is required for the construction administration part of the consulting services assignment to reflect the completed design, added scope and the updated planned schedule for delivery

The original contract with Planmac for RFP14-076 included a construction administration fee that was based on the preliminary scope of work to be delivered in 2015 and calculated based on an estimated duration of construction. Once the detailed design was completed and the date for construction activities updated (in collaboration with Parks Development) to 2017, Planmac updated their estimate for construction administration services. Additional information can be obtained in the Background - Analysis and Options section of the report.

Based on their updated estimate, Planmac determined a total cost of \$66,778.00 for construction administration services would be needed. The increased amount of \$25,000.00 (excluding HST) includes a 10% contingency allowance for any unforeseen incidents during construction, such as inclement weather conditions impacting the construction schedule and will only be used if required. Staff has reviewed the additional funding request and determined that it is appropriate and reasonable.

Communications Plan

Once the project is awarded, a newsletter identifying the project commencement and details will be distributed to the Mayor and Members of Council, and to the affected residents and businesses.

Purpose

The purpose of this report is to obtain approval to award the contract for Tender T16-462, Glen Shields Avenue Bridge Rehabilitation to Belor Construction Ltd. and to amend the contract with Planmac for RFP14-076 - Consulting Services for the Design and Construction Administration for the Rehabilitation of the Glen Shields Avenue Bridge.

Background - Analysis and Options

Routine inspections have identified that the Glen Shields Avenue Bridge, an essential link within the community, will benefit from an investment in rehabilitation

Regulations under the Highway Traffic Act (Section 123(2)) and the Bridges Act (Section 2) requires the City to ensure that the bridges are kept safe and in good repair. This requirement is completed through the performance of regular biennial structure inspections in accordance with the Ministry of Transportation Ontario Structure Inspection Manual (OSIM).

The OSIM Inspections for the Glen Shields Avenue Bridge identified that it would require some form of rehabilitation in order to carry out its full life-cycle. The bridge rehabilitation benefits both public safety and the overall management of the city's transportation assets. As a result, Capital Project EN-1888-13 - Bridge Rehabilitation – Glen Shields Avenue - was initiated and approved as part of the 2013 Budget to carry out the preliminary engineering, determine the appropriate rehabilitation method and undertake the detailed design. Subsequently the engineering consulting firm, Planmac, was retained in June 2014 to complete the detailed design and contract administration for the Glen Shields Avenue Bridge rehabilitation.

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The budget to fund the associated construction of the Glen Shields Avenue Bridge was approved as part of the 2015 and 2016 Budgets. The scope of work as part of this contract includes the removal and replacement of the existing deck, parapet walls, expansion joints, approach slabs and conversion to semi-integral abutments. In addition, since this bridge is an essential link within the community is adjacent to the main access to Marita Payne Park, enhanced landscape features have been incorporated into the design for the park entrance and the bridge parapet walls (See Attachment No. 1 for project location).

On January 17, 2017, bids were received for T16-462 Glen Shields Avenue Bridge Rehabilitation

Tender T16-462, Glen Shields Avenue Bridge Rehabilitation was advertised on the City of Vaughan Bidding Website-Vaughan Bids & Tenders, Biddingo, Ontario Public Buyers Association's Website, and the Daily Commercial News on December 23, 2016 and closed on January 17, 2017. Two addenda were issued to extend the closing date and respond to the questions received. A total of 23 Plan Takers registered for this Tender, and 11 compliant bids were received as per below:

Bidder	Bid Price (Excl. HST)
Belor Construction Ltd.	* \$1,452,076.83
Soncin Construction	\$1,549,855.00
Marbridge Construction Ltd.	* \$1,623,820.00
Anscon Contracting Inc.	* \$1,700,775.00
Bob Hendricksen Construction Ltd.	\$1,833,026.00
HiTech Structures Inc.	\$1,836,789.00
Carlington Construction Inc.	* \$1,954,499.00
Clearwater Structures Inc.	\$1,985,946.00
Toronto Zenith Contracting Ltd.	* \$2,054,730.20
Bridgecon Construction Ltd.	\$2,327,758.00
Dig-Con International Ltd.	* \$2,410,595.00

* Corrected for arithmetic errors

Based on the review of the submitted bids, staff recommends to award the contract for Tender T16-462, Glen Shields Avenue Bridge Rehabilitation, to the lowest compliant bidder, Belor Construction Ltd.

RFP14-076, Consulting Services for the Design and Construction Administration for the rehabilitation of the Glen Shields Avenue Bridge was awarded to Planmac in June 2014 for a total proposal fee of \$80,198.00

RFP14-076 was awarded to Planmac in June 2014. The consulting services were divided into three components, namely preliminary design, detailed design and construction administration. The preliminary and detailed design phases are complete and were incorporated into the documents for Tender T16-462. The original proposal fee from Planmac was \$80,198.00, with a contingency of \$12,100.00. The original fee for the construction administration phase was \$41,778.00. The preliminary and detailed design fees have been paid to Planmac for works completed. As a result of additional design requested for the landscaping and the bridge parapet walls, as well as additional TRCA permitting costs, the approved contingency allowance has been fully utilized. The construction administration phase will be initiated once the bridge construction commences this spring.

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The project was planned for delivery in 2017 in collaboration with Parks Development to accommodate works within Marita Payne Park, enhanced landscape features and utility relocations

In coordination with Parks Development, it was determined that a pedestrian bridge in Marita Payne Park was planned for rehabilitation in 2016. The Glen Shields Avenue Bridge is located immediately adjacent to the primary entrance to the park. In order to carry out the Glen Shields Avenue Bridge works, the entrance would have to be closed during construction, resulting in access to the park being restricted at this location. In collaboration with Parks Development staff, enhancements to the Marita Payne Park entrance, as well as the bridge parapet walls, were incorporated into the scope of the Glen Shields Bridge project. Furthermore, the identification of utility relocations (Bell and Hydro) required to facilitate the proposed bridge works were determined during preliminary design. To avoid concerns restricting access for pedestrians to the park and avoiding potential constructor issues, it was determined that the community would benefit by having the park bridge works completed first, followed by the bridge works on Glen Shields Avenue.

The determination of the fees for the Construction Administration phase were based on a preliminary scope of work prior to commencing the preliminary design

In order to determine the fees associated with providing contract administration, it is typical for engineering service providers to estimate the time required to undertake construction work first, then apportion the staff time required to inspect the work and administer the contract based on the preliminary scope. As a result, the industry standard to estimate fees for contract administration is directly proportional to the time required to undertake and complete the construction work. During the preparation of their proposal for RFP14-076, Planmac provided an estimated cost to carry out the construction administration based on the preliminary scope of work provided in the RFP document. Once the detailed design of the bridge was completed, an accurate determination of construction duration could be made and the associated contract administration fees updated.

Upon completion of the detailed design, the construction duration was reassessed and extended to 18 weeks. In addition, the hourly rates used by Planmac in the original award reflected the construction work having been completed in 2015, as per the RFP Terms of Reference. Since the bridge construction was subsequently scheduled for 2017, an increase of the hourly rates has also contributed to an increase in the construction administration fees.

Therefore, as identified in the Economic Impact section, Planmac has requested an increase of \$25,000.00 (excluding HST) for construction administration. This amount also includes a 10% contingency to address any unforeseen incidents that may arise during construction, such as severe weather conditions impacting the construction schedule.

Relationship to Term of Council Service Excellence Strategy Map (2014-2018)

In consideration of the priorities set within the Term of Council Service Excellence Strategy Map, the recommendations in this report support the priority to invest, renew and manage infrastructure assets.

Regional Implications

Not Applicable.

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Conclusion

Staff recommends that the contract for Tender T16-462, Glen Shields Avenue Bridge Rehabilitation be awarded to Belor Construction Ltd., in the amount of \$1,452,076.83, plus applicable taxes and that the contract with Planmac for RFP14-076 be amended in the amount of \$25,000.00 plus applicable taxes.

Attachment

1. Location Map

Report prepared by:

Frank Facchini, Project Manager, ext. 8986

Paolo Masaro, Manager, Design & Construction (East), ext. 8446

(A copy of the attachments referred to in the foregoing have been forwarded to each Member of Council and a copy thereof is also on file in the office of the City Clerk.)