

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF JANUARY 19, 2016

Item 2, Report No. 1, of the Finance, Administration and Audit Committee, which was adopted without amendment by the Council of the City of Vaughan on January 19, 2016.

2 HUMBER BRIDGE TRAIL BOWSTRING ARCH BRIDGE MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT – EA ADDENDUM, SOLE SOURCE AWARD & BUDGET AMENDMENT WARD 1

The Finance, Administration and Audit Committee 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 January 11, 2016:

Recommendation

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

1. That a Municipal Class Environmental Assessment (EA) Addendum – Revisions to Schedule B Projects be undertaken for the Humber Bridge Trail bowstring arch bridge;
2. That AECOM Canada Ltd. (AECOM) be sole sourced to provide consulting services to undertake the Municipal Class Environmental Assessment Addendum – Revisions to Schedule B Projects and issue the Revised Notice of Completion for the bowstring arch bridge on Humber Bridge Trail in the amount of \$28,425 plus applicable taxes;
3. That a contingency allowance in the amount of \$4,500 plus applicable taxes be approved within which the Deputy City Manager, Public Works or his designate is authorized to approve amendments to the contract;
4. That the amounts of the above recommendations including all contingency allowances and applicable taxes be funded from Capital Project EN-1719-08 Class Environment Assessment – Bowstring Arch Bridges and the following budget amendments resulting in an increase of \$27,996 be approved;
 - a. \$27,996 be transferred from Capital Project EN-1894-12 to EN-1719-08
5. That the inclusion of this matter on a Public Committee or Council agenda with respect to amending the capital budget identified as Humber Bridge Trail Bowstring Arch Bridge Municipal Class Environment Assessment – EA Addendum Sole Source Award & Budget Amendment be deemed as sufficient notice pursuant to in this report and Budget Amendment is deemed sufficient notice pursuant to Section 2(1)(c) of By-Law 394-2002; and
6. That the Mayor and City Clerk be authorized to sign the appropriate documents.

Contribution to Sustainability

Revisiting the Municipal Class Assessment Study on the Humber Bridge Trail Bridge supports environmental sustainability and fulfills the goals and objectives outlined by the plan, specifically:

- Goal 2: To ensure sustainable development and redevelopment.
- Goal 3: To ensure that Vaughan is a City that is easy to get around with low environmental impact.

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF JANUARY 19, 2016

Item 2, Finance Report No. 1 – Page 2

Economic Impact

Sufficient funds are not available within Capital Project EN-1719-08 Class Environmental Assessment – Bowstring Arch Bridges to accommodate the increase in total project costs of \$34,509. However, Capital Project EN-1894-12 Drainage Improvement on Ranch Trail Road, funded from Roads Reserve, is complete and residual funds in the amount of \$492,951 are available. Staff recommend that the required costs for the EA amendment be funded from the budget remaining in Capital Project EN-1894-12. Upon approval of this report, Capital Project EN-1894-12 will be closed, returning the balance remaining to the Roads Reserve.

Communications Plan

A Revised Notice of Completion will be given to all potentially affected members of the public and review agencies. As per the Municipal Class Environmental Assessment process, a period of 30 calendar days will be provided for review and response by the public.

Following the 30 days review period, if no request is received by the Minister of Environment and Climate Change, the EA addendum will be filed and Planmac Engineering Inc. (Planmac), the design consultant currently retained to undertake the detailed design, will be directed to proceed to finalize the design for the bridge.

Purpose

The purpose of this report is to seek Council approval:

1. To undertake revisions to the original EA study filed in August 2013 on the Humber Bridge Trail Bowstring Arch Bridge Class Environmental Assessment;
2. To sole source AECOM, who undertook the original study, to undertake the Municipal Class Environmental Assessment Addendum and subsequently issue a Revised Notice of Completion for the bowstring arch bridge on Humber Bridge Trail; and
3. To amend the budget for Capital Project EN-1719-08 Class Environmental Assessment – Bowstring Arch Bridges.

Background - Analysis and Options

The Humber Bridge Trail Bridge is nearing the end of its useful service life and requires an investment to remain operational

The Humber River, West Branch Bridge (Bridge No. 008601) is located on Humber Bridge Trail, approximately 200 m east of Highway 27 (See Attachment No.1). Humber Bridge Trail was the original alignment for Major Mackenzie Drive, however, when Major Mackenzie Drive was re-aligned to the south, the bridge and a portion of the road remained and the road was renamed as Humber Bridge Trail.

The existing bridge was constructed in 1914 and is an 18.3 metre single span, cast in place concrete bowstring arch bridge with a concrete deck and wearing surface. The bridge provides a roadway width of 3.7 metres and accommodates a single lane for two way vehicular traffic.

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. Recent inspections have identified that the bridge is in an advanced state of disrepair and will require some form of rehabilitation or replacement for it to remain in service. Based on the recent load limit assessment, the load limit for the bridge has been reduced from 5 tonnes to 3 tonnes.

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF JANUARY 19, 2016

Item 2, Finance Report No. 1 – Page 3

The Humber Bridge Trail provides the only vehicular access to 5789 Humber Bridge Trail, a residential property on the east bank of the Humber River. The City has a legal obligation to ensure that road access to this property is maintained. Municipalities cannot close a road to deprive an owner of the only means of access unless other options are available.

A Notice of Study Completion was issued in 2013 recommending rehabilitation of the bowstring arch bridge on Humber Bridge Trail

As the bridge is greater than 40 years of age, the City was required to undertake a Schedule “B” Class Environmental Assessment to identify an appropriate solution to address the structural and safety concerns, as well as access issues, associated with this bridge. This process included developing alternative remedial solutions, evaluation of alternatives against a set of criteria, and the selection of a preferred option. AECOM Canada Ltd. was retained to undertake this investigation in 2009.

The Environmental Study Report for the Humber Bridge Trail Bridge contained an analysis of full rehabilitation in comparison to providing a new two lane bridge. The rehabilitation alternative was selected as the preferred option as it was the most cost effective solution to improve the bridge’s safety and ensure access is maintained to 5789 Humber Bridge Trail. The rehabilitation option also was the only option that would preserve the bridge’s heritage potential. A Notice of Completion of the Study was issued in July 2013.

The Corporate Asset Management Strategy was approved in September 2013 and emphasizes that infrastructure investments should be based on life cycle cost analysis

At the time of the Class EA, it was common industry practice to undertake cost/benefit analyses of infrastructure rehabilitation/replacement options based solely on initial construction costs. As a result of the analysis undertaken as part of the EA, the recommendation to rehabilitate the bridge was determined based on these principles. A full life cycle cost analysis that incorporates the operational and maintenance costs, as well as the disposal and future replacement costs (over the service life of the asset), was not undertaken.

In September 2013, a Corporate Asset Management Strategy (CAMS) was approved by Council, to ensure a consistent and coordinated approach to managing the physical assets owned by the City, to support long-term sustainability while continuously delivering appropriate levels of service to its citizens. A Corporate Asset Management Plan was developed that outlines the principles to guide decision making for all City assets. Asset management decisions will consider the interrelationships between assets, systems and services, over an appropriate time-frame that captures performance, cost and risk impacts over complete asset life cycles.

An EA Addendum must be initiated to revisit the recommended alternative in the Class EA for the Humber Bridge Trail Bridge

To ensure that the most appropriate investment is made, an analysis of the alternatives identified within the original Class EA should be undertaken that incorporates life cycle costs. This analysis should review the cost of ownership of all options, including acquisition, operation, maintenance and disposal over a 50 year time horizon. In view of the above, staff recommend revisiting the original Class EA for the Humber Bridge Trail Bridge.

In accordance with the Municipal Class EA process, in order to re-evaluate the alternatives considered in the Class EA, an EA Addendum must be initiated. Should a change in the recommended alternative result from the re-evaluation, a Revised Notice of Completion will be required.

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF JANUARY 19, 2016

Item 2, Finance Report No. 1 – Page 4

AECOM, having undertaken the original Class EA, is most familiar with the history of the project. As a result, it is appropriate and cost effective to retain AECOM to undertake the EA Addendum for the Humber Bridge Trail Bridge. A proposal for this work has been submitted by AECOM, identifying a total cost of \$28,425 (excluding taxes).

The estimated cost for AECOM's services and the summary of the available funding is illustrated in the table below:

TABLE 1: ESTIMATED COSTS	
EN-1719-08	
	Total
	\$
AECOM Canada Ltd. (excluding H.S.T.)	28,425.00
Contingency Allowance (approx. 15 %)	4,500.00
Sub-Total	32,925.00
H.S.T. (1.76%) Not Recoverable	579.48
Total	33,504.48
Administration Recovery (3%)	1,005.13
Net Total Cost	34,509.61

The project is considered moderate in complexity and the scope is mostly defined, however there are many external constraints. 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 updated scope of the project.

Any residual funds will be transferred back to the original funding sources upon completion of the project.

TABLE 2: PROJECT FUNDING POSITION SUMMARY		
	EN-1719-08	EN-1894-12
	\$	\$
Approved Budget	110,000	515,000
Expenses/Commitments to Date	(103,487)	(22,049)
Current Funds Remaining	6,513	492,951
Additional Cost for EA Amendment	(34,509)	0
Amount Exceeding Capital Project Budget	(27,996)	492,951
Transfer from EN-1894-12	27,996	(27,996)
Balance Remaining	0	464,955

Upon approval of this report, Capital Project EN-1894-12 will be closed, returning the balance remaining to Roads Reserve.

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF JANUARY 19, 2016

Item 2, Finance Report No. 1 – Page 5

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 supports the priority to invest, renew and manage infrastructure assets by ensuring that an appropriate level of service for the roadway conditions are maintained for the citizens of Vaughan.

Regional Implications

N/A

Conclusion

In consideration of the findings from the detailed design, staff recommends that an Environmental Assessment Study addendum be undertaken in accordance with the Municipal Environmental Class Environmental process. In order to provide continuity on the project, it is also recommended that AECOM be sole sourced to undertake the EA addendum.

Attachments

1. Location Map

Report prepared by:

Pat Marcantonio, Project Manager, ext. 8468
Mohan Toor, Manager Design & Construction (West), ext. 8144
Vince Musacchio, Manager Infrastructure Programming, ext. 8311

(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.)

**HUMBER BRIDGE TRAIL BOWSTRING ARCH BRIDGE MUNICIPAL CLASS
ENVIRONMENTAL ASSESSMENT – EA ADDENDUM, SOLE SOURCE AWARD & BUDGET
AMENDMENT
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Regional Implications

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1. Location Map

Report prepared by:

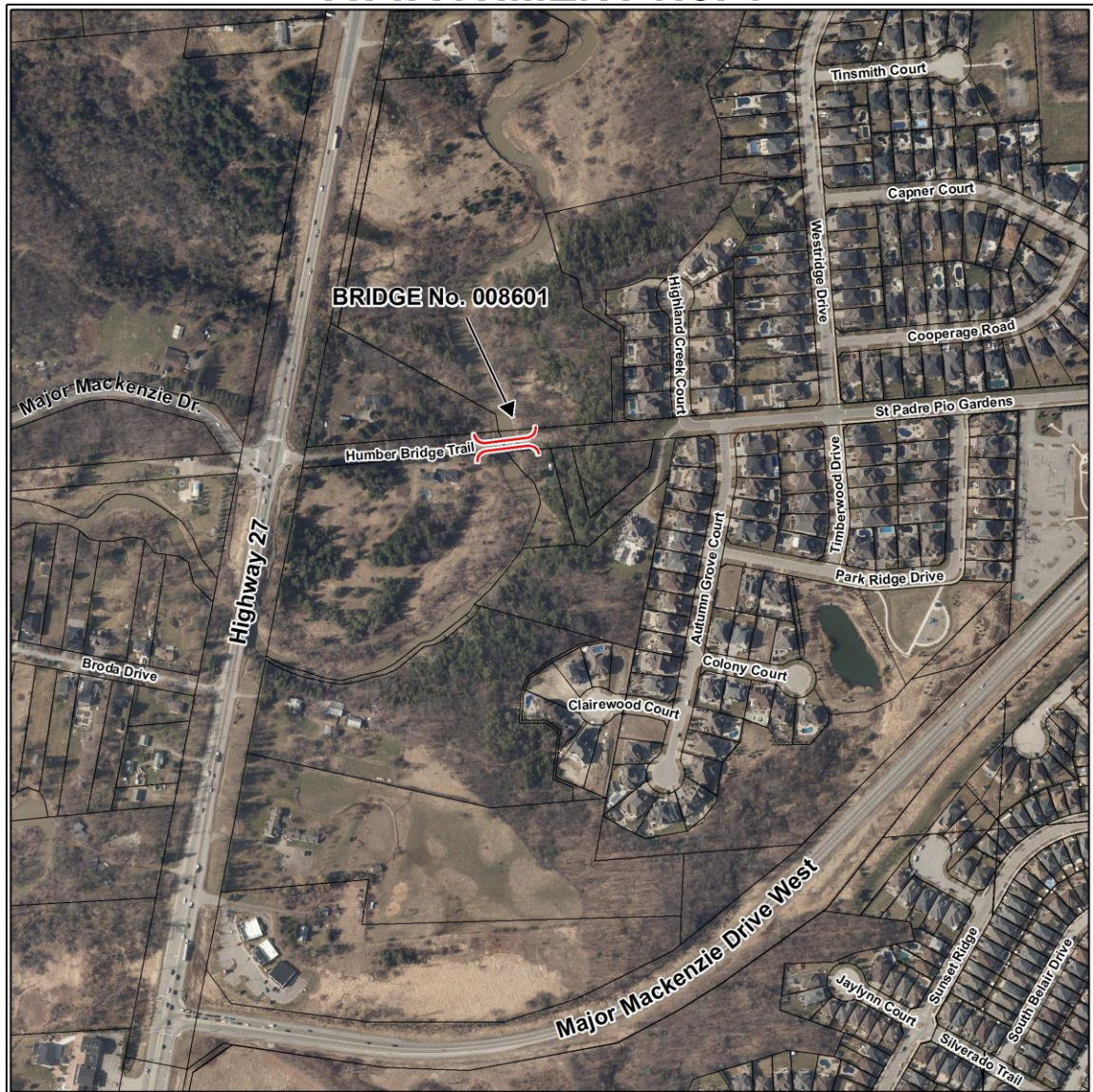
Pat Marcantonio, Project Manager, ext. 8468
Mohan Toor, Manager Design & Construction (West), ext. 8144
Vince Musacchio, Manager Infrastructure Programming, ext. 8311

Respectfully submitted,

Paul Jankowski
Deputy City Manager, Public Works

Jack Graziosi
Director of Infrastructure Delivery

ATTACHMENT No. 1



BOWSTRING ARCH BRIDGE ON HUMBER BRIDGE TRAIL **CLASS ENVIRONMENTAL ASSESSMENT STUDY** **EA ADDENDUM**

LEGEND



SUBJECT BRIDGE

LOCATION: Part of Lots 20 & 21,
Concession 8

Note: Aerial photography acquired in Spring 2015

