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CONSULTANT SELECTION FOR DETAILED DESIGN, CONTRACT ADMINISTRATION AND SITE INSPECTION SERVICES FOR BATHURST STREET WATERMAIN REPLACEMENT, CITY OF VAUGHAN, TOWN OF RICHMOND HILL PROJECT 78519-EI10009

The Environmental Services Committee recommends the adoption of the recommendations contained in the following report dated May 24, 2012, from the Commissioner of Environmental Services.

1. RECOMMENDATIONS

It is recommended that:

1. Exp Services Inc. be engaged to undertake detailed design, contract administration and site inspection services for the Bathurst Street Watermain Replacement project as outlined in this report, at a fee of \$660,407.70 excluding taxes.
2. The Commissioner of Environmental Services be authorized to adjust the contract administration and site inspection fees using the competitive unit price of \$3,920.53 per week, excluding taxes, to match actual construction duration within the Total Project Budget Authority.

2. PURPOSE

This report seeks Council authorization to retain engineering services related to detailed design, contract administration and site inspection for replacement of approximately 3.2 km of 400mm and 450mm diameter ductile iron watermain along Bathurst Street from Birch Avenue to Centre Street in Richmond Hill. A location plan is appended to this report (*see Attachment 1*).

The Region's Purchasing Bylaw requires Council authorization to award a Request for Proposal over \$500,000 or when the recommended proponent does not have the lowest cost. In this case, the recommended proponent submitted the lowest cost; however, their bid is greater than \$500,000.

3. BACKGROUND

Bathurst Street watermain is a critical water supply main for City of Vaughan and Town of Richmond Hill

The existing ductile iron watermain on Bathurst Street between Birch Avenue and Centre Street in Richmond Hill is a critical water supply main for City of Vaughan and Town of Richmond Hill residents. This watermain has been in service since 1975. Approximately 3.2 km of the Bathurst Street watermain has experienced numerous breaks and failures in recent years raising concerns regarding service disruptions to customers. There have been four breaks in the last six years and nine in the last twelve years. The failures have been caused by pinholes due to corrosion, cracks at the joints and failures at connections. Ductile iron watermain deteriorate over time when subjected to corrosive soils or differential settlements, eventually resulting in failures such as the ones experienced.

Existing ductile iron watermain on Bathurst Street significantly impacted by corrosion

Past condition assessments, information gathered during breaks and subsequent investigations and testing all confirm advanced deterioration of this ductile iron watermain due to corrosion. Replacement of this watermain will enhance the water system locally and regionally providing additional security to the system.

Replacement of watermain provides benefits related to cost, traffic disruption and roadway integrity

Replacement of this watermain is important not only to provide continuity of water supply but, also to avoid costly repair work, disruption to traffic and to maintain integrity of the roadway. Failures to date have been costly and caused traffic disruptions, however impacts to the physical roadway have been minimized mainly due to the nature of the breaks and expedient emergency response by Regional staff.

This project is the first to be recommended from a Region wide program that began in 2007 to review ductile iron watermain in the York Water System and to plan for replacement of deteriorating watermain. The Region currently owns approximately 30 km of ductile iron watermain and various segments have been recommended for replacement in the next five to ten years as these segments have also been impacted by advanced degradation. The 2012 Capital Budget projects over \$55 million in the overall watermain rehabilitation program over the next 10 years.

4. ANALYSIS AND OPTIONS

Request for Proposal P-12-69 issued to an open field of consulting firms

In response to the open call for Request for Proposal P-12-69, the following nine firms submitted a proposal:

- AECOM Canada Ltd.
- Associated Engineering (Ont) Ltd.
- Chisholm, Fleming and Associates
- Cole Engineering Group Ltd.
- Delcan Corporation
- Exp Services Inc.
- GHD Inc.
- MMM Group Ltd.
- The Municipal Infrastructure Group Ltd.

Request for Proposal P-12-69 detailed the scope of work required, which included the following services:

- Project management, planning and control
- Detailed design and tendering
- Acquisition of approvals
- Construction contract administration and site inspection
- Quality assurance and quality control

Proposals evaluated using the two-envelope system

Proposals were evaluated using the two-envelope system with technical and financial information submitted in two separate envelopes. The overall proposal score was evaluated based on a weighting of 80 points for the technical proposal and 20 points for the financial proposal. Technical proposals were evaluated prior to any knowledge of financial information.

The Region's proposal evaluation team reviewed the nine technical proposals based on the following criteria as listed in Request for Proposal P-12-69:

- Corporate experience related to watermain installations for 600mm diameter pipe or greater
- Project manager and proposed key staff experience for similar projects
- Proposed technical support staff experience for similar projects
- Project understanding and ability to deliver the project
- Sub-consultants' experience
- Project management, implementation and allocated resources
- References

Technical components of the proposal must achieve a minimum technical score of 60 per cent (48 points out of the potential 80 points) to have the financial portion of the proposal considered. If a proponent does not achieve this minimum technical score, their financial proposal is returned unopened. This was the case with the proposal from Delcan Corporation. Technical and financial results are summarized in Table 1.

Table 1
Consultant Proposal Evaluation Summary

Consulting Engineering Firm	Technical Score (out of 80)	Total Fee (\$) (excluding taxes)	Financial Score (out of 20)	Total Score (out of 100)	Cost Per Technical Point (\$)
Exp Services Inc.	56.00	\$660,407.70	20.0	76.00	\$11,792.99
AECOM Canada Ltd.	53.88	\$716,211.00	18.44	72.32	\$13,293.94
MMM Group Ltd.	61.00	\$863,011.72	15.30	76.30	\$14,147.73
The Municipal Infrastructure Group Ltd.	59.50	\$890,660.00	14.83	74.33	\$14,969.08
GHD Inc.	50.13	\$847,838.00	15.58	65.70	n/a
Cole Engineering Group Ltd.	54.25	\$850,191.00	15.54	69.79	n/a
Chisholm Fleming and Associates	51.00	\$855,928.00	15.43	66.43	n/a
Associated Engineering Ltd.	53.50	\$908,939.00	14.53	68.03	n/a
Delcan Corporation.	38.75	-	-	-	-

Evaluation of proposals revealed Exp Services Inc. achieved the lowest price per technical score

The firm with the highest total score is MMM Group Ltd. Given that the total score achieved by three other firms was within five points of the highest total score, a “dollar cost methodology” calculation was completed, as required by the Purchasing Bylaw. Results of this calculation, as shown in Table 1, determined that the proposal submitted by Exp Services Inc. represents the best overall value to the Region. Exp Services Inc. has experience in providing construction administration and inspection services for large diameter watermain, including the Yonge Street watermain in 2009.

Supplies and Services Branch has reviewed the evaluation summary and has issued their internal report confirming that Exp Services Inc. be recommended as the successful overall proponent to undertake the engineering consulting services related to contract administration and site inspection services for the Bathurst Street Watermain Replacement Project.

Link to Key Council-approved Plans

The existing ductile iron watermain on Bathurst Street between Birch Avenue and Centre Street in Richmond Hill is a critical water supply main for City of Vaughan and Town of Richmond Hill residents. This assignment and ultimate upgrade of this main is a key project that aligns with the Region's 2011 to 2015 Strategic Planning objective of continuing to deliver and sustain critical infrastructure.

5. FINANCIAL IMPLICATIONS

The fee for the proposed work is \$660,407.70 excluding taxes. This fee is 6.6 per cent of the estimated capital costs which is within the industry standards. The approved 2012 10 Year Capital Program identifies a Total Project Budget Authority for this project of \$11,295,000 funded through water user rates.

The consulting fee includes contract administration and site inspection services for an estimated duration of 300 days. The proposal includes unit prices for contract administration and site inspection services, in this case \$3,920.53 per week, which staff deem acceptable for this type of project.

Should the actual duration of construction increase, as determined by the detailed design and specified in the tender documents, it is recommended that the Commissioner of Environmental Services be authorized to adjust the fee accordingly by the amount of \$3,920.53 per week excluding taxes.

6. LOCAL MUNICIPAL IMPACT

The replacement of the existing watermain on Bathurst Street between Birch Avenue and Centre Street will support water supply security and capacity of the water supply system in the City of Vaughan and Town of Richmond Hill.

Throughout the course of the assignment and construction, Regional staff will work closely and cooperatively with the local municipality and residents to ensure a successful project. As this watermain project is located on a four lane Regional road it will be imperative for the consultant together with the Region to ensure that minimal traffic disruptions occur during the construction stage.

The Region is planning road improvements on Bathurst Street in the vicinity of Highway 7 to Birch Avenue and design of the road improvements is currently underway with construction anticipated in 2014. Similarly, vivaNext rapidway has improvements scheduled for 2015 on Bathurst Street in the vicinity of Highway 407 to Centre Street. Watermain construction will be coordinated closely with the timing of these

improvements to minimize disruption to the roadway and to minimize overall construction costs.

Construction on this section of Bathurst Street north of Highway 7 will be assessed under the Region's *Open Roads* program. *Open Roads* is the Region's commitment to prudently manage activities surrounding vivaNext rapidway construction on Highway 7, Davis Drive and Yonge Street by ensuring lanes remain open and closures are minimized. To manage traffic flow and keep people moving, Environmental Services will work collaboratively with Transportation and Community Planning's Traffic Management team to develop and implement a comprehensive traffic management plan which will include traveller information and monitoring of real time traffic conditions through deployment of Smart Work Zone technology.

7. CONCLUSION

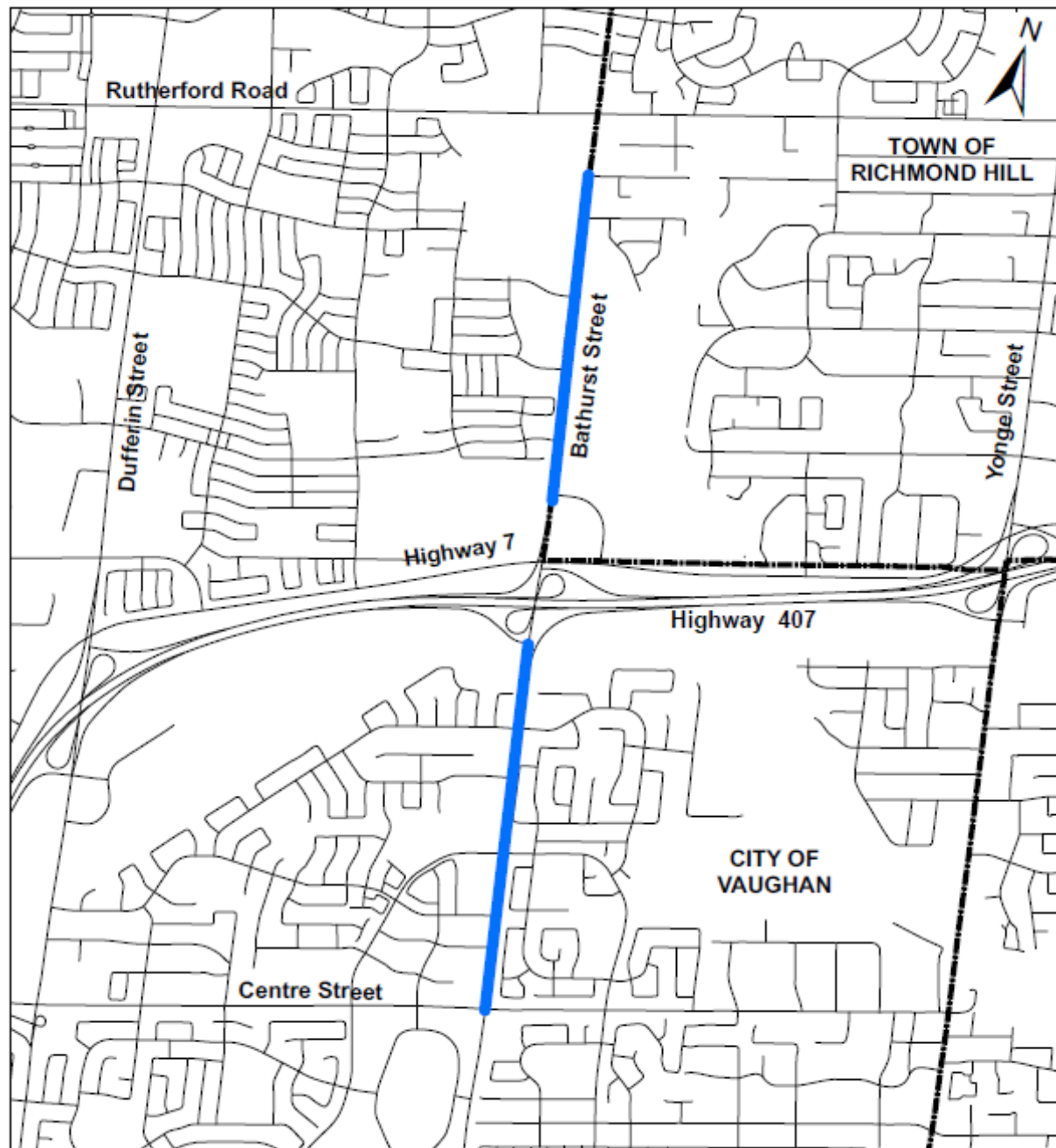
The replacement of the existing watermain on Bathurst Street between Birch Avenue and Centre Street will enhance the water system locally and regionally and ensure continued performance and reliability.

Nine proposals from engineering consultants were received and evaluated for this project in accordance with the Region's Purchasing Bylaw. The proposal from Exp Services Inc. represents the best overall value to the Region and it is recommended that Exp Services Inc. be engaged to undertake the detailed design, contract administration and site inspection for the Bathurst Street Watermain Replacement Project for a fee of \$660,407.70 excluding taxes.

For more information on this report, please contact Daniel Kostopoulos, Director, Capital Planning and Delivery, Environmental Services at extension 5070.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause is attached to this report.)



LOCATION PLAN

Consultant Selection for the Detailed Design,
Contract Administration and Site Inspection
Services for Bathurst Street Watermain
Replacement, Project 78519 EI-10009

0 250 500 750 1,000 Meters

Local Municipal Boundary

Watermain Replacement



ENVIRONMENTAL SERVICES

York# 4153520