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Clause No. 3 in Report No. 2 of the Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting on January 23, 2014.

**CONSULTANT SELECTION FOR  
BAYVIEW WATER PUMPING STATION UPGRADES  
CITY OF MARKHAM - PROJECT 78512 EI10004**

**Committee of the Whole recommends adoption of the following recommendations contained in the report dated December 5, 2013 from the Commissioner of Environmental Services:**

**1. RECOMMENDATIONS**

It is recommended that:

1. Cole Engineering Group Ltd. be engaged to undertake detailed design, contract administration and site inspection services related to the Bayview Water Pumping Station Upgrades as outlined in this report, at a fee of \$717,308.30 excluding taxes. The fee includes contract administration and site inspection services based on estimated construction duration of 52 working weeks.
2. The Commissioner of Environmental Services be authorized to adjust contract administration and site inspection fees using the competitive unit price of \$6,350.74 per week, excluding taxes, within the Capital Spending Authority for this project.

**2. PURPOSE**

This report seeks Council authorization to retain engineering services for detailed design, contract administration and site inspection services related to the Bayview Water Pumping Station Upgrades. A location plan and servicing area map is appended to this report (*see Attachment 1*).

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

### 3. BACKGROUND

#### **System sustainability study revealed need for emergency power and electrical upgrades to ensure water supply continuity**

A system sustainability study was completed as a result of power failures experienced York Region and Toronto wide. The study concluded that an emergency standby power facility is needed at the Bayview Water Pumping Station to ensure backup power during an electrical power failure to allow for uninterrupted water supply. Based on ongoing water supply contingency and criticality assessments, staff determined the Bayview Water Pumping Station as a critical facility for Region water supply continuity in the event of a power outage.

The system sustainability study established that in order to provide sustainable water service and minimize environmental and socio-economic concerns for York Region and the City of Toronto, the preferred level of service is a continuous water supply during system-wide power failures. Based on hydraulic modelling for a continuous supply scenario, various City of Toronto facilities and four York Region water pumping stations require the addition of backup power. The Regional facilities are listed in Table 1.

**Table 1**  
York Region Water Pumping Station Generator Upgrade

<b>Water Pumping Station</b>	<b>Generator Upgrade Requirement</b>	<b>Anticipated Year of Completion</b>	<b>Current Status</b>
Maple	3 megawatt	2014	Under Construction
Richmond Hill	1 megawatt	2014	Under Construction
Bayview	1.5 megawatt	2016	Procurement for Consulting Service
North Richmond Hill	To Be Determined	2018	Planning

### **Upgrade project identified to address needs at the Bayview Water Pumping Station**

A project has been identified to complete required upgrades at the Bayview Water Pumping Station to increase reliability and redundancy of water supply needs during a failure. Major upgrades include:

- New standby diesel power generator with diesel fuel tank and supply lines conforming to all applicable regulations and technical authority reviews.
- New building to accommodate a dedicated electrical room, fuel system room and standby power room adjacent to the existing building within existing property boundaries.
- Noise and emissions attenuation equipment required to reduce noise and exhaust emission levels to meet provincial guidelines and mitigate impact on the environment, businesses and residents.
- Electrical system upgrades, including motor control centre with associated electrical equipment requirements for operation of standby power generator.
- Replace existing 30-year-old transformers that meet electrical needs and are in accordance with all electrical safety codes and design guidelines and regulations.
- Upgrade existing Programmable Logic Control/Supervisory Control and Data Acquisition (PLC/SCADA) system to meet Regional standards; all new and existing equipment and associated instruments and controls are to be connected to the Supervisory Control and Data Acquisition (SCADA) system.

### **Stakeholder engagement required for successful project completion**

The Bayview Water Pumping Station is located in an urbanized area along Bayview Avenue. It neighbours both the Toronto Water Valve House and the Toronto Water Bayview Reservoir. The in-ground Bayview Reservoir is located to the east of the Bayview Water Pumping Station, whose surface at ground level serves as a sports recreational area as part of the Bayview Reservoir Park.

Early stakeholder engagement is required to ensure good understanding of local site-specific conditions, potential construction concerns, technical review needs, and engagement in the decision-making process. Project stakeholders include:

- Regional departments
- Local municipalities (operations, permitting)
- Local residents and businesses
- Land owners (City of Toronto)
- Schools (Thornlea Secondary School)
- Toronto and Region Conservation Authority
- Ministry of the Environment (MOE)
- Electrical Safety Authority (ESA)
- Technical Standards and Safety Authority (TSSA)
- Utility companies (gas, power, phone, etc.)
- Police, Fire and Emergency Medical Services
- Transportation services (Viva, Metrolinx, York Region Transit)

#### **4. ANALYSIS AND OPTIONS**

##### **Request for Pre-qualification P-13-78 undertaken to select qualified engineering firms**

In accordance with the Purchasing Bylaw, a Request for Pre-qualification (P-13-78) for detailed design, contract administration and site inspection services for the Bayview Water Pumping Station Upgrades project was advertised in the *Daily Commercial News* and electronically on *Biddingo.com*. A total of eight consulting firms submitted a formal response to this Request for Pre-qualification.

Based on the information received in the formal response to the Request for Pre-qualification, the following four firms were invited to submit a proposal in response to a Request for Proposal.

- AECOM Canada Ltd.
- Associated Engineering (Ont.) Ltd.
- Cole Engineering Group Ltd.
- EMA Canada Inc.

##### **Request for Proposal issued to four pre-qualified engineering firms**

In accordance with the Region's Purchasing Bylaw, Request for Proposal (P-13-88) for the Bayview Water Pumping Station Upgrades was issued to four pre-qualified engineering firms in October 2013.

Request for Proposal detailed the scope of work required, which included the following services:

- Project management, planning and control
- Condition and needs assessment
- Schedule A Class Environmental Assessment
- Detailed design and tendering
- Procurement of approvals
- Construction contract administration and site inspection services
- Quality assurance and quality control

Pre-qualified consultants were invited to submit proposals for the assignment through a Request for Proposal that was advertised in the *Daily Commercial News*, electronically on *Biddingo.com* and on the Regional website. EMA Canada Inc. did not submit a proposal. The following three pre-qualified consulting firms submitted proposals for this assignment:

- AECOM Canada Ltd.
- Associated Engineering (Ont.) Ltd.
- Cole Engineering Group Ltd.

### **Proposals evaluated using two-envelope system**

Proposals were evaluated using the two-envelope system with technical and financial information submitted in 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 three technical proposals based on the following criteria as listed in Request for Proposal P-13-88:

- Corporate experience
- Project manager experience
- Key and technical staff/sub-consultant experience
- Project understanding
- Project approach methodology
- Project schedule, work plan and deliverables
- Project management approach
- Implementation of quality assurance and control process
- Value added and innovative design concepts

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. Technical and financial results are summarized in Table 2.

**Table 2**  
Consultant Proposal Evaluation Summary

<b>Consulting Engineering Firm</b>	<b>Technical Score (out of 80)</b>	<b>Financial Score (out of 20)</b>	<b>Total Score (out of 100)</b>	<b>Total Fee (\$) (excluding taxes)</b>
Cole Engineering Group Ltd.	60.6	20.0	80.6	\$717,308.30
AECOM Canada Ltd.	58.2	15.6	73.8	\$920,000.00
Associated Engineering (Ont.) Ltd.	57.9	13.5	71.4	\$1,062,320.70

**Evaluation of proposals revealed Cole Engineering Group Ltd. achieved highest total score**

The proposal submitted by Cole Engineering Group Ltd. demonstrated clear understanding of project requirements, site limitations and critical review timelines imposed by regulatory agencies and technical authorities. It also provided an experienced team committed to working with Regional staff. The proposal submitted by Cole Engineering Group Ltd. represents the best value for the Region.

Supplies and Services Branch reviewed the evaluation summary and issued their report confirming that Cole Engineering Group Ltd. be recommended as the successful overall proponent to undertake detailed design, contract administration and site inspection services related to the Bayview Water Pumping Station Upgrades project.

**Link to Key Council-approved Plans**

Continuing to deliver and sustain critical infrastructure is a priority of the Region's 2011 to 2015 Strategic Plan. The Bayview Water Pumping Station is considered critical infrastructure providing water supply services to residents and businesses.

**5. FINANCIAL IMPLICATIONS**

The fee for this proposed work is \$717,308.30 excluding taxes. This fee is just over 14 per cent of the estimated construction cost of \$5,035,000, which is within the industry standard for this type of electrical, instrumentation and control upgrade work. Adequate Capital Spending Authority of \$3,984,000 is in the approved 2014 Pumping-Water Budget to award this assignment, which is funded by water user rates.

Fees for this proposed work include detailed design, contract administration and site inspection services for an estimated duration of 260 working days (52 weeks). The proposal includes competitive unit prices for contract administration and site inspection services. In this case, the unit price is \$6,350.74 per week, which staff deem as acceptable for this type of project.

Should the actual duration of construction increase, as determined by 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 \$6,350.74 per week excluding taxes, and not exceeding Capital Spending Authority.

## **6. LOCAL MUNICIPAL IMPACT**

Stakeholder engagement will be undertaken throughout planning, design and construction phases of this project. The schedule for completing this work will be developed in coordination with the City of Markham, City of Toronto and in consideration of local business and resident activities.

A risk management strategy will be developed for the project with key mitigation measures to minimize impacts to residents and businesses in the general vicinity of the work.

By undertaking this assignment, the Region will optimize the operation of this critical water distribution facility to ensure continued delivery of water services to York Region residents.

## **7. CONCLUSION**

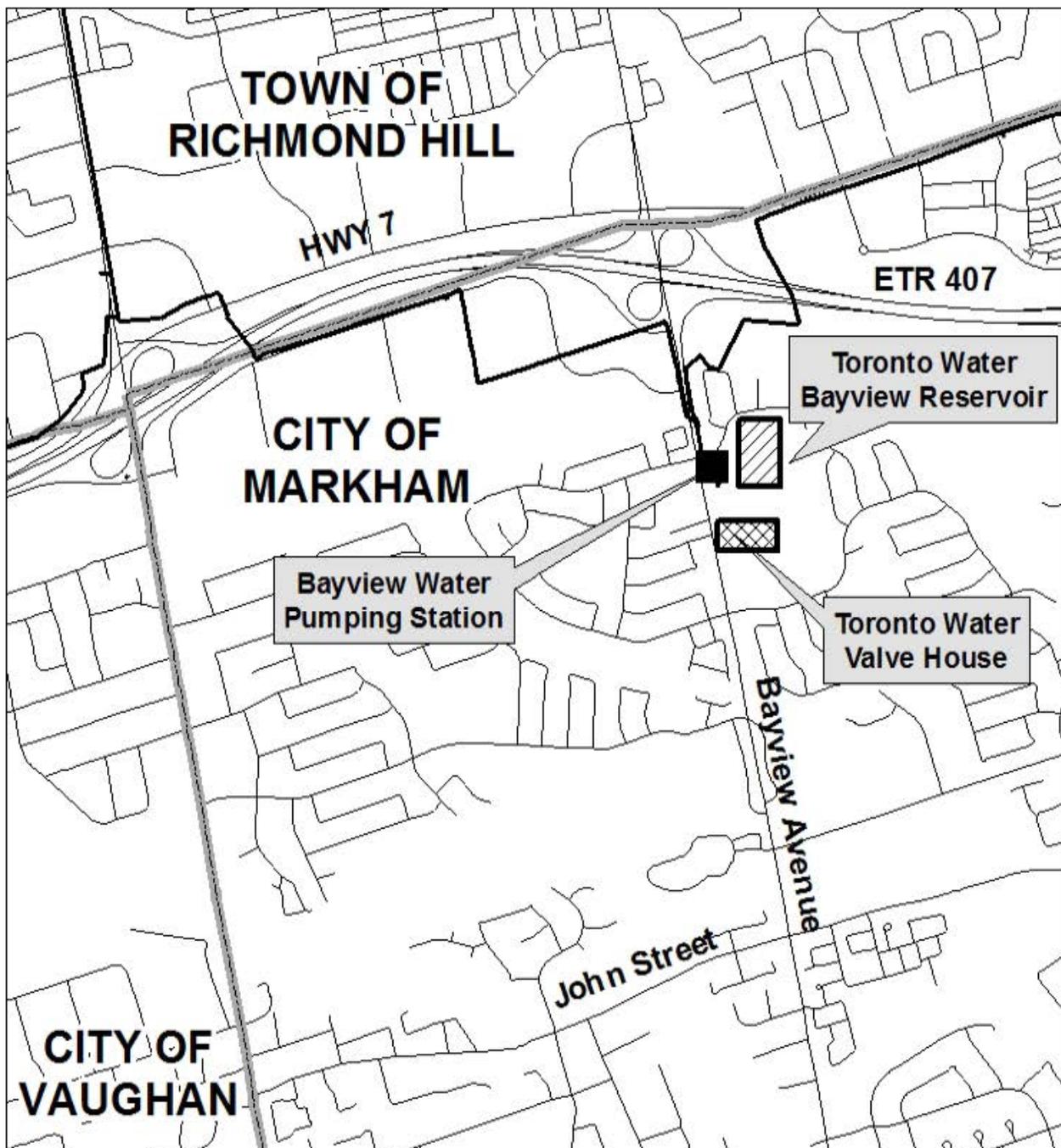
Three proposals were received and evaluated for this project in accordance with the Region's Purchasing Bylaw. The Proposal from Cole Engineering Group Ltd. represents the best value for money to the Region.

It is recommended that Cole Engineering Group Ltd. be engaged to undertake detailed design, contract administration and site inspection services related to the Bayview Water Pumping Station Upgrades at a cost of \$717,308.30 excluding taxes.

For more information on this report, please contact Michael Rabeau, Acting Director, Capital Planning and Delivery, Environmental Services at 905-830-4444 Ext. 75157.

The Senior Management Group has reviewed this report.

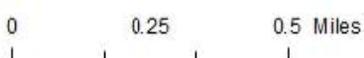
*Attachment (1)*



**LOCATION PLAN**  
**Consultant Selection for Bayview Water Pumping Station Upgrades City of Markham**  
**Project 78512 E110004**



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**LEGEND**

-  Existing Watermain
-  Roads
-  Pumping Station
-  Municipal Boundary
-  Toronto Water Valve House
-  Toronto Water Bayview Reservoir