

NO: R106

COUNCIL DATE: May 16, 2016

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## REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **May 12, 2016**

FROM: **General Manager, Engineering**

FILE: **4816-051**

SUBJECT: **Award of Contract M.S. 4816-0510 D1  
Colebrook Flood Protection**

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## RECOMMENDATIONS

The Engineering Department recommends that Council:

1. Award Consultant Agreement M.S. 4816-0510 D1 to Stantec Consulting Ltd. for the design and Phase 1 construction services of the Colebrook Flood Protection works in the amount of \$912,733.50, including GST;
2. Set the expenditure authorization limit for Contract M.S. 4816-0510 D1 at \$1,005,000.00, including GST and contingency;
3. Authorize the General Manager, Engineering to execute Contract M.S. 4816-0510 D1 to a maximum of \$1,005,000.00, including GST and contingency;
4. Authorize the inclusion in the Consultant Agreement M.S. 4816-0510 D1 an option in favour of the City to negotiate with, and retain, Stantec Consulting Ltd. to provide Phase 2 construction services for the Colebrook Flood Protection works at the hourly rates and estimated fee of \$472,631.25, including GST, as quoted in the Consultant's original proposal; and
5. In the circumstance that the option is exercised, set the expenditure authorization limit for the design and construction components (Phase 1 and 2) of Consultant Agreement M.S. 4816-0510 D1 at \$1,525,000.00, including GST and contingency.

## SCOPE OF WORK

This project involves engineering services for the design and construction administration of the Colebrook Flood Protection works. The 7.2 kilometre long dyke is composed of the Surrey Dyking District (2.2 kilometres) and the Colebrook Dyking District (5.0 kilometres). The dyking districts extend from the Corporation of Delta east to King George Boulevard at the Serpentine Sea Dam, as illustrated in the map attached as Appendix "I". The existing dyke elevation ranges from 2.5 metres to 3.2 metres geodetic.

Project #	Description	Location
4816-4060-00	Surrey Dyking District	Mud Bay: Corporation of Delta east to 125A Street; 14266 – Colebrook Road (west PL) to Sea Dam
4816-4070-00	Colebrook Dyking District	Mud Bay: 125A Street to 14266 – Colebrook Road (west PL) to Sea Dam

The project will include upgrades to the 7.2 kilometres of dyke to provide uniform flood protection as per the *Dike Design and Construction Guide Best Management Practices for British Columbia* (as originally published in July 2003). It is anticipated that the dyke will be raised to a nominal 3.9 metres elevation.

The scope of work includes two distinct phases: Phase 1 (Design in 2016 and 2017/18 Construction Services), and Phase 2 (Optional - 2019/20 Construction Services). At this time, a contract will be awarded for Phase 1 only with the option to award Phase 2 upon successful completion of the preceding phase, and upon approval by the signing authority designate. Construction is being administered over multiple years due to geotechnical constraints where the weight of dyke fill must be staged over time to allow controlled subsurface soil consolidation.

Phase 1 involves design, permit application/requisition, and construction administration for the proposed works in years 2017 and 2018. During this phase, the design will be completed, permits will be achieved, drainage rights-of-way will be acquired, and the base lift of dyke fill will be placed.

Phase 2 (Optional) involves the construction administration of the proposed works in years 2019 and 2020, where the final stages of dyke construction will be performed. During this phase, the dyke flood boxes/piping will be replaced, and dyke fill will continue to the finished 3.9 metre nominal elevation.

## BACKGROUND

At its Regular meeting on March 2, 2016, Council considered Corporate Report No. Ro47;2016 and adopted its recommendations. The purpose of that report was to make recommendations regarding the transfer of the Colebrook Dyking District and the Surrey Dyking District to the City.

That report documented that staff was authorized to inform appropriate Provincial officials that the City is willing to assume responsibility of the Surrey Dyking District, and the Colebrook Dyking District given the financial support committed to by the Province, on the basis that the Province acknowledges and agrees that any future dyke upgrades required will comply with the *Dike Design and Construction Guide Best Management Practices for British Columbia* as originally published in July 2003, and that the Province is not requiring that the dykes within the Colebrook Dyking District be designed and/or constructed to the Seismic Design Guidelines for Dikes.

In an effort to assist the City in accepting the transfer of the Colebrook Dyking District, the Province has provided \$1.166 million for land acquisition and a financial commitment to \$9.234 million for improvements to the dykes to bring them up to an acceptable standard for a total of \$10.4 million. Since receipt of this letter, the Province has transferred the total funding of \$10.4 million to the City via a Government Transfer – Shared Cost Arrangement.

With the Shared Cost Arrangement finalized, the City has assumed responsibility of the Surrey Dyking District and the Colebrook Dyking District and, per the Agreement, will upgrade the Dykes as per the *Dike Design and Construction Guide Best Management Practices for British Columbia* as originally published in July 2003.

### **Proposal Submissions**

The City invited three (3) pre-qualified engineering consultants to respond to the RFP. All three (3) invited consultants responded to the RFP and were received as listed below:

- Associated Engineering Ltd.;
- Parsons Corporation; and
- Stantec Consulting Ltd.

### **Evaluation**

The proposals were evaluated using the following criteria:

- Understanding of the assignment;
- Experience relative to the assignment;
- Strength of the project manager and team;
- Work plan and schedule; and
- Financial considerations.

A consultant was selected by carefully reviewing all of the submissions and following a structured evaluation process.

The Stantec Consulting Ltd. proposal demonstrated a very thorough understanding of the project requirements, offered a team that had considerable experience with projects of a similar nature and proposed an appropriate level of effort. The design fee proposed by Stantec Consulting Ltd. is considered to be reasonable for this type of engineering assignment.

Stantec Consulting Ltd. yielded the highest overall technical score and had the lowest proposal fee for the over 5-year assignment. Overall, the proposal from Stantec Consulting Ltd. was determined to represent the best value to the City in comparison to the other two (2) proposals.

### **SUSTAINABILITY CONSIDERATIONS**

The upgrade of the Colebrook floodplain supports the Economic and Environmental Pillars of the City's Sustainability Charter under the following specific elements of the Charter:

- EC3: Sustainable Infrastructure Maintenance and Replacement;
- EN8: Sustainable Engineering Standards and Practices;
- EN12: Enhancement and Protection of Natural Areas, Fish Habitat and Wildlife Habitat;  
and
- EN16: Manage Land, Water and Air Quality.

## FUNDING

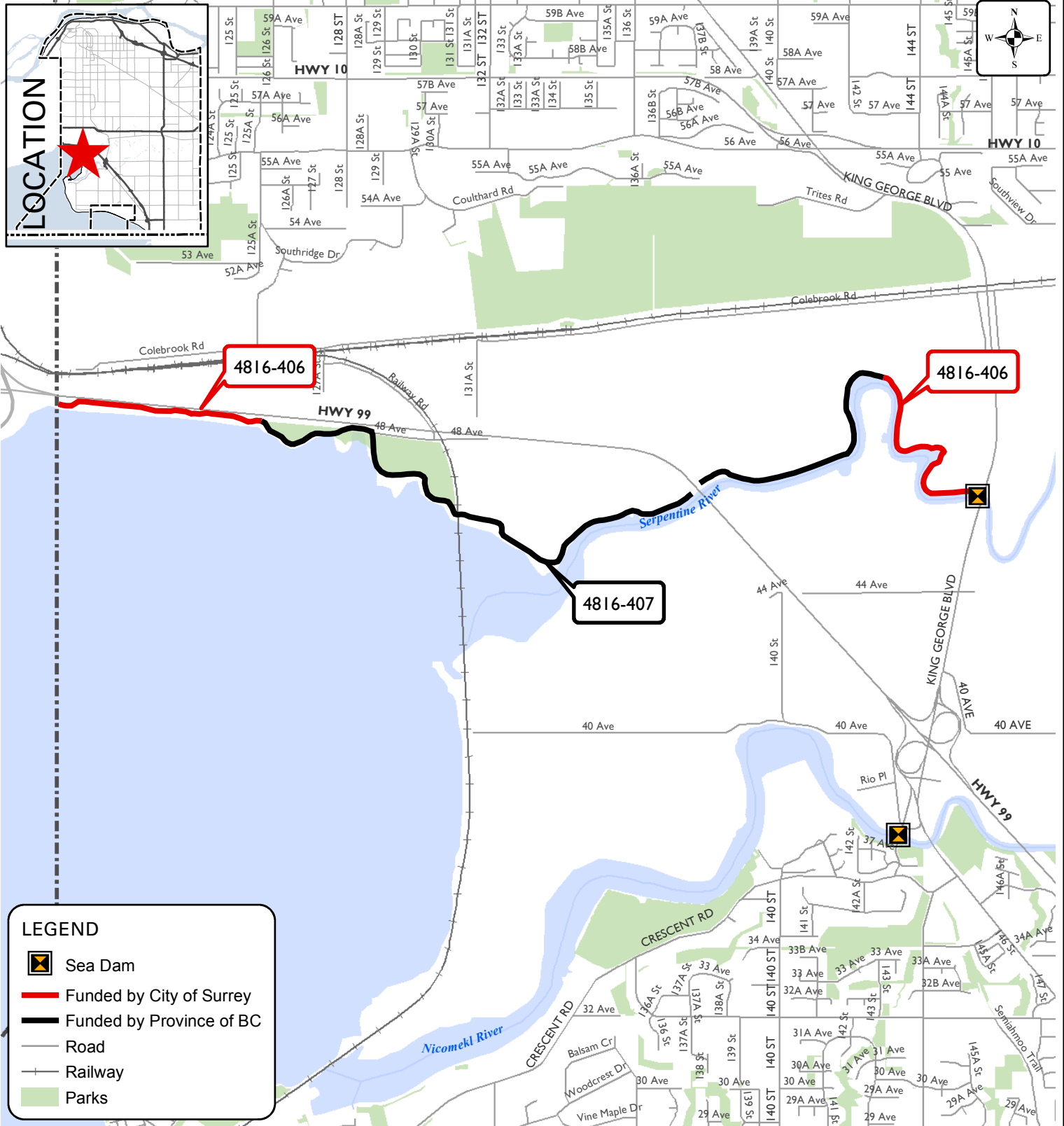
Funding for this contract is available in the City's Capital Budget.

Fraser Smith, P.Eng., MBA  
General Manager, Engineering

SBN/CAB/TB/clr

Appendix "I" – Map of Project Location – Consultant Design Agreement M.S. 4816-0510 D1

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**CONTRACT M.S. 4816-0510**  
**Colebrook Dyke Upgrades**

**ENGINEERING**  
**DEPARTMENT**