



ADMINISTRATIVE REPORT

Report Date: March 3, 2019
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VanRIMS No.: 08-2000-20
Meeting Date: April 3, 2019

TO: Standing Committee on Policy and Strategic Priorities
FROM: General Manager of Engineering Services and Chief Procurement Officer
SUBJECT: Contract Award for Consultant for Cambie Bridge Rehabilitation

RECOMMENDATION

- A. THAT Council authorize City staff to negotiate to the satisfaction of the General Manager of Engineering Services, the Director of Legal Services, and the Chief Procurement Officer, to enter into a contract with Associated Engineering (B.C.) Ltd., for the supply of design and construction contract administration services for the Cambie Bridge Rehabilitation, for a term of two (2) years, with the option to extend for three (3) additional one (1) year terms. The estimated contract price is not to exceed \$5,500,000. The initial award recommendation is for an estimated \$2,441,397, plus applicable taxes, over the initial phase of the contract. Subsequent award(s) for additional phases, up to the maximum contract amount, will be subject to confirmation of construction delivery approach and approved funding.
- B. THAT, subject to approval of Recommendation A, Council approve an increase of \$425,000 to the Multi-Year Capital Project Budget for the Cambie Bridge Seismic Assessment; source of funding to be debenture funding reallocated from the capital projects 2015-16 Bridgeway Slope Stabilization (\$163,000), 2015-18 Major Bridge Maintenance (\$158,000), and 2019 major bridge maintenance (\$104,000). 2019 expenditures will be managed within the overall approved 2019 Annual Capital Expenditure Budget.
- C. THAT the General Manager of Engineering Services, the Director of Legal Services and the Chief Procurement Officer, be authorized to execute on behalf of the City the contract as outlined in Recommendation A.
- D. THAT no legal rights or obligations will be created by Council's adoption of Recommendations A and C above unless and until such contract is executed by the authorized signatories of the City as set out in these recommendations.

REPORT SUMMARY

The City issued “Request for Proposal (RFP) No. PS20181561 - Consultant for Cambie Bridge Rehabilitation” in December 2018. The RFP was advertised on the City of Vancouver website and BC Bid and the work was called in accordance with the terms and condition of the City’s Procurement Policy ADMIN-008.

City staff that were on the RFP evaluation committee and, subsequently, the Bid Committee, have considered the responses received and, on that basis, recommend that the City negotiate and, if such negotiations are successful, enter into a contract as described above with Associated Engineering (B.C.) Ltd.

COUNCIL AUTHORITY/PREVIOUS DECISIONS

The City’s Procurement Policy ADMIN-008 requires that contracts with values over \$2 million must be approved by Council following review and recommendations by the Bid Committee. The Bid Committee have considered, and recommended Associated Engineering (B.C.) Ltd. as the successful proponent.

REPORT

Background/Context

The Cambie Street Bridge (the “Bridge”), constructed in 1985, is one of Vancouver’s major gateway bridges crossing False Creek into the heart of the City, carrying approximately 55,000 vehicles per day (average annual daily traffic), and having an approximate replacement value of \$400 million. It is approximately 870 metres long and is comprised of 21 spans, carrying Cambie Street from West 6th Avenue at the south end to Beatty Street at the north end.

Although the Bridge has been constructed fairly recently, our understanding of seismic performance of structures has changed since the 1980’s. Lessons learned from recent earthquakes (Northridge, Kobe, and Christchurch) have led to advances in our understanding of structural response and, subsequently, revisions to applicable design codes. Significant changes that have occurred in the past three decades are:

- A move to a performance based approach to design vs. strength based design;
- A review and change to the earthquake return period (hazard level);
- Increased soil liquefaction potential;
- Increased understanding of how to model/predict the interaction between the soil and the bridge; and
- Improved detailing requirements to both steel and concrete structures.

Since 2008, the City has commissioned preliminary studies to help better understand the Bridge’s risk profile.

In 2009, with the development of the City’s Neighbourhood Energy Utility (NEU), a select number of bridge piers in close proximity to the energy center were seismically upgraded to capitalize on the facility excavation.

In 2013, a preliminary seismic assessment was completed to develop a better understanding of the bridge's expected seismic performance, as well as some of its apparent and/or potential deficiencies. The foundations, columns and other structural components were identified as being deficient, along with concerns for potentially liquefiable soils.

In 2014, geotechnical data was collected. A geotechnical seismic assessment followed, where it was concluded that liquefaction was a concern along the bridge's alignment and ground improvement options were developed, for consideration.

From the various studies it has become clear that the Bridge does not meet the current seismic code (Canadian Highway Bridge Design Code S6-14) requirements and, given the increased seismic hazard and potential for soil liquefaction, the Bridge is not expected to perform well. After a moderate level earthquake, the Bridge would likely need to be closed and require replacement.

Therefore, the City initiated a procurement seeking a Professional Engineering Consulting firm (the "Consultant") with the capability, capacity, and experience to complete the assessment, analysis, and design for seismic upgrades and structural rehabilitation to the Bridge.

In addition to the seismic upgrade design scope of work, the Consultant, in the initial award phase, will also develop a complete and comprehensive rehabilitation and upgrade approach/package for the Bridge. This includes the following work items:

- Asset management related tasks (condition assessment, material testing, lifecycle analysis);
- A climate change assessment (PIEVC engineering protocol);
- Rehabilitation designs (concrete repairs, bearing & expansion joint replacement);
- Retrofit designs (barrier & railing retrofits, urban design parameters) ;
- Habitat, environmental, and archeological assessments; and
- Construction plans (phasing, staging, traffic) .

Future phases of work for the Consultant are related to providing technical assistance and Engineer of Record services during tender, construction administration and field review services, as well as assisting during the construction warranty phase. These future phases of work are to be awarded subject to the approval of construction funding. Only funding to support the design work is included in the current capital plan.

Strategic Analysis

The RFP was issued in accordance with City's Procurement Policy ADMIN-008.

The City received responses from:

- Associated Engineering (B.C.) Ltd.;
- WSP Canada Group Limited;
- Stantec Consulting Ltd.;
- COWI North America, Ltd.; and
- Morrison Hershfield Limited.

The responses were evaluated through the work of an evaluation team comprised of representatives from the Engineering Services Department under the stewardship of Supply Chain Management to ascertain if the responses offered good overall value to the City, both quantitative and qualitative factors were evaluated.

Some of the Criteria considered in the overall evaluation process included:

- Proponent overview;
- Proposed key personnel;
- Work plan and ability to meet schedule;
- Quality management plan;
- Value added services; and
- Sustainability.

Based on the overall evaluation, the team concluded that the proposal submitted by Associated Engineering (B.C.) Ltd., best met the City's requirements and provided best overall value to the City.

Financial Implications

Finance has reviewed and confirmed that funding is available from the approved Multi-Year Cambie Bridge Seismic Upgrades Assessment Capital Budget pending Council's approval of the increase to the budget. As a result of the RFP, the City is able to achieve cost certainty for the proposed contract term.

To deliver this project staff seek Council approval of a \$425,000 increase to the Multi-Year Capital Project Budget for the Cambie Bridge Seismic Assessment; source of funding to be debenture funding reallocated from the capital projects 2015-16 Bridgeway Slope Stabilization (\$163,000), 2015-18 Major Bridge Maintenance (\$158,000), and 2019 major bridge maintenance (\$104,000). 2019 expenditures will be managed within the overall approved 2019 Annual Capital Expenditure Budget.

Legal

The City's Procurement Policy requires that all contracts that have been awarded by the Bid Committee plus Council will be signed by the Director of Legal Services.

CONCLUSION

In summary, City staff recommend that the City negotiate and enter into a two (2) year contract, with the option to extend the contract for an additional three (3) - one (1) year terms, with Associated Engineering (B.C.) Ltd., for consulting services for the Cambie Bridge Rehabilitation.

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