



COUNCIL REPORT

Report Date: April 7, 2025
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Meeting Date: May 7, 2025
[Submit comments to Council](#)

TO: Standing Committee on Policy and Strategic Priorities

FROM: General Manager of the Engineering Services Department and Chief Procurement Officer

SUBJECT: Approval of Contract Amendment to Professional Services Agreement No. PS20181561 - Consultant for Cambie Bridge Rehabilitation

Recommendations

- A. THAT Council authorize City staff to negotiate to the satisfaction of the City's General Manager of Engineering Services, City's Director of Legal Services, and the Chief Procurement Officer, contract amendments to Professional Services Agreement No. PS20181561 - Consultant for Cambie Bridge Rehabilitation with Associated Engineering (BC) Ltd. for the Cambie Bridge Seismic Upgrade and Restoration Program to add additional scope of services. The additional scope of the recommended amendments would increase the term of the agreement by approximately six (6) years and add an incremental, estimated value of \$11,000,000.00 (including contingency and contract administration services), for an estimated total contract value of \$16,500,000.00 and total term of eleven (11) years. Funding for the contract amendments are included in the Approved Multiyear Capital Budget for the Cambie Bridge Seismic Upgrade (CEB-00042 and CEB-00043).
- B. THAT Council delegate its authority to execute the contract amendment to the City's Director of Legal Services, Chief Procurement Officer, and General Manager of Engineering Services.
- C. THAT no legal rights or obligations will be created by Council's approval of Recommendations A and B unless and until the City executes and delivers the amendments.

Purpose and Executive Summary

The City issued Request for Proposals (RFP) No. PS20181561 Consultant for Cambie Bridge Rehabilitation on November 7, 2018 for engineering design and contract administration services for the seismic upgrade and rehabilitation of the Cambie Bridge. The City advertised the RFP on

the City of Vancouver website and BC Bid in accordance with the City's Procurement Policy (ADMIN-008). Associated Engineering (BC) Ltd. was awarded the contract for design and contract administration services at for \$5,500,000.00. Through the term of work to date, additional requirements have been identified that require change orders to the contract with Associated Engineering (BC) Ltd. With a much larger construction scope than initially anticipated in 2018, the City is about to reach the initial maximum consulting contract limit of \$5.5 million. Amendments to extend the contract and additional consulting budget are needed to retain Associated Engineering (B.C.) Ltd. to complete the seismic design for the bridge rehabilitation program and maintain their Engineer of Record responsibilities and be able to meet design and construction timelines as part of requirements for external funding deadlines.

Council Authority/Previous Decisions

The City's Procurement Policy (ADMIN-008) requires Council approve contracts with a total value greater \$3,000,000 following review and recommendations by the City's Bid Committee.

The Bid Committee has considered the additional costs described in this report and recommends proceeding with issuing the contract extension and change order to Associated Engineering (BC) Ltd.

The following Council reports/decisions have relevance to this work:

RTS 13072 PS20181561 Contract Award for Consultant for Cambie Bridge Rehabilitation

RTS 17709 DMAF Funding for Cambie Bridge

City Manager's Comments

The City Manager concurs with the foregoing recommendations.

Context and Background

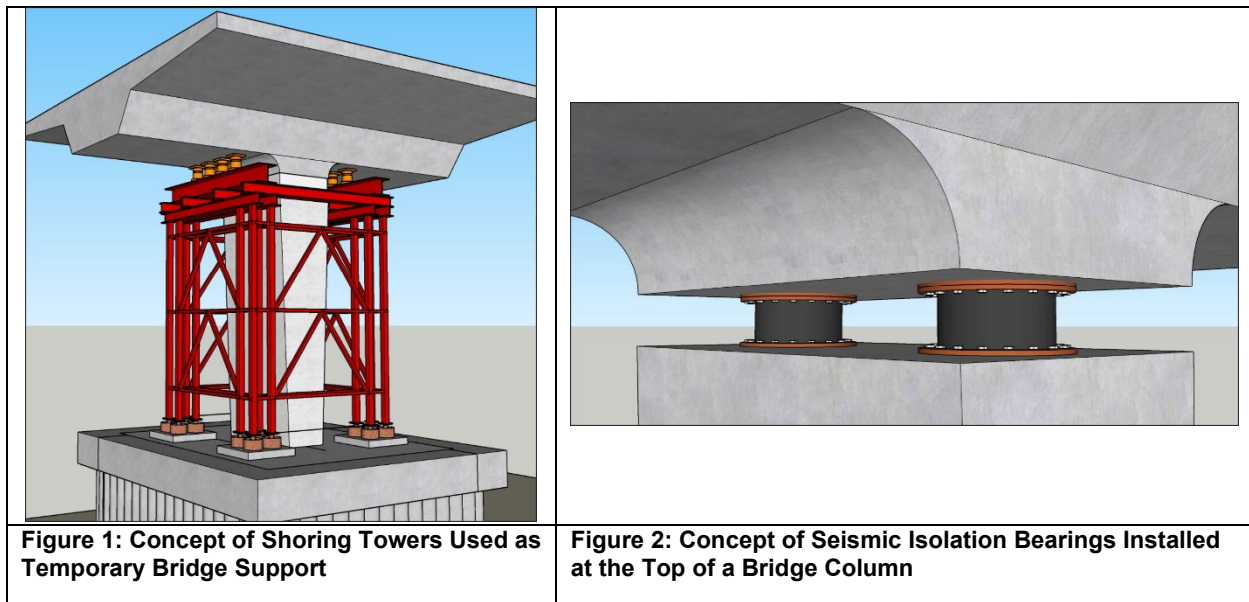
The City issued RFP No. PS20181561 Consultant for Cambie Bridge Rehabilitation on November 7, 2018 for engineering design and contract administration services for the seismic upgrade and rehabilitation of the Cambie Bridge (the Bridge) in order to support the overall multi-capital plan Cambie Bridge Seismic Upgrade & Rehabilitation Program (the Program). The City advertised the RFP on the City of Vancouver website and BC Bid in accordance with the City's Procurement Policy (ADMIN-008). Associated Engineering (BC) Ltd. was awarded the contract for design and contract administration services at a maximum price of \$5,500,000.00.

When the original contract for design and contract administration services was developed, it was estimated the cost of the Program would be \$30 million and that only a significantly lower level of seismic performance would be possible for the Bridge. After engaging Associated Engineering (BC) Ltd., and as a direct result of their innovative seismic upgrade approach, it was confirmed that a much higher seismic performance level can be achieved for the Bridge. Because of this innovative approach, the Bridge would be open to emergency vehicles days after a major earthquake. This level of performance is nearly equivalent to today's modern bridge code for a 1 in 2475-year seismic event.

Funding sources for this Program are anticipated to be from the City, Translink, and the Federal government. The Federal funding application, which was endorsed by Council, has a substantial

completion deadline eligibility requirement of 2032. To meet this construction deadline each phase of the Program must begin as soon as possible.

Seismic upgrade design is a highly iterative process, as it's important to determine what level of seismic performance is achievable for an existing structure while also balancing the associated costs. During the early stages of their work, Associated Engineering (B.C.) Ltd. completed numerous studies and assessments to develop the seismic upgrade and rehabilitation strategy for the Bridge. The chosen strategy utilizes seismic isolation bearings to significantly reduce the seismic forces that the bridge would experience during an earthquake. To achieve the higher level of seismic performance the isolation bearings need to be installed at every column and abutment. When installing the isolation bearings, the bridge will need to be temporarily supported using shoring towers. Figures 1 and 2 illustrate what this process will look like.



This innovative approach to upgrading the Bridge will also protect critical infrastructure located directly below and reduce future rehabilitation needs over the lifespan of the Bridge by eliminating approximately half of the Bridge deck joints that would typically require repairs and replacement. It's important to note that alternative seismic upgrade approaches would not have been able to achieve this seismic performance level or would have a significantly higher construction cost.

As the design stage progressed, the required construction scope for this innovative approach has been better defined. The cost for the Program is now estimated to be approximately \$218 million.

To date, Associated Engineering (B.C.) Ltd. has completed a 70% overall structural design for the Bridge. In addition, Phase 1 construction was completed in 2022 and the Phase 2 design is scheduled to be out for tender in May 2025. The Program is expected to be completed over 4 phases which span multiple capital plans. A brief description of the scope included in each phase is included in the table below and shown in Figure 3.

Table 1: Anticipated Seismic Upgrade and Rehabilitation Program Phasing

Upgrade Phase	Scope of Work for the Program
Phase 1:	The early works phase was completed in 2022 and included necessary urgent repairs to select bridge components and strengthening of a pile cap within the parking lot below the south end of the Bridge.
Phase 2:	Estimated to begin at the end of 2025 and finish by 2027, Phase 2 includes installation of isolation bearings within Coopers Park on the north end of the Bridge and the marine spans over False Creek. Liquefaction protection will occur at select pier footings within Coopers Park. Seawall naturalization will occur at the same time as this phase on the north end of False creek.
Phase 3:	Estimated to begin in 2027 and finish by 2029, Phase 3 includes installation of seismic isolation bearings on the south approach on and off ramps. Transportation improvements of the 2nd Ave. westbound off ramp will be investigated and may occur as part of this phase.
Phase 4:	Estimated to begin in 2028, Phase 4 is significantly larger than the other phases. It includes installation of isolation bearings on all the north approach on and off ramps and the south spans over the Neighbourhood Energy Utility plant, parking lots and the 1800 Spyglass building. Liquefaction protection will occur at select footings on the south spans. The majority of the above deck work will occur during this phase which includes replacement of the deck overlay, elimination of intermediate deck joints and installation of larger joints at the bridge ends. Phase 4 is expected to finish in 2032. Numerous additional transportation and utility improvements will be investigated and may occur as part of this phase. For clarity, the non-seismic design and contract administration services for Phase 4 will be awarded under a separate RFP.

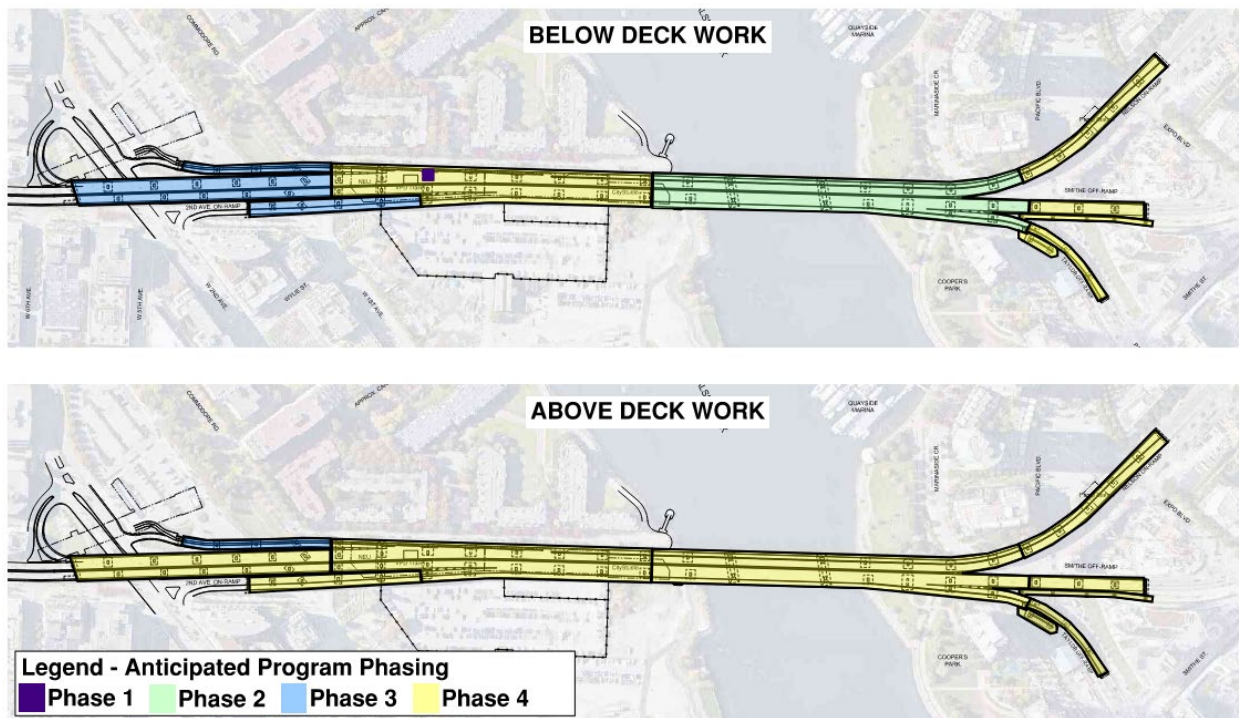


Figure 3: Plan View of Anticipated Seismic Upgrade and Rehabilitation Phasing

Once all phases of the Program are complete, the Bridge will function as a fully connected system during an earthquake, providing a significantly higher seismic performance level compared to its current condition. Since the improved seismic performance of the upgraded Bridge depends on all phases being complete and acting as one system, it is essential to retain Associated Engineering (BC) Ltd. to complete all phases of the seismic upgrade design to ensure continuity and maintain their Engineer of Record design responsibilities.

Phase 2 is currently scheduled to be issued for tender in May 2025, and consulting services will be required to provide contract administration and construction support for this phase. Additionally, to meet the estimated timeline for Phase 3, the design of non-structural elements to enable the seismic upgrade work, such as utility relocations, must start in 2025.

Given these constraints, the additional scope included in the recommended change orders include:

- Completion of the seismic upgrade and rehabilitation design for all phases of the Program;
- Completion of the non-structural design scope for Phase 3; and
- Construction contract administration and support services for Phases 2 and 3.

Reason for Change Orders

With a much larger construction scope than initially anticipated in 2018, the City is about to reach the initial maximum consulting contract limit of \$5.5 million. Additional budget is therefore needed to retain Associated Engineering (B.C.) Ltd. to complete the seismic design for the Program to maintain their Engineer of Record responsibilities. To meet the Federal funding

application substantial completion deadline of 2032, the services of Associated Engineering (B.C.) Ltd. are also required for contract administration to support the Phase 2 and 3 design and construction timelines.

The City will undertake a new competitive procurement process for Phase 4 non-seismic design scope of work and construction administration and support. It is anticipated that a Request for Proposals will be posted in 2025 to obtain these professional engineering services.

Financial Implications

Finance has reviewed and confirmed that funding is available from the Approved Multiyear Capital Budget for the Cambie Bridge Seismic Upgrade Project (CEB-00042 and CEB-00043).

FP&A has reviewed and concurs on the costs shown below:

Estimated Contract Value	
Original contract value	\$2,441,397.00*
Current Contract Value	\$5,500,000.00
Contemplated Change Orders (estimate)	\$11,000,000.00, plus applicable taxes.
New maximum contract value (estimate)	\$16,500,000.00 plus applicable taxes.

*The initial approved maximum value of the original agreement is \$5.5M however the agreement was awarded at a lower value due to the amount of funding available at the time of contract execution.

Legal Implications

The City's Procurement Policy (ADMIN-008) requires the Director of Legal Services to execute all contracts with a total value greater than \$3,000,000 that have been awarded by the Bid Committee and Council.

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