



Governance and Priorities Committee Report For the July 24, 2014 Meeting

To: Governance and Priorities Committee **Date:** July 17, 2014
From: Dwayne Kalynchuk, P. Eng.,
Director of Engineering and Public Works
Subject: Johnson Street Bridge Replacement Project Quarterly Update

Executive Summary

Quarterly reports are prepared on the Johnson Street Bridge Replacement Project throughout the year to keep Council and the community updated on this important capital project. This is the second quarterly report for 2014.

Since the last report on April 10, 2014, a significant amount of work has been accomplished with the construction of the foundation of the new bridge on both the east and west sides of the harbour and in the water. Significant progress has also been made with construction of the bascule leaf at the steel fabricator in China. Steel fabrication is expected to be complete by May 2015 with the new bascule leaf arriving in Victoria in July 2015.

Crews are currently in the area of Harbour and Esquimalt Roads, constructing a new four-way intersection which will be complete in September. Once the intersection of Harbour and Esquimalt Roads is done this fall, all major road work related to the bridge project will be complete on the west side.

As of May, PCL has invoiced \$11.9 million representing approximately 18.9% of the total contract amount. This includes \$1.65 million for prepayment of roughly two thirds of the structural steel that is located at the fabricator's plant in China. MMM has invoiced a total of \$7,355,770 from the \$9,362,377 budget for design, permitting, construction administration, and project management. To date \$872,880 has been allocated from the construction contingency with \$1,942,120 remaining.

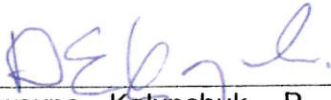
The latest schedule update from PCL shows the new bridge opening to traffic in January 2016. This is approximately five months later than the contract date. Until the change order is resolved, the expected completion date remains March 2016, and the contractor is expected to accelerate work to meet the contract date.

With ongoing road work and an increase in visible activity onsite, public interest in the project continues to grow. The project website has been updated to help provide better access to information that is of high interest and to allow for easy sharing of information through social media. Staff continue to correspond with stakeholders to provide as much advance notice as possible and to address any issues as they arise.

Recommendation:

That Council receive this report for information.

Respectfully submitted,

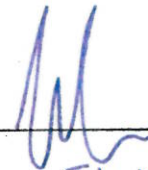


Dwayne Kalynchuk, P. Eng.,
Director of Engineering and
Public Works



Katie Hamilton
Director of Citizen Engagement
and Strategic Planning

Report accepted and recommended by the City Manager:



Date:

July 17, 2014

Purpose

As directed by Council, staff provide quarterly reports on the Johnson Street Bridge Replacement Project throughout the year. This is the second quarterly report for 2014 and the tenth quarterly report to date.

Design Update

The bridge design is substantially complete with minor non-critical items being finalized. The team is presently working with the contractor and contractor's assembly consultant developing bascule erection plan.

Majority of fendering design completed and released to the contractor, final design of north wing wall fenders still pending.

Risk Registry

The Project Team is tracking the key project risks on a weekly basis. The risk registry is being revised and will be provided in upcoming reports to Council (this is addressed further in the report in terms of refreshing the risk registry and recommendations from Mr. Huggett's report).

Bridge Construction Update

Since the last report on April 10, 2014, a significant amount of work has been accomplished with the construction of the foundation of the new bridge on both the east and west sides of the harbour and in the water. Significant progress has also been made with construction of the bascule leaf at the steel fabricator in China.



Bascule leaf fabrication

The bascule pier, which is the housing to support the mechanical and electrical system that moves the bascule leaf, has had all 16 piles completed. Concrete work is underway on the floor slab with forming for the walls to commence shortly.



Bascule pier concrete work

The rest pier, which is where the bascule leaf rests, has had all six piles completed. The west abutment footing is now finished and part of the abutment wall has been completed. For the east abutment, the temporary retaining wall is in place and excavation in advance of the abutment piling will commence in the coming days.



Rest pier work



West abutment wall work

Thurber Engineering Ltd. has been on site during all pile installation activity to confirm geotechnical compliance with the design.

Site Work

The off-ramp access to the Delta Ocean Pointe Resort has been closed and removed, and a new temporary driveway has been constructed into the Delta Ocean Pointe Resort to maintain access to the hotel during construction. This allowed crews to begin moving soil in the s-curve area during the drier weather. The new extension of Harbour Road, which includes future two-way access to the hotel and future waterfront greenspace, will be completed this September.



Delta driveway access

Construction has started for the new intersection of Harbour and Esquimalt Roads. This work includes improving drainage, curbs for traffic signals, new sidewalks, road base, paving, and hydro infrastructure relocation. Once complete in the fall, the new intersection will include new sidewalks and crosswalks and a new extension of Harbour Road south of Esquimalt, connecting to the Delta Ocean Pointe Resort and future waterfront green space. Once the intersection of

Harbour and Esquimalt Roads is done this fall, all major road work related to the bridge project will be complete on the west side.



New intersection work underway at Harbour and Esquimalt Roads

PCL has constructed a temporary concrete retaining wall on the west side to allow for placement of excavated soil generated from the new road alignment, from the bridge to the intersection at Harbour Road. All excavation work has progressed under archaeological monitoring and First Nations oversight.

Pandora Avenue has been shifted a little to the south to allow access to the work area for the east abutment.



Pandora Avenue realignment

Traffic management plans that detail all traffic impacts from now until the end of 2014 have been prepared by PCL and approved by City staff. This information will allow advance notice to the

public regarding all temporary lane and road closures, as well as detours anticipated until the end of the year to accommodate the road re-alignments.

Structural Steel Fabrication

Structural steel fabrication in China is substantially complete for the top and bottom chord plates for both trusses of the new bascule leaf. Installation of diaphragms and closing up of the chord sections has begun. Plate cutting has begun for the ring of the bascule leaf. It is expected that the structural steel work will be complete by May 2015 and the bascule leaf will arrive in Victoria in July 2015.

Safety and Environment

The contractor has approximately 40 people currently working onsite in Victoria. This consists of approximately 14 office staff and 24 field staff, which includes the sub-contractor work force.

No environmental health and safety recordable incidences were reported during the last three month period. PCL did report a near miss in May as an excavator came in contact with a live power pole during the excavation works at the old Delta Hotel ramp on the west side of the project. PCL Constructors Westcoast has a robust safety program and safety orientations are continuously being given to new personnel. Safety orientations are also provided to all visitors to the job site prior to proceeding to any active work zone.

Environmental monitoring is being conducted by Hemmera field representatives on a regular basis. According to Hemmera's reports, the contractor has maintained a very high level of compliance with all environmental regulations under the Ministry of Environment and Department of Fisheries and Oceans.

Archaeological monitors from Stantec and representatives from First Nations are on site and present during the excavation works at the west side of the project. Minor artifacts have been found to date. Some of the findings include iron fragments, clay pipes, glass bottles, and nails. All findings are documented and catalogued with the provincial Archaeological Branch and will eventually be provided to the Royal BC Museum. While the project is located in an area of cultural significance, it has also experienced land disturbance over the years as a result of past development activities, meaning the location of artifacts recovered provide limited interpretive value.

Upcoming Site Work

Excavation will continue on the west side with piling commencing on the west side for the 203 Harbour Road retaining wall. This item is a cash allowance design build component and final costs are expected as soon as the design and geotechnical testing is complete. These costs are separate from the bridge project.

Construction of the west abutment wall will continue over the coming weeks. It is anticipated that grading for the new Harbour and Esquimalt Road intersection should be completed by the end of July. In September, a new connection to the existing bridge will open from the new intersection of Harbour and Esquimalt. This new connection will allow for an earlier closure of the current s-curve road and allow soil grading for the future green space to be completed during the drier weather.

Column and pier cap construction for the rest pier will commence shortly.

Work continues on the east side on the floor of the bascule pier and forms for wall construction will be erected. Piling will commence on the intermediate pier which is between the bascule pier

and the east abutment. Excavation will commence for the east abutment which necessitated the shifting of Pandora Avenue.

Financial Overview

As of May 31, 2014 PCL has invoiced \$11.9 million representing approximately 18.9% of the total contract amount. This included \$1.65 million for prepayment of roughly two thirds of the structural steel that is located at the fabricator's plant in China.

As of June 27, 2014 MMM has invoiced a total of \$7,355,770 from the \$9,362,377 budget for design, permitting, construction administration, and project management (see Appendix A for Budget Update).

To date \$872,880 has been allocated from the construction contingency with \$1,942,120 remaining. This includes an allocation for an Owner's Quality Assurance program for structural steel in China. The Owner's Quality Assurance program is designed to audit PCL to confirm that their quality management system is effective and is properly implemented. The program was contemplated during the contract preparation and funds were allocated from the contingency (see Appendix B for Project Completion Contingency (as per Schedule C – Schedule of Prices).

Construction Schedule

The latest schedule update received by the consultant shows the new bridge receiving traffic in January 2016. This is approximately five months later than the contract date.

Until the change order is resolved, the completion date remains March 2016, and the contractor is expected to accelerate work to meet the contract date.

Contractor Request for a Change Order

As the first step for dealing with the PCL request for a change order, received on March 17, 2014 (see Appendix C), as noted in the contract, the City requested MMM, as the City's primary consultant managing the project, to review and comment on the merits, if any, of PCL's request.

MMM's response was received in May (see Appendix D) with the recommendation that the claim be denied. City staff are reviewing MMM's document and are requesting further information from PCL on all relevant material. The City will continue to evaluate the claim and then bring forward a recommendation in the future for Council's consideration.

Review of Johnson Street Bridge Project

The City retained Jonathan Huggett to undertake an independent review and assessment of the Johnson Street Bridge Replacement Project. Mr. Huggett held numerous meetings with staff from the City, PCL, MMM Group consultants, and Hardesty and Hanover consultants. He also reviewed large quantities of written documentation. The report (see Appendix E – Review of Johnson Street Bridge Project) documents issues, proposed corrective action, and updates Council on action already initiated by the City Manager to deal with the problems identified.

A summary of the eight recommendations of the report is as follows:

- 1) That the City appoints and delegates authority to one individual as Project Director.

Action taken: The City Manager has retained the Consultant (Jonathan R Huggett P. Eng) on an interim basis (until September 2014), and reporting to the City's Director of Engineering and Public Works to provide leadership on behalf of the City in resolving the

issues identified in this report. The City Manager has indicated he will be reviewing longer-term issues around leadership beyond September after an evaluation of project issues.

- 2) Issues arising on the project are to be dealt with in a timely manner through constructive dialogue and teamwork.

Action taken: The Interim Project Director has asked both MMM and PCL prepare a detailed scope of work for MMM and its sub consultants from now until the end of the Project and then MMM will be invited to submit a proposal as to how these services can be provided. This issue is an example of how work that is not being undertaken in a timely manner is delaying the Project. To simply deny that these services are required or that they have already been paid for means that important engineering services are not being undertaken.

- 3) The roles and responsibilities of MMM Group consultants and their performance need to be reviewed.

Action taken: MMM have assigned an additional office engineer to review contractor submittals.

- 4) The City, in consultation with MMM Group and PCL, to devise an appropriate owner's quality assurance plan for work in China.

Action taken: The City has now issued a fully detailed quality assurance change order to MMM and principally its sub consultant H&H to ensure third party checks on the steel fabrication in China are being undertaken. Ongoing monitoring will be required.

- 5) Revise the risk monitoring process to identify and focus on a smaller number of risks that are specific to the project (not generic risks) and develop proper mitigation strategies to deal with them.

Action taken: Through regular weekly meetings the Project Team are now coming to grips with all of the key project risks and these are being tracked on a weekly basis. These risks and mitigation strategies will be further defined in the upcoming reports to Council so they may be properly managed.

- 6) Formalize a project schedule for the project in an agreement involving PCL, MMM, and the City, and include the schedule in both contracts.

Action taken: City staff and MMM are reviewing all responses made by City / MMM staff to PCL regarding the April 6, 2013 schedule and are endeavouring to ensure formal adoption of the project schedule by the end of July 2014.

- 7) Undertake a thorough and realistic assessment of potential costs of the project and work with its partners to develop strategies to contain costs.

Action taken: The City is in the process of reviewing PCL's request for a change order for schedule delays. The City has also asked MMM (and its sub consultant H&H) to review the scope of work required to complete the engineering services for the project. The City is also taking various actions as detailed in the previous recommendations to improve communication in the project team, to resolve outstanding issues speedily, and to foster a more collaborative approach to the delivery of the Project. This will take time to establish a more definitive project budget, but at the same time it would be very unwise to cause additional delays.

- 8) Put in place the recommended Project Governance Strategy outlined in the review.

Action taken: The City Manager has appointed the consultant Jonathan Huggett P. Eng. as an Interim Project Director with instructions to implement the recommendations in this report as quickly as possible. The Interim Project Director will report to the City's Director of Engineering and Public Works and both will report to the City Manager on a regular basis.

Public Information and Consultation

On May 28, 2014, the City hosted a drop-in information session at Swans Hotel for the public to learn about the next phase of construction with the bridge project. About 20 people attended the event. Overall comments were positive with most people attending out of curiosity to learn more about what to expect in the coming months in terms of construction activity. The City continues to communicate regularly with neighbouring hotels, the Downtown Victoria Business Association, and Downtown and Victoria West Community Associations to keep them informed about the project.

Decorative construction banners have been added on both the east and west sides of the construction site to help minimize construction clutter. There have been a few minor incidents of graffiti since the banners went up and those panels have since been replaced.

The project website www.JohnsonStreetBridge.com has a new look and improved navigation, making it easier for people to find information about the project and to share it through Facebook and Twitter. With construction activity increasing, the website is being updated more often with new information, letting the public know about progress in bridge construction and any construction impacts. The website is seeing a steady increase in visitation, with more than 2,300 unique visitors in June. This is an increase of about 700 more visitors per month when compared to March of this year. The webcam and pages with information about the new bridge remain the most popular pages.

Recommendation:

That Council receive this report for information.

Attachments

Appendix A – Budget Update

Appendix B – Project Completion Contingency (as per Schedule C – Schedule of Prices)

Appendix C – PCL Letter re: Design Delay and Scope Increases Request for Change Order (March 17, 2014)

Appendix D – MMM response to the PCL March 17, 2014 Letter (May 2, 2014)

Appendix E – Review of Johnson Street Bridge Project, report by Jonathan R Huggett P.Eng.