

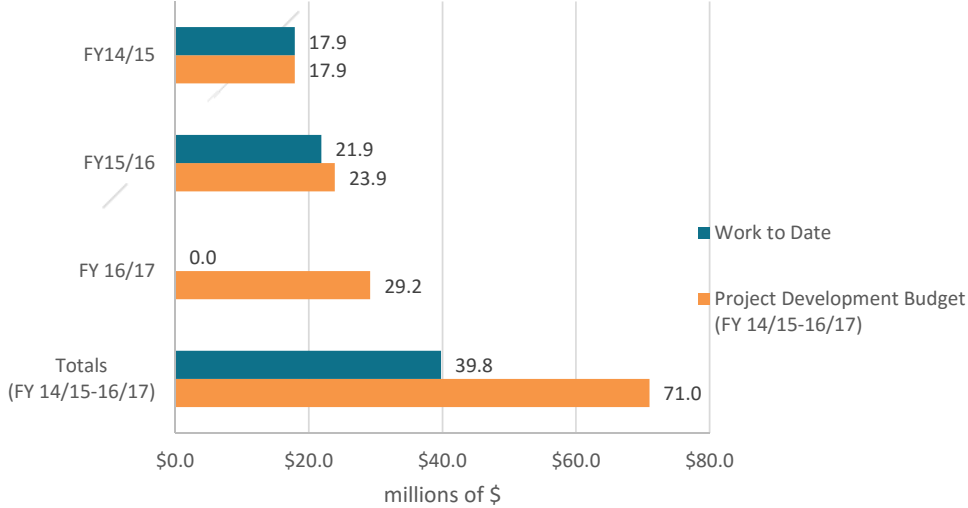



GEORGE MASSEY TUNNEL REPLACEMENT PROJECT

MONTHLY STATUS REPORT MARCH 2016

DRAFT

PROJECT STATUS DASHBOARD

Scope	Status*															
<ul style="list-style-type: none"> A Project Definition Report draft reference concept has been completed, which includes the main bridge and interchanges at Steveston Highway, Highway 17A and Westminster Highway as well as Highway 99 corridor improvements from Bridgeport Road in Richmond to Highway 91 in Delta. The Project Definition Report was released on December 16, 2015. The Project scope, along with the draft reference concept, will be refined following Project Definition Report consultation, technical studies and the environmental review. 																
Schedule																
<ul style="list-style-type: none"> Consultation: Public and stakeholder consultation on the Project Definition Report has been completed; the Phase 3 - Project Definition Report Consultation Summary Report was released in March. Further comments from the public continue to be welcomed at the Project office in Richmond. Environment: Consultation on the Project Description component of the Environmental Assessment (EA) Application is ongoing; the public comment period ended in February. Development of the EA Application will continue in preparation for a May/June 2016 submission. Technical Studies: Engineering, geotechnical and other technical studies are underway to further inform the reference concept and in support of the procurement process. Procurement: A business case has been completed. Procurement is expected to begin in 2016. All key Project activities are proceeding on schedule. 																
Cost																
<ul style="list-style-type: none"> The Project is on budget at March 31, 2016. The 2015/2016 fiscal year ended on March 31, 2016. Actuals were \$2M below budget, primarily due to the timing of property acquisition.  <table border="1" data-bbox="337 1276 1299 1780"> <caption>Cost Comparison (millions of \$)</caption> <thead> <tr> <th>Fiscal Year</th> <th>Work to Date</th> <th>Project Development Budget (FY 14/15-16/17)</th> </tr> </thead> <tbody> <tr> <td>FY14/15</td> <td>17.9</td> <td>17.9</td> </tr> <tr> <td>FY15/16</td> <td>21.9</td> <td>23.9</td> </tr> <tr> <td>FY 16/17</td> <td>0.0</td> <td>29.2</td> </tr> <tr> <td>Totals (FY 14/15-16/17)</td> <td>39.8</td> <td>71.0</td> </tr> </tbody> </table>	Fiscal Year	Work to Date	Project Development Budget (FY 14/15-16/17)	FY14/15	17.9	17.9	FY15/16	21.9	23.9	FY 16/17	0.0	29.2	Totals (FY 14/15-16/17)	39.8	71.0	
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* **Status Legend:** Green = No issues to report; Yellow = Minor issues to report; Red = Significant issues to report.

INTRODUCTION

Project Overview

The George Massey Tunnel is an important link in the regional and provincial transportation system, carrying an average of 80,000 vehicles each day. It connects to key gateways such as Vancouver International Airport (YVR), the Peace Arch and Pacific Canada-U.S. border crossings, BC Ferries' Tsawwassen terminal, Deltaport and the Boundary Bay Airport. It is a vital goods movement route that fuels our local, regional, provincial and national economies, and a key access point for businesses in Delta, Surrey, Richmond, and Tsawwassen First Nation.

Since the Tunnel opened in 1959, Metro Vancouver's population and economy have grown, and its population is forecast to continue to grow by more than one million people over the next 30 years. Without improvements to this crossing, economic growth and regional livability will be constrained by congestion and increasing travel times for commuters, goods movers, commercial traffic and other traffic.

With growing concerns about public safety and congestion in and near the Tunnel, in 2012, the government of B.C. commenced a study of options to address the Highway 99 corridor. After analysis and consultation, a new bridge to replace the Tunnel emerged as the most appropriate and supported solution. Construction is anticipated to begin in 2017.

Project Goals

Based on the Ministry's mandate and results of consultation to date, six primary goals have been identified for the Project:

1. **Reduce congestion.** Improve travel times and reliability for all users.
2. **Improve safety.** This includes improving traffic and seismic safety, as well as emergency response capabilities.
3. **Support trade and commerce.** Improve access to local businesses and gateway facilities, and improve travel time reliability for goods movers and service providers.
4. **Support increased transit on the Highway 99 corridor.** Provide dedicated transit/HOV lanes on the new bridge to improve travel time reliability and add capacity for long-term transit improvements.
5. **Support options for pedestrians and cyclists.** Provide a multi-use pathway on the new bridge to connect cycling and pedestrian corridors in Richmond and Delta.
6. **Enhance the environment.** Enhance the environment under the new bridge and in the Project right-of-way on Deas Island.

Key Milestones Achieved to Date

Key milestones achieved to date are listed by category below. The reports can be found within the Document Library of the George Massey Tunnel Replacement Project website.

Consultation	<ul style="list-style-type: none"> • Project Definition Report • Completion of Phase 1, Phase 2 and Phase 3 Consultation, including summary reports
Environmental Review	<ul style="list-style-type: none"> • Submission of Environmental Assessment Pre-Application to the BC Environmental Assessment Office
Design/Engineering	<ul style="list-style-type: none"> • Project Definition Report Draft Reference Concept • Multiple traffic data and analysis reports • Multiple geotechnical studies
Procurement	<ul style="list-style-type: none"> • Business Case • Capital Cost Estimate Report • Operations, Maintenance and Rehabilitation Base Cost Estimate Report • Procurement Options Report • Risk Report

March 2016 Highlights

Consultation	<ul style="list-style-type: none"> • Completed and released the Phase 3 – Project Definition Report Consultation Summary Report
Construction	<ul style="list-style-type: none"> • Began installing the reaction piles for the upcoming Pile Load Test • Obtained initial monitoring data during pile installations

Report Structure

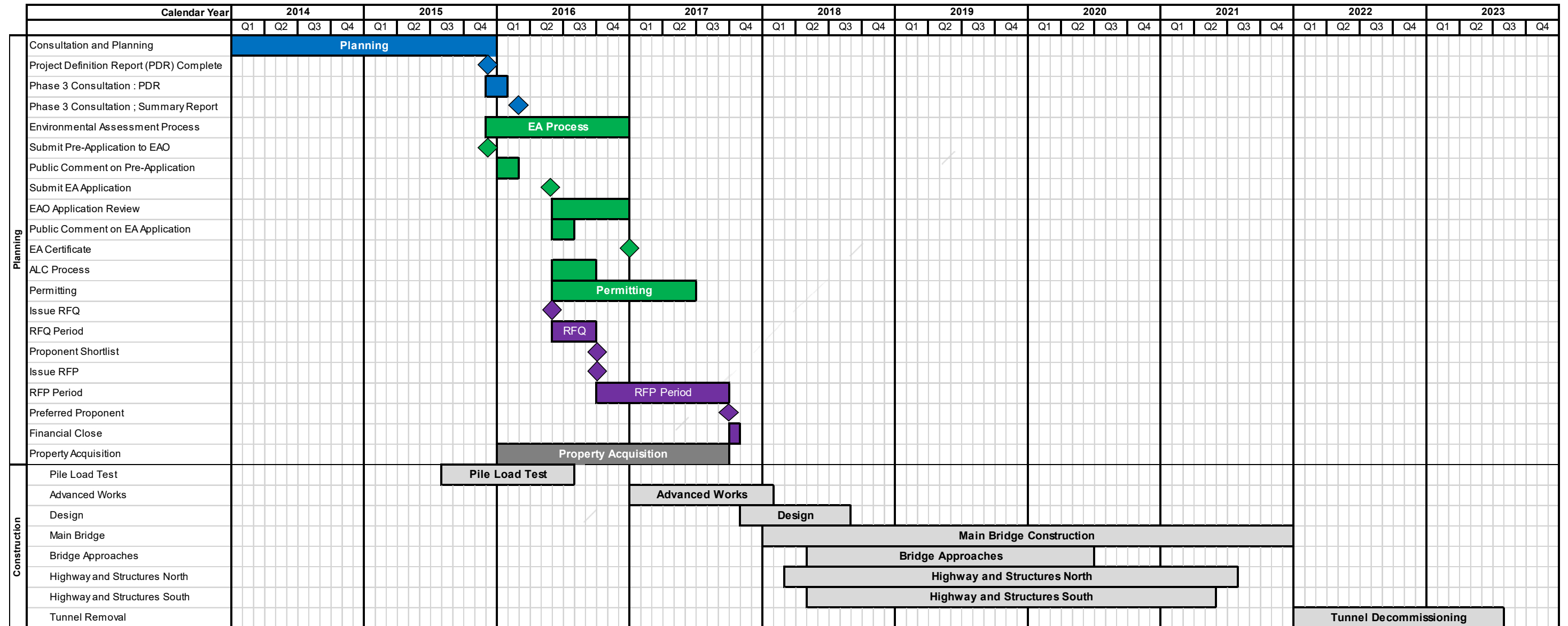
The table below provides a brief description of the contents of this report.

1. Schedule	<ul style="list-style-type: none"> • High-level Project schedule including major milestones and deliverables
2. Project Management	<ul style="list-style-type: none"> • Objectives, monthly accomplishments and upcoming activities related to Safety, Quality and Project Controls
3. Project Development	<ul style="list-style-type: none"> • Scope, monthly accomplishments and upcoming activities for the each of the major disciplines: Stakeholders, Environment, Agriculture, Aboriginal Groups, Procurement, Engineering, Construction and Property
4. Cost Report	<ul style="list-style-type: none"> • Annual budgets and actual cost by fiscal year
5. Risk Management	<ul style="list-style-type: none"> • Key risks and mitigation strategies

1 SCHEDULE

The following schedule depicts deliverables, milestones and associated dates and timelines for the planning phase of the Project as well as high-level construction timelines.

Legend:



2 PROJECT MANAGEMENT

2.1 Safety

Objectives:	<ul style="list-style-type: none"> • Provide clear information on health and safety responsibilities. • Ensure all required training is presented and evaluated. • Ensure a safe worksite at all times.
Accomplished in month:	<ul style="list-style-type: none"> • Conducted Occupational Health and Safety Committee meeting. • Conducted Project safety orientations at the Project Office.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Safety training will be provided on a continual basis to the Project team and for new team members. • Occupational Health and Safety committee meetings. • Field safety audits for Pile Load Test Project.

2.2 Quality

Objectives:	<ul style="list-style-type: none"> • Ensure design services and construction works delivered to the Province are implemented within a quality standard consistent with Ministry standards and ISO 9001.
Accomplished in month:	<p>For the Pile Load Test:</p> <ul style="list-style-type: none"> • Review and monitoring of Contractor quality management activities including quality control and quality assurance activities per Contractor's Quality Management Plan, and work plans for Adjacent Structures Monitoring, Pile Installation and Construction Site Health, Safety and Environment Management. • Full-time site surveillance monitoring. • External audit conducted on All-Span (load frame designer) by the Contractor; no major findings identified.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Continue quality management input and support to procurement activities as required. <p>For the Pile Load Test:</p> <ul style="list-style-type: none"> • Continue review and monitoring of Contractor quality management activities including observation and review of Contractor's internal and external audits. • Carry out activity-specific Quality Management System and surveillance audits per audit schedule. • Continue full-time site surveillance monitoring.

2.3 Project Controls

Objectives:	<ul style="list-style-type: none">• Effectively manage the Project's contracts, scope, schedule and cost.
Accomplished in month:	<ul style="list-style-type: none">• Held regular monthly Project controls meetings with all discipline leads.• Began review of contract annual work plans for the fiscal year beginning April 1, 2016.• Ongoing development and updates to the overall Project schedule.
Key activities for next 3 months:	<ul style="list-style-type: none">• Conduct monthly project controls meetings with all discipline leads.• Conduct an annual performance review with main contractors for the fiscal year ended March 31, 2016.• Complete contract work plan review; finalization and approval of contract annual work orders for the fiscal year beginning April 1, 2016.• Continued development of the Project's performance measurement system.

3 PROJECT DEVELOPMENT

3.1 Stakeholders

Scope:	<ul style="list-style-type: none"> • Management of phased and ongoing public and stakeholder consultation, community relations and Project communications.
Accomplished in month:	<ul style="list-style-type: none"> • Completed and released the Phase 3 – Project Definition Report Consultation Summary Report. <p><i>Meetings were held with the following stakeholder groups:</i></p> <p>Agriculture</p> <ul style="list-style-type: none"> • Agricultural Land Commission • Delta Agricultural Advisory Committee • Richmond Agricultural Advisory Committee • BC Cranberry Growers Association • Richmond Farmers' Institute <p>Business Association</p> <ul style="list-style-type: none"> • Canadian Institute for Steel Construction • Richmond Chamber of Commerce <p>Government/Federal</p> <ul style="list-style-type: none"> • BC Environmental Assessment Office • Transport Canada <p>Government/Municipal</p> <ul style="list-style-type: none"> • City of Richmond • Corporation of Delta • Metro Vancouver / Metro Vancouver Parks • Ministry of Forests, Lands and Natural Resources • Translink <p>Other</p> <ul style="list-style-type: none"> • Port Metro Vancouver • BC Hydro • Fraser Health • Vancouver Coastal Health
Key activities for next 3 months:	<ul style="list-style-type: none"> • Conduct follow up with key stakeholders regarding the opportunity for feedback for the environmental assessment public comment period. • Continued stakeholder engagement and business and community group presentations.

3.2 Environment

Scope:	<ul style="list-style-type: none"> • Development of the Environmental Assessment (EA) Application as well as management of the Project monitoring and permitting process.
Accomplished in month:	<ul style="list-style-type: none"> • Conducted the second round meeting with the Technical Working Group (TWG) on March 10. • Received and addressed the second round of TWG comments on the draft Application Information Requirements (dAIR) document. • Revised the dAIR based on review comments; preparing to redistribute to the TWG. • Met with TWG members to discuss the Ministry's response to comments on the dAIR. • Revising the Application to reflect the revised dAIR.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Revise the environmental baseline studies as a result of TWG comments on the dAIR. • Finalize the dAIR. • Finalize the EA application for an expected submission of May/June 2016. • Prepare for the Application review phase public comment period, including consultation activities. • Conduct environmental audits on the Pile Load Test.

3.3 Agriculture

Scope:	<ul style="list-style-type: none"> • Identify and work with farmers and other agricultural stakeholders potentially affected by the Project. • Prepare and submit the application to the Agricultural Land Commission (ALC).
Accomplished in month:	<ul style="list-style-type: none"> • Met with the Richmond Farmers' Institute (RFI), the Delta Agricultural Advisory Committee, the Richmond Agricultural Advisory Committee and the BC Cranberry Growers Association. • Ongoing meetings with Agricultural Land Reserve (ALR) property owners and operators. • Met with the Agricultural Land Commission. • Ongoing development of the application to the Agricultural Land Commission (ALC) for approval of works within ALR boundaries.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Conduct follow-up meetings with farmers and stakeholders including the City of Richmond, the Corporation of Delta, the Ministry of Agriculture, the RFI and the DFI. • Finalize the application to the ALC. • Submit the application to the ALC. • Conduct assessment of existing highway ditch drainage/irrigation system and develop improved system related to the Project's design. • Continuing liaison with ALR property owners and operators.

3.4 Aboriginal Groups

Scope:	<ul style="list-style-type: none"> • Consultation and engagement with Aboriginal Groups.
Accomplished in month:	<ul style="list-style-type: none"> • Six meetings were held with Aboriginal Groups. • Supported Aboriginal Groups in their review and comment on environmental assessment (EA) and Project-related documents and in the provision of traditional use studies for incorporation into the environmental assessment application. • Responded to questions, concerns and information needs of Aboriginal Groups through the EAO-led working group process, and through the Ministry's consultation program. • Undertook a site visit with Lyackson First Nation elders to ensure knowledge sharing and effective involvement of elders in the Project's review process. • Involved Aboriginal Groups in field work (River Otter Study, Human Health Impact Assessment).
Key activities for next 3 months:	<ul style="list-style-type: none"> • Complete a draft Aboriginal Consultation Report for Aboriginal Groups' review and comment. • Finalize the Aboriginal Consultation Report based on input received from Aboriginal Groups. • Continue consultation with Aboriginal Groups including site visits, meetings and community meetings. • Support Aboriginal Groups in their review and comment on EA and Project-related documents including the environmental assessment application. • Respond to outstanding questions, concerns and information needs of Aboriginal Groups through the EAO-led working group process and through the Ministry's consultation program. •

3.5 Procurement

Scope:	<ul style="list-style-type: none"> • Development of a business case, Request for Qualifications (RFQ), Request for Proposals (RFP) and subsequent evaluation of submissions.
Accomplished in month:	<ul style="list-style-type: none"> • Conducted initial planning for transfer of information to the data room site. • Refined the draft RFQ including the submission requirements and evaluation criteria, based on initial feedback. • Began interdisciplinary internal reviews of the draft RFQ. • Planned for implementation of the RFQ evaluation process including internal reviews of the draft evaluation handbook and initial planning regarding protocols during the evaluation period. • Continued to develop the draft Concession Agreement with the advancement of technical specifications including road and structure design criteria and ongoing coordination between the legal, technical and procurement teams.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Continue developing the data room including access protocols. • Conduct selection of the RFQ evaluation teams, orientation of the evaluation participants and approval of the RFQ evaluation handbook. • Finalize the RFQ. • Continue working with the technical and external advisors to advance the draft RFP and draft Concession Agreement.

3.6 Engineering

Scope:	<ul style="list-style-type: none"> • Development of a reference concept, technical requirements/specifications and related technical studies for the Project. • Travel demand forecasting, traffic operations modelling, traffic data collection, and other related services in support of the Project.
Accomplished in month:	<ul style="list-style-type: none"> • Developed conceptual design of Steveston interchange road and structures. • Conducted micro-simulation for traffic operations at Steveston interchange and the Highway 17A interchange. • Began review of implications of new bridge code with respect to seismic design. • Continued development of cycling and pedestrian trail design. • Provided technical support on the Pile Load Test project. • Ongoing refinement of reference concept and cost estimate.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Reference concept and cost estimate to be further refined based on the results of the Project Definition Report consultation, technical studies and the environmental review. • Construction staging analysis and constructability assessment will continue. • Technical support for procurement will continue. • Finalize seismic analysis related to the new bridge code. • Additional drainage analysis will be conducted in Richmond. • Ongoing traffic data collection and travel demand forecasting. • Finalize reference concept for cycling and pedestrian trail design. • Development of landscaping requirements and concepts.

3.7 Construction

Scope:	<ul style="list-style-type: none"> • The overall planning, coordination and implementation of construction activities. • Current construction works include: Pile Load Test.
Accomplished in month:	<ul style="list-style-type: none"> • Began installation of reaction piles. • Obtained initial monitoring data during pile installations.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Complete installation of reaction piles. • Complete load frame modifications. • Conduct the Pile Load Test; anticipated completion is summer 2016. • Conduct environmental, safety and quality audits on the Pile Load Test.

3.8 Property

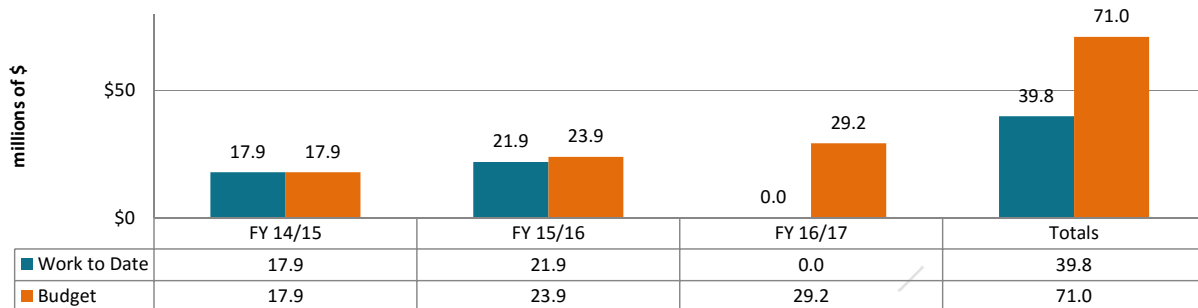
Scope:	<ul style="list-style-type: none"> • Review of properties along the Project corridor and development of a property acquisition plan. • The acquisition of land required to deliver the Project. • A total of 34 properties have been identified for acquisition, the majority of which are partial acquisitions.
Accomplished in month:	<ul style="list-style-type: none"> • Finalized five appraisal reports and delivered to owners for review. • Prepared three draft acquisition agreements.
Key activities for next 3 months:	<ul style="list-style-type: none"> • Continue property negotiations with owners to secure final agreements or agreements in principle. • Assist in the preparation of the ALR application, including onsite meetings with farmers. • Finalize property acquisition plans.

4 COST REPORT

4.1 Project Cost Estimate

Capital costs are estimated to be \$3.5 billion. This estimate will be refined in response to scope changes resulting from public and stakeholder engagement and environmental review. The detailed cost estimate will be refined and finalized after the next phase of stakeholder and public engagement.

4.2 Planning Phase Financials



Notes:

- *The 2015/2016 fiscal year ended on March 31, 2016*
- *Actuals were \$2M below budget, primarily due to the timing of property acquisition*

5 RISK MANAGEMENT

The Project team has developed a risk register for the Project, including risk mitigation strategies. The risk register is reviewed on a regular basis and will evolve as project development progresses.

Soft soil conditions have been identified as a risk. The ministry is undertaking additional geotechnical investigations (Pile Load Test project) to test soil conditions and confirm foundation requirements for the bridge.



6 APPENDIX A – PROJECT PHOTOS



Pile installation



Pile splicing

7 APPENDIX B – PHASE 3 PROJECT DEFINITION REPORT CONSULTATION SUMMARY REPORT