

George Massey Corridor Independent Review Options

Background

- On September 6, 2017, the Province announced an 'independent technical review of the George Massey Tunnel corridor to find a solution that gets people and goods moving and makes sense for commuters across the region'.
 - Also announced was that the ministry is in the process of 'recruiting the individual to lead the technical review' and that the review would be complete Spring 2018
- In a recent meeting with Metro Vancouver mayors, the following considerations were also raised:
 - Misinformation about project need to be addressed (e.g. perception that improvements are being driven by port expansion);
 - Analysis needs to look at George Massey crossing in context of Metro Vancouver integrated transportation planning;
 - Traffic modelling needs to be done on regional transportation model that is used for other regional transportation initiatives;
 - Metro Vancouver mayors need input into analysis objectives/approach.
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Breadth of Analysis

- Draft terms of reference for the review include the following:
 - Level of improvement needed in context of regional and provincial planning, growth and vision;
 - Which option would be best for the corridor (10-lane bridge, smaller bridge or tunnel);
 - Include technical information developed by the project team and from Metro Vancouver municipalities;
 - New analysis looking at how removal of tolls from Port Mann and Golden Ears bridges will affect the crossing;
 - Expertise in three key areas of expertise: traffic modelling, transportation planning and transportation infrastructure engineering is expected to be required to undertake the review. To address independence of review, resources should not have worked on or been associated with proponents for the GMTRP procurement.

Options

A. Approach to Review

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B. Review Team Resourcing

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Recommended Option:

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Province of British Columbia
Ministry of Transportation & Infrastructure

October 26, 2017

Attention: Lisa Gow; Executive Director
Major Projects & P3 Procurement
Infrastructure and Major Project Department

Reference: George Massey Tunnel Replacement
Independent Technical Review

Further to our recent meetings I am pleased to confirm that Westmar Advisors (Westmar) is interested and committed to working with the Ministry of Transportation and Infrastructure (the Ministry) to complete the Independent Technical Review (the Review) of the George Massey Tunnel Replacement Project as described in the Terms of Reference provided in our meeting on October 19, 2017. (Attached)

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As requested, Mr. Stan Cowdell P.Eng., will be the Study Manager. Mr. Cowdell's hourly rate is \$295 per hour.

He will be supported by the following internal Westmar resources on an as required basis. Curriculum vitae are appended to this letter.

	Responsibility	Hourly Rate
Mr. Michael Cowdell P.Eng.	Deputy Study Manager	\$180
Mr. Peter Action P.Eng.,	Maritime Design & Construction	\$245
Mr. F. Culbert P.Eng.	Transportation Economics	\$225
Ms. C. Ackermann P.Eng	Quality Management and Technical Review	\$225
Mr. D. Jennings P.Eng.	Bridge and Seismic Design	\$180
Project Assistance and Clerical		\$65

Additional resources to the above may be required and will be assigned as necessary; but will be agreed with the Ministry in advance.

All charges will be based on the stated hourly rates. Only those hours necessarily expended will be invoiced. It is assumed that disbursements will be charged in accordance with the Ministry guidelines.

Third-party subject matter experts to support the Independent Technical Review will be engaged by the Province but will be managed by Westmar.

Westmar expects the following subject matter experts to be required:

- Geotechnical; assessment of seismic susceptibility of soils and soil structure interaction
- Traffic modelling, transportation planning and highway design
- Bridge design and construction
- Tunnel design and construction
- Transportation Economist and Urban Planner (to be confirmed)
- Environmental (to be confirmed)
- Quantity Surveyor and Capital Cost Estimating

In addition to the above, Westmar will have full access to the existing George Massey Tunnel Team including studies, engineering designs and capital cost estimates. Identification of key personnel and documents will be supported directly by the Ministry.

It is Westmar's understanding that the Ministry has established a "notional budget" to complete the Review within the desired schedule.

As a first task Westmar will meet with the Ministry and the George Massey Tunnel Team to establish communication and reporting protocols, to identify the available information, and to further understand critical issues, and perceived risks and opportunities. Following this meeting, Westmar will commence an initial overview of the project studies and related documentation. This initial review will take place in early November after which the scopes of work for external subject matter experts will be better defined thereby allowing a preliminary budget and schedule to be developed.

We trust we have interpreted your requirements correctly and look forward to your confirmation of the assignment.

Yours Very Truly

Stanley R. Cowdell
Managing Director



INDEPENDENT TECHNICAL REVIEW

GEORGE MASSEY TUNNEL REPLACEMENT

Terms of Reference

Background

The George Massey Tunnel Replacement Project has been in pre-development, planning and procurement since 2012. Questions have been raised about the proposed bridge option, such as: how the improvements fit within the regional context; the need for 10-lane capacity; tunnel vs. bridge; magnitude of connecting infrastructure, etc. Public comments have been made about environmental, agricultural, port marine/truck impacts and imperatives and the need to ensure George Massey traffic modelling aligns with broader regional models.

The Ministry of Transportation and Infrastructure is proceeding with an independent technical review of the George Massey corridor. The review will focus on what level of improvement is needed in the context of regional and provincial transportation planning, growth and vision, as well as which option would be best for the corridor.

While this review is underway, Minister Claire Trevena will engage with mayors from Metro Vancouver, Richmond and Delta to gather their perspectives on the project, and to ensure that any plan for this crossing reflects their ideas and fits into the overall vision for the region.

Terms of Reference

The time line for the independent review is expected to be six months.

The team will undertake the following:

1. Review and objectively analyze public statements of impacts/drivers (e.g. environment and agricultural, port marine/truck traffic impacts) for veracity;
2. Seek input from Translink, local municipalities and academia as input into review;
3. Develop objectives for George Massey crossing improvement for review by Province, municipalities and Translink;
4. Undertake technical review of safety, seismic and congestion issues and objectives for George Massey Tunnel under current conditions;

5. Identify minimum improvements necessary to address safety, seismic and current congestion issues, including any technology limitations.
6. Review existing develop and transportation planning analysis at a regional and local level which identifies economic and population growth with Translink;
7. Review existing traffic models and, with Translink, determine regional traffic model to be used for George Massey and other future regional traffic demand analysis incorporating impacts from elimination of tolls from Golden Ears and Port Mann bridges;
8. Based on Lower Mainland development and transportation strategies created by the Province, Translink and Local Mainland municipalities, validate future traffic demand for George Massey crossing;
9. Based on validated future traffic demand, safety and seismic objectives, identify options for George Massey crossing;
10. Recommend preferred George Massey improvement that meets objectives, including the size and capacity of the infrastructure, including: scope and cost.

The independent technical review should assume all bridges in the Lower Mainland are not tolled. The review is not a reconsideration of decisions made by the environmental assessment process, the agricultural land commission review or by statutory decision makers.

The independent review lead must submit to the Minister of Transportation and Infrastructure recommendations in a final report.

Resources

The lead will draw from the technical information developed by the Province and from Metro Vancouver municipalities. The lead may also obtain expert advice and analysis on any subject related to the review, which may include highway infrastructure design and construction, transportation planning and traffic engineering. Ministry of Transportation and Infrastructure staff will be available to support the team in ensuring procurement of independent expert advice.

Mr. Cowdell is an experienced engineering consulting business leader and manager. He founded Westmar Consultants Inc. in 1988 and over 20 years developed it into an industry leading consulting practice providing services globally to both private and public sector clients specializing in the planning and design of port and marine terminals, public infrastructure and mining related projects. In 2008, Mr. Cowdell managed the sale of Westmar Consultants to WorleyParsons, a large publicly held firm trading on the ASX.

During the period 2008 to 2011 Mr. Cowdell was the Senior Vice President for WorleyParsons Canada Services Ltd. holding a variety of senior management and business development roles. During this time, Mr. Cowdell was responsible for the strategic development and management of large business units with annual revenues in excess of \$100 million across multiple offices in Canada and the United States.

Retired from WorleyParsons Canada in June 2011, Mr. Cowdell established Westmar Advisors Inc. to provide specialist management services to both private and public sector clients focussing on major project evaluation and strategic project development.

Experience

2011 – Present

President, Westmar Project Advisors Inc.

Ledcor Resources and Transportation; Advisory and evaluation services related to a barge-based container trans-shipment logistics solution.

MMM Group Ltd; Risk assessment of two major highway bridges for the Ministry of Transportation and Highways of the Province of British Columbia.

BHP Billiton Canada Inc. The completion of several studies in support of the operational planning for a new marine export terminal to be located on the West Coast of North America. Issues examined included industrial relations, automation, logistic chain management systems, labour costs in different jurisdictions and evaluation of technical trade-off studies completed by the design engineering consultant.

EMR Capital In support of a potential capital investment, assessment of the feasibility, risk and cost of the transportation logistics for a new

gold/lead/zinc mine located in a remote area of norther British Columbia.

Cresco Ventures LLC. A concept development and feasibility design study for beach stabilization and environmental protection for a resort Island in Belize SA.

McLennan Design LLC. Completion of a study to determine maximum storm surge, waves and currents resulting from tropical storms and hurricanes at a proposed offshore Island development in Belize, SA.

Sandvik Mining & Construction Canada. Expert legal opinion in support of litigation.

Pacific Coast Terminals - Port Moody BC. Assessment of project management procedures related to the completion of a major terminal upgrade and resulting performance issues

Province of British Columbia Ministry of Justice & Ministry of Transportation & Infrastructure. Assistance with the review of responsibilities and technical considerations related to an existing Public Private Partnership Contract. The assignment included an expert analysis of the influence of the new

infrastructure on wind and wave conditions which were perceived to be causing erosion of adjacent shoreline areas.

MMM Group Ltd.; Laldia Port Planning Study – Bangladesh. A study to determine the feasibility of the construction of a new bulk break bulk terminal at the Port of Chittagong and then to assist the Government of Bangladesh with development of tenders for the delivery of the Project on a public private partnership basis.

BHP Billiton Canada Inc. Owner' representative managing BBCI's engineering consultant to complete a Phase 1 study to benchmark industry standards for dry bulk terminals, establish appropriate project criteria, and the development of concept designs and capital cost estimates for a bulk terminal at several alternative port locations.

BHP Billiton Canada Inc. A study to identify alternative sites for a marine dry bulk terminal for the export of potash from the BBCI Jansen Mine. In excess of 150 sites were examined on the west and east coasts of Canada and the United States. The study resulted in a short list of potential terminal sites for further detailed investigation

Northern Gateway Pipelines (Enbridge). Peer review of the marine terminal design for the NGP Terminal at Kitimat, British Columbia in advance of the final project design and budget being accepted by Management.

Ministry of Transportation & Infrastructure, Province of British Columbia. Multi-year contract to provide project advisory services to the Ministry's regional offices on an as required basis.

Aldridch & Rosling Barristers & Nisga's Lisims Government. Review of a proposed investment opportunity comprised of a new marine dry bulk terminal within the NLG traditional lands. The feasibility study was reviewed for technical and financial feasibility.

Vancouver Harbour Flight Centre - Vancouver British Columbia. Owner's representative for the EPC delivery of an extension to the existing float plane terminal by a new tenant airline. The project involved confirmation that the proposed design and completed construction was consistent with the design and safety requirements of the existing terminal

Vale Technology Development Canada Limited (Vale). Sudbury Refinery Atmospheric Emissions Reduction Project: A pre-tollgate peer review and final Toll Gate review of the FEL 3 Study Project Execution Strategy for the multi-billion dollar Atmospheric Emissions Reduction (AER) Project for Vale's Sudbury facilities. This review examined all facets of the requirements for the final project execution including; project objectives, project organization, project controls and reporting, constructability, contracting and procurement, labour availability, environmental compliance, capital cost, and risk management.

Vale Technology Development Canada Limited (Vale). Long harbour Hydrometallurgical Processing Plant, Newfoundland. Working with a team of other specialists completed an assessment of the project execution status of the multi-billion dollar capital project at approximately the 50% complete stage to identify project risks, estimate the remaining construction period and total expected project cost.

Vancouver Harbour Flight Centre – Vancouver, British Columbia. Preparation of an expert report identifying the limiting operating climatic conditions and risk analysis of operations for the Vancouver Float Plane Terminal.

Societe Des Mines De Fer De Guinee S.A. (SMFG) - Nimba Mine Iron Ore Export Port Liberia. Peer review and gap analysis of FEL 2 report and capital cost estimate for a new \$1 B (approx.) iron ore export terminal to be constructed in Liberia, Africa.

Vale Technology Development Canada Limited (Vale) - Goro Nickel New Caledonia.

Peer review and pre toll gate assessment of an FEL 2 study for the installation of major new process equipment at the nickel refinery.

BHP Billiton Canada Inc. - Potash Export Terminal Vancouver Washington USA. Peer Review and Capital Effectiveness Assessment of the FEL 3 level study for a \$400 M USD (approx.) Potash export terminal. The assignment included; assistance with terminal design concepts, contracting strategy, capital cost estimates and execution plan and schedule.

2010 – 2011

North Vancouver, BC Canada

Senior Vice President - I&E Canada Sub Region, WorleyParsons Canada Services Ltd.

During this period, Mr. Cowdell was responsible for the integration of four separate business units from across Canada into the Infrastructure and Environment Business within WorleyParsons Canada. This new business unit comprised 14 offices with 750 staff and annual revenues in excess of \$100 million.

Upon retirement from WorleyParsons at the end of June 2011, the integration of the Business was complete and the market share had expanded significantly with the winning of several major contracts which assured a multi-year backlog of revenue.

2008 – 2010

North Vancouver, BC Canada

Senior Vice President - WorleyParsons Westmar

In June of 2008, the sale of Westmar Consultants Inc. to WorleyParsons Canada Services Ltd. was completed. Mr. Cowdell undertook the dual role of managing the heritage Westmar business while at the same time as being the Customer Sector Group Vice President for Infrastructure and Environment across Canada.

During this period, the Westmar Business was integrated into WorleyParsons while at the same time the existing WorleyParsons' business units located in British Columbia were integrated into WorleyParsons Westmar.

In addition to the responsibilities of managing the business unit, responsibilities included acting as the Project Sponsor for major new projects while leading the strategic development of the Infrastructure and Environment business for WorleyParsons across Canada.

Major Project Responsibilities during this period included:

Port Metro Vancouver - Container Capacity Improvement Program. Project Sponsor for the planning, definitive engineering and permitting phase for the proposed new multi-billion dollar container terminal to be located at Roberts Bank in Delta, BC.

Toba Montrose General Partnership, Powell River, BC - Toba Montrose Hydroelectric Project. Project Director responsible for working and liaising directly with the client's CEO and WorleyParsons' Project Manager in this Project Management Consultancy role overseeing all project activities being performed by Peter Kiewit, a design-build contractor, for this \$660 million hydroelectric project in a remote location north of Powell River, BC.

1988 – 2008

North Vancouver, BC Canada

President, Westmar Consultants Inc.

In 1988 Mr. Cowdell founded Westmar Consultants Inc. and over the next 20 years built the company into an internationally recognized firm, working across the globe on major port, marine terminal, mining and public infrastructure projects.

In addition to being responsible for the leadership and management of the business, Mr. Cowdell was very active on major projects including:

Ministry of Transportation, Kelowna, BC – W.R. Bennett Bridge. Owner's Engineer and Province's Representative. Project Director responsible for providing technical and commercial advice to the Province of British Columbia Ministry of Transportation for the procurement of a Public Private Partnership concession for a new 1.4 km five-lane highway bridge crossing of Okanagan Lake. Advice included preparation of a complete detailed design; Concessionaire prequalification, development and negotiation of the Concession Agreement; evaluation of technical proposals; and administration of the Concession Agreement during the project construction.

Port of Everett, Everett, Washington – Port of Everett Master Plan. Project Manager for the development of a Marine Terminal Master Plan (MTMP 2008) for the Port of Everett's deep-water marine terminal facilities on Port Gardner Bay. The Master Plan sets forth the future development of the Port's terminals over the next five to ten years to realize the full potential of its assets, which are designated as facilities of state-wide significance, and thereby providing the maximum future benefit to the local, regional and national economies. Part of the process included creating a proactive outreach approach to involve both the public and private

community through surveys, public meetings and special commission meetings to ensure the vision for the future development of the Port's marine terminal met everyone's approval.

Western Canadian Coal Corp., Tumbler Ridge, BC – Wolverine Coal Project. Project Director of this \$200 million capital cost project for complete EPCM services for the mine processing plant development involving complete site development, coal processing facilities, interconnecting materials handling systems for coal shipment, power supply and distribution, fuels handling and coordination, procurement and construction management of the tailings ponds and effluent treatment and sedimentation control systems, and all office, maintenance, and warehouse support facilities for this 2.5 mtpy capacity greenfield open-pit coal mine in north-eastern BC.

Westshore Terminals Ltd., Delta, BC – Berth No. 2 Shiploader Replacement. Project Manager for replacement of two quadrant shiploaders at Westshore Terminals' Berth No. 2 that collapsed during a windstorm. The Project included the full EPCM delivery of the replacement on a fast-track basis. The new shiploaders were upgraded to meet all current codes and regulatory standards and the drive systems were completely redesigned for improved safety and reliability. Marine foundations were also upgraded for increased loads and increased seismic risk. Both shiploaders were fully designed, fabricated, installed and commissioned in approximately six months, saving 12 months off a normal project schedule.

INCO Technical Services, Voisey's Bay, NL – Voisey's Bay Port Facilities and Concentrate Transportation. As Project Director, assisted Inco in the development and negotiation of a contracting program for the transportation of nickel concentrates from its new mine at Voisey's Bay, NL, through to its smelters in Sudbury, ON, and Thompson, MB. The project included a wide

range of contracts, including the procurement of shipping services for the nickel concentrate which included the negotiating a long-term service contract for the provision of a new ice-class concentrate ship.

Bechtel-Technip Joint Venture, New Caledonia – Goro Nickel Project, Port and Materials Handling Facilities. Project Director for the planning and design development of the port and materials handling systems to service the Goro Nickel Mine. Facilities included wharves, container yard, dry bulk unloading systems, liquid bulk unloading systems and liquid product storage facilities.

Concert Properties Ltd., Vancouver, BC (formerly Greystone Properties Ltd.) – Portside Cruise Ship Terminal and Convention Centre. Project Director for the detailed design of the extension of Canada Place Cruise Ship Pier and Convention Centre to provide three cruise ship berths, the marine foundation structures for a Convention Centre expansion, and the relocation of the existing SeaBus passenger ferry terminal and floating heliport facility.

Vancouver Wharves Ltd., N. Vancouver, BC – Sulphur Receiving System. Project Director for the preliminary and final design of a new 4,000 tph sulphur receiving and shipping system which included a new automated railcar dumper and pit, new conveyors and renovations of existing conveyors and shiploaders.

St. Lucia Air and Sea Ports Authority, St. Lucia, WI – Pointe Seraphine Berth Improvements. Project Manager for the planning, design, international procurement and construction management for two new cruise ship berths to replace existing structures at the Pointe Seraphine Cruise Terminal.

Pacific Coast Terminals Co. Ltd., Port Moody, BC – Design of Shiploading System and Berthing Structures. Project Director for the EPCM delivery of a new a new 4,000 tph sulphur shiploading system for Panamax vessels. The

project included new berthing structures, new conveyors, a 5,000 tph shiploader and relocation of bulk liquids facilities.

Vancouver Port Authority, Vancouver, BC – Design of Piled Wharf Alternative for Deltaport Container Terminal. Project Director for the design of a 640 m long by 42 m wide piled wharf for a new container terminal at Roberts Bank, BC.

Pacific International Terminals, Gateway Pacific Terminal, Cherry Point, WA, USA – Investigations and Design for Bulk and Liquid Materials Handling Systems. Project Director for the planning and basic engineering for a new multi-product dry and liquid bulk materials handling terminal. Project included design development, First Nations liaison, preparation of capital and operating costs, and assistance with permit applications.

Port of Los Angeles, Los Angeles, CA, USA – Pier 400, Conceptual Design of Grain Terminal. Project Manager for the master planning, conceptual design and capital cost estimate for a new 10 mtpy grain terminal to be constructed on the Port of Los Angeles Pier 400 site.

Koch Carbon, Pittsburg, CA, USA – Design of a New Coke Shiploading Terminal. Project Manager for the planning and design of a new 1.5 mtpy terminal for the loading of petroleum coke and other dry bulk products.

Methanex Corporation, Kitimat, BC – MTBE/Methanol Terminal. Project Manager for the EPCM delivery of a MTBE/Methanol facilities expansion, which included new tank farm, railcar unloading area, pipeline and marine loading facility.

NorskeCanada, MacKenzie, BC – Effluent Outfall Review. Specialist Engineering and Management services for the review of causes for failure of 7,000 ft. 36 in. diameter effluent outfall and presentation of expert opinion. Upon agreement with the Contractor and Designer on

cause, provided arbitration and project management for replacement outfall. Design review of 16,000 gpm fresh water intake and project management of re-construction completion.

Port of Los Angeles, CA, USA – Study and Detailed Design for Proposed Coal Export Facility. Project Director for the Master Planning study and detailed design of a 15 mtpy coal export facility at the Port of Los Angeles.

Killam Whitelaw Twining, Vancouver, BC – Vancouver Island Natural Gas Pipeline. Expert Witness provided expert opinion and testimony on underwater pipeline design and construction.

Montserrat Port Authority, Montserrat, WI – Planning, Design and Construction of Port Facilities for Cargo and Cruise Ships. Project Manager for the EPCM delivery of a new general cargo and cruise ship facility for the Caribbean Island of Montserrat. The wharf was designed for a Zone 4 earthquake and for dynamic hydraulic forces imposed from an 11 m design wave.

City of Vancouver, Riverfront Park, BC – Planning and Design of New Public Parkway. Project Manager for planning and EPCM delivery of a new public park on the North Arm of the Fraser River. The project included extensive shoreline treatment pedestrian piers, recreation facilities, aquatic habitat compensation and extensive planting.

Vancouver Wharves Ltd., N. Vancouver, BC – New Potash and Sulphur Shiploader. Project Manager for the emergency re-design and replacement of a new potash and sulphur shiploader for vessels to 60,000 DWT.

Eurocan Pulp and Paper Co., Kitimat, BC – New Concrete Pile and Deck Wharf. Project Manager for the EPCM delivery of a new ship basin for 40,000 DWT and the construction of a new 50,000 sq. ft. concrete pile and deck wharf for Panamax vessels. Project included extensive dredging and aquatic habitat compensation.

BC Hydro and Power Authority, Strathcona Dam Intake, Campbell River, BC – Penstock Intake Structure Modifications. Project Manager for preparation of feasibility design and capital cost estimate for construction of a major penstock intake structure modification.

1985 – 1988

North Vancouver, BC Canada

Manager, Marine and Structures Department, Morrow Engineering Ltd.

Mr. Cowdell joined Morrow Engineering in 1985 with the express purpose of developing a marine and infrastructure project capability. From 1985 to 1988 Mr. Cowdell grew Morrow Engineering from a staff of 8 to a total staff in excess of approximately 45.

Chatterton Petrochemical Corporation, Delta, BC – Design and Construction for Expansion of Process Facilities. Project Manager for design, contract preparation and field services for a major expansion of process facilities including tank installation and relocation, tank foundations, piping structural supports and foundations, and product containment systems.

1974 – 1985

Vancouver, BC, Canada

Project Manager, Swan Wooster Engineering Co. Ltd.

Mr. Cowdell joined Swan Wooster Engineering shortly after graduation and steadily progress through the organization becoming the youngest shareholder, ultimately a Director and Senior Project Manager.

British Columbia Place, Vancouver, BC – False Creek Shoreline Treatment. Project Manager for dredging and disposal of severely contaminated seabed sediments, foreshore fills and construction of various shoreline structures, including piled walkways, sheet pile walls, special feature walls, small craft marinas and public park civil structures.

Ridley Terminals Inc., Ridley Island, BC – Design of Marine Facilities and Railcar Dumper Pit. Deputy Project Manager for the EPCM delivery of a new 15 mtpy coal export terminal at Prince Rupert, BC. The terminal design included the receipt of unit trains through a rotary dumper, stacker/reclaimers in the storage yard, and dual quadrant shiploaders designed to accommodate vessels up to 200,000 DWT. The capital value in 1982 was approximately \$220 M.

Compañía de Aceros del Pacífico S.A., Huasco, Chile – Guacolda II Port. Project Engineer responsible for the design of marine structures for a new iron ore pellet loading terminal designed for vessels to 200,000 DWT.

Kingcome Navigation Ltd., Vancouver, BC – Marine Terminal Relocation. Project Manager for the relocation of Kingcome Navigation's office and tug and barge mooring facilities. The project included the design of a floating pier for mobile equipment to service the moored vessels.

Nexen Inc., Prince Rupert, BC – Site Selection Study and Preliminary Design of Marine Facilities. Project Engineer for site selection study and preliminary design of marine facilities for petrochemical plant to be located in northern British Columbia.

Dome Petroleum, Prince Rupert, BC – Site Selection Study and Preliminary Design of Marine Facilities. Project Manager for site selection study and preliminary design of marine facilities for West Coast LNG plant.

Dome Petroleum, McKinley Bay, NT – Feasibility Study for Offshore Supply Base.

Project Manager for the feasibility study of offshore supply base to be constructed on a sand-filled island.

Gulf Canada, Burnaby, BC – Reconstruction of Concrete Pile and Deck Wharf. Project Manager for West Wharf Reconstruction. The project included the design of a new concrete pile and deck wharf for 50,000 DWT vessels.

Tahsis Company, Tahsis, BC – Concrete Pile and Deck Lumber Wharf. Project Manager for replacement of existing timber pile lumber wharf with a new 45,000 sq. ft. concrete wharf. A unique system of driven concrete piles connected to rock with a drilled-in anchor bar was used to develop pile tension capacity.

Hooker Chemicals Ltd., N. Vancouver, BC – Reconstruction of Deep-Sea Pier. Project Manager for reconstruction of deep-sea pier and modifications to salt unloading system. The project involved the replacement of existing timber pile dolphins with new steel pile dolphins designed to resist the impact from 80,000 DWT vessels.

Puerto Rico Electric Power Authority, San Juan – Sea Water Intake Structure Modifications. Project Manager for Palo Seco power plant seawater intake structure modifications. Project involved the design of stilling basins in front of the intake to eliminate weed fouling of the water intake for the oil-fired power plant.

Exploraciones y Explotaciones Mineras Izabal S.A., Guatemala – Design of Marine Facilities for Barge Oil Trans-shipment. Project Engineer for design of marine facilities for a barge oil trans-shipment terminal near Puerto Barrios.

Publications & Presentations

- Cowdell, S.R. **"Providing Effective Multi-Disciplinary Engineering Services"**, Port Technology International, 31st ed., 2006, pp. 11-12.
- Cowdell, S.R. **"Trends in Port and Terminal Development"**, Port Technology International, 24th ed., 2004.
- Cowdell, S.R. **"The Vital Work of the Engineering Consultant"**, Dry Cargo International, 2004.
- Cowdell, S.R., and Harrison, G.J. **"Port Infrastructure for Mine Development in Remote Locations"**, Ports 2004, 10th Specialty Conference on Port Development in the Changing World, May 23-26, 2004, Houston, TX.
- Cowdell, S.R. and Hogg, J. **"Learning from Experience (The Westshore Terminals Reconstruction Project)"**, World Coal, January 2004.
- Cowdell, S.R. **"Terminals of the Future – How Things May Change in the Next 30 Years"**, Dry Cargo International, June 2002.
- Cowdell, S.R. **"Bulk Coal Terminal Planning & Design Issues"**, Port Technology International, 14th ed., 2001, pp. 69-71.
- Cowdell, S.R., Acton, P.J. and Kendrick, W.S. **"Cruise Ship Terminal Expansion – Port of Vancouver"**, ASCE/PIANC Ports 2001 Conference, Norfolk, Virginia, USA, 2001.
- Cowdell, S.R., Yee, S. and Wallis, D. **"Vancouver Wharves Ltd. – Terminal Development."** ASCE/PIANC Ports 2001 Conference, Norfolk Virginia, USA, 2001.
- Cowdell, S.R., Isaacson, M., Baldwin, J. and Allyn, N.F. **"Wave Interactions with Perforated Breakwater"**, ASCE Journal of Waterway, Port, Coastal and Ocean Engineering, Vol. 126, No. 5, 2000, pp. 229-235.
- Cowdell, S.R. **"Gateway Pacific Terminal"**, Port Technology International, 10th ed., 1999, pp. 163-167.
- Cowdell, S.R. **"Buyers Beware"**, International Bulk Journal, 1999, pp. 45.
- Cowdell, S.R. and McLachlan, C.W. **"Unloading of Coal from Ship"**, Pdl Bulk Supplement, Vol. 15, No. 6, 1999, pp. 29.
- Cowdell, S.R. and Allyn, N.F. **"Breakwater Design & Construction: A Case Study"**, Port Technology International, 9th ed., 1999, pp. 175-179.
- Cowdell, S.R. **"Guest Editorial"**, ASTT News, Issue 100, 1999.
- Cowdell, S.R. and Isaacson, M. **"Handbook of Port and Harbour Engineering: Geotechnical and Structural Aspects"**, Canadian Journal of Civil Engineering, Issue 25, 1998, pp. 190-191.
- Cowdell, S.R. **"Sulphur Terminal Upgrades – Port of Vancouver"**, Port Technology International, 8th ed., ICG Publishing Ltd., England, 1998.

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- Cowdell, S.R. "**Cruise Ship Terminal Expansion – Port of Vancouver, Canada**", Port Technology International, 8th ed., ICG Publishing Ltd., England, 1998.
- Cowdell, S.R., Acton, P.J. and Kullmann, H.G. "**Rehabilitation and Strengthening, United Grain Growers Jetty No. 3, Vancouver, British Columbia**", ASCE/PIANC Ports '98 Conference, Long Beach, CA, USA, 1998.
- Cowdell, S.R., Wood, J.S. and Acton, P.J. "**Design and Construction of Three Ferry Terminals on the Mid-Coast of British Columbia for the New 'Discovery Coast Passage' Ferry Route**", ASCE/PIANC Ports '98 Conference, Long Beach, California, USA, 1998.
- Cowdell, S.R. and Harwood, P. "**New Shiploading System for Pacific Coast Terminals**", ASCE/PIANC Ports '98 Conference, Long Beach, CA, USA, 1998.
- Cowdell, S.R., Isaacson, M., Baldwin, J. and Allyn, N.F. "**Design of a Perforated Breakwater**", ASCE Ports '98 Conference, Long Beach, CA, USA, 1998.
- Cowdell, S.R. "**Launching New Ports of Call – Facilities for the Cruise Ship Industry**", Article from Innovation, Vancouver, BC, Canada, April 1998.
- Cowdell, S.R. "**Port of Plymouth Reconstruction**", Montserrat, West Indies, Ports '95 Proceedings, Committee on Ports and Harbours of the Waterway, Port, Coastal and Ocean Engineering Division/ASCE, Tampa, FL, USA, March 13-15, 1995.
- Cowdell, S.R. "**Port of Plymouth Reconstruction Montserrat, West Indies**", Canadian Civil Engineer, 1995.
- Cowdell, S.R. "**Marina Guidelines for the Protection of Fish and Fish Habitat**", Fisheries and Oceans Canada/Ministry of Environment Lands and Parks, Province of British Columbia, Vancouver, BC, March 1995.
- Cowdell, S.R. "**Fraser Lands Riverfront Park**", Ports '94 Proceedings, Committee on Ports and Harbours of the Waterway, Port, Coastal, and Ocean Engineering Division/ASCE, March 1994

Education

B.A.Sc., Civil Engineering, University of British Columbia, Vancouver, BC, 1973

Registrations/Affiliations

Association of Professional Engineers and Geoscientists of British Columbia
Consulting Engineers of British Columbia, President (1997 - 1998)

Note to File: George Massey Independent Review Process

August 24, 2017	<p>Telephone calls by Maria Ciarniello for potential names for independent technical review:</p> <ul style="list-style-type: none"> • Amanda Farrell, Partnerships BC • Doug Foster, Ministry of Finance • Ed Miska, Ministry of Transportation and Infrastructure
August 2017	<p>Identified list of potential academics to provide future support to the project:</p> <ul style="list-style-type: none"> • s.22 • •
August 24-29, 2017	<p>Telephone calls from Maria Ciarniello to potential candidates, asking that they be willing to speak confidentially about a potential engagement, either as lead or support</p> <ul style="list-style-type: none"> • s.22 • • Stan Cowdell • s.22 • •
August 25, 2017	<p>Received list of potential names from Partnerships BC with note to treat as confidential</p> <ul style="list-style-type: none"> - s.22 - - - - - - <p>Most of List was more for advisors for strategic business/business case development/economic etc. Many had been involved in GMTR</p>
August 28, 2017	<p>Received list of potential names from Ministry of Finance with note to treat as confidential</p>
August 28-31, 2017	<p>Maria c discussions re interest, background on potential TOR, asked their qualifications, asked their interest, and potential conflicts</p> <ul style="list-style-type: none"> • s.22 – wants more information on role, qualified possible • Stan Cowdell – available and interested. Experience on large/complex project reviews going beyond technical, including economic impacts • s.22 – very interests. s.22 • s.22 • s.22 – interested. s.22 but available beyond that. • s.22 – initial interest – requires more information • s.22 – not available. Will identify further names.
August 31 to	Gathering more contact information

Note to File: George Massey Independent Review Process

Sept 1	
September 6, 2017	Public announcement of independent technical review. Additional names identified by individuals contacted to date: <ul style="list-style-type: none"> • s.22 • • • • • • • • • •
September 15, 2017	Lisa Gow spoke to s.22 and others??
	Original list reviewed against criteria: <ul style="list-style-type: none"> • Having significant experience providing technical engineering advice on major infrastructure projects • No previous involvement or work on the George Massey Tunnel project • Willing to forgo future work on a proponent team for the George Massey Tunnel project • Experience with reviewing major projects • Available • Interested
	Shortlist of potential candidates
September 28, 2017	Maria C spoke to following regarding willingness to have name put forward for consideration : <ul style="list-style-type: none"> • s.22 • Stan Cowdell • s.22
October 11, 2017	<p>Lisa Gow met with DM. s.13</p> <p>s.13</p> <p>Lisa, Maria talked about MOTI resources to assist panel, including RISP or other existing pre-qualified lists from MOTI, PBC and Finance.</p> <p>Talked about two phases, reviewing seismic and safety, s.13</p> <p>s.13</p> <p>Talked about phase 2 future levels, timelines (30-50 years) in terms of regional strategy.</p>

Note to File: **George Massey Independent Review Process**

Oct 12	Maria talked to Stan re ACEC, bias towards Port – no contracts with Port currently, but had done work for Port over 10 years ago
Oct 16	Verbal confirmation from Executive that Stan Cowdell preferred candidate
Oct 16	Risk assessment re MMM – Stan Cowdell review of work for MMM (Lions Gate). Shared draft RFP with Stan. Sought Bio from Stan
Oct 17	Call with Stan to arrange meeting
Oct 19	Met with Stan Cowdell willingness to take on work.
Oct 24	Stan agreed to take on independent review. Maria to Stan re access to data room at GMRP and other resources. Access to transportation planning, road and bridge, tolling, good geotechnical engineer. Talked about budget, contract rates. Stan has no existing contract.
Oct 25	Maria note to Jenny Pleice seeking direction on direct award process
October 26	Maria Draft TOR to finance staff seeking assistance with contract Number
October 27	Stan Cowdell proposal letter received by Lisa Gow Lisa Gow met with Stan Cowdell October 27 to review document. Items discussed: <ul style="list-style-type: none"> - Need to ensure that team is independent – no previous work on GMTRP - Stan to review list of names to ensure no potential for perception of bias (w.r.t. Port) Maria sent to Stan standard conflict of interest form and list of companies that had worked on GMTRP to allow Stan to engage with his potential core advisory team to ensure no conflict. Maria sent draft work services contact language.
October 30	Maria consulted JAG as to whether blanket confidentiality agreement suitable for this engagement Maria talked to Stan re ToR being finalized today and re confidentiality agreement. Maria sent pre-sorted list of RISP codes for obtaining additional technical resources through pre-qualified list. Maria sent confidentiality agreement to Stan. Maria to tweak confidentiality agreement to prevent influence of Stan on future procurements
November 1	Finalized Terms of Reference with Minister's Office Meeting with corporate procurement, MOTI re coding of direct contract Contract with Stan Cowdell signed Confidentiality agreement with Stan Cowdell confirmed.
November 2	

Note to File: George Massey Independent Review Process

Review:

Name	Work on GMTRP	Other potential conflicts	Experience in Significant Technical Reviews	Interested in Review	Available
s.22	No	No	Yes	Conditional	Limited Sept, October
	No	No	No	Support	Yes
	Stan Cowdell	No	No	Yes	Yes
s.22	No	No	Yes	No	Limited
	No	No	Yes	No	No
	No	No	Yes	Support	Limited
	No	Yes	Conflicted out		
	No	No	No	Area of expertise not in technical reviews.	
	No	N/A	No	Area of expertise not in technical reviews.	
	No	N/A	No	Area of expertise not in technical reviews.	
	No	N/A	No	Area of expertise not in technical reviews.	
	No	N/A	No	Area of expertise not in technical reviews.	
	No	N/A	No	Area of expertise not in technical reviews.	
	No	Yes	Conflicted out		
	No	Yes	Conflicted out		
	No	No	No	Area of expertise not in technical reviews.	
	No	No	No	Area of expertise not in technical reviews.	
	No	Yes	Conflicted out		
	No	No	No	Area of expertise not in technical reviews.	
	No	N/A	No	Area of expertise not in technical reviews.	
	No	N/A	No	Area of expertise not in technical reviews.	
	Yes	Yes	Conflicted out		
	No	N/A	No	Area of expertise not in technical reviews.	
	No		No	Area of expertise not in technical reviews.	

Direct Award Justification for Contract 159CS105879

The contract is required for an Independent Technical Review of the George Massey Tunnel Replacement Project (the Project). The Minister announced in August an Independent Technical Review of the Project.

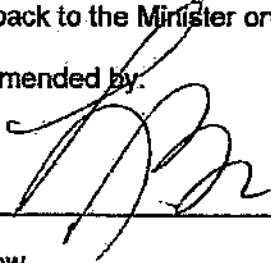
There was a selective invitation process that included nominated names from various sources including but not limited to; the Ministry of Transportation & Infrastructure, Partnerships BC, and the Ministry of Finance Strategic Initiatives advisors list. Over two dozen individuals were reviewed with respect to their independence from the Project (i.e. not having worked previously as a team member, proponent or technical advisor for the Project). Of this, twelve individuals were contacted for appropriate expertise, availability, and interest in the Review.

Mr. Cowdell was identified as the individual best able to meet these criteria. Mr. Cowdell is experienced in managing/leading successful large capital engineering projects, specifically bridges or other structures and is well versed in conducting reviews of mega capital projects, including feasibility studies, risk assessment and project planning. In addition Mr. Cowdell is available for the requisite time for the review. Mr. Cowdell has no previous association with the Project, with individuals or companies associated neither with the Project nor with any of the three shortlisted proponents.

Mr. Cowdell will have access to information that is commercially sensitive and will be in a position to strongly influence Project decisions. Therefore, it is expected that Mr. Cowdell may be restricted or prevented from future involvement with the Project either as a proponent or as part of any proponent team for the procurement of the Project. The Province has adopted conflict of interest guidelines which will be used to determine any future involvement of Mr. Cowdell, at the sole discretion of the Province, in other procurements for the Project.

Mr. Cowdell, as lead of the Independent Technical Review, is appointed by the Minister and will report back to the Minister on his findings.

Recommended by:



Lisa Gow
ED, Major Projects and Alternate Procurement

Approved by:



Patrick Livolsi
ADM, Infrastructure and Major Projects

Date

November 1, 2017

Date

November 1 2017



REQUEST FOR CONSULTING SERVICES CONTRACT

To	Headquarters or Regional Contract Administration		Date (yyyy/mm/dd)
	Headquarters		2017 11 01
From	Address (Street Number, City, Province, Postal Code)		
	940 Blanshard Street		
	Requestor (Print Name)	Qualified Receiver (Print Name)	Phone Number
	Lisa Gow	Maria Ciampiello	250-356-0514
	Branch, Region, District Name		Contact Responsibility Centre Number
	Major Projects and Procurement, Infrastructure & Major Projects Department		55051
File Number	Contact Contract Identification Number (Contract Administration Use Only)		RISP Selection Number
	1 5 9 C S 1 0 5 8 7 9		
Contractor	Business Name		Phone Number
	Westmar Advisors		604-770-4787
	Contact Name	Email Address	Facsimile Number
	Stan Cowdell	scowdell@westmaradvisors.com	
	Business Address (Street Number, City, Province, Postal Code)		
	351 Bewicke Avenue, North Vancouver, B.C. V7M 3E9		

Method of Selection: ☐ RISP RFP (attach RISP Selection Report) ☒ Selective Invitation ☐ BC Bid RFP ☐ ITQ ☒ Direct Award (attach explanation)

Procurement Process and Trade Agreement (AIT / TILMA) Exclusion (mandatory): ☐ Check the Appropriate Boxes on Page 2.

Category Type: ☒ BN.BN02 – Consulting Services Solicitation Number in BC Bid:

Short Description: Independent Technical Review of George Massey Tunnel Replacement Project

Commencement Date (yyyy/mm/dd): 2017 11 01 Completion Date (yyyy/mm/dd): 2018 06 30

1. Email Word Documents (Mandatory): ☒ Works/Services Schedule (H0461A); ☒ Payment Schedule (H0461B); ☒ Risk Review Form (H0056); and ☒ Cost Benefit Justification Form H1200 (contracts > \$100k)

2. Please indicate which of the following forms are to be attached by the Contract Administration Section:

2a) Schedule of Reimbursable Expenses:

☐ No

☐ Regular Group I (H0461c)

☒ Management Group II (H0461c-1)

2b) Special Conditions:

☒ No

☐ Engineering Assignments (H0461d)

☐ Information Systems (H0461d-1)

2c) Insurance (H0111): ☐ No

☒ INSURANCE SPECIFICATIONS (INS-80)

Commercial General Liability (Item 3)

☒ \$2,000,000; ☐ \$5,000,000; ☐ \$10,000,000

☐ INSURANCE SPECIFICATIONS PROFESSIONAL (INS-132)

Commercial General Liability (Item 3)

☐ \$2,000,000; ☐ \$5,000,000; ☐ \$10,000,000

Professional Liability Limits (Item 5)

☐ \$250,000; ☐ \$500,000; ☐ \$1,000,000

2d) Privacy Protection (does your contract collect personal information?)

☒ No ☐ Yes Schedule E – Privacy Protection Schedule (PPS)

(If yes, Contractor must take the privacy training course
https://order.openschool.bc.ca/ProductDetail/ps_7540008302)

3. For Contract Admin. Offices Only: ☒ Legal Entity/Register of Companies/Licensed to do Business; and ☐ WCB Registration

Contract Total	Fiscal Year 2017	Fiscal Year 218	Fiscal Year	Fiscal Year	Fiscal Year
\$	Total \$150,000.00	Total \$200,000.00	Total \$	Total \$	Total \$
Orca PO Coding	Responsibility	Service Line	STOB	Project	Total \$
Orca PO Coding	Responsibility	Service Line	STOB	Project	Total \$
CPS PO Coding	(Info 1) – CFS – Product	Business Function	(Info 2) – Work Activity	(Info 3) – Cost Type	

IF INS-132 IS REQUIRED PLEASE PROVIDE INSURANCE AND BONDS WITH ADMINISTRATION FEE CODING BELOW.

Insurance & Bonds Admin Fee Orca Coding	Responsibility	Service Line	STOB	Project	
			5097 / 5098		
Insurance & Bonds Admin Fee CPS Coding	(Info 1) – CFS – Product	Business Function	(Info 2) – Work Activity	(Info 3) – Cost Type	

Approval to Award	(Expense Authority Signature)	Print Name: Lisa Gow	
	(Signature of A.D.M., C.O.O. or D.M. where required)	Print Title: Executive Dir for Major Projects	Date: Nov 1, 2017
		Print Name: Patrick Livolsi	
		Print Title: ADM for Infrastructure & Major Projects	Date: Nov 1/17



**PROCUREMENT PROCESS AND TRADE AGREEMENT
(AIT) EXCLUSION – LIST OF VALUES**

Tick Off Appropriate Box for Procurement Process and then Tick Off Appropriate Box for Trade Agreement Exclusion

PROCUREMENT PROCESS – LIST OF VALUES

Code	Description
<input type="checkbox"/> 100	Open competitive process An open competitive solicitation process (e.g. Invitation to Quote, Request for Proposal, Joint Solution Procurement, Invitation to Tender, other) has been used, normally by advertising opportunity on BC Bid.
<input type="checkbox"/> 200	Direct Award – Public sector organization Contracts for acquisitions (of goods, services, and construction) and disposals may be negotiated and directly awarded without competitive process where the contract is with another government organization – CPPM – 6.3.3(a)(1).
<input type="checkbox"/> 201	Direct Award – Sole source Contracts for acquisitions (of goods, services, and construction) and disposals may be negotiated and directly awarded without competitive process where the ministry can strictly prove that only one contractor is qualified to provide the goods, services or construction or is capable of engaging in a disposal opportunity – CPPM 6.3.3(a)(1).
<input type="checkbox"/> 202	Direct Award – Emergency Contracts for acquisitions (of goods, services, and construction) and disposals may be negotiated and directly awarded without competitive process where an unforeseeable emergency exists and the goods, services or construction could not be obtained in time by means of a competitive process – CPPM 6.3.3(a)(1).
<input type="checkbox"/> 203	Direct Award – Security, order, etc. Contracts for acquisitions (of goods, services, and construction) and disposals may be negotiated and directly awarded without competitive process where a competitive process would interfere with a ministry's ability to maintain security or order or to protect human, animal or plant life or health – CPPM 6.3.3(a)(1).
<input type="checkbox"/> 204	Direct Award – Confidentiality Contracts for acquisitions (of goods, services, and construction) and disposals may be negotiated and directly awarded without competitive process where the acquisition is of a confidential or privileged nature and disclosure through an open bidding process could reasonably be expected to compromise government confidentiality, cause economic disruption or be contrary to the public interest – CPPM 6.3.3(a)(1).
<input type="checkbox"/> 205	Direct Award – Notice of Intent (No substantiated objections) When a contract for goods valued at \$10,000 or more, or a contract for services or construction valued at \$50,000 or more, is intended to be directly awarded on the basis that there is only one vendor that can provide the services or goods required, but this cannot be strictly proven, a Notice of Intent must be posted on BC Bid – CPPM 6.3.2(b)(5) (Goods) and CPPM 6.3.2(c)(7) (Services).
<input type="checkbox"/> 206	Direct Award – Permitted under another corporate policy or legislation Use this code where the Direct Award was permitted under another corporate policy or legislation. Do not use this code if another direct award code applies.
<input type="checkbox"/> 207	Direct Award – Services and Construction Under \$25,000 Any service or construction opportunity, or supply arrangement for the supply of services or construction, with an estimated value of less than \$25,000, should be compelled to the extent reasonable and cost effective – CPPM 6.3.2(c)(6). (Note: Do not use this code if one of the exceptions in CPPM 6.3.3(a) apply, in that case use one of codes 200 to 204, whichever applies).
<input type="checkbox"/> 208	Direct Award – Shared Cost Arrangement (Financial Assistance) A Shared Cost Arrangement (STOB 80 agreement) may be directly awarded where financial assistance is provided to a specialized target group or population (e.g. First Nation, or a direct beneficiary, individual or family or legal guardian of that individual under a community/social service program) – CPPM 21.3.6 and CPPM 6.3.3(a)(3).
<input type="checkbox"/> 209	Direct Award – Shared Cost Arrangement A Shared Cost Arrangement (STOB 80 or agreement) may be directly awarded where a competitive selection is not appropriate – CPPM 21.3.6 and CPPM 6.3.3(a)(3).
<input type="checkbox"/> 300	Competitive process among selected vendors (Construction and Services under \$75,000) A competitive solicitation process among a limited list of vendors and not advertised on BC Bid. (i.e. solicitation of three or more vendors) – CPPM 6.3.2(c)(5). If vendors are on a pre-qualification list, use 401.
<input type="checkbox"/> 400	Selected vendor from pre-qualification list (RISP < \$75,000) Select this code for a contract that is issued to a vendor on a ...cont'd.

PROCUREMENT PROCESS – LIST OF VALUES Cont'd.

Code	Description
<input type="checkbox"/> 400	Cont'd. pre-qualification list without undertaking a competitive process. The process followed must be consistent with the rules set out in the original request for qualifications. (RISP < \$75,000)
<input type="checkbox"/> 401	Competition among vendors on a pre-qualification list (RISP \$75,000 - \$1,000,000) A competitive solicitation process among a limited list of vendors selected from a pre-qualification list. Select this code if a competitive solicitation process is conducted among a limited list of vendors selected from a pre-qualification list. The process followed to select vendors must be consistent with the rules set out in the original request for qualifications.
<input type="checkbox"/> 500	Purchase from a Corporate Supply Arrangement (CSA) A purchase from a pre-established corporate supply arrangement such as a MSO, SO, the Queen's Printer or other as identified under the following reference CPPM 6.3.2(a)(1).
<input checked="" type="checkbox"/> 600	Other purchase process Use for purchasing processes such as ministerial appointments. Use this code only if no other code applies.
<input type="checkbox"/> 601	Continuing Service Agreements Use for Continuing Service Agreements and for the component schedules created pursuant to Continuing Service Agreements. A Continuing Service Agreement is a specific and rarely used form of contract identified in CPPM 6.3.2(d), that is only to be used in one of the community health and social service areas – CPPM 6.3.2(d).
<input type="checkbox"/> 602	Other – Shared Cost Arrangement Use for grants and entitlements only.

TRADE AGREEMENT EXCLUSION – LIST OF VALUES

Code	Description
<input checked="" type="checkbox"/> 100	Purchase subject to Agreement on Internal Trade (AIT) The purchase is over the trade agreement (AIT) threshold for national advertising (\$25K for goods, \$100K for services, \$100K for construction) and is not excluded or exempted under any other category below.
<input type="checkbox"/> 200	Purchase below applicable AIT thresholds The purchase is under the trade agreement thresholds (\$25K for goods, \$100K for services and \$100K for construction).
<input type="checkbox"/> 300	Purchase of an exempted commodity/service The purchase is for goods, services or construction that is exempted from coverage of AIT or to which AIT does not apply by virtue of its specific reference in AIT (e.g. health and social services, grants and entitlements, ministerial appointments). Note: the only policy exceptions to the requirement to conduct fair, open, competitive solicitation processes are those permitted under the following reference – CPPM 6.3.3(a).
<input type="checkbox"/> 400	Excluded - Emergency A purchase where an unforeseeable situation of urgency exists and the goods, services or construction cannot be obtained in time by means of an open procurement.
<input type="checkbox"/> 500	Excluded - Security, order, etc. A purchase where compliance with the open tendering provisions set out in AIT would interfere with the Province's ability to maintain security or order or to protect human, animal or plant life or health.
<input type="checkbox"/> 600	Excluded - Product compatibility/exclusive rights A purchase which must: ensure compatibility with existing products; recognize exclusive rights, such as exclusive licenses, copyright and patent rights; or maintain specialized products that must be maintained by the manufacturer or its representative.
<input type="checkbox"/> 700	Excluded - Procurement of prototype The procurement of a prototype or a first good or service to be developed in the course of and for a particular contract for research, experiment, study or original development, but not for any subsequent purchases.
<input type="checkbox"/> 800	Excluded - Regional/Economic development A purchase which, under exceptional circumstances, may be excluded by the Province from the application of the AIT provisions for regional and economic development.
<input type="checkbox"/> 900	Excluded - RISP program (MOT) The Ministry of Transportation and Infrastructure's specific exclusion for its RISP program for hiring engineers.

**INDEPENDENT TECHNICAL REVIEW
GEORGE MASSEY CROSSING**

Terms of Reference

Background

The George Massey Tunnel Replacement Project has been in pre-development, planning and procurement since 2012. Questions have been raised about the proposed bridge option, such as: how the improvements fit within the regional context; the need for 10-lane capacity; tunnel vs. bridge; magnitude of connecting infrastructure, etc. Public comments have been made about environmental, agricultural, port marine/truck impacts and imperatives and the need to ensure George Massey traffic modelling aligns with broader regional models.

The Ministry of Transportation and Infrastructure is proceeding with an independent technical review of the George Massey corridor. The review will focus on what level of improvement is needed in the context of regional and provincial transportation planning, growth and vision, as well as which option would be best for the corridor.

While this review is underway, Minister Claire Trevena will engage with mayors from Metro Vancouver, Richmond and Delta to gather their perspectives on the project, and to ensure that any plan for this crossing reflects their ideas and fits into the overall vision for the region.

Terms of Reference

The timeline for the independent review is expected to be six months.

The review will include the following:

1. Review and objectively analyze public statements of impacts/drivers (e.g. environment and agricultural, port marine/truck traffic impacts);
2. Review the objectives for George Massey crossing improvements;
3. Review the analysis and assumptions made for the Project;
4. Undertake technical review of safety, seismic and congestion issues for George Massey Tunnel;
5. Undertake review of tunnel vs. bridge technical and costs.
6. Identify minimum improvements necessary to address safety, seismic and current congestion issues, including any technology limitations.
7. Review existing traffic models and, with TransLink, determine regional traffic model to be used for George Massey and other future regional traffic demand analysis

incorporating impacts from elimination of tolls from Golden Ears and Port Mann bridges;

8. Use the outputs from provincial, regional and local transportation planning and regional traffic modelling to validate the future traffic demand for George Massey;
9. Based on validated future traffic demand, safety and seismic objectives, identify options for George Massey crossing;
10. Recommend preferred George Massey improvement that meets objectives, including the size and capacity of the infrastructure, including: scope and cost.

The independent technical review should assume all bridges in the Lower Mainland are not tolled. The review is not a reconsideration of decisions made by the environmental assessment process, the agricultural land commission review or by statutory decision makers.

The independent review lead must submit to the Minister of Transportation and Infrastructure a draft report by Spring 2018.

Resources

The lead will draw from the technical information developed by the Province and from Metro Vancouver municipalities. The lead may also obtain expert advice and analysis on any subject related to the review, which may include highway infrastructure design and construction, transportation planning and traffic engineering. Ministry of Transportation and Infrastructure staff will be available to support the review in ensuring procurement of independent expert advice.

Calling Blind?
Panel # of participants?
sources
Contract/Value?

o defining scope

Project Manager Lead
- technical
- low profile.

Conflict of Interest check
- RRC list?

add

s.22

o checking w. Doug F
for contact info for
s.22

✓ Technical
✓ Leadership
? Academic

ow s.22

for CV summaries and
contact info the field
4 recommended names

chair
panel.

- 1) review cost estimates, risk + assumption
- 2) validate level of improvement need / Major's Council Objectives
- 4) make recommend for best options
- 3) look at impacts traffic/env./port safety

2.00/10

BTY support

s.22

confid agent send

- qualified yes ~~depends on role~~ - is available
- still interested
- no conflict / no involvement with GRIT

S. Cowdell confid agent send very interested

- broad range of economic impact
- done many multi-million project reviews

→ busy next week but will pick up email + messages
→ will send updated C.V.

s.22

confid agent send

- interested

loose association with

availability • Oct for

- ordered that for qualified agent for recruitment which is small part of the business
- no conflict - minor area

- just got on

- will have some time.

- will consider scope + possibilities.

not full time job

not available - will try to think of other names.

s.22

s.22

s.22

s.22

P3 D/B on Gov. Risk Assessment for P3

s.22

Sept 6

s.22

s.22

Info. p.

s.22

s.22

(another line)

own consultancy business

s.22

don't think regional - (if it's possible
to have a smaller subcommittee to deal with)

s.22

o

→ strong technical.

s.22

interested

* All France - Day F
s.22
As r. when.

s.22

fine

10 calls

Log 7

s.22

Interested - did s.22

+ value for BB

• does s.22

s.22

s.22

- doesn't think he's qualified.
qualifying of traffic
• yes on tech - but thinks that's a small part.
terms + conditions

s.22

s.22

but s.22 wasn't involved
in that all.

back s.22

pt 28 Stan C

s.22

• still interested.
• no conflicts

• needs to know time
commitment.

availability
Interested
Conflict of Ints

OWT
Port Mgmt

comfortable in:

- input from Haysri's Canal's staff objectives
- input from academics
- support Minister
- make presentations

Oct 11 (Lisa met with the DM)

- need to screen for ACEC executive or board member

Ministry resources to assist, including GMTR Staff, RISP etc.

Phase 1 2) review at current volumes seismic and safety issues/standards

1) review what is being demanded publicly and what is factual

↳ some interaction with mayor's council

- given new ^{lower mainland} transportation strategy

Phase 2 - following 2) seismic + safety required at current levels

then look at what would be required at future levels (what timeline - 30? 50 years?)

in terms of broader regional strategy and needs

→ what are the current best options?

Oct 12 Sten Cowdell
was president and board more than 10 years of

No. based toward Port.

Works for port globally
↳

No contact with Port of Vancouver.

Last time worked for Port of V - Senior VP. Worley Parson
- contact with W. Parsons 2011 -
not directly with Sten

Has not worked for Port of V in the
Fraser River area. Has done work
in Fraser R for other companies.

Oct 16

? - Risk assumed with MMH

↳ **Has 6 mo
Ironwork B.**

? Existing contract? No
His when services

**Not on
Risk**

• Terms of Reference
• Other resources
↳ shore draft RFP

No news release, Minn

↳ Bio - due diligence
Reviews

s.13

Logix

Oct 24/14

November - getting into
data room access

Other Resources

- Trust ~~Trust~~ Planning • Road + Bridge G • traffic - given no tables
- Good geotechnical engineers • use of modelling
- Traffic Engineer • seismic • will be different demand

Direct
Award

Budget
Contract -
Rates

westmar + associates
↳

Estimate
16-20 hours a week
over 6 months.

Comm. Contact Name for Sten
GWT Mtg.

Notice of Intent
Direct Award Appraisal
Contract
Value + project report

Dirk - who did the seismic review for GWTTR?
Buckland + Taylor early 2000
Value Eng done by Ministry - who?
↳ 2nd Value Eng in 2007