FEEDBACK FORM INSIDE

Pattullo Bridge Review Consultation

June 2013

Discussion Guide and Feedback Form

June 3 – June 28, 2013

We Want To Hear From You

Pattullo Bridge Review Consultation takes place from June 3 through June 28, 2013. Materials, including this Discussion Guide and Feedback Form, are available at:

www.pattullobridgereview.ca

You can learn more and provide feedback by:

- **Attending an Open House or a Small Group Meeting** (see schedules)
- **Providing feedback online by:**
  - **Visiting the Pattullo Bridge Review website:** www.pattullobridgereview.ca
  - **Visiting PlaceSpeak:** www.placespeak.com/PattulloBridgeReview
  - **Visiting City of Surrey's City Speaks:** www.cityspeaks.ca/Pattullo
- **Sending written submissions to** info@pattullobridgereview.ca or PO Box 2225 Vancouver Main Vancouver, B.C. V6B 3W2

NEW WESTMINSTER TRANSLINK CITY OF SURREY the future lives here.

HOW INPUT WILL BE USED

The Pattullo Bridge Review builds on previous consultations and outreach efforts, and responds to previous feedback requesting additional information and evaluation of all practical alternatives.

Input received during this consultation will be considered, along with financial and technical information, in refining the long list of alternatives for rehabilitating or replacing the bridge and in identifying fewer alternatives for additional evaluation and consultation. This refined list of alternatives, along with information on road connections and traffic, will be presented for public and stakeholder feedback in fall 2013.

A *Consultation Summary Report* summarizing feedback received during this consultation will be posted on the Pattullo Bridge Review website.

PUBLIC OPEN HOUSE SCHEDULE*

The first half of the open house will be in a drop-in format. The second half will consist of a 30-minute presentation followed by a 60-minute question and answer session.

COMMUNITY	DATE	TIME	LOCATION
New Westminster	Thursday, June 6	**5:00 p.m. – 8:00 p.m.**	**Sapperton Pensioners Hall**, 318 Keary Street
Surrey	Saturday, June 8	**10:00 a.m. – 1:00 p.m.**	**SFU Surrey**, 13450 102 Avenue
New Westminster	Tuesday, June 11	**5:00 p.m. – 8:00 p.m.**	**Inn at the Quay**, 900 Quayside Drive
Surrey	Wednesday, June 12	**5:00 p.m. – 8:00 p.m.**	**SFU Surrey**, 13450 102 Avenue
Surrey	Thursday, June 13	**5:00 p.m. – 8:00 p.m.**	**City Centre Library**, 10350 University Drive
New Westminster	Saturday, June 15	**10:00 a.m. – 1:00 p.m.**	**Inn at the Quay**, 900 Quayside Drive

SMALL GROUP MEETING SCHEDULE*

Small group meetings are scheduled for two hours. ***Please register to attend a small group meeting*** *by going to* ***www.pattullobridgereview.ca or calling 604-684-6840.*** *Location details will be provided upon registration*

COMMUNITY	DATE	TIME	LOCATION
New Westminster	Tuesday, June 4	**6:00 p.m. – 8:00 p.m.**	**Sapperton**
Surrey	Wednesday, June 5	**1:00 p.m. – 3:00 p.m.**	**City Centre**
New Westminster	Thursday, June 6	**1:00 p.m. – 3:00 p.m.**	**Sapperton**
Surrey	Wednesday, June 12	**1:00 p.m. – 3:00 p.m.**	**City Centre**

** Please check www.pattullobridgereview.ca for any potential revisions to this schedule.*

Pattullo Bridge Review Consultation

June 2013

The City of New Westminster, the City of Surrey and TransLink are working together to review and evaluate alternatives to rehabilitate or replace the Pattullo Bridge and to determine a preferred alternative that meets the needs of communities connected by the bridge, as well as the broader region served by the bridge.

PURPOSE

New Westminster, Surrey and TransLink are consulting with local residents and businesses, local and regional stakeholders, and bridge users about the:

- Problem Statement for the Pattullo Bridge Review (page 5)
- Objectives for rehabilitating or replacing the bridge (page 11)
- Initial screening of the long list of alternatives for rehabilitating or replacing the bridge (screening against the objectives) (pages 13–23)

THIS DISCUSSION GUIDE INCLUDES:

- Background on the condition and use of the Pattullo Bridge
- Roles and responsibilities of provincial, regional and municipal governments in planning, operating and maintaining the Pattullo Bridge and its approaches
- Problem Statement and Other Issues
- Overview of local, regional and provincial plans and past studies that inform the Pattullo Bridge Review
- Current long list of alternatives for rehabilitating or replacing the bridge and the objectives that are guiding the evaluation of the Pattullo crossing
- Findings of an initial screening of the alternatives against the objectives
- Feedback form

Current Pattullo Bridge Seismic Upgrade Planned by TransLink

TransLink has set aside funds to design and complete a seismic upgrade for the Pattullo Bridge. Design work will take about a year and a half, and then construction will take approximately two years. **This work will occur regardless of the outcome of the Pattullo Bridge Review to ensure the bridge remains open and safe for all users.**

If the Pattullo Bridge Review determines that a new bridge is the best option, the design, funding and construction of a new bridge would take approximately 10 years. This seismic upgrade will ensure that the existing bridge is available continuously as a new bridge is built.

If the Pattullo Bridge Review determines that full rehabilitation of the existing bridge is the best option, the scope of this immediate seismic upgrade may be expanded.

Background: Pattullo Bridge

Pattullo Bridge Has Significant Challenges

Opened in 1937, the Pattullo Bridge is one of the oldest bridges in the Lower Mainland. It serves primarily as a connection between Surrey, New Westminster and Burnaby and is a critical transportation link for the movement of people, goods and services. On average, about 73,000 vehicles per weekday travel over the bridge, and the bridge sidewalk serves a small volume of pedestrians and cyclists.

The bridge faces a number of challenges, including seismic and structural concerns. The Pattullo Bridge Review team is working together to address key challenges, including:

- The bridge structure and foundation are 76 years old and many components have surpassed their useful lives
- The bridge is vulnerable to damage from a moderate earthquake or ship collision and does not meet current seismic standards
- The bridge does not meet current roadway guidelines, including lane widths and curvature, which creates safety and reliability issues
- Bridge facilities, such as sidewalks and barriers, and connections for pedestrians and cyclists, are inadequate and do not provide separation from traffic
- Traffic (including truck) volumes affect the liveability of adjacent communities due to air quality, noise and resulting health impacts, as well as due to neighbourhood traffic infiltration

The Pattullo Bridge is safe to remain open; however, bridge engineers advise that it may not withstand a moderate seismic event. TransLink continues to actively inspect, monitor and maintain the bridge.

PATTULLO BRIDGE REVIEW TEAM ROLES AND RESPONSIBILITIES

TransLink owns the Pattullo Bridge and is responsible for the safe and efficient movement of people, goods and services on the bridge.

The Pattullo Bridge Review partners – The City of New Westminster, The City of Surrey and TransLink – are working together, along with the Ministry of Transportation and Infrastructure, Metro Vancouver and other associated agencies, to identify long-term alternatives for the bridge that will meet the needs of local communities and the region.

The Pattullo Bridge is also part of an integrated regional transportation network. Potential future alternatives could affect the transportation patterns in neighbouring municipalities and for other agencies, such as Port Metro Vancouver. As such, the Major Roads Transportation Advisory Committee (MRTAC) has nominated members to act as an External Advisory Committee for the Pattullo Bridge Review to advise on regional interests.

The agencies directly affected by changes to the roadway connections or the bridge area would have to be in agreement with any proposed alternative. Most of the crossing alternatives would only affect New Westminster and Surrey. However, some alternatives could affect others such as the Ministry of Transportation and Infrastructure and the City of Coquitlam, the City of Burnaby or the City of Richmond. Their agreement would be required to proceed with any alternative that directly affects them. Any project to replace the bridge that would also require additional funding would require the approval of the Mayors' Council for Regional Transportation.

CONSULTATION TOPIC

Problem Statement and Other Issues

CONTEXT

The Pattullo Bridge opened in 1937 and is an important element of the region's Major Road Network. Connecting the City of Surrey and the City of New Westminster, the bridge carries, on average, about 73,000 vehicles per weekday, a significant portion, 10%, of which are trucks.*

PROBLEM STATEMENT

The Pattullo Bridge may not survive a moderate earthquake or ship collision, the piers are at risk of being undermined by river scour** and many bridge components have surpassed their useful lives.

OTHER ISSUES

When considering the best solutions for the problem, it is an opportune time to establish the optimal roles for the crossing, and also to address other issues with the current crossing, including:

1. The Pattullo Bridge does not meet current roadway design guidelines, including for lane widths and curvature, potentially contributing to collisions.
2. Pattullo Bridge facilities, such as sidewalks and barriers, and connections for pedestrians and cyclists, are inadequate and do not provide sufficient protection from traffic.
3. During rush hours, travel demand on the roads leading to the Pattullo Bridge results in queuing and unreliable travel times for the movement of people, goods and services.
4. Current traffic (including truck) volumes affect the liveability of adjacent communities due to air quality, noise and resulting health impacts, as well as due to neighbourhood traffic infiltration.

* *Traffic data for 2013 (January to April).*

** *River scour occurs as water flow changes the riverbed and removes sediment and rocks from around the bridge piers.*

BRIDGE STRUCTURAL ISSUES

The Pattullo Bridge was designed for a 50-year life, which has now been exceeded by 26 years. Maintenance, such as cleaning and painting the steel to prevent corrosion, has stabilized and extended the life of some of the bridge components, but other major elements should be replaced to keep the bridge in good condition.

The deck, joints, railings and bearings are all in need of replacement. Targeted repairs of the reinforced concrete deck and crossheads (horizontal concrete elements that join the columns and support the trusses) have not been entirely successful and bridge corrosion continues. The piers and footings also need reinforcement to be able to withstand earthquakes, potential ship impacts and the aging of the timber piles that support them.

The piers of the bridge are subject to river scour as water flow changes the riverbed and removes sediment and rocks from around the bridge piers. This can undermine the piers supporting the bridge if not countered by protective measures, such as placing rip-rap (large rocks) around the piers. Pier 5 (between the main span and the south bank) is particularly subject to scour and measures have been taken to protect it.

DOES NOT MEET CURRENT ROADWAY DESIGN GUIDELINES

The Pattullo Bridge has four traffic lanes, but the lane widths are below current guidelines. The width between the bridge arches of the main span is 12.1 metres, which limits the outside traffic lanes to 3 metres and the inside traffic lanes to 2.9 metres, leaving only 0.3 metres for the centreline indicators. These traffic lane widths are well below the 3.5- to 3.7-metre lane widths that are the guidelines for new construction. The limited width also means that a median barrier to separate two-way traffic cannot be installed.

As the lane widths on the approach spans are consistent with those on the bridge, large trucks often must straddle the lanes, especially on the curved sections, to avoid hitting the curbs.

PEDESTRIAN AND CYCLING ISSUES

The pedestrian and cycling facilities on the bridge are also below current design guidelines. There is a sidewalk only on the west side and it is 1.8 metres wide, too narrow for pedestrians and cyclists to comfortably share. In most areas, the only separation between the sidewalk and roadway is a standard curb. The bridge arch structure and fences provide some additional separation in the area of the main span.

RECENT TRAFFIC IMPROVEMENT MEASURES

Traffic safety issues on the Pattullo Bridge have been raised due to narrow lanes, tight curves and fatal collisions.

The following changes were made to improve safety, including:

- 2002: Signage and marking improvements
- 2009: Nighttime closures of centre lanes and speed limit reduced to 50 kilometres per hour

The maintenance costs associated with nighttime closures are approximately $264,000 a year.

These measures have reduced collisions. Additional traffic safety improvements will be considered as part of the Pattullo Bridge Review.

Current Traffic on the Pattullo Bridge

The information below shows weekday and weekend traffic volumes for November 2012, prior to the opening of the new Port Mann Bridge, and from January to April 2013, following the opening. This data is not adjusted for seasonal variations in traffic flows. In addition, traffic flows on the Port Mann Bridge are continuing to change as traffic patterns normalize over time. New Westminster, Surrey, TransLink and the Ministry of Transportation and Infrastructure are working together to continue to monitor and study traffic patterns and volumes.*

NOVEMBER 2012**
VEHICLE AND TRUCK TRAFFIC VOLUMES

WEEKDAYS:

- **Weekday vehicle** traffic volumes on the Pattullo Bridge ranged from 68,000 to 73,000 vehicles per weekday for an average of 70,000 vehicles per weekday
- **Weekday truck** volumes ranged from 6,500 to 7,100 trucks per weekday for an average of 6,700 trucks per weekday

WEEKEND:

- **Weekend vehicle** traffic volumes ranged from 49,000 to 64,000 vehicles per weekend day for an average of 56,000 vehicles per weekend day
- **Weekend truck** volumes ranged from 1,800 to 2,900 trucks per weekend day for an average of 2,400 trucks per weekend day

JANUARY–APRIL 2013
VEHICLE AND TRUCK TRAFFIC VOLUMES

WEEKDAYS:

- **Weekday vehicle** traffic volumes on the Pattullo Bridge ranged from 61,000 to 81,000 vehicles per weekday for an average of 73,000 vehicles per weekday
- **Weekday truck** volumes ranged from 5,200 to 8,300 trucks per weekday for an average of 6,900 trucks per weekday

WEEKEND:

- **Weekend vehicle** traffic volumes ranged from 47,000 to 66,000 vehicles per weekend day for an average of 58,000 vehicles per weekend day
- **Weekend truck** volumes ranged from 1,500 to 3,500 trucks per weekend day for an average of 2,400 trucks per weekend day

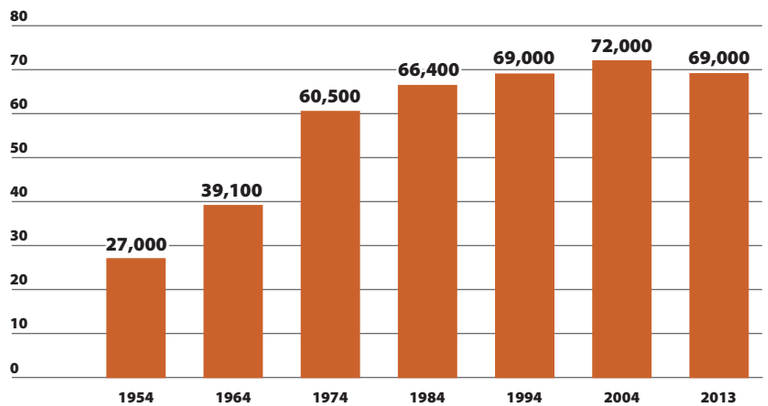
* *Traffic Study: The review partners are compiling traffic data and information to better analyze and understand recent and ongoing changes to the Pattullo Bridge and connecting roads resulting from ongoing network changes, including the opening of the Port Mann Bridge and gradual improvements to Highway 1 and the South Fraser Perimeter Road. This information will be reported later in 2013.*

** *TransLink began traffic monitoring in November 2012 .*

Pattullo Bridge Traffic Volumes (1954–2013)

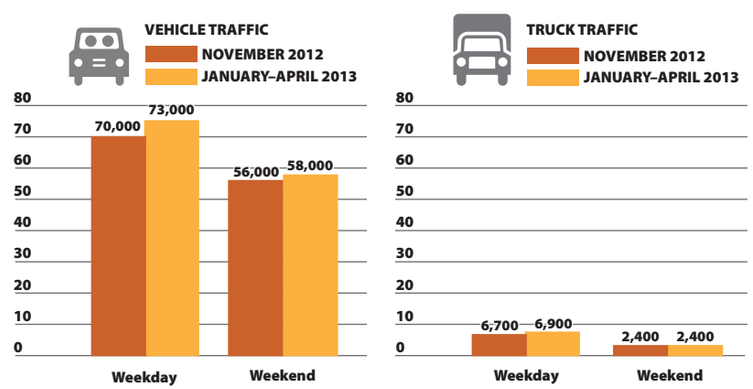
(AVERAGE DAILY TRIPS IN 1,000s)

Please note that the Average Daily Trips shown for years 1954 to 2004 are based on the traffic volumes recorded during the entire year (12 months), while the 2013 Average Daily Trip amount of 69,000 is only based on January to April 2013 traffic volumes.



Pattullo Bridge Traffic Volumes (November 2012 and January to April 2013)

(AVERAGE DAILY VEHICLE AND TRUCK TRAFFIC IN 1,000s)



Regional, Local And Policy Context

The following information regarding population growth forecasts, land use designation, transportation network, and current policies and plans form the basis for the objectives used to screen the crossing alternatives, as described on page 11 of this Discussion Guide.

POPULATION, LAND USE DESIGNATION AND TRANSPORTATION NETWORK

Growing Population and Employment

In the next 30 years, the region is projected to grow by 1.1 million people and add 600,000 jobs. Population and employment levels in both New Westminster and Surrey, the areas connected by the Pattullo Bridge, are projected to increase.

Population Projections

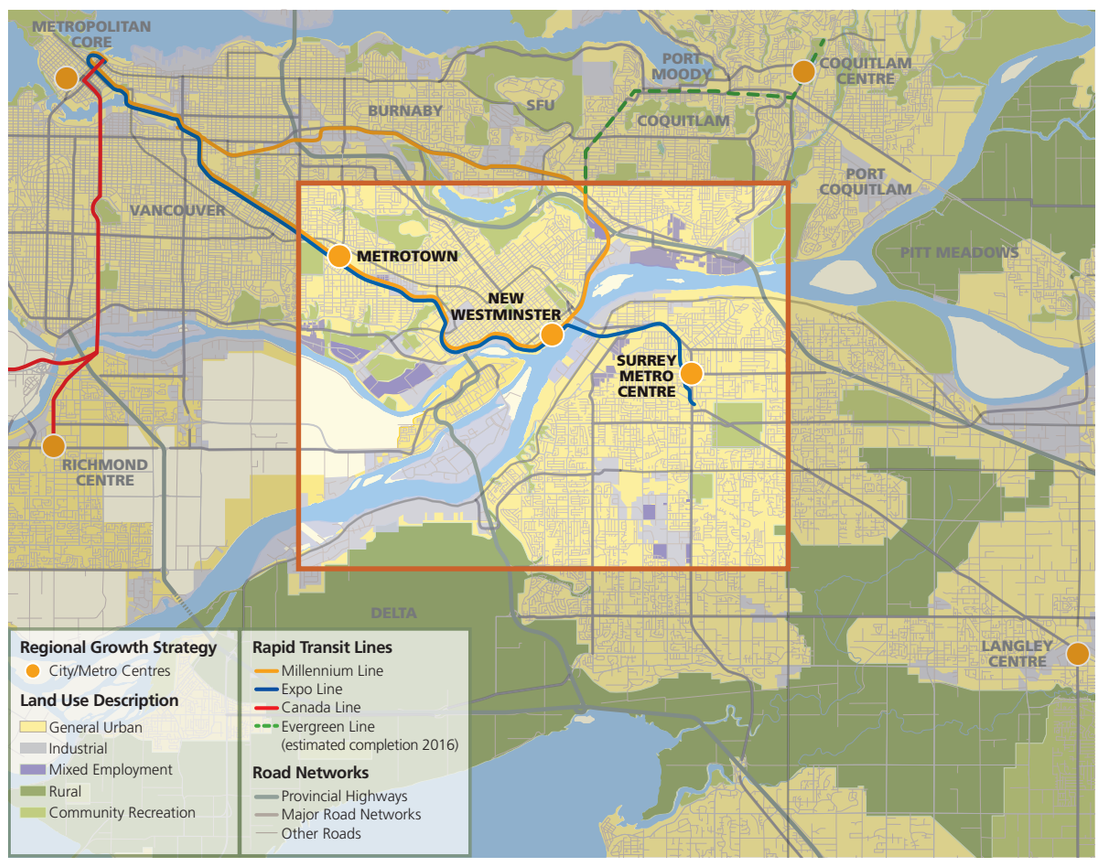
Between 2012 and 2041, New Westminster's population is projected to grow by 49% and Surrey's by 53%.

Employment Projections

Between 2006 and 2041, New Westminster's employment is projected to grow by 41% and Surrey's by 103%.

LAND USE DESIGNATION AND TRANSPORTATION NETWORK

Rapid Transit and Road Network



LOCAL, REGIONAL AND PROVINCIAL POLICIES AND PLANS

The following local, regional and provincial policies and plans were reviewed to lay a foundation and provide guidance for the Pattullo Bridge Review team. It is important to consider plans at all levels of government to inform the Pattullo Bridge Review planning process and to help reach a consensus on a plan for rehabilitating or replacing the Pattullo Bridge.

The following plans were reviewed:

Local (Municipal) Plans	• Downtown Community Plan (City of New Westminster, 2011) • New Westminster Official Community Plan (City of New Westminster, 2011) • Long-Range Transportation Study (City of New Westminster, 1998) • New Westminster Community Energy and Emissions Plan (City of New Westminster, 2011) • City of Surrey Official Community Plan (2002) • A Neighbourhood Concept Plan for South Westminster (2003) • City of Surrey Transportation Strategic Plan (2008) • A Sustainability Charter for the City of Surrey (2008) • City of Surrey Walking Plan (2011) • City of Surrey Cycling Plan (2012)
Regional Plans	• Transport 2040 (TransLink, 2010) • 2013 Base Plan (TransLink, 2012) • Regional Growth Strategy (Metro Vancouver, 2011) • Integrated Air Quality and Greenhouse Gas Management Plan (Metro Vancouver, 2011)
Provincial Plans	• 2010/11 – 2012/13 Service Plan (Ministry of Transportation and Infrastructure, 2010) • Provincial Transit Plan (Ministry of Transportation and Infrastructure, 2008) • Provincial Cycling Policy (Ministry of Transportation and Infrastructure, 2000) • Provincial Climate Action Plan (2008)

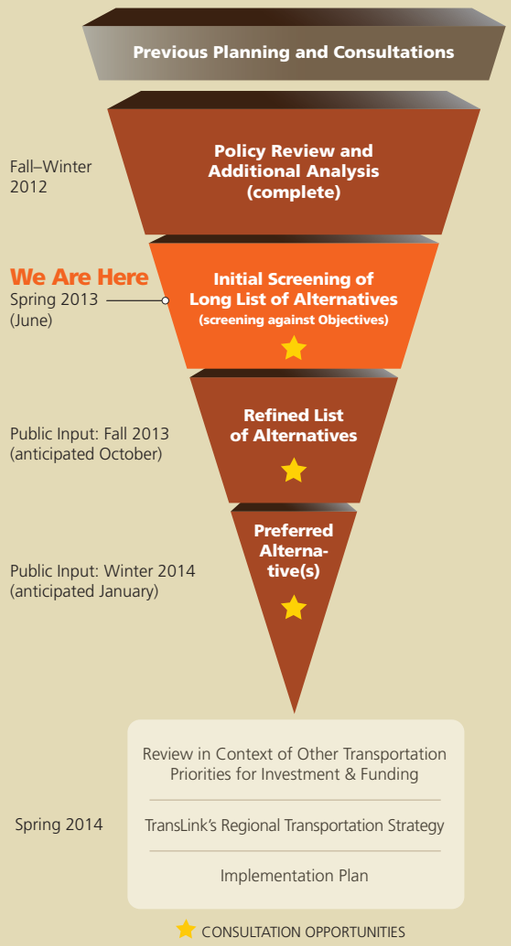
COMMON POLICIES FROM REGIONAL, MUNICIPAL AND PROVINCIAL PLANS WERE IDENTIFIED TO HELP ESTABLISH THE OBJECTIVES OF THE PATTULLO BRIDGE REVIEW:

- Give priority to walking, cycling and transit
- Foster efficient goods movement and economic growth
- Reduce greenhouse gases (GHGs) and air pollution
- Integrate land use and transportation
- Ensure transportation investments enhance liveability and address community impacts
- Maintain infrastructure in a state of good repair
- Think in terms of moving people and goods, rather than vehicles alone
- Cost-efficiency
- Manage transportation demand before increasing capacity (add capacity as a last resort)
- Develop a replacement of the bridge on the basis of the ability to collect tolls (TransLink Board, 2008)

Changes in capacity on the Pattullo Bridge, or changes to its existing role, have not been identified in local, regional or provincial plans.

PATTULLO BRIDGE REVIEW
OPPORTUNITIES FOR PUBLIC INPUT

There will be various opportunities for public input during the Pattullo Bridge Review process. As noted by the yellow stars in the graphic below, public consultation is planned at several key milestones during the review process.



- **Public Input: Spring 2013**
  (current consultation)
  During this consultation, feedback is being sought regarding:
  - Framework of the Pattullo Bridge Review as defined by the Problem Statement
  - Objectives used to screen the long list of alternatives for rehabilitating or replacing the bridge
  - Initial screening of the long list of alternatives (based on the Objectives)
- **Public Input: Fall 2013**
  (anticipated October)
  Following further evaluation of viable alternatives, a refined list of crossing alternatives, along with information on road connections and traffic estimates, will be presented for public and stakeholder feedback along with the evaluation criteria and findings.
- **Public Input: Winter 2014**
  (anticipated January)
  Following further detailed evaluation and technical work, the preferred alternative(s) will be presented for public and stakeholder feedback.

Pattullo Bridge Review – Why Are We Here?

Pattullo Bridge Review – City of New Westminster, City of Surrey and TransLink

Previous planning initiatives and public and stakeholder consultations conducted by the City of New Westminster, the City of Surrey and TransLink about proposed alternatives for replacing the Pattullo Bridge raised concerns that need to be resolved to reach a mutually supportable alternative.

The current collaborative joint review was initiated in late 2012 by New Westminster, Surrey and TransLink, with participation from the Ministry of Transportation and Infrastructure, and Metro Vancouver. It responds to the lack of a consensus in consultations held in 2012 and to requests for additional information and analysis.

The Pattullo Bridge Review is a comprehensive process evaluating alternatives through the following steps:

- Assess all previous work as inputs to the Review
- Undertake additional analysis of past work and context
- Establish the functional role of the crossing
- Develop an evaluation framework that captures local and regional goals
- Identify, screen and evaluate practical and viable alternatives
- Seek input from the public and stakeholders to inform the evaluation

The Pattullo Bridge Review aims to identify a suitable alternative that meets regional and local objectives that can be included in a funded TransLink plan no later than fall 2014.

PREVIOUS CONSULTATIONS – 2012

Both TransLink and the City of New Westminster have hosted previous consultations on Pattullo Bridge replacement options. The joint Pattullo Bridge Review team has reviewed and is considering feedback from both consultations in the current strategic review.

- For more information on TransLink's March 2012 and June 2012 consultations, please visit www.translink.ca
- For more information on New Westminster's May 2012 consultation, please visit www.newwestcity.ca/residents/residents_services/transportation/master_transportation_plan

Pattullo Bridge Review – Initial Screening of Crossing Alternatives

Objectives of the Pattullo Bridge Review

Based on examination of the local, regional and provincial policies and plans (page 9), the Pattullo Bridge Review team established the following objectives to evaluate alternatives, including connections, based on their abilities to address the identified problems and deliver a supportable alternative.

The preferred alternative will meet transportation, environmental and health objectives including:

1. Moves towards the regional goal that most trips will be by walking, cycling and transit.
2. Minimizes single occupant vehicle use and vehicle kilometres travelled.
3. Minimizes emissions of greenhouse gases (GHGs) and pollutants.
4. Is capable of supporting neighbourhood liveability by minimizing and mitigating impacts, including during construction, and provides an aesthetically pleasing structure.
5. Supports local and regional land use plans and economic development.
6. Provides reliable access and predictable travel times for all modes, users, and for an appropriate level of goods movement.
7. Provides a safe crossing for all modes, is structurally sound and meets current standards for seismic and ship impacts.
8. Is cost-effective.

Objectives are not listed in priority order.

CONSULTATION TOPIC
Alternatives for the Pattullo Crossing

Twenty-five alternatives for the Pattullo crossing were developed based on previous technical work and on suggestions from the public and stakeholders during previous consultations.

The alternatives are grouped in three corridors, as shown on the map on the following page:

- **Crossing at Existing Corridor**
- **Crossing at Sapperton Bar Corridor**
- **Crossing at Tree Island Corridor**

One of the first steps of the Pattullo Bridge Review process was to complete a screening of each of the crossing alternatives against the objectives. The outcome of this initial screening is shown on pages 15 through 23.

Overview of Alternatives

CROSSING AT EXISTING CORRIDOR

No Bridge/Pedestrian- and Bike-Only Bridge

- No Bridge
- Rehabilitated Pattullo Bridge for pedestrians and cyclists only
- Rehabilitated 2-, 3- or 4-lane Pattullo Bridge

New Bridge

- New 4-, 5-, 6- or 8-lane bridge

New Tunnel

- New 4-lane tunnel with or without branch to Stewardson Way
- New 4-lane tunnel with or without branch to Stewardson Way, with rehabilitated Pattullo Bridge for pedestrians and cyclists only

CROSSING AT SAPPERTON BAR CORRIDOR

Sapperton Bar Crossing

- New 4-lane Sapperton Bar Crossing
- New 4-lane Sapperton Bar Crossing, with rehabilitated Pattullo Bridge for pedestrians and cyclists only
- New 4-lane Sapperton Bar Crossing, with 2- or 3-lane rehabilitated Pattullo Bridge

New Surrey-Coquitlam Crossing

- New 4- or 6-lane Surrey-Coquitlam Crossing
- New 4- or 6-lane Surrey-Coquitlam Crossing, with rehabilitated Pattullo Bridge for pedestrians and cyclists only
- New 4- or 6-lane Surrey-Coquitlam Crossing, with 2- or 3-lane rehabilitated Pattullo Bridge

CROSSING AT TREE ISLAND CORRIDOR

New Richmond-Burnaby Tree Island Crossing

- New 4-lane Richmond-Burnaby Tree Island Crossing
- New 4-lane Richmond-Burnaby Tree Island Crossing, with rehabilitated Pattullo Bridge for pedestrians and cyclists only
- New 4-lane Richmond-Burnaby Tree Island Crossing, with 2- or 3-lane rehabilitated Pattullo Bridge

INITIAL SCREENING OF CROSSING ALTERNATIVES

The joint Pattullo Bridge Review team reviewed each of the alternatives against each of the agreed objectives. The screening resulted in six alternatives that require further consideration and 19 alternatives that are not recommended for further evaluation. The screening outcome is shown on pages 15 through 23.

This screening process was completed by the Pattullo Bridge Review team, including representatives of the City of New Westminster, the City of Surrey, TransLink, the Ministry of Transportation and Infrastructure, and Metro Vancouver.

The screening was based on professional judgment and the information available from:

- Previous technical work
- Review of the policy context as prepared for the Pattullo Bridge Review
- Updated cost estimates of the alternatives (subject to further study and refinement)

The findings are preliminary for consultation and do not reflect the official positions of the agencies involved.

COST ESTIMATES

A preliminary cost estimate range has been included for each alternative. These are initial estimates only and do not include additional costs that could be included in the project, such as connector roads, environmental studies or mitigation measures. The cost estimates will be updated as more detailed technical work is completed in the coming months.

Initial affordability modelling has been done for the 13 alternatives located at the current crossing location. Based on the current volumes at the current location, costs of $1 billion would be recoverable through user fees. Costs over $1 billion would likely require additional funding through senior levels of government. The affordability modelling will be updated as more detailed technical work is completed in the coming months.

CROSSING AT EXISTING CORRIDOR

Possible Connections

To be determined during future phases:

- McBride Boulevard
- Royal Avenue
- East Columbia Street
- South Fraser Perimeter Road (SFPR)
- Highway 1
- King George Boulevard and Scott Road
- Other network connections

Notes

1) **Rehabilitated Pattullo Bridge**
All alternatives that involve rehabilitation of the existing bridge include the construction of a new bridge deck. The life expectancy of the current bridge deck is about eight to 10 years with regular maintenance to repair potholes and surface damage.

2) **Combined Road-Rail**
Given the proximity of the New Westminster Rail Bridge to the Pattullo Bridge, there have been suggestions that a new combined bridge would be appropriate, as the rail bridge, having been built in 1904, is even older than the Pattullo Bridge and is a major bottleneck in the region's rail network. Recent analysis suggests, however, that the cost savings of doing so would not be significant, as there would be a minimal ability to share bridge structures. Further, the rail companies have not expressed an interest in participating in the timelines required.

Note: The Ministry of Transportation and Infrastructure has no plans to provide a connection between SFPR and the Port Mann Bridge. However, at the request of the City of New Westminster, The Ministry of Transportation and Infrastructure is undertaking additional analysis of the practical feasibility of a potential connection between the SFPR and the Port Mann Bridge.

No Bridge

Rehabilitated Pattullo Bridge
- For pedestrians and cyclists only

Legend:

- Municipal Boundary
- SkyTrain
- Bridge for Pedestrians and Cyclists only
- Rehabilitated Pattullo Bridge
- New Bridge
- Proposed Tunnel Alignment

Rehabilitated Pattullo Bridge
- 2, 3 or 4 lanes

New Bridge
- 4, 5, 6 or 8 lanes

New 4-Lane Tunnel
- With or without branch to Stewardson Way
- With or without a rehabilitated Pattullo Bridge for pedestrians and cyclists only

EXISTING CORRIDOR

OBJECTIVES	1) NO BRIDGE	2) REHABILITATED PATTULLO BRIDGE PEDESTRIANS AND CYCLISTS ONLY	3) REHABILITATED PATTULLO BRIDGE 2 LANES	4) REHABILITATED PATTULLO BRIDGE 3 LANES	5) REHABILITATED PATTULLO BRIDGE 4 LANES
1. Moves towards the regional goal that most trips will be by walking, cycling and transit.	Removing a key vehicle connection while retaining the parallel transit route (SkyBridge) would increase the share of trips by transit. Cycling and walking facilities would not be provided.	Removing a key vehicle connection but providing for walking, cycling and transit (SkyBridge) would increase the share of trips by walking, cycling and transit. Cycling and walking on the bridge would be more comfortable than today but the shift to walking and cycling would likely be small, due to the length of the crossing.	Reducing capacity on a key vehicle connection while providing for walking, cycling and transit (SkyBridge) would increase the share of trips by walking, cycling and transit. Rehabilitation would improve walking and cycling by incorporating facilities with modern standards and dimensions but the mode shift to walking and cycling would likely be small, due to the length of the crossing.	Reducing capacity on a key vehicle connection while providing for walking, cycling and transit (SkyBridge) would increase the share of trips by walking, cycling and transit. Rehabilitation would improve walking and cycling by incorporating facilities with modern standards and dimensions but the mode shift to walking and cycling would likely be small, due to the length of the crossing.	Rehabilitation would improve the comfort of walking and cycling by incorporating facilities with modern standards and dimensions but the mode shift to walking and cycling would likely be small, due to the length of the crossing. Increase in transit use is not likely since the capacity of the bridge for drivers remains the same.
2. Minimizes single occupant vehicle (SOV) use and vehicle kilometres (VKT) travelled. **3. Minimizes emissions of GHGs and pollutants.**	There may be a shift from SOV to transit, which could reduce overall VKT, GHGs and pollutants. However, longer driving trips for those who drive could also cause a net increase in VKT, GHGs and pollutants.	There may be a shift from SOV to transit, walking and cycling, which could reduce overall VKT, GHGs and pollutants. However, longer driving trips for those who drive could also cause a net increase in VKT, GHGs and pollutants.	There may be a shift from SOV to transit, walking and cycling due to reduced capacity, which could reduce overall VKT, GHGs and pollutants. However, diversion of driving trips to other crossings could also cause a net increase in VKT, GHGs and pollutants.	There may be a shift from SOV to transit, walking and cycling due to reduced vehicle capacity, which could reduce overall VKT, GHGs and pollutants. However, this could be partially offset by having two lanes in the peak direction. Overall, diversion of vehicles to other crossings could also cause a net increase in VKT, GHGs and pollutants, particularly since flows on the bridge are almost balanced.	Vehicle capacity would be maintained; improved walking and cycling conditions are a positive factor but are unlikely to lead to large enough behavioural changes to significantly change mode share, VKT and GHG emissions.
4. Is capable of supporting neighbourhood liveability by minimizing and mitigating impacts, including during construction, and provides an aesthetically pleasing structure.	Neighbourhood liveability adjacent to the current crossing location would improve, as there would no longer be traffic queuing for the Pattullo Bridge. However, traffic would move to other crossings and queuing for these crossings could spill into residential areas.	Neighbourhood liveability adjacent to the current crossing location would improve, as there would no longer be traffic queuing for the Pattullo Bridge. However, traffic would move to other crossings and queuing for these crossings could spill into residential areas.	Traffic impacts during rehabilitation work would be significant and could encourage motorists to use alternate routes. The long-term diversion would result in lower volumes using the crossing. There could be an impact on queuing in neighbourhoods but further analysis is required.	Traffic impacts during rehabilitation work would be significant and could encourage motorists to use alternate routes. Counter-flow operation is liable to increase queuing since peak traffic volumes in each direction are quite balanced, causing more queuing and reducing liveability.	Traffic impacts during rehabilitation work could be significant but the end result would be similar to today.
5. Supports local and regional land use plans and economic development.	Conflicts with plans that assume a multi-modal connection between Surrey and New Westminster town centres. This alternative would not support the accessibility and economic attractiveness of either municipality.	Conflicts with plans that assume a multi-modal connection between Surrey and New Westminster town centres. This alternative would not support the accessibility and economic attractiveness of either municipality.	Reducing the road capacity between the Surrey and New Westminster town centres is not in any land use plans and would reduce the accessibility of both municipalities. Further analysis is required to assess the impact on economic development.	Reducing the road capacity between the Surrey and New Westminster town centres is not in any land use plans and would reduce the accessibility of both municipalities. Further analysis is required to assess the impact on economic development.	The current bridge capacity is assumed in all land use plans. This capacity is sufficient to support the economic development seen to date and planned.
6. Provides reliable access and predictable travel times for all modes, users, and for an appropriate level of goods movement.	Traffic would move to other already congested crossings, leading to unpredictable travel times. Goods and services movement could be compromised by the lack of a crossing in a long-standing location between Surrey and New Westminster town centres, and adjacent to an industrial area in Surrey.	Traffic would move to other already congested crossings, leading to unpredictable travel times. Goods and services movement could be compromised by the lack of a crossing in a long-standing location between Surrey and New Westminster town centres, and adjacent to an industrial area in Surrey.	Capacity reduction would lead to less reliable travel times. The capacity and reliability of goods and services movement would also be compromised.	Capacity reduction could lead to less reliable travel times. The capacity and reliability of goods and services movement would also be compromised.	Access and travel times would remain unchanged, as the number of lanes would be the same as today.
7. Provides a safe crossing for all modes, is structurally sound and meets current standards for seismic and ship impacts.	Not applicable.	Not applicable for motor vehicles. Pedestrians and cyclists would have a dedicated bridge, with no potential interaction with cars or trucks, and better seismic performance.	A rehabilitated crossing would provide better seismic and structural performance as well as wider lanes. There would be potential to include a painted median. Pedestrian and cycling facilities would be improved.	A rehabilitated crossing would provide better seismic and structural performance as well as wider lanes. Counter-flow operation would preclude a median barrier, continuing the risk of head-on collisions. Pedestrian and cycling facilities would be improved.	A rehabilitated crossing would provide better seismic and structural performance. Lane widths through the arch could not meet modern guidelines. There would be a continued risk of collisions, which would need a further safety assessment. Pedestrian and cycling facilities would be better than existing.
8. Is cost-effective. Costs include crossing and connections and removal of existing bridge where required. Costs of changes to connecting street networks, if needed, are not included.	**PRELIMINARY COST ESTIMATE ($M): $60–$70** Cost of decommissioning would not produce transportation benefits or a revenue stream.	**PRELIMINARY COST ESTIMATE ($M): $290–$330** Not cost-effective, as it is assumed that there would not be an ability to recover costs from pedestrians and cyclists through user-related fees.	**PRELIMINARY COST ESTIMATE ($M): $290–$330** Fewer lanes would attract fewer users and less revenue. However, the low capital cost could be covered by the smaller user base, subject to additional analysis.	**PRELIMINARY COST ESTIMATE ($M): $330–$375** Fewer lanes would attract fewer users and less revenue. However, the low capital cost could be covered by the smaller user base, subject to additional analysis.	**PRELIMINARY COST ESTIMATE ($M): $375–$400** With the existing number of lanes maintained, capital costs could be covered by the user base, subject to additional analysis.
RECOMMENDED OUTCOME OF THIS SCREENING	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVES 5, 6 AND 8**	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVES 5, 6 AND 8**	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVE 6**	**REQUIRES FURTHER CONSIDERATION**	**REQUIRES FURTHER CONSIDERATION**

EXISTING CORRIDOR continued

OBJECTIVES	6) NEW 4-LANE BRIDGE	7) NEW 5-LANE BRIDGE	8) NEW 6-LANE BRIDGE	9) NEW 8-LANE BRIDGE
1. Moves towards the regional goal that most trips will be by walking, cycling and transit.	A new bridge would improve the comfort of walking and cycling by incorporating facilities of a modern standard and dimension. Mode shift is likely small, in part due to the length of the crossing. No increase in transit use, as attractiveness to drivers remains the same.	A new bridge would improve the comfort of walking and cycling by incorporating facilities with modern standards and dimensions. The shift to walking and cycling is likely small, due to the length of the crossing. Mode shift from transit may or may not occur, due to increased bridge capacity. This would require further analysis.	A new bridge would improve the comfort of walking and cycling by incorporating facilities with modern standards and dimensions. Mode shift to walking and cycling would likely be small, due to the length of the crossing. Mode shift from transit may or may not occur, due to increased bridge capacity and requires further analysis.	Although pedestrian and cycling facilities would be improved by incorporating facilities with modern standards and dimensions, the doubling of vehicle capacity on the bridge would diminish the attractiveness of walking, cycling and transit. Mode shift to walking and cycling would likely be small, due to the length of the crossing.
2. Minimizes single occupant vehicle (SOV) use and vehicle kilometres (VKT) travelled. **3. Minimizes emissions of GHGs and pollutants.**	A new 4-lane bridge would have slightly increased capacity. Improved walking and cycling conditions are unlikely to lead to large enough behavioural changes to significantly change mode share, VKT and GHG emissions. More analysis to consider bridge connections, tolls and resulting traffic demand would be required to determine likely outcomes.	Additional capacity may increase vehicle travel and emissions in the long term. More analysis to consider bridge connections, capacity of the road network, tolls and resulting traffic demand is required to determine likely outcomes.	Additional capacity may increase vehicle travel and emissions in the long term. More analysis to consider bridge connections, capacity of the road network, tolls and resulting traffic demand is required to determine likely outcomes.	The doubling of lanes and vehicle capacity would likely attract additional SOV travel from transit, cycling and walking, increasing auto-dependency. This is expected to exceed the demand management effects of tolls, which can typically reduce VKT and GHG emissions.
4. Is capable of supporting neighbourhood liveability by minimizing and mitigating impacts, including during construction, and provides an aesthetically pleasing structure.	Traffic impacts during construction would be mitigated by the current bridge remaining open. Long-term traffic impacts on liveability would largely be the same as today, but there may be some local changes due to approach design and potential mitigation measures.	More analysis of specific bridge connections is required to evaluate the resulting potential to affect liveability.	More analysis of specific bridge connections is required to evaluate the resulting potential to affect liveability.	The extra lanes would likely attract additional traffic. Bridge capacity would exceed the carrying capacity of the connecting street network, leading to increased volumes and congestion on surrounding streets, affecting liveability.
5. Supports local and regional land use plans and economic development.	The current bridge capacity is assumed in all land use plans. The capacity of a new 4-lane bridge should be sufficient to support the economic development seen to date and planned.	The additional lanes may encourage auto-oriented development. Economic benefits for goods movement are possible. Both issues require further analysis.	The additional lanes may encourage auto-oriented development. Economic benefits for goods movement are possible. Both issues require further analysis.	The additional lanes could encourage automobile use and auto-oriented development. The land use drawbacks would exceed the economic benefits for goods movement.
6. Provides reliable access and predictable travel times for all modes, users, and for an appropriate level of goods movement.	Access and travel times would remain unchanged, as the number of lanes would be the same as today. Some improvements could result from trucks no longer needing to occupy two lanes on the curved sections of the bridge, due to wider lanes.	The fifth lane may provide more reliable travel times in the direction it would serve and could be configured to benefit goods movement, subject to the capacity of the connecting street network.	The additional lanes may improve travel time reliability if they could be connected so they would not overload connecting streets, causing additional congestion and delay. Additional analysis would be required.	The capacity of the bridge would likely exceed that of the connecting street network, leading to increased volumes, congestion and delay.
7. Provides a safe crossing for all modes, is structurally sound and meets current standards for seismic and ship impacts.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths would meet modern guidelines. Walking and cycling facilities would be much better than existing.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths would meet modern guidelines. Walking and cycling facilities would be much better than existing.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths would meet modern guidelines. Walking and cycling facilities would be much better than existing.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths and alignment would meet modern guidelines. Walking and cycling facilities would be much better than existing.
8. Is cost-effective. Costs include crossing and connections and removal of existing bridge where required. Costs of changes to connecting street networks, if needed, are not included.	**PRELIMINARY COST ESTIMATE ($M): $820–$845** Costs could be covered by user-based revenues, subject to additional analysis.	**PRELIMINARY COST ESTIMATE ($M): $895–$930** Costs could be covered by user-based revenues, subject to additional analysis.	**PRELIMINARY COST ESTIMATE: $985M–$1.1B** Costs could be covered by user-based revenues, subject to additional analysis.	**PRELIMINARY COST ESTIMATE ($B): $1.05–$1.1** Costs could be covered by user-based revenues, subject to additional analysis.
RECOMMENDED OUTCOME OF THIS SCREENING	**REQUIRES FURTHER CONSIDERATION**	**REQUIRES FURTHER CONSIDERATION**	**REQUIRES FURTHER CONSIDERATION**	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVES 1, 2, 3, 4, 5 AND 6**

EXISTING CORRIDOR continued

OBJECTIVES	10) NEW 4-LANE TUNNEL WITHOUT BRANCH	11) NEW 4-LANE TUNNEL WITH BRANCH	12) NEW 4-LANE TUNNEL WITHOUT BRANCH WITH A REHABILITATED PATTULLO BRIDGE FOR PEDESTRIANS AND CYCLISTS ONLY	13) NEW 4-LANE TUNNEL WITH BRANCH WITH A REHABILITATED PATTULLO BRIDGE FOR PEDESTRIANS AND CYCLISTS ONLY
1. Moves towards the regional goal that most trips will be by walking, cycling and transit.	Pedestrian and cycling facilities would not be included in a tunnel. The remote locations of the tunnel portal(s) in New Westminster could encourage more use of SkyTrain between Surrey and downtown New Westminster.	Pedestrian and cycling facilities would not be included in a tunnel. The remote locations of the tunnel portal(s) in New Westminster could encourage more use of SkyTrain between Surrey and downtown New Westminster.	Mode split may be similar to today since a pedestrian and cycling crossing would be available and the remote locations of the tunnel portal(s) in New Westminster could encourage more use of SkyTrain between Surrey and downtown New Westminster. However, by bypassing parts of New Westminster where congestion now occurs, a tunnel could reduce travel times and make driving more attractive. Mode shift to walking and cycling would likely be small, due to the length of the bridge.	Mode split may be similar to today since a pedestrian and cycling crossing would be available and the remote locations of the tunnel portal(s) in New Westminster could encourage more use of SkyTrain between Surrey and downtown New Westminster. However, by bypassing parts of New Westminster where congestion now occurs, a tunnel could reduce travel times and make driving more attractive. Mode shift to walking and cycling would likely be small, due to the length of the bridge.
2. Minimizes single occupant vehicle (SOV) use and vehicle kilometres (VKT) travelled. **3. Minimizes emissions of GHGs and pollutants.**	Tunnel portal locations in New Westminster would increase driving distances for downtown New Westminster and Coquitlam trips. The tunnel would bypass congested areas, making driving more attractive, and potentially increasing VKT and GHG emissions. There could be some emission reductions from reduced congestion.	Tunnel portal locations in New Westminster would increase driving distances for downtown New Westminster and Coquitlam trips. The tunnel would bypass congested areas, making driving more attractive, and potentially increasing VKT and GHG emissions. There could be some emission reductions from reduced congestion.	Tunnel portal locations in New Westminster would increase driving distances for downtown New Westminster and Coquitlam trips. The tunnel would bypass congested areas, making driving more attractive, and potentially increasing VKT and GHG emissions. There could be some emission reductions from reduced congestion.	Tunnel portal locations in New Westminster would increase driving distances for downtown New Westminster and Coquitlam trips. The tunnel would bypass congested areas, making driving more attractive, and potentially increasing VKT and GHG emissions. There could be some emission reductions from reduced congestion.
4. Is capable of supporting neighbourhood liveability by minimizing and mitigating impacts, including during construction, and provides an aesthetically pleasing structure.	A single New Westminster portal would concentrate traffic impact in a largely residential area, thereby affecting liveability. Truck traffic travelling to and from Highway 1 and Coquitlam would need to use Eighth Avenue.	Two New Westminster portals, including one on the southwest edge of downtown, could reduce the overall impacts on liveability by reducing traffic flows in largely residential areas.	A single New Westminster portal would concentrate traffic impacts in a largely residential area, thereby affecting liveability. Truck traffic travelling to and from Highway 1 and Coquitlam would need to use Eighth Avenue.	Two New Westminster portals, including one on the southwest edge of downtown, could reduce the overall impacts on liveability by reducing traffic flows in largely residential areas.
5. Supports local and regional land use plans and economic development.	The tunnel would bypass downtown New Westminster and would be less effective at connecting town centres. Connectivity to parts of Coquitlam would also be lacking.	The branch would provide a connection to New Westminster but is further from downtown. Connectivity to parts of Coquitlam would also be lacking.	The tunnel would bypass downtown New Westminster and would be less effective at connecting town centres. Connectivity to parts of Coquitlam would also be lacking.	The branch would provide a connection to New Westminster but is further from downtown. Connectivity to parts of Coquitlam would also be lacking.
6. Provides reliable access and predictable travel times for all modes, users, and for an appropriate level of goods movement.	Reliability would generally improve for drivers, though not for pedestrians and cyclists. Incident management could be more complex in a tunnel and potentially more disruptive. Goods movement to downtown New Westminster and Coquitlam would be compromised, given portal locations.	Reliability would generally improve for drivers, though not for pedestrians and cyclists. Incident management could be more complex in a tunnel and potentially more disruptive. Goods movement to Coquitlam would be compromised, given portal locations.	Reliability would generally improve for drivers. Incident management could be more complex in a tunnel and potentially more disruptive. Goods movement to downtown New Westminster and Coquitlam would be compromised, given portal locations.	Reliability would generally improve for drivers. Incident management could be more complex in a tunnel and potentially more disruptive. Goods movement to Coquitlam would be compromised, given portal locations.
7. Provides a safe crossing for all modes, is structurally sound and meets current standards for seismic and ship impacts.	Tunnels typically perform well in seismic events and are not subject to ship impacts. Some tunnel-specific safety issues would exist, given enclosed spaces.	Tunnels typically perform well in seismic events and are not subject to ship impacts. Some tunnel-specific safety issues would exist, given enclosed spaces.	Tunnels typically perform well in seismic events and are not subject to ship impacts. Some tunnel-specific safety issues would exist, given enclosed spaces. Pedestrian and cyclist safety would be improved, given access to the rehabilitated bridge.	Tunnels typically perform well in seismic events and are not subject to ship impacts. Some tunnel-specific safety issues would exist, given enclosed spaces. Pedestrian and cyclist safety would be improved, given access to the rehabilitated bridge.
8. Is cost-effective. Costs include crossing and connections and removal of existing bridge where required. Costs of changes to connecting street networks, if needed, are not included.	**PRELIMINARY COST ESTIMATE ($B): $2.9–$3.0** High cost would not be recoverable from user-based charges.	**PRELIMINARY COST ESTIMATE ($B): $4.4–$4.5** High cost would not be recoverable from user-based charges.	**PRELIMINARY COST ESTIMATE ($B): $3.1B–$3.2** High cost would not be recoverable from user-based charges.	**PRELIMINARY COST ESTIMATE ($B): $4.7–$4.8** High cost would not be recoverable from user-based charges.
RECOMMENDED OUTCOME OF THIS SCREENING	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVE 8**	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVE 8**	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVE 8**	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVE 8**

CROSSING AT SAPPERTON BAR CORRIDOR

Possible Connections

To be determined during future phases:

- United Boulevard
- Lougheed Highway
- Highway 1
- Royal Avenue
- South Fraser Perimeter Road
- King George Boulevard and Scott Road
- McBride Boulevard
- Columbia Street

Legend:

- **Municipal Boundary**
- **SkyTrain**
- **New Crossing**
- **Tunnel**
- **Optional Rehabilitated Bridge for Pedestrians and Cyclists Only *or* Optional 2- or 3-Lane Rehabilitated Pattullo Bridge**

New 4-Lane Sapperton Bar Crossing

- With or without a rehabilitated Pattullo Bridge for pedestrians and cyclists only
- With or without a 2- or 3-lane rehabilitated Pattullo Bridge

New 4- or 6-Lane Surrey-Coquitlam Bridge

- With or without a rehabilitated Pattullo Bridge for pedestrians and cyclists only
- With or without a 2- or 3-lane rehabilitated Pattullo Bridge

SAPPERTON BAR CORRIDOR

OBJECTIVES	14) NEW 4-LANE SAPPERTON BAR CROSSING	15) NEW 4-LANE SAPPERTON BAR CROSSING WITH A REHABILITATED PATTULLO BRIDGE FOR PEDESTRIANS AND CYCLISTS ONLY	16) NEW 4-LANE SAPPERTON BAR CROSSING WITH A 2- OR 3-LANE REHABILITATED PATTULLO BRIDGE
1. Moves towards the regional goal that most trips will be by walking, cycling and transit	Mode shift may be insignificant, based on the level of vehicle capacity across the river. The location of the bridge access in New Westminster could encourage more use of SkyTrain between Surrey and downtown New Westminster. A new bridge would improve the comfort of walking and cycling by incorporating facilities with modern standards and dimensions; however, the location would not be very useful for pedestrians and cyclists, given its length and distance from destinations on the north side.	Mode shift may be insignificant, based on the level of vehicle capacity across the river. The location of the access in New Westminster could encourage more use of SkyTrain between Surrey and downtown New Westminster. A new bridge would improve the comfort of walking and cycling by incorporating facilities with modern standards and dimensions. In addition, the pedestrian and cyclist crossing in the existing corridor would benefit these modes, though mode shift to walking and cycling would likely be small, due to the lengths of the crossings.	Although the pedestrian and cycling facilities would be improved on both bridges, mode shift to walking and cycling is likely small, due to the lengths of the crossings. The additional crossing location and capacity may make driving more attractive overall.
2. Minimizes single occupant vehicle (SOV) use and vehicle kilometres (VKT) travelled. **3. Minimizes emissions of GHGs and pollutants.**	This crossing location would likely shorten trips between Surrey and Coquitlam/Highway 1 but extend those to New Westminster. The positive effects of shortened trips to one location may be offset by the longer trips to the other. Vehicle trips may increase in number, but on average, they would be marginally shorter, so the total change in VKT and GHG emissions may be minor.	This crossing location would likely shorten trips between Surrey and Coquitlam/Highway 1 but extend those to New Westminster. The positive effects of shortened trips to one location may be offset by the longer trips to the other. Vehicle trips may increase in number but on average they would be marginally shorter, so the total change in VKT and GHG emissions may be minor.	The increase in overall automobile accessibility and use with two crossings may balance the VKT and GHG benefits from more direct automobile trips.
4. Is capable of supporting neighbourhood liveability by minimizing and mitigating impacts, including during construction, and provides an aesthetically pleasing structure.	Liveability gains from relocating the north end of the bridge from a residential area to an industrial area could be offset by the increased need for New Westminster-related traffic to travel through more of the community when going to/from the bridge.	Liveability gains from relocating the north end of the bridge from a residential area to an industrial area could be offset by the increased need for New Westminster-related traffic to travel through more of the community when going to/from the bridge.	Shorter trips to/from bridges in New Westminster resulting from two bridges may lead to improved liveability. However, queuing for the rehabilitated bridge could have liveability impacts, especially in a 3-lane counter-flow scenario.
5. Supports local and regional land use plans and economic development.	The loss of a direct multi-modal connection between adjacent town centres is not consistent with local and regional plans. Bridge approaches would impinge on industrial lands. The crossing would also affect a less disturbed portion of the river and would require consideration relative to environmental protection policies.	The loss of a direct multi-modal connection between adjacent town centres is not consistent with local and regional plans. Bridge approaches would impinge on industrial lands. The crossing would also affect a less disturbed portion of the river and would require consideration relative to environmental protection policies.	A direct connection between adjacent town centres would be maintained. Bridge approaches would impinge on industrial lands. The Sapperton Bar crossing would also affect a less disturbed portion of the river and would require consideration relative to environmental protection policies.
6. Provides reliable access and predictable travel times for all modes, users, and for an appropriate level of goods movement.	Travel times and reliability would improve for some users but there would be fewer benefits for trips to/from New Westminster. Pedestrians and cyclists would likely find the crossing location inconvenient. Goods movement might benefit overall, given more direct connections to Highway 1, United Boulevard and the northeast sector.	Travel times and reliability would improve for some users but there would be fewer benefits for trips to/from New Westminster. Goods movement might benefit overall, given more direct connections to Highway 1, United Boulevard and the northeast sector.	Travel times and reliability would improve for most users (pedestrians and cyclists unaffected). Goods movement would be likely to benefit overall, given more direct connections to Highway 1, United Boulevard and the northeast sector.
7. Provides a safe crossing for all modes, is structurally sound and meets current standards for seismic and ship impacts.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths would meet modern guidelines and walking and cycling facilities would be much better than existing.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths would meet modern guidelines and walking and cycling facilities would be much better than existing on both crossings. The rehabilitated bridge would be more resistant to seismic events than today but not to the same standard as a new bridge.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths would meet modern guidelines and walking and cycling facilities would be much better than existing on both crossings. The rehabilitated bridge would be more resistant to seismic events than today but not to the same standard as a new bridge.
8. Is cost-effective. Costs include crossing and connections and removal of existing bridge where required. Costs of changes to connecting street networks, if needed, are not included.	**PRELIMINARY COST ESTIMATE ($B): $2.6–$2.7** High cost would not be recoverable from user-based charges.	**PRELIMINARY COST ESTIMATE ($B): $2.9–$3.0** High cost would not be recoverable from user-based charges. User-based charges would not be able to recover costs associated with the rehabilitation of the bike and pedestrian bridge.	**PRELIMINARY COST ESTIMATE ($B): $3.0–$3.1** High cost would not be recoverable from user-based charges. The additional cost of the rehabilitated bridge would further reduce the ability to recover all costs from users.
RECOMMENDED OUTCOME OF THIS SCREENING	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVES 5 AND 8**	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVES 5 AND 8**	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVE 8**

SAPPERTON BAR CORRIDOR continued

OBJECTIVES	17) NEW 4-LANE SURREY-COQUITLAM BRIDGE	18) NEW 4-LANE SURREY-COQUITLAM BRIDGE WITH A REHABILITATED PATTULLO BRIDGE FOR PEDESTRIANS AND CYCLISTS ONLY	19) NEW 4-LANE SURREY-COQUITLAM BRIDGE WITH A 2- OR 3-LANE REHABILITATED PATTULLO BRIDGE
1. Moves towards the regional goal that most trips will be by walking, cycling and transit.	Mode shift and effects on travel patterns are likely to be highly dependent on connections at the Coquitlam end. The remote location of the bridge could encourage more use of SkyTrain between Surrey and downtown New Westminster. Although a new bridge would improve the comfort of walking and cycling by incorporating facilities with modern standards and dimensions, the location would not be very useful for these modes, given its length and distance from destinations on the north side.	Mode shift and effects on travel patterns are likely to be highly dependent on connections at the Coquitlam end. The remote location of the bridge could encourage more use of SkyTrain between Surrey and downtown New Westminster. Although a new bridge would improve the comfort of walking and cycling by incorporating facilities with modern standards and dimensions, the location would not be very useful for these modes, given its length and distance from destinations on the north side. However, the pedestrian and cyclist crossing in the existing corridor would benefit these modes, though mode shift to walking and cycling would likely be small, due to the lengths of the crossings.	Mode shift and effects on travel patterns are likely to be highly dependent on connections at the Coquitlam end and would require further analysis, including of the additional capacity across the river with two vehicle bridges. Cyclists and pedestrians would have access to good facilities on both bridges, though mode shift to walking and cycling is likely small, due to the lengths of the crossings. The additional crossing location and capacity may make driving more attractive overall.
2. Minimizes single occupant vehicle (SOV) use and vehicle kilometres (VKT) travelled. **3. Minimizes emissions of GHGs and pollutants.**	This crossing location would likely shorten trips between Surrey and Coquitlam/Highway 1 but extend those to New Westminster. Therefore, the positive effects of shortened trips to one location may be offset by the longer trips to the other. Vehicle trips may increase in number but on average they would be marginally shorter, so the total change in VKT and GHG emissions may be minor.	This crossing location would likely shorten trips between Surrey and Coquitlam/Highway 1 but extend those to New Westminster. Therefore, the positive effects of shortened trips to one location may be offset by the longer trips to the other. Vehicle trips may increase in number but on average they would be marginally shorter, so the total change in VKT and GHG emissions may be minor.	The increase in overall vehicle accessibility and use with two crossings may balance the VKT and GHG benefits from more direct vehicle trips. More analysis that also considers bridge connections, tolls and resulting traffic demand is required to determine likely outcomes.
4. Is capable of supporting neighbourhood liveability by minimizing and mitigating impacts, including during construction, and provides an aesthetically pleasing structure.	Liveability gains from relocating the north end of the bridge from a residential area to an industrial area may be offset by the increased need for New Westminster-related traffic to travel through more of the community when travelling to/from the bridge.	Liveability gains from relocating the north end of the bridge from a residential area to an industrial one may be offset by the increased need for New Westminster-related traffic to travel through more of the community when travelling to/from the bridge.	Shorter trips to and from the bridges in New Westminster resulting from two bridges may lead to improved liveability. However, queuing for the reduced-capacity rehabilitated bridge could have liveability impacts.
5. Supports local and regional land use plans and economic development.	A much less direct connection between adjacent town centres would not be consistent with local and regional plans. Bridge approaches would impinge on industrial lands. The crossing would also affect a less disturbed portion of the river and would require consideration relative to environmental protection policies.	A much less direct connection between adjacent town centres would not be consistent with local and regional plans. Bridge approaches would impinge on industrial lands. The crossing would also affect a less disturbed portion of the river and would require consideration relative to environmental protection policies.	A direct connection between adjacent town centres is maintained. The new bridge approaches would impinge on industrial lands. The new crossing would also affect a less disturbed portion of the river and would require consideration relative to environmental protection policies.
6. Provides reliable access and predictable travel times for all modes, users, and for an appropriate level of goods movement.	Travel times and reliability would improve for some vehicle users but there would be no benefits for trips to/from New Westminster. Pedestrians and cyclists would likely find the crossing location inconvenient. Goods movement might benefit overall, given more direct connections to Highway 1, United Boulevard and the northeast sector.	Travel times and reliability would improve for some users (pedestrians and cyclists unaffected) but there would be no benefits for trips to/from New Westminster. Goods movement might benefit overall, given more direct connections to Highway 1, United Boulevard and the northeast sector.	Travel times and reliability would improve for most users (pedestrians and cyclists unaffected). Goods movement would be likely to benefit overall, given more direct connections to Highway 1, United Boulevard and the northeast sector. Further analysis is needed to confirm overall impacts.
7. Provides a safe crossing for all modes, is structurally sound and meets current standards for seismic and ship impacts.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths would meet modern guidelines and walking and cycling facilities would be much better than existing.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths would meet modern guidelines and walking and cycling facilities would be much better than existing on both crossings. The rehabilitated bridge would be more resistant to seismic events than today, but not to same standard as a new bridge.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths would meet modern guidelines and walking and cycling facilities would be much better than existing on both crossings. The rehabilitated bridge would be more resistant to seismic events than today, but not to same standard as a new bridge.
8. Is cost-effective. Costs include crossing and connections and removal of existing bridge where required. Costs of changes to connecting street networks, if needed, are not included.	**PRELIMINARY COST ESTIMATE ($B): $1.1–$1.2** Cost may be recoverable from user-based charges, subject to further analysis.	**PRELIMINARY COST ESTIMATE ($B): $1.3–$1.4** Cost may be recoverable from user-based charges, subject to further analysis. User-based charges would not be able to recover cost of the bike and pedestrian bridge.	**PRELIMINARY COST ESTIMATE ($B): $1.4–$1.5** Cost may be recoverable from user-based charges, subject to further analysis. There would likely be a cross-subsidy between the new and rehabilitated bridges. Further analysis needed to develop firm conclusions.
RECOMMENDED OUTCOME OF THIS SCREENING	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVE 5**	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVE 5**	**REQUIRES FURTHER CONSIDERATION**

SAPPERTON BAR CORRIDOR continued

OBJECTIVES	20) NEW 6-LANE SAPPERTON BAR BRIDGE	21) NEW 6-LANE SAPPERTON BAR BRIDGE WITH A REHABILITATED PATTULLO BRIDGE FOR PEDESTRIANS AND CYCLISTS ONLY	22) NEW 6-LANE SAPPERTON BAR BRIDGE WITH A 2- OR 3-LANE REHABILITATED PATTULLO BRIDGE
1. Moves towards the regional goal that most trips will be by walking, cycling and transit.	Mode shift and effects on travel patterns would likely be highly dependent on connections at the Coquitlam end of the bridge and would require further analysis to consider the increase in lanes crossing the river. The remote location of the bridge could encourage more use of SkyTrain between Surrey and downtown New Westminster. A new bridge would improve the comfort of walking and cycling by incorporating facilities with modern standards and dimensions; however, the location of the new bridge would not be very useful for those modes, given its length and distance from destinations on the north side.	Mode shift and effects on travel patterns would likely be highly dependent on connections at the Coquitlam end of the bridge and would require further analysis to consider the increase in the number of lanes crossing the river. The remote location of the bridge could encourage more use of SkyTrain between Surrey and downtown New Westminster. A new bridge would improve the comfort of walking and cycling by incorporating facilities with modern standards and dimensions; however, the location would not be very useful for those modes, given its length and distance from destinations on the north side. The pedestrian and cyclist crossing in the existing corridor would benefit those modes of travel, though mode shift to walking and cycling would likely be small, due to the lengths of the crossings.	Mode shift and effects on travel patterns would likely be highly dependent on connections at the Coquitlam end of the bridge and would require further analysis, although the additional capacity across the river with two vehicle bridges (4 or 5 additional lanes overall) is likely to have a negative effect. Cyclists and pedestrians would have access to good facilities on both bridges, though mode shift to walking and cycling is likely small, due to the lengths of the crossings.
2. Minimizes single occupant vehicle (SOV) use and vehicle kilometres (VKT) travelled. **3. Minimizes emissions of GHGs and pollutants**	This crossing location would likely shorten trips between Surrey and Coquitlam/Highway 1 but would extend trips to New Westminster. Therefore, the positive effects of shortened trips to one location may be offset by the longer trips to the other. Vehicle trips may increase in number but on average they would be marginally shorter, so the total change in VKT and GHG emissions may be minor, although the increase in the number of lanes crossing the river would also likely have an effect.	This crossing location would likely shorten trips between Surrey and Coquitlam/Highway 1 but would extend trips to New Westminster. Therefore, the positive effects of shortened trips to one location may be offset by the longer trips to the other. Vehicle trips may increase in number but on average they would be marginally shorter, so the total change in VKT and GHG emissions may be minor, although the increase in the number of lanes across the river would likely have an effect.	The increase in overall automobile accessibility and use with two crossings, and the high capacity on the Surrey-Coquitlam bridge, may outweigh VKT and GHG benefits from more direct automobile trips.
4. Is capable of supporting neighbourhood liveability by minimizing and mitigating impacts, including during construction, and provides an aesthetically pleasing structure.	Liveability gains from relocating the north end of the bridge from a residential area to an industrial area could be offset by the increased need for New Westminster-related traffic to travel through more of the community when going to and from the bridges.	Liveability gains from relocating the north end of the bridge from a residential area to an industrial area could be offset by the increased need for New Westminster-related traffic to travel through more of the community when going to and from the bridges.	Shorter trips to and from bridgeheads in New Westminster resulting from two bridges may lead to improved liveability. However, queuing for the reduced-capacity rehabilitated bridge could have liveability impacts.
5. Supports local and regional land use plans and economic development.	A much less direct connection between adjacent town centres would not be consistent with local and regional plans. Bridge approaches would impinge on industrial lands. The crossing would also affect a less disturbed portion of the river and would require consideration relative to environmental protection policies.	A much less direct connection between adjacent town centres would not be consistent with local and regional plans. Bridge approaches would impinge on industrial lands. The crossing would also affect a less disturbed portion of the river and would require consideration relative to environmental protection policies.	While a direct connection between adjacent town centres would be maintained, increased vehicle capacity (8 or 9 lanes in total) across the river could encourage auto-dependent development. New bridge approaches would impinge on industrial lands. The new crossing would also affect a less disturbed portion of the river and would require consideration relative to environmental protection policies.
6. Provides reliable access and predictable travel times for all modes, users, and for an appropriate level of goods movement.	Travel times and reliability would improve for some vehicle users but there would be no benefits for trips to and from New Westminster. Pedestrians and cyclists would likely find the crossing location inconvenient. Goods movement might benefit overall, given more direct connections to Highway 1, United Boulevard and the northeast sector.	Travel times and reliability would improve for some users (pedestrians and cyclists would be unaffected) but there would be no benefits for trips to and from New Westminster. Goods movement might benefit overall, given more direct connections to Highway 1, United Boulevard and the northeast sector.	Travel times and reliability would improve for most users (pedestrians and cyclists would be unaffected). Goods movement would be likely to benefit overall, given more direct connections to Highway 1, United Boulevard and the northeast sector.
7. Provides a safe crossing for all modes, is structurally sound and meets current standards for seismic and ship impacts.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths would meet modern guidelines and walking and cycling facilities would be much better than existing.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths and alignment would meet modern guidelines. Walking and cycling facilities would be much better than existing on both crossings. The rehabilitated bridge would be more resistant to seismic events than today but not to same standard as a new bridge.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths would meet modern guidelines. Walking and cycling facilities would be much better than existing on both crossings. The rehabilitated bridge would be more resistant to seismic events than today but not to same standard as a new bridge.
8. Is cost-effective. Costs include crossing and connections and removal of existing bridge where required. Costs of changes to connecting street networks, if needed, are not included.	**PRELIMINARY COST ESTIMATE ($B): $1.7–$1.8** High cost would not be recoverable from user-based charges.	**PRELIMINARY COST ESTIMATE ($B): $1.9–$2.0** High cost would not be recoverable from user-based charges. User-based charges would not be able to recover costs associated with the rehabilitation of the bike and pedestrian bridge.	**PRELIMINARY COST ESTIMATE ($B): $2.0–$2.1** High cost would not be recoverable from user-based charges. The additional cost of the rehabilitated bridge would further reduce the ability to recover all costs from users.
RECOMMENDED OUTCOME OF THIS SCREENING	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVES 5 AND 8**	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVE 5**	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVE 5**

CROSSING AT TREE ISLAND CORRIDOR

Possible Connections

To be determined during future phases:

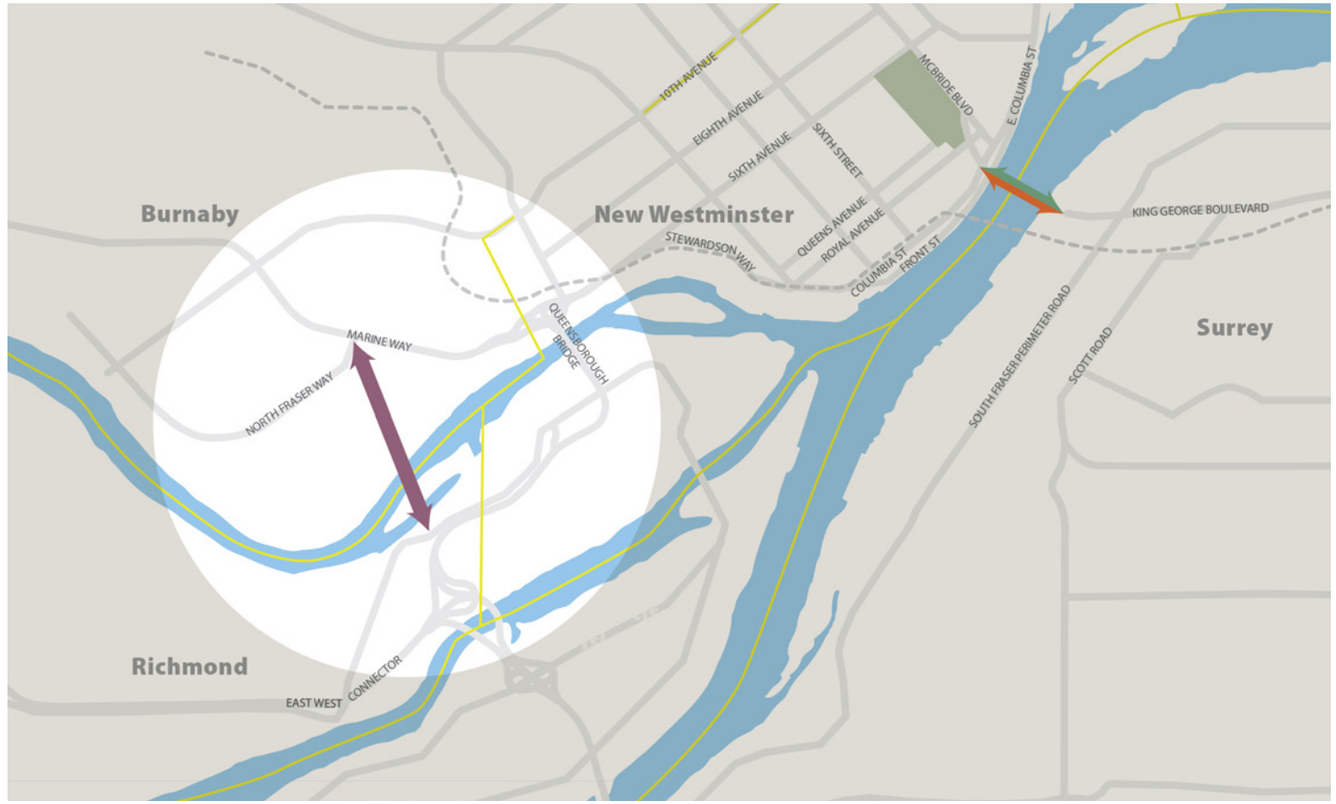
- Marine Way
- Highway 91

Notes

1) **Richmond City Council**
   Richmond City Council has advised TransLink that it is opposed to the consideration of a new Fraser River crossing in the vicinity of Tree Island as part of any alternative to replace or upgrade the Pattullo Bridge, as this alternative is not in the City's Official Community Plan and it could have a significant impact on the land use in the area.

Legend:

- **Municipal Boundary**
- **SkyTrain**
- **New Bridge**
- **Optional Rehabilitated Bridge for Pedestrians and Cyclists Only *or* Optional 2- or 3-Lane Rehabilitated Pattullo Bridge**



New Richmond-Burnaby Tree Island Bridge ◊

- With or without a rehabilitated Pattullo Bridge for pedestrians and cyclists only
- With or without a 2- or 3-lane rehabilitated Pattullo Bridge

◊ Tree Island Crossing does not have a connection to New Westminster, other than Marine Way/Stewardson Way.

TREE ISLAND CORRIDOR

◊ Tree Island Crossing does not have a connection to New Westminster, other than Marine Way/Stewardson Way.

OBJECTIVES	23) NEW 4-LANE RICHMOND–BURNABY TREE ISLAND BRIDGE ◊	24) NEW 4-LANE RICHMOND–BURNABY TREE ISLAND BRIDGE ◊ WITH A REHABILITATED PATTULLO BRIDGE FOR PEDESTRIANS AND CYCLISTS ONLY	25) NEW 4-LANE RICHMOND–BURNABY TREE ISLAND BRIDGE ◊ WITH A 2- OR 3-LANE REHABILITATED PATTULLO BRIDGE
1. Moves towards the regional goal that most trips will be by walking, cycling and transit	A Tree Island crossing would not effectively serve the demand that is currently using the Pattullo Bridge. The remote location of the bridge could encourage more use of SkyTrain between Surrey and downtown New Westminster. Although a new bridge would improve the comfort of walking and cycling by incorporating facilities with modern standards and dimensions, the location would not be very useful for these modes, given its location and distance from destinations on the north side of the Fraser River.	A Tree Island crossing would not effectively serve the demand now using the Pattullo Bridge. The remote location of the bridge could encourage more use of SkyTrain between Surrey and downtown New Westminster. Although a new bridge would improve the comfort of walking and cycling by incorporating facilities with modern standards and dimensions, the location would not be very useful for these modes, given its length and distance from destinations on the north side. The pedestrian and cyclist crossing in the existing corridor would benefit from these modes, though mode shift to walking and cycling is likely small, due to the lengths of the crossing.	Capacity reduction in the existing corridor and the constrained traffic demand on a Tree Island crossing due to existing congestion on the Alex Fraser Bridge could result in a small positive effect. (This alternative implies removal of one or two travel lanes across the Fraser River.) Cyclists and pedestrians would have access to good facilities on both bridges, though mode shift to walking and cycling is likely small, due to the lengths of the crossings.
2. Minimizes single occupant vehicle (SOV) use and vehicle kilometres (VKT) travelled. **3. Minimizes emissions of GHGs and pollutants.**	This crossing location would provide a more circuitous and less attractive route to and from New Westminster, thereby discouraging driving and reducing overall VKT, GHGs and pollutants. However, the likely diversion of driving trips to other crossings, some of which are already congested, could cause net increases in VKT, GHGs and pollutants.	This crossing location would provide a more circuitous and less attractive route to and from New Westminster, thereby discouraging driving and reducing overall VKT, GHGs and pollutants. However, the likely diversion of driving trips to other crossings, some of which are already congested, could cause net increases in VKT, GHGs and pollutants.	A shift may occur from SOV to transit, walking and cycling, due to reduced capacity in the existing corridor. The diversion of driving trips to other crossings could cause net increases in VKT, GHGs and pollutants. A Tree Island crossing would shorten some trips that now use the Queensborough Bridge but the impact may be limited.
4. Is capable of supporting neighbourhood liveability by minimizing and mitigating impacts, including during construction, and provides an aesthetically pleasing structure.	Liveability impacts may result from traffic using more circuitous routes to downtown New Westminster. These impacts could exceed the benefits of diverting traffic from the Queensborough Bridge.	Liveability impacts may result from traffic using more circuitous routes to downtown New Westminster. These impacts could exceed the benefits of diverting traffic from the Queensborough Bridge.	Some liveability benefits may occur due to the diversion of traffic from Queensborough Bridge. However, queuing for the reduced-capacity rehabilitated bridge could have liveability impacts.
5. Supports local and regional land use plans and economic development.	No connection would be provided between adjacent town centres and this would not be consistent with local and regional plans. The south end of the bridge would be in Richmond and the City of Richmond has expressed their formal opposition to this location, as it is not consistent with their Official Community Plan. The City of Burnaby has expressed similar concerns for the north end of the bridge. Bridge approaches would impinge on agricultural and developed industrial lands, counter to local plans. The new crossing would affect a less disturbed portion of the river and would require consideration relative to environmental protection policies.	No connection would be provided between adjacent town centres and this would not be consistent with local and regional plans. The south end of the bridge would be in Richmond and the City of Richmond has expressed their formal opposition to this location, as it is not consistent with their Official Community Plan. The City of Burnaby has expressed similar concerns for the north end of the bridge. Bridge approaches would impinge on agricultural and developed industrial lands, counter to local plans. The new crossing would affect a less disturbed portion of the river and would require consideration relative to environmental protection policies.	The existing bridge would provide a link between adjacent town centres but the Tree Island Bridge approaches would impinge on agricultural and developed industrial lands, counter to local plans. The south end of the bridge would be in Richmond and the City of Richmond has expressed their formal opposition to this location, as it is not consistent with their Official Community Plan. The City of Burnaby has expressed similar concerns for the north end of the bridge. The new crossing would affect a less disturbed portion of the river and could counter environmental protection policies.
6. Provides reliable access and predictable travel times for all modes, users, and for an appropriate level of goods movement.	Travel times would get longer for all modes and reliability would be reduced, given the circuitous travel and reliance of this crossing on the already congested Alex Fraser Bridge to complete the link across the Fraser River. While some goods movement would benefit, especially to and from the Big Bend area, the net effect is expected to be negative.	Travel times would get longer and reliability for vehicles would be reduced, given the circuitous travel and reliance of this crossing on the already congested Alex Fraser Bridge to complete the link across the Fraser River. While some goods movement would benefit, especially to and from the Big Bend area, the net effect is expected to be negative.	Travel times may be longer and reliability may be reduced, given the circuitous travel and reliance of this crossing on the already congested Alex Fraser Bridge, combined with reduced capacity on the Pattullo Bridge. While some goods movement would benefit, especially to and from the Big Bend area, the net effect is expected to be negative.
7. Provides a safe crossing for all modes, is structurally sound and meets current standards for seismic and ship impacts.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths and alignment would meet modern guidelines. Walking and cycling facilities would be much better than existing.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths would meet modern guidelines. Walking and cycling facilities would be much better than existing on both crossings. The rehabilitated bridge would be more resistant to seismic events than today, but not to the same standard as a new bridge.	A new bridge would be built to higher seismic and ship-impact standards than a rehabilitated bridge and would be more resistant to river scour. Lane widths and alignment would meet modern guidelines. Walking and cycling facilities would be much better than existing on both crossings. The rehabilitated bridge would be more resistant to seismic events than today, but not to the same standard as a new bridge.
8. Is cost-effective. Costs include crossing and connections and removal of existing bridge where required. Costs of changes to connecting street networks, if needed, are not included.	**PRELIMINARY COST ESTIMATE ($M): $825–$915** A Tree Island Bridge would function as an alternative to the Queensborough Bridge. Given the proximity of the two bridges, it would be difficult for a Tree Island Bridge that included user-based charges to attract travellers from a "free" Queensborough Bridge just upstream, especially outside peak hours. Consequently, it is unlikely that revenues would be sufficient to offset costs.	**PRELIMINARY COST ESTIMATE ($B): $1.1–$1.2** A Tree Island Bridge would function as an alternative to the Queensborough Bridge. Given the proximity of the two bridges, it would be difficult for a Tree Island Bridge that included user-based charges to attract travellers from a "free" Queensborough Bridge just upstream, especially outside peak hours. Consequently, it is unlikely that revenues would be sufficient to offset costs.	**PRELIMINARY COST ESTIMATE ($B): $1.2—$1.3** A Tree Island Bridge would function as an alternative to the Queensborough Bridge. Given the proximity of the two bridges, it would be difficult for a Tree Island Bridge that included user-based charges to attract travellers from a "free" Queensborough Bridge just upstream, especially outside peak hours. Consequently, it is unlikely that revenues would be sufficient to offset costs. This would not be overcome by combining it with a 3-lane rehabilitated bridge in the existing corridor.
RECOMMENDED OUTCOME OF THIS SCREENING	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVES 5, 6 AND 8**	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVES 5, 6 AND 8**	**NOT RECOMMENDED FOR FURTHER EVALUATION DUE PRIMARILY TO OBJECTIVES 5 AND 8**

Feedback Form

1. Problem Statement and Other Issues (see page 5)

PROBLEM STATEMENT

The Pattullo Bridge may not survive a moderate earthquake or ship collision, the piers are at risk of being undermined by river scour and many bridge components have surpassed their useful lives.

OTHER ISSUES

When considering the best alternatives for the problem, it is an opportune time to establish the optimal roles for the crossing and also to address other issues with the current crossing, including:

1. The Pattullo Bridge does not meet current roadway design guidelines, including for lane widths and curvature, potentially contributing to collisions.
2. Pattullo Bridge facilities, such as sidewalks and barriers, and connections for pedestrians and cyclists, are inadequate and do not provide sufficient protection from traffic.
3. During rush hours, travel demand on the roads leading to the Pattullo Bridge results in queuing and unreliable travel times for the movement of people, goods and services.
4. Current traffic (including truck) volumes affect the liveability of adjacent communities due to air quality, noise and resulting health impacts, as well as due to neighbourhood traffic infiltration.

Do the Problem Statement and Other Issues incorporate your concerns with the current Pattullo Bridge? Would you add anything?

Feedback Form

2. Objectives – Initial Screening of Crossing Alternatives (see page 11)

Based on examination of the local, regional and provincial policies and plans (page 9), the Pattullo Bridge Review team established the following objectives to evaluate alternatives, including connections, based on their abilities to address the identified problems and deliver a supportable alternative.

Meets transportation, environmental and health objectives including:

1. Moves towards the regional goal that most trips will be by walking, cycling and transit.
2. Minimizes single occupant vehicle use and vehicle kilometres travelled.
3. Minimizes emissions of greenhouse gases (GHGs) and pollutants.
4. Is capable of supporting neighbourhood liveability by minimizing and mitigating impacts, including during construction, and provides an aesthetically pleasing structure.
5. Supports local and regional land use plans and economic development.
6. Provides reliable access and predictable travel times for all modes, users, and for an appropriate level of goods movement.
7. Provides a safe crossing for all modes, is structurally sound and meets current standards for seismic and ship impacts.
8. Is cost effective.

Are there any further objectives that the Pattullo Bridge Review should consider?

Initial Screening of Crossing Alternatives Against the Objectives (see pages 13–23)

Twenty-five alternatives for the Pattullo crossing were developed based on previous technical work and suggestions from the public and stakeholders during previous consultations. The Pattullo Bridge Review team conducted an initial evaluation and screening of each alternative against the Objectives shown in Question 2.

3. Alternatives that require FURTHER CONSIDERATION

Based on the screening work completed, the following six alternatives require further consideration.

	Please rate your level of agreement with each of the following alternatives requiring further consideration.	Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
3.1	**4) Rehabilitated Pattullo Bridge – 3 Lanes** requires further consideration	☐	☐	☐	☐	☐
3.2	**5) Rehabilitated Pattullo Bridge – 4 Lanes** requires further consideration	☐	☐	☐	☐	☐
3.3	**6) New 4-Lane Bridge at Existing Location** requires further consideration	☐	☐	☐	☐	☐
3.4	**7) New 5-Lane Bridge at Existing Location** requires further consideration	☐	☐	☐	☐	☐
3.5	**8) New 6-Lane Bridge at Existing Location** requires further consideration	☐	☐	☐	☐	☐
3.6	**19) New 4-Lane Surrey-Coquitlam Bridge, with a 2- or 3-Lane Rehabilitated Pattullo Bridge** requires further consideration	☐	☐	☐	☐	☐

3.7 Comments:

4. Alternatives NOT RECOMMENDED for Further Evaluation

Based on the screening work completed, the following 19 alternatives are **not recommended** for further evaluation.

	Please rate your level of agreement with each of the following alternatives being NOT recommended for further evaluation.	Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
4.1	**1) No Bridge** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.2	**2) Rehabilitated Pattullo Bridge for Pedestrians and Cyclists Only** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.3	**3) Rehabilitated Pattullo Bridge – 2 Lanes** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.4	**9) New 8-Lane Bridge** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.5	**10) New 4-Lane Tunnel without Branch** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.6	**11) New 4-Lane Tunnel with Branch** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.7	**12) New 4-Lane Tunnel without Branch with Rehabilitated Pattullo Bridge for Pedestrians and Cyclists Only** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.8	**13) New 4-Lane Tunnel with Branch with Rehabilitated Pattullo Bridge for Pedestrians and Cyclists Only** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.9	**14) New 4-Lane Sapperton Bar Crossing** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.10	**15) New 4-Lane Sapperton Bar Crossing with Rehabilitated Pattullo Bridge for Pedestrians and Cyclists Only** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.11	**16) New 4-Lane Sapperton Bar Crossing with a 2- or 3-Lane Rehabilitated Pattullo Bridge** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.12	**17) New 4-Lane Surrey-Coquitlam Bridge** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.13	**18) New 4-Lane Surrey-Coquitlam Bridge with Rehabilitated Pattullo Bridge for Pedestrians and Cyclists Only** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.14	**20) New 6-Lane Sapperton Bar Bridge** is NOT recommended for further evaluation	☐	☐	☐	☐	☐

Continued on next page

Alternatives **NOT RECOMMENDED** for further evaluation (continued)

	Please rate your level of agreement with each of the following alternatives being NOT recommended for further evaluation.	Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
4.15	**21) New 6-Lane Sapperton Bar Bridge with Rehabilitated Pattullo Bridge for Pedestrians and Cyclists Only** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.16	**22) New 6-Lane Sapperton Bar Bridge with a 2- or 3-Lane Rehabilitated Pattullo Bridge** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.17	**23) New 4-Lane Richmond-Burnaby Tree Island Bridge** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.18	**24) New 4-Lane Richmond-Burnaby Tree Island Bridge with Rehabilitated Pattullo Bridge for Pedestrians and Cyclists Only** is NOT recommended for further evaluation	☐	☐	☐	☐	☐
4.19	**25) New 4-Lane Richmond-Burnaby Tree Island Bridge with a 2- or 3-Lane Rehabilitated Pattullo Bridge** is NOT recommended for further evaluation	☐	☐	☐	☐	☐

4.20 Comments:

5. ADDITIONAL COMMENTS

Additional comments on any aspect of the Pattullo Bridge Review:

We Want To Hear From You

Pattullo Bridge Review Consultation takes place from June 3 through June 28, 2013. Materials, including this Discussion Guide and Feedback Form, are available at:

www.pattullobridgereview.ca

You can learn more and provide feedback by:

- **Attending an Open House or a Small Group Meeting** (see schedules)
- **Providing feedback online by:**
  - **Visiting the Pattullo Bridge Review website:** www.pattullobridgereview.ca
  - **Visiting PlaceSpeak:** www.placespeak.com/PattulloBridgeReview
  - **Visiting City of Surrey's City Speaks:** www.cityspeaks.ca
- **Sending written submissions to** info@pattullobridgereview.ca or PO Box 2225 Vancouver Main Vancouver, B.C. V6B 3W2

NEW WESTMINSTER TRANSLINK CITY OF SURREY the future lives here.

HOW INPUT WILL BE USED

Input received during this consultation will be considered, along with financial and technical information, in refining the long list of alternatives for rehabilitating or replacing the bridge and in identifying fewer alternatives for additional evaluation and consultation. This refined list of alternatives, along with information on road connections and traffic, will be presented for public and stakeholder feedback in fall 2013.

DEADLINE FOR FEEDBACK IS JUNE 28, 2013.

1. Please indicate the city you live in and/or represent:

- ☐ Surrey
- ☐ New Westminster
- ☐ Other: _____
  (Name of the municipality)

2. How often do you use the Pattullo Bridge?

- ☐ Almost daily
- ☐ Once or twice a week
- ☐ A few times every month
- ☐ A few times every year
- ☐ Almost never

3. How do you most commonly travel on the Pattullo Bridge:

- ☐ Vehicle
- ☐ Walk
- ☐ Cycle

To receive Pattullo Bridge Review community updates and notification of future public consultations, please fill in the following information:

First Name: _____ Last Name: _____

Organization (optional): _____

_____

Position (optional): _____

Email: _____

Phone (optional): _____

☐ I acknowledge that, from time to time, the Pattullo Bridge Review may call me to provide information and updates about consultation meetings.

The personal information collected relates directly to the consultation process and other related public and stakeholder engagement activities of the Pattullo Bridge Review under the authority of the South Coast British Columbia Transportation Authority Act. *The Pattullo Bridge Review may use and disclose this information for the consultation process of the Pattullo Bridge Review to the Partners for the Pattullo Bridge Review (the City of New Westminster, the City of Surrey and TransLink) in accordance with provisions of Part 3 of the* Freedom of Information and Protection of Privacy Act. *Questions about the consultation process can be directed to the Pattullo Bridge Review by telephone at 604-684-6840 or by email at info@pattullobridgereview.ca. Questions about the collection, use and disclosure of information can be directed to TransLink c/o Privacy Officer, #700 – 287 Nelson's Court, New Westminster, B.C. V3L 0E7 or 778-375-7702 or to privacy@TransLink.ca.*