

Sea to Sky Corridor Regional Transit Study



FINAL DRAFT

October 2017

BC Transit would like to acknowledge the contributions of the many individuals and organizations that supported the development of this study. Thank you to the staff at the District of Squamish, the Resort Municipality of Whistler, the Village of Pemberton, Lil'wat Nation, Squamish Nation and the Squamish-Lillooet Regional District for their continued participation in developing this plan. In addition, thank you to TransLink and the local partners in Metro Vancouver for participating in the process along the way. Finally, thank you to everyone who participated in the many engagement opportunities throughout the process.

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EXECUTIVE SUMMARY

Regional and interregional transit were identified as key priorities through the Sea to Sky Transit Future Plan Process. As a result, the Sea to Sky Corridor Regional Transit Study was initiated to explore the feasibility of regional and interregional transit service along the Sea to Sky Corridor.

This study was undertaken in collaboration with the Squamish-Lillooet Regional District (SLRD), the District of Squamish, the Resort Municipality of Whistler (RMOW), the Village of Pemberton, the Lil'wat Nation, the Squamish Nation, the Ministry of Transportation and Infrastructure (MOTI), TransLink, and BC Transit, and was led by a Project Working Group which included members from each of these partners. The following bullet points summarize the content within this report:

- A comprehensive, two-phase public engagement process and a market demand analysis were included in the study to develop both the business case and the proposed service details for a regional and interregional transit service along the Sea to Sky Corridor.
- The market demand analysis produced a daily ridership estimate of 575 along the corridor, which indicates a substantial latent demand for regional and interregional transit along the Sea to Sky Corridor between the Pemberton area, Whistler, Squamish, and Metro Vancouver.
- Based on the market demand analysis and public engagement, proposed transit service details were developed including routing, bus stop locations, and infrastructure requirements. For an initial implementation, the short-term service proposal requires eight buses and 15,100 annual service hours, for a total cost of \$3,310,000 with a local cost of \$1,900,000 shared between all participating local partners. This initial implementation would provide approximately six round trips on weekdays and four round trips on weekend days along the segment between Whistler, Squamish, and Metro Vancouver, and an additional two daily round trips on the currently operating segment between the Pemberton area and Whistler.

Short-Term Service Proposal - Sea to Sky Regional and Interregional Transit Service Expansion (2019/20)

Segment	Service Hours	Vehicle Requirement	Total Costs*	Total Local Share of Costs†	Provincial Share of Operating Costs*
Whistler, Squamish, and Metro Vancouver	14,000	7	\$3,060,000	\$1,750,000	\$1,310,000
Pemberton - Whistler	1,100	1	\$250,000	\$150,000	\$100,000
Total	15,100	8	\$3,310,000	\$1,900,000	\$1,410,000

*These costs do not include the Provincial contribution to Lease fees or required infrastructure improvements, assume the traditional conventional cost sharing ratio, and may change according to the operations facility location.

†Does not include projected revenue (which would offset the local share of costs).

- Although service expansion is also recommended for 2020/21 and 2021/22 to account for ridership growth, a post-implementation review should be conducted within one year after the initial service implementation to assess performance and further refine ongoing service expansion.

The following steps are required before implementing a regional and interregional transit service along the Sea to Sky Corridor:

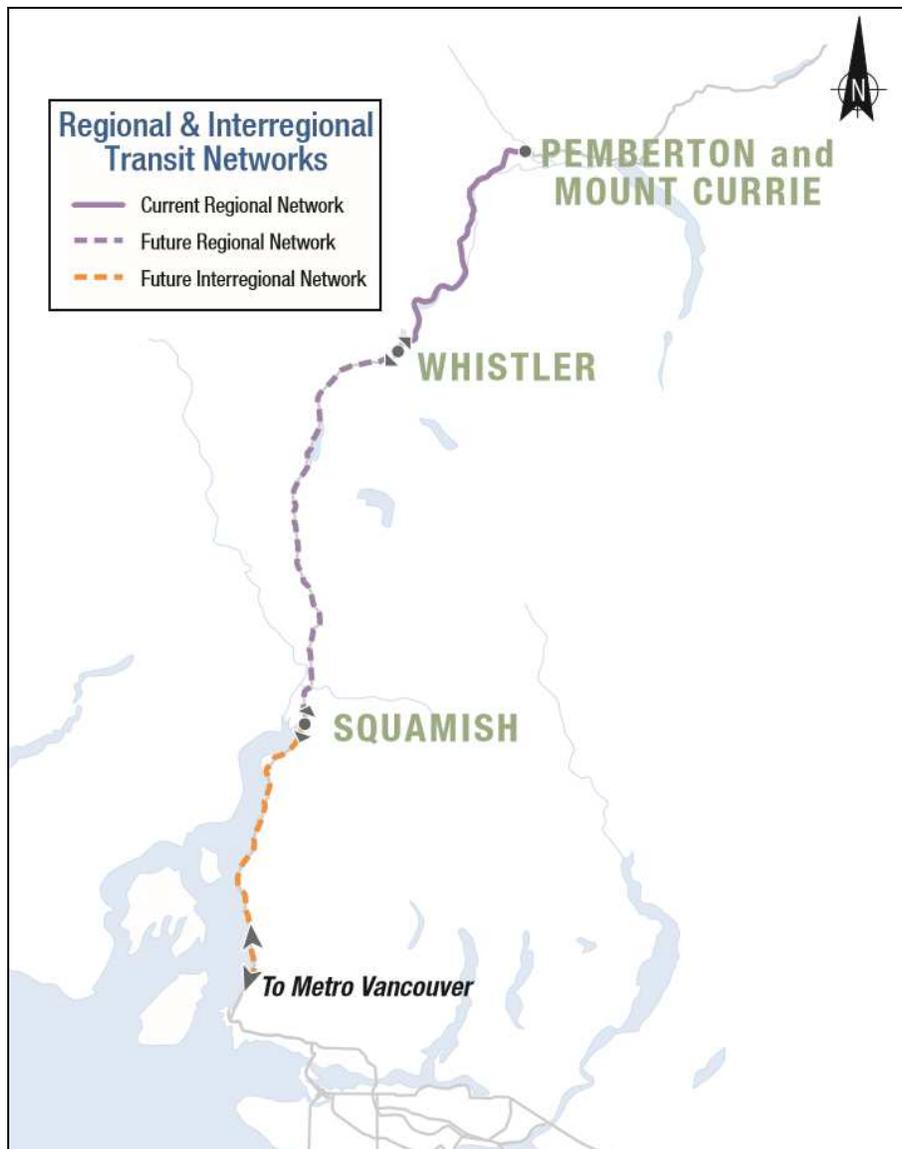
- The participating local partners must select a governance model for making decisions on service levels, fares, and cost-sharing.
 - BC Transit recommends the formation of a higher-level working group involving the senior leadership of the participating local communities and BC Transit to guide this decision-making process.
- The locally selected governance structure must confirm the service levels, fares, and cost-sharing for the service.
- Funding for the service must be confirmed by both the local partners and the Province.

BACKGROUND

In 2015, BC Transit completed the [Sea to Sky Transit Future Plan](#). This long-term transit plan summarized the region’s transit ridership goals and envisioned the steps required to achieve them. This included identifying what the communities’ transit networks should look like 25 years from now and described what priorities, infrastructure and investment are needed to get there. As part of this work, the introduction of new or expanded regional and interregional transit services was identified as a top priority for all participating Sea to Sky communities.

Figure 1 below shows the Sea to Sky Transit Future Network map for regional and interregional transit service along the Sea to Sky Corridor. This network was developed through an extensive engagement process.

Figure 1 - Sea to Sky Corridor Regional Transit Service Segments



As part of the Sea to Sky Transit Future Plan, there were two key regional and interregional recommendations identified for completion in the immediate future to assist in the decision-making process:

1. Undertake a Sea to Sky Corridor Regional Transit Study

This comprehensive study would include the entire corridor (Metro Vancouver to the Pemberton Valley), and would consider the expansion of regional and interregional transit service in detail.

2. Explore the Development of a Sea to Sky Regional Transit Governance Structure

This study would also explore options for a more integrated regional governance structure for transit along the Sea to Sky Corridor. The study would look at the benefits and challenges with the goal of streamlining the implementation of regional and interregional transit, and enabling more comprehensive system management and performance monitoring.

Introduction

In the summer of 2016, the Sea to Sky Corridor Regional Transit Study process was initiated to explore the feasibility of expanding regional and interregional transit service along the corridor. The Study was undertaken in collaboration with the Squamish-Lillooet Regional District (SLRD), the District of Squamish, the Resort Municipality of Whistler (RMOW), the Village of Pemberton, the Líl'wat Nation, and the Squamish Nation, Ministry of Transportation and Infrastructure (MOTI), TransLink (and other communities in Metro Vancouver), and BC Transit, and was led by a Project Working Group which included members from each of these partners.

A comprehensive, two-phase public engagement process and a market demand analysis were conducted as part of the study to develop both the business case and the proposed service details for this regional and interregional transit service.

The overall objectives of this document are as follows:

- Gain a better understanding of transit ridership potential between key origins and destinations including, but not limited to: Pemberton, Líl'wat Nation, Whistler, Squamish, Squamish Nation, SLRD communities (including Black Tusk, Pinecrest, and Britannia Beach), and other regions within Metro Vancouver.
- Develop proposed service options (routings, bus stops, and frequencies), including identifying associated hours and costs along with recommendations for priorities and phasing.
- Develop and explore possible governance structure changes for regional and interregional transit service along the Sea to Sky Corridor to assist in facilitating the discussions between the local partners.
- Review fare options and provide fare strategies which could be considered for any new or expanded service.
- Prepare an implementation action plan for the Sea to Sky partners, to summarize the above tasks for service improvements and recommend a course of action.

This study provides information on the objectives outlined above. This study is intended to assist in the decision-making process for the local partners regarding any future implementation and the necessary

governance and funding discussions that will need to take place. If or when the funding and governance has been confirmed, then a detailed implementation plan would be developed that would include additional engagement throughout the region.

Transportation in the Sea to Sky Region

This section provides a brief overview of the transportation options currently available within the Sea to Sky Region. For additional details, refer to the Sea to Sky Transit Future Plan (pg. 39).

Public Transit

Squamish, Whistler, the Pemberton Valley, and other areas within the SLRD are distinct communities with unique travel needs. Each of these communities is served by its own unique transit system with tailored services. More information about these transit systems can be found in the Sea to Sky Transit Future Plan in the 'Transit Today' section. Transit ridership across the Sea to Sky communities is among the highest in the province, with significant demand for transit service around Squamish, Whistler and the Pemberton Valley.

A small portion of the Sea to Sky Corridor is currently served by publically funded BC Transit or TransLink services. The Pemberton Valley is connected to Whistler via BC Transit's 99 Pemberton Commuter, and Lions Bay is connected to Horseshoe Bay via TransLink's Route 259 and C12.

Regional service in the Pemberton Valley began in 2000 with the Pemberton Valley Transit System's Route 99 Pemberton Commuter, which still links the Pemberton Valley and Whistler with four round trips per day. The Squamish-Whistler Commuter (Route 98) was implemented as a winter-only pilot project linking Squamish to Whistler. The service started in January 2005 and ran for five years.

Initially, the Squamish-Whistler Commuter pilot project was cost-shared between the District of Squamish and RMOW until 2007/08. The local cost-share split between Whistler and Squamish was 50/50. In April 2008 this service expanded to include year-round service when provincial government funding became available. At that time, the RMOW committed to continue funding the pilot project for three years to the end of 2010. Figure 2 shows the historical schedule for the service.

A fare increase was implemented in 2010 to help offset rising operational costs, which impacted ridership, along with speculation about the stability of the service and future funding for it. The District of Squamish funded the local share of the service for six months beyond the RMOW's involvement, but ultimately the service ceased in 2011.

Figure 2 – Historical 98 Squamish Commuter Schedule

98 Squamish Commuter To Whistler			
Daily			
A	J	K	A
Squamish: Chieftain Centre	Valleycliffe: Vista at Northridge	Valleycliffe: Spruce at Westway	Squamish: Chieftain Centre
—	6:04	6:06	6:14
—	—	—	6:25 ^a
—	6:24	6:26	6:34
—	—	—	9:10 ^a
—	—	—	11:25 ^a
1:05	1:14	1:16	1:24
—	—	—	1:40 ^a
—	—	—	4:10 ^a
—	—	—	6:10 ^a
—	—	—	8:10 ^a
9:10	9:19	9:21	9:29

F	G	W	V
Squamish: Highlands Mall	Squamish North: Greyhound Depot	Whistler Creek	Whistler: Gondola Transit Exchange
6:30	—	7:15	7:22
—	6:50 ^a	7:25 ^a	7:45 ^a
6:50	—	7:35	7:42
—	7:30 ^a	8:15 ^a	8:30 ^a
—	9:40 ^a	10:20 ^a	10:30 ^a
—	11:55 ^a	12:35 ^a	12:45 ^a
1:40	—	2:25	2:32
—	2:10 ^a	2:50 ^a	3:00 ^a
—	4:40 ^a	5:20 ^a	5:30 ^a
—	6:40 ^a	7:16 ^a	7:30 ^a
—	8:40 ^a	9:20 ^a	9:30 ^a
—	—	10:30	10:37

^a via Greyhound. Trips arrive/depart Whistler Village at Visitor Centre bus loop on Village Gate Boulevard.

98 Squamish Commuter To Squamish			
Daily			
V	W	F	G
Whistler: Gondola Transit Exchange	Whistler Creek	Squamish: Highlands Mall	Squamish North: Greyhound Depot
6:15 ^a	6:20 ^a	—	7:05 ^a
7:45	7:52	8:42	—
8:15 ^a	8:20 ^a	—	9:10 ^a
10:30 ^a	10:35 ^a	—	11:35 ^a
1:30 ^a	1:35 ^a	—	2:35 ^a
4:30 ^a	4:35 ^a	—	5:30 ^a
4:45	4:52	5:42	—
5:00 ^a	5:05 ^a	—	6:00 ^a
5:10	5:17	6:07	—
6:30 ^a	6:35 ^a	—	7:35 ^a
9:00 ^a	9:05 ^a	—	9:50 ^a
12:30	12:37	1:27	—

A	J	K	A
Squamish: Chieftain Centre	Valleycliffe: Vista at Northridge	Valleycliffe: Spruce at Westway	Squamish: Chieftain Centre
8:54	9:03	9:05	9:13
9:20 ^a	—	—	—
11:45 ^a	—	—	—
2:45 ^a	—	—	—
5:40 ^a	—	—	—
5:54	6:03	6:05	6:13
6:10 ^a	—	—	—
6:19	6:29	6:30	6:38
7:45 ^a	—	—	—
10:00 ^a	—	—	—
1:39	1:48	1:50	1:58

^a via Greyhound. Trips arrive/depart Whistler Village at Visitor Centre bus loop on Village Gate Boulevard.
Brackendale Detour: Upon request southbound trips to Squamish will detour into Brackendale.

ATTENTION: For up-to-date information on Greyhound schedules and fares, visit www.greyhound.ca or call Greyhound at 604-898-3914 Squamish, or 604-932-5031 Whistler.

In addition to the transit service, transportation along the Sea to Sky Corridor today is comprised of a variety of services. While the area is most commonly accessed by personal vehicle, an overview of transportation options is further provided below.

School Busing

Public School District 48 (SD48) provides school bus transportation to nearly 1,000 elementary and secondary school students per day between September and June each year. The School District serves several schools throughout the Sea to Sky Corridor with its fleet of about 30 buses, which are stored and maintained at SD48’s own sites in Squamish, Whistler, and Pemberton.

Personal Automobile Travel

Travel along the Sea to Sky Corridor is heavily auto-oriented given the area’s tourism demand, climate, topography and transient population. According to the 2011 Census, nearly 87% of Squamish residents and 67% of Whistler residents drive to work. Pemberton 2010 community census shows that 46% of its residents use a car to access employment. In 2015, the BC Ministry of Transportation and Infrastructure (MOTI) reported nearly 6 million trips were made on the Sea to Sky Highway (Highway 99).

Ferry Travel

BC Ferry’s Horseshoe Bay Terminal is located 45 km from Squamish and 20 km from Vancouver. This terminal links Vancouver Island, the Sunshine Coast, and Bowen Island to Sea to Sky communities and to Metro Vancouver. The terminal docks multiple daily ferries year round. TransLink provides public transit from the terminal to as far as Lions Bay, and Greyhound Canada services Horseshoe Bay once per day.

Highway Coach and Shuttle Service

Private operators provide highway coach and shuttle bus service to, from, and between Sea to Sky communities, which is overseen and regulated by the Passenger Transportation Board (PTB).

In 2017, private operators provided multiple round trips each day between Vancouver and Whistler, with at least one round trip to West Vancouver, Lions Bay, Britannia Beach, Squamish, Black Tusk, Pinecrest, Pemberton, and Mount Currie.

Car and Ride Sharing

The Zipcar car sharing service is currently available in parts of the Sea to Sky region. In addition, there are several online ridesharing platforms available in the area.

Air Travel

Scheduled air access to the Sea to Sky region is limited to floatplane service to Whistler in the summer months, though unscheduled or chartered flights are also available to the airports in Squamish and Pemberton. The Whistler floatplane terminal is located less than 1 km from a Whistler Transit System bus stop along the Sea to Sky Highway, and pedestrian and cyclist access is safely accommodated between the floatplane terminal and the bus stop.

Rail

Rocky Mountaineer's Whistler Sea to Sky Climb provides rail services in the Sea to Sky region. Rocky Mountaineer's trip departs from North Vancouver Station and travels on the railroad along the Sea to Sky Highway (Highway 99) and stops at Whistler. This rail service is mainly targeted to tourism travel purposes.

Reference: <https://www.rockymountaineer.com/plan-your-trip/train-schedule-station-locations>

Active Transportation

The Sea to Sky region is home to a robust cycling community, with many people cycling recreationally as well as for transportation between and within communities. While the Sea to Sky Highway includes a narrow shoulder bike lane in some segments, off-highway facilities are also in place, such as the Whistler's Valley Trail, Pemberton's Friendship Trail, Squamish's Corridor Trail, and the Sea to Sky Trail. The Sea to Sky Trail is a 180 km multi-use trail that is still under construction, but will ultimately connect the Sea to Sky Corridor from Squamish to D'Arcy. To the south, the Marine Trail connects Horseshoe Bay and Squamish.

Walking within Sea to Sky communities is generally accommodated by sidewalks and trails, though these infrastructure networks are still growing. East-west pedestrian access across the Sea to Sky Highway is accommodated by several crossings in Squamish and Whistler, and one crossing in the Village of Pemberton at the intersection of the Sea to Sky Highway and Portage Road.

PUBLIC ENGAGEMENT SUMMARY

Engagement Overview

Building upon the findings from the Sea to Sky Transit Future Plan public engagement, the Sea to Sky Corridor Regional Transit Study involved a comprehensive, two-phase public engagement process. In total, 3,730 people participated. The engagement phases were heavily promoted using radio, newspaper and bus ads, a project website (<https://bctransit.com/seatosky>), and social media. Below is a summary of each of the phases.

Phase 1

The first phase of engagement took place from October 24th to November 15th 2016, and sought to gather information on current travel patterns and needs along the Sea to Sky Corridor to identify preliminary transit service details. The first phase of engagement primarily used an online survey to gather information from the public. The results of this survey are included in the [Phase 1 Public Engagement Report](#).

Phase 2

The second phase of engagement took place from February 24th to March 12th 2017, and sought feedback on the preliminary transit service details developed from the first phase of engagement including proposed bus stop locations, travel times, fares, and transit funding sustainability. The second phase of engagement was anchored primarily by an online survey and six open house events hosted throughout the Sea to Sky Corridor. The results of this engagement can be found in the [Phase 2 Public Engagement Report](#).

Figure 3 - Open House Pictures from Squamish (Left) and Britannia Beach (Right)



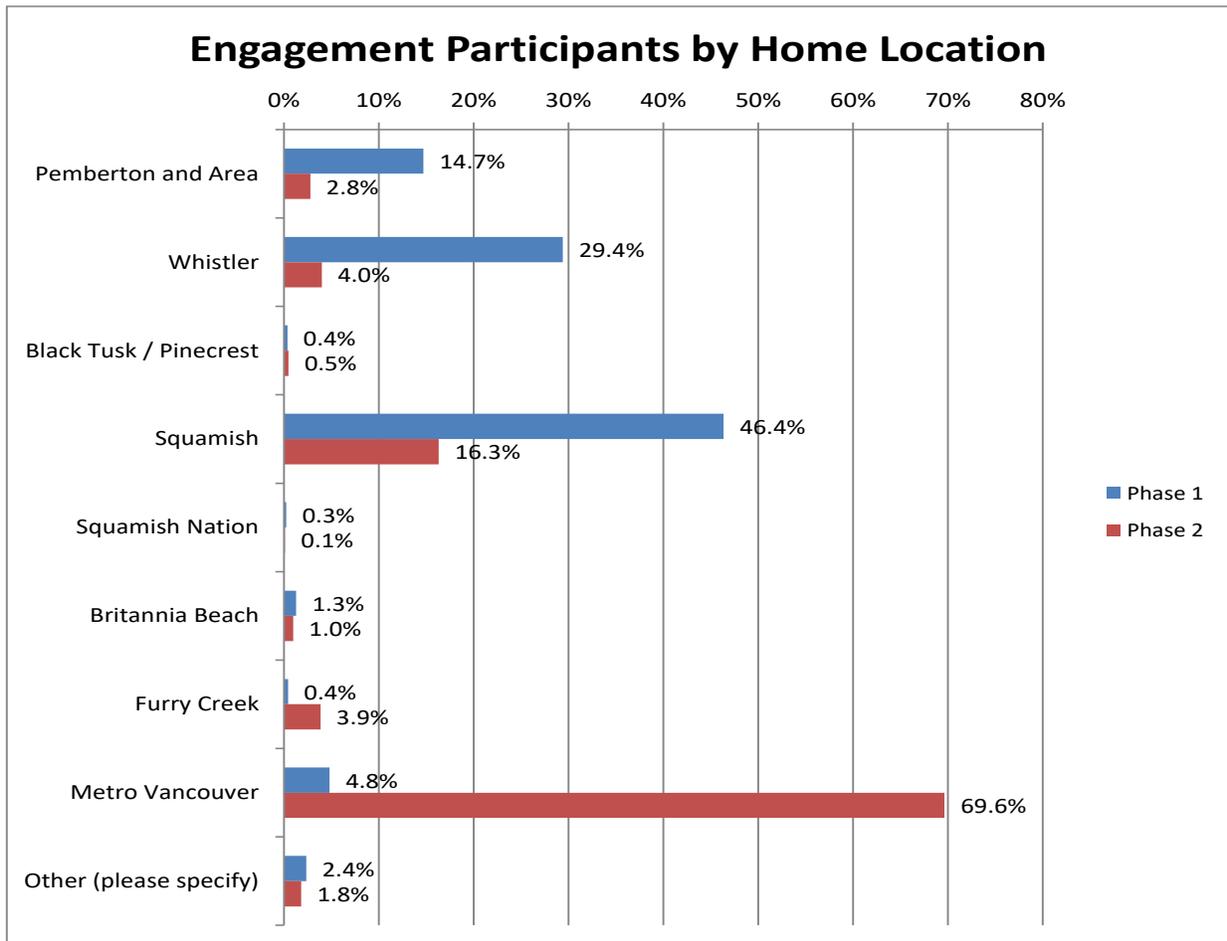
Key Results

There were over 3,700 public engagement participants for this project, with substantial involvement in each phase (Table 1). The response rates between communities along the Sea to Sky Corridor were reasonably representative of the populations for both engagement phases (Figure 4); however, Metro Vancouver received a substantially higher response rate in the second phase of engagement, which is likely due to the increased media attention the second phase of engagement received in Metro Vancouver in comparison to the first phase.

Table 1 – Engagement Participation Summary

Phase	Survey	Open House	Total
Phase 1 (Oct. – Nov. 2016)	2,718	N/A	2,718
Phase 2 (Feb. – Mar. 2017)	827	187	1,014
Total	3,545	187	3,732

Figure 4 – Engagement Participants by Home Location (Phase 1 and Phase 2)



MARKET DEMAND SUMMARY

Overview

One of the primary goals of the Sea to Sky Corridor Regional Transit Study was to explore if a sustainable business case exists for regional and interregional transit along the corridor. To answer this question, SNC-Lavalin assisted BC Transit in preparing a market demand analysis. This analysis was used to estimate potential transit ridership along the Sea to Sky Corridor within a defined study area extending from Metro Vancouver to Pemberton and Mount Currie.

As anticipated based on the amount of interest during the public engagement process, it appears there may be substantial latent demand for regional and interregional transit service along the Sea to Sky Corridor. The market demand analysis found a conservative daily ridership estimate of 575 each weekday on the segments between Pemberton and Vancouver (Table 2).

Table 2 – Daily Weekday Transit Ridership Estimate by Corridor Segment

Corridor Segment	Daily Weekday Ridership Forecast
Pemberton – Whistler	100
Whistler – Squamish	175
Squamish – Metro Van	300
Total	575

Market Demand Analysis Approach

This market demand analysis focuses primarily on the individual corridor segments in order to develop a conservative ridership estimate, so it may be that interregional ridership between these identified segments (E.g. Whistler to Vancouver) may further increase ridership beyond the segment-level estimate. It is also worth noting that most of the data presented in this section is from the Statistics Canada 2011 National Household Survey's Travel Behaviour Section, as the 2016 data was not yet available when the market demand analysis was conducted. Given the increase in population in the region since 2011, it is expected that the 2016 data will further increase the market demand.

Due to differences in available travel information along the corridor, different methodologies were used to estimate ridership for each segment along the Sea to Sky Corridor (Figure 1). For example, transit service and ridership information is currently available for the corridor segment between Pemberton and Whistler, previously existed for the corridor segment between Whistler and Squamish from 2005 to 2011, and has never existed for the corridor segment between Squamish and Metro Vancouver. Consequently, different methodologies were used to calculate and/or estimate ridership along each segment of the Sea to Sky Corridor (Table 3).

Table 3 – Transit Ridership Estimation Methodology by Corridor Segment

Corridor Segment	Transit Service	Methodology
Pemberton – Whistler	Currently Operating	Direct count of transit ridership
Whistler – Squamish	Previously Operated	Extrapolation of historical transit ridership
Squamish – Metro Vancouver	Never Operated	Estimation of ridership using census population, commuter flow, distance contours of similar areas and mode share data

Squamish - Metro Vancouver

The transit ridership estimate between Squamish and Metro Vancouver was developed using census population, commuter flow, and mode share data. The forecasted demand is also based on similar distance contours in Metro Vancouver for commuters that regularly travel to Downtown Vancouver. Ridership estimates were provided at low, medium, high, and very high levels to account for potential differences in service levels, travel time, and fare price, and their potential impact on mode shares along the corridor (Table 4). It is anticipated that ridership will likely fall within the medium ridership estimate range, which equates to a transit commuter mode share of 15%¹. It is important to note that this estimate was for work related commuting purposes only and does not include ridership for other trip purposes such as shopping, medical, recreational, or tourism-related activities.

Table 4 – Estimated Ridership for Squamish to Metro Vancouver Segment

	Low	Medium	High	Very High
Mode Share	7%	15%	35%	60%
Estimated Daily Commuters	69	148	346	592
Estimated Daily Ridership	138	296	691	1184

¹ Same transit modal share as the Squamish to Whistler commuters in the 2011 Census (when the 98 Squamish Commuter was in operation)

Whistler - Squamish

Ridership on the segment between Squamish and Whistler was estimated using historical ridership for the 98 Squamish Commuter service that operated between Whistler and Squamish from 2005 to 2011. Average daily ridership on this service varied between 125 and 200 depending on the year. In order to estimate current market demand, these historical ridership numbers were compared alongside changing population and employment statistics, and modified according to changes in peak vehicle flow since 2011 along Hwy 99 between Whistler and Squamish. Given the substantial decrease in employment in the 2008 recession and the subsequent, gradual return of economic development in Whistler since then, it is anticipated that average daily ridership levels now would likely be similar to the historical ridership on the 98 Squamish Commuter in 2005 before the 2008 economic recession (Table 5).

Table 5 – Historical Average Daily Ridership for 98 Squamish Commuter

	Low	Medium	High	Very High
Year	2008	2010	2005² (Annual)	2005 (Winter)
Average Daily Ridership (98 Squamish Commuter)	125	150	175	200

Pemberton - Whistler

The ridership estimate on this segment uses the 2016/17 average daily ridership on the 99 Pemberton Commuter (Table 6).

Table 6 – Historical Average Daily Ridership for 99 Pemberton Commuter

	2013/14	2014/15	2015/16	2016/17
Average Daily Ridership (99 Pemberton Commuter)	80	87	95	104

² The service in 2005 only operated in the winter, and winter ridership is historically 10%-20% higher than non-winter; consequently, the 2005 annual daily ridership average presented is the winter average modified by the 'total year to winter' ridership ratio to approximate average daily ridership for the whole year.

PROPOSED SERVICE DESIGN

This section describes the proposed service design for the Sea to Sky regional and interregional transit service including routing, bus stop locations, and infrastructure. These proposals were developed through the extensive public engagement, detailed analysis of market demand, and ongoing feedback from the project working group.

This report separates specific service recommendations into short and long-term timelines, which provides the opportunity to establish a baseline level of service along the corridor and to build upon its success as ridership and funding availability grows over time. These proposed service options are not final, and are intended to continue to facilitate discussion on future transit expansion in the area. If or when funding and governance has been confirmed for any new or expanded service, then a detailed implementation plan would be developed that would include additional analysis and public engagement throughout the region.

Short-Term Service Proposals

This section provides a short-term transit service proposal capable of providing a baseline level of service along the corridor, which can be built upon in the future as ridership grows and additional funding becomes available. The segment between Whistler, Squamish, and Metro Vancouver is considered separately from the segment between Pemberton and Whistler since the Pemberton to Whistler segment currently operates with the 99 Pemberton Commuter.

In summary, the short-term service proposal would provide approximately six round trips on weekdays and four round trips on weekend days along the segment between Whistler, Squamish, and Metro Vancouver, and an additional two daily round trips on the currently operating segment between Pemberton and Whistler. This short-term service proposal would require a total of eight buses and 15,100 annual service hours, for a total cost of \$3,310,000 with a local cost of \$1,900,000 shared between all participating local partners (Table 7). Additional service details by route segment have been included in the following sections.

Table 7 - Short-Term Service Costing Summary (2019/20)

Segment	Service Hours	Vehicle Requirement	Total Costs*	Total Local Share of Costs†	Provincial Share of Operating Costs*
Whistler, Squamish, and Metro Vancouver	14,000	7	\$3,060,000	\$1,750,000	\$1,310,000
Pemberton - Whistler	1,100	1	\$250,000	\$150,000	\$100,000
Total	15,100	8	\$3,310,000	\$1,900,000	\$1,410,000

*These costs do not include the Provincial contribution to Lease fees or required infrastructure improvements, assume the traditional conventional cost sharing ratio, and may change according to the operations facility location.

†Does not include projected revenue (which would offset the local share of costs).

Service between Whistler, Squamish and Metro Vancouver

This section describes the proposed service details for the Sea to Sky Corridor regional and interregional transit service between Whistler, Squamish, and Vancouver.

Structure

This service would provide regional and interregional service to Sea to Sky residents for a multitude of trip purposes including work, shopping, medical, and recreation. Based on the market demand study and public consultation, the primary markets for this service would likely include the following:

- Squamish and Whistler commuters travelling between Squamish and Whistler;
- Squamish and Squamish-Lillooet Regional District (SLRD) commuters travelling between Squamish and Metro Vancouver; and
- Whistler, Squamish, and SLRD residents travelling for regional and interregional shopping, recreation, and medical services.

This service may also be used by visitors to the region, but based on the proposed service design, that is not the primary market this service is designed for. Additionally, there are several other existing private transportation options along the corridor designed specifically for visitors. Although the proposed service has been designed to connect directly into downtown Vancouver, an exact terminus location has not yet been finalized. This would be analyzed collaboratively with TransLink and the partners in Metro Vancouver as part of the detailed implementation plan.

Although some trips on the Squamish to Metro Vancouver and Squamish to Whistler segments may be operated separately to best serve local community needs, integration is a key goal to allow for seamless regional and interregional connections.

Routing and Bus Stop Locations

The routing and bus stop locations considered through this study for the service between Whistler, Squamish, and Vancouver are identified in Figure 5, but the final bus stop locations for this service will be determined during the implementation plan process after funding for the service is approved. Further information on the proposed bus stop locations (including the difficulty of implementation) is included in Appendix A.

Given that substantial public feedback identified travel time as a key consideration for regional and interregional trips around commuter trip times, this service is proposed to operate standard and express trips depending on time of day and day of week (Table 8). Given the existing circuitous routing to access the Horseshoe Bay ferry terminal and the varying demand requirements, it is proposed that the express trips skip Horseshoe Bay. The bus stops served by both the standard and express trips will be reviewed and finalized through the implementation plan process, and it is possible that the express trips could bypass more stops to improve travel times further for commuters.

Figure 5 – Proposed Routing and Preliminary Bus Stop Locations

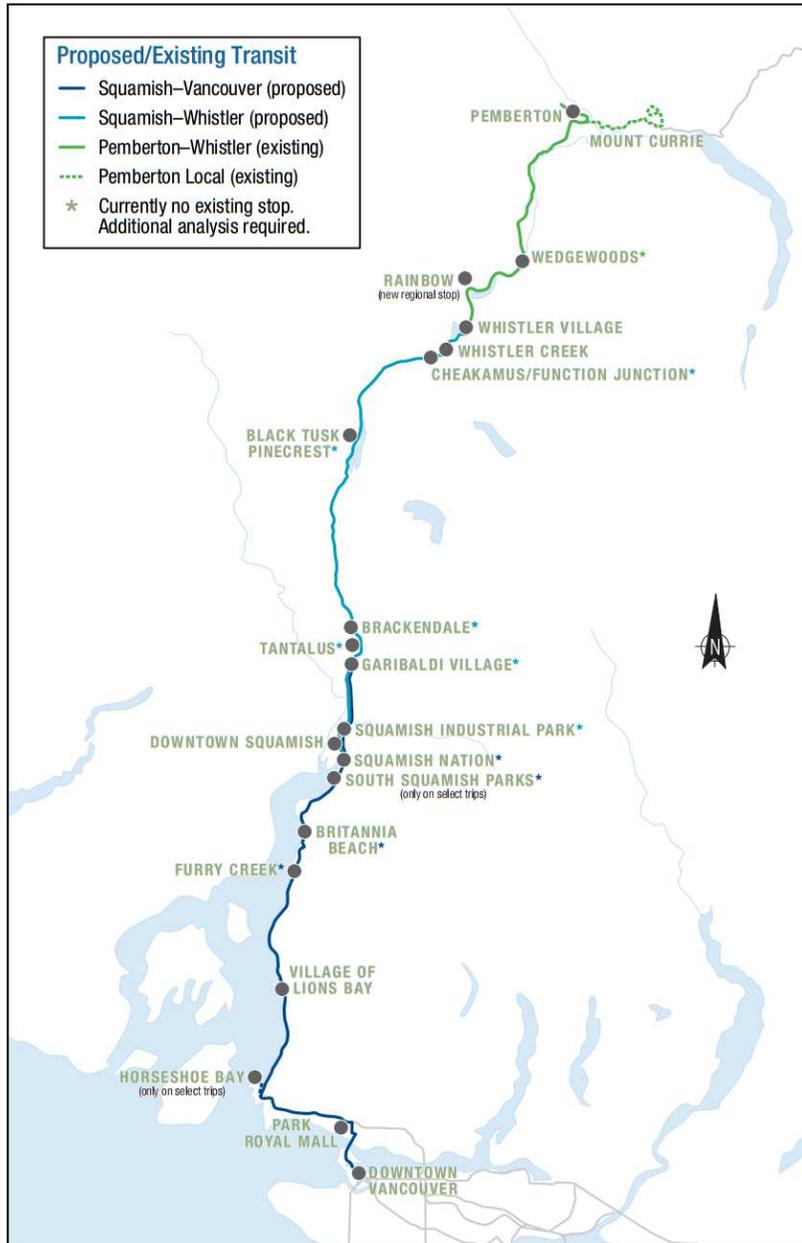


Table 8 – Service Type and Operation Details

	Service Times	Areas Served
Standard	Midday weekday trips and weekend trips	All stops
Express	Weekday AM and PM peak trips	Bypasses Horseshoe Bay ³

³ Potential to bypass more proposed bus stops to further reduce travel time on the express service

Schedule and Frequency

Based on the target market for this service identified through the market demand analysis and extensive public engagement, the proposed service frequency varies between weekdays and weekend days. Although some trips on the Squamish to Metro Vancouver and Squamish to Whistler segments may be operated separately to best serve local community needs, integration is a key goal to allow for seamless regional and interregional connections.

Weekday Service Frequency

The proposed weekday service includes six round trips operating between Whistler, Squamish, and Metro Vancouver. These six full round trips would likely be divided into the Squamish to Metro Vancouver and Squamish to Whistler segments and then operated as follows:

Table 9 – Weekday Service Levels by Route Segment

Weekday (Monday – Friday)		
Time Period	Squamish to Metro Vancouver Segment	Squamish to Whistler Segment
AM Peak	Two Express Round Trips	Two Standard Round Trips
Midday	Two Standard Round Trips	Two Standard Round Trips
PM Peak	Two Express Round Trips	Two Standard Round Trips

Weekend Service Frequency

The proposed weekend service includes four round trips operating between Whistler, Squamish, and Metro Vancouver. These four full round trips would likely be divided into the Squamish to Metro Vancouver and Squamish to Whistler segments and then operated as follows:

Table 10 – Weekend Service Levels by Route Segment

Weekend (Saturday – Sunday)		
Time Period	Squamish to Metro Vancouver Segment	Squamish to Whistler Segment
AM Peak	One Standard Round Trip	One Standard Round Trip
Midday	Two Standard Round Trips	Two Standard Round Trips
PM Peak	One Standard Round Trip	One Standard Round Trip

Table 11 identifies the service details for the proposed service including distance, running time, cycle time⁴, and estimated service hours for the entire corridor between Whistler and Metro Vancouver, and Table 12 separates these service details into the Squamish to Whistler and Squamish to Metro Vancouver segments.

Table 11 – Sea to Sky Regional Transit Service Details (Entire Corridor; Whistler - Metro Vancouver)

Trip Type	<u>One-Way Trip Distance (km)</u>	<u>One-Way Trip Running Time (min)</u>	<u>One-Way Trip Cycle Time (min)</u>	<u>Estimated Service Hours per Round Trip</u>
Standard	125	170	195	6.52
Express	122	160	185	6.17

Table 12 – Sea to Sky Regional Transit Service Details (by Segment)

Segment	Trip Type	<u>One-Way Trip Distance (km)</u>	<u>One-Way Trip Running Time (min)</u>	<u>One-Way Trip Cycle Time (min)</u>	<u>Estimated Service Hours per Round Trip</u>
Whi – Squ	Standard	60	60	70	2.35
Squ – Van	Standard	65	110	125	4.20
Squ – Van	Express	63	100	115	3.85

⁴ Cycle time includes recovery time, which is standard transit planning practice to ensure on-time performance.

Service Requirements and Costs

To provide the short-term regional and interregional transit service identified between Whistler, Squamish, and Metro Vancouver, it will require approximately 14,000 annual service hours and seven buses, which works out to an estimated annual local cost of \$1,750,000 to be split between the local partners participating in the service (Table 13). Further information regarding service funding and governance is included in the Funding and Governance section of this report (pg. 29). Note that the projected revenue is not included in these proposed costs, and any revenue that is generated from this service would directly offset the local share of the costs.

Table 13 – Service Costing Details for Proposed Regional Service (Entire Corridor; Whistler - Metro Vancouver)

Six round-trips on weekdays and four round-trips on weekends between Whistler, Squamish, and Metro Vancouver (2019/20)					
Service Hours	Vehicle Requirement	Total Costs*	Local Share of Lease Fees	Total Local Share of Costs†	Provincial Share of Operating Costs*
14,000	7	\$3,060,000	\$255,000	\$1,750,000	\$1,310,000

*These costs do not include the Provincial contribution to Lease fees or required infrastructure improvements, assume the traditional conventional cost sharing ratio, and may change according to the operations facility location.

†Does not include projected revenue (which would offset the local share of costs).

Service between Pemberton and Whistler

The regional service between the Pemberton area and Whistler currently operates as the 99 Pemberton Commuter.

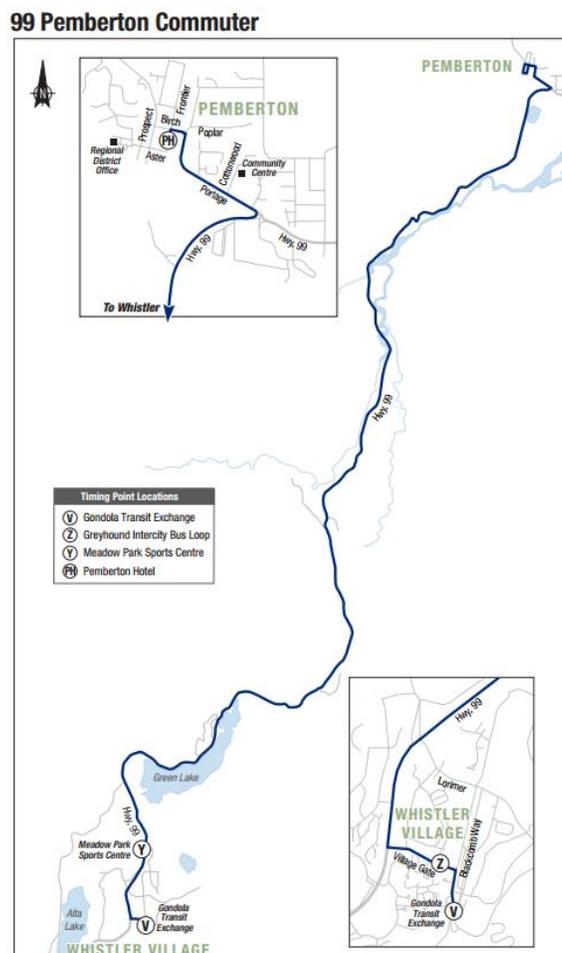
Structure

By connecting with route 100 Pemberton Local, the route 99 Pemberton Commuter currently provides regional service for Pemberton, Líl'wat, SLRD Area C, and Whistler residents travelling between Pemberton and Whistler. If the proposed regional and interregional service connecting Whistler, Squamish, and Vancouver were implemented, the route 99 Pemberton Commuter could be integrated to provide interregional service for Pemberton, Líl'wat, and SLRD Area C residents to Squamish and Metro Vancouver as well. More information on this is found in the governance and funding section.

Routing

Figure 6 shows the current routing for the 99 Pemberton Commuter.

Figure 6 – 99 Pemberton Commuter Routing



Schedule and Frequency

The route 99 Pemberton Commuter currently provides four round trips per day operated by BC Transit and additional service provided by Greyhound⁵. The service details for this service including distance, running time, cycle time⁶, and estimated service hours per round trip are identified in Table 14.

The Transit Future Plan identified improvements to the route 99 Pemberton Commuter as a long-term priority, and ridership on this service has grown by almost 50% within the past three years⁷. The proposed route 99 Pemberton Commuter service expansion includes an additional two daily round trips:

- One midday round trip
- One evening round trip

Table 14 – Sea to Sky Regional Transit Service Details (Pemberton and Whistler)

<u>One-Way Trip Distance (km)</u>	<u>One-Way Trip Running Time (min)</u>	<u>One-Way Trip Cycle Time (min)</u>	<u>Estimated Service Hours per Round Trip</u>
34	37	40	1.3

Service Requirements and Costs

To provide the expansion for the 99 Pemberton Commuter identified within this report, it will require approximately 1,100 annual service hours and one bus, which works out to an estimated annual local cost of \$150,000 to be split between the local partners participating in the service (Table 15). Further information regarding service funding and governance⁸ is included in the Funding and Governance section of this report (pg. 29). Note that the projected revenue is not included in these proposed costs, and any revenue that is generated from this service would directly offset the local share of the costs.

Table 15 – Service Costing Details for Proposed 99 Pemberton Commuter Expansion

Two additional daily round-trips on the 99 Pemberton Commuter (2019/20)					
Service Hours	Vehicle Requirement	Total Costs*	Local Share of Lease Fees	Total Local Share of Costs†	Provincial Share of Operating Costs*
1,100	1	\$250,000	\$36,500	\$150,000	\$100,000

*These costs do not include the Provincial contribution to Lease fees or required infrastructure improvements, assume the traditional conventional cost sharing ratio, and may change according to the operations facility location.

†Does not include projected revenue (which would offset the local share of costs).

⁵ Fares for these additional Greyhound trips are subsidized by the local partners, which allows residents to use the Greyhound service at the same cost as the BC Transit regional service

⁶ Cycle time includes recovery time, which is standard transit planning practice to ensure on-time performance

⁷ Ridership has grown from 26,000 rides in 2013/2014 to 38,100 rides in 2016/17 (47% growth in 3 years)

⁸ Including the potential for integrating current Pemberton Commuter service with other STS Regional Services

Longer-Term Service Proposals

This section provides longer-term transit service and infrastructure proposals (5+ years) that would provide a higher-level of service along the entirety of the Sea to Sky Corridor once ridership grows and additional funding becomes available.

Service

New transit services often experience ridership growth over time once they have been fully established and residents have had time to alter their travel patterns accordingly. Accordingly, the Sea to Sky Transit Future Plan identified long-term service standards and performance guidelines for regional and interregional transit in the Sea to Sky region.

To meet the 25-year service standards identified within the Transit Future Plan⁹, it would require between 45,000 and 90,000 annual service hours. However, the Sea to Sky Transit Future Plan operates on a 25-year horizon and these service targets are meant to be considered within the context of the performance guidelines. Consequently, the service levels should increase progressively over time as ridership on the service continues to grow.

Although expansions are recommended for the two years following the initial service implementation as a contingency for ridership growth (2020/21 and 2021/22; Table 16), it is recommended that a post-implementation review be conducted within one year after the initial service implementation to assess performance and further refine medium-term service options. It is possible that ridership on this service may fluctuate seasonally with the fluctuation in tourism in Squamish and Whistler. Based on the findings of the post-implementation review, the expansion resources can be optimized by targeting additional service around ridership demand patterns and additional feedback from the community. Additionally, the Sea to Sky Transit Future Plan Refresh process, currently planned for 2020, will provide an opportunity to further review the service performance and to review the service standards and performance guidelines as well.

Table 16 – Sea to Sky Regional and Interregional Service Expansion (Three-Year Plan)

Year	Service Hours	Vehicle Requirement	Total Costs*	Total Local Share of Costs†	Provincial Share of Operating Costs*
2019/20	15,100	8	\$3,310,000	\$1,900,000	\$1,410,000
2020/21	5,000	2	\$1,110,000	\$625,000	\$480,000
2021/22	5,000**	2**	\$1,140,000	\$645,000	\$495,000

*These costs do not include the Provincial contribution to Lease fees or required infrastructure improvements, assume the traditional conventional cost sharing ratio, and may change according to the operations facility location.

†Does not include projected revenue (which would offset the local share of costs).

**To be further assessed through the post-implementation review and Transit Future Plan Refresh process.

⁹ See pages 130-131 of the [Sea to Sky Transit Future Plan](#) for details regarding the Regional and Interregional Transit Service Standards

INFRASTRUCTURE

This section identifies the infrastructure considerations related to this service including bus stops, exchanges, Park & Rides, transit priority and modal infrastructure, and operations and maintenance facilities. Final infrastructure details will be determined through the implementation plan process, which will proceed if funding for the service is approved. These infrastructure details will be identified in consultation with the Ministry of Transportation (MoTI), TransLink¹⁰, local partner staff, and local operating company staff. Generally, local approval is required for any infrastructure improvements within a given jurisdiction. For example, bus infrastructure improvements on Hwy 99 requires MOTI approval, and on local roadways requires the approval of the relevant local authority¹¹.

BUS STOPS

The bus stop locations considered through the Corridor Study process are identified in Figure 5 (pg. 18). The final bus stop locations would be determined during the implementation plan process after funding for the service is approved. Additional information on the proposed bus stop locations (including difficulty of implementation) is included in Appendix A.

Any bus stops for this route should meet the [BC Transit Infrastructure Design Guidelines](#). The extent of passenger amenities provided at individual bus stops varies, and often depends on local conditions including existing infrastructure, land use, ridership, and weather. At a minimum, a bus stop pole/sign, lighting, a passenger landing pad, a wheelchair landing pad and a curb letdown in the vicinity of the bus stop should be provided, regardless of the land use. Table 17 identifies the proposed minimum bus stop amenities for this service.

Table 17 – Regional Transit Bus Stop Attributes

Facility	Attributes
High activity transit stops	<ul style="list-style-type: none"> • Transit Shelter • Lighting • Seating • Quality customer information • Universally accessible (passenger and wheelchair landing pad) • Bike parking / storage
Lower activity transit stops	<ul style="list-style-type: none"> • Transit shelter • Lighting • Seating • Universally accessible (passenger and wheelchair landing pad)

¹⁰ Regarding the proposed stops in Park Royal and Downtown Vancouver.

¹¹ E.g. The Squamish Lillooet Regional District, the Resort Municipality of Whistler, the District of Squamish, the Village of Pemberton, the Squamish Nation, or the Lil'wat Nation.

Through the Sea to Sky Corridor Regional Transit Study process, highway access challenges limited the feasibility of providing regular service to certain desired destinations along the Sea to Sky Corridor such as Furry Creek¹² and Horseshoe Bay¹³. Highway access improvements to these locations could reduce the barriers to providing transit in the future.

EXCHANGES / PARK & RIDES

Additional consideration should be taken for developing new Park & Ride and Transit Exchange Facilities to coincide with this service implementation. As identified within the Sea to Sky Transit Future Plan, the following facilities could be considered:

- A second Park & Ride site in Squamish (Garibaldi Village)
- A Park & Ride site in Whistler (Cheakamus / Function Junction)
- A secondary Transit Exchange in Squamish (Garibaldi Village)
- Improved transit infrastructure at Gateway Loop in coordination with RMOW plans (Whistler Village)

In addition, local partners could consider developing legitimate Park & Ride locations in smaller locales including Pemberton, Britannia Beach, and Black Tusk/Pinecrest.

TRANSIT PRIORITY

Transit priority is a term used to refer to a variety of physical and operational improvements designed to give transit vehicles and passengers priority over general vehicle traffic. As congestion increases, it is important to consider giving transit priority over general traffic to attract greater numbers of passengers to transit. Transit priority investments also improve reliability by reducing the effect that daily changes in congestion have on transit travel times. Savings in transit travel times will reduce the number of service hours and fleet required to operate service.

In the short-run, BC Transit recommends working with local partners to take advantage of current transit priority initiatives being developed and implemented in Whistler, Squamish, and Metro Vancouver, such as the bus queue jumper pilot project being tested in Whistler to bypass congestion on Hwy 99 at Whistler Creekside in Whistler.

¹² Given Furry Creek's size, there was substantial public support for regional service to the community; however, the limited highway access makes it very challenging to provide a centralized bus stop and requires a substantial travel time penalty to serve a relatively small community. Improved highway access would be required to make providing regional service to this community feasible.

¹³ BC Ferries is currently planning a Horseshoe Bay Terminal redesign for 2021. If these changes included improvements to highway access, it could reduce the barriers for transit access to Horseshoe Bay. If these Terminal changes substantially reduced the bus travel time penalty, it may be feasible to serve Horseshoe Bay on all trips.

MODE

Through public consultation, the concept of providing a Sea to Sky regional and interregional service by rail was brought up several times. There were also a number of potential challenges identified through the consultation process regarding implementing rail service along this corridor including ownership, safety, and other factors. Given the lack of certainty around potential ridership and the additional challenges associated with a rail implementation, it is recommended that this service start with buses. Once the service has had ample time to establish itself and actual ridership demand has been assessed, additional planning work could be undertaken to assess the relative feasibility of other mode types.

TRANSIT OPERATIONS AND MAINTENANCE FACILITIES

Determining an operations facility for this service is dependent on the outcome of the governance discussion and the development of the operations contract. In the short-term, it may make sense to operate the service out of the current Whistler operations facility due to the additional capacity that facility currently has. However, in terms of minimizing operational costs in the long-run, consideration should be given to developing a new operations facility in Squamish. The operations facility for the Squamish Transit System is currently at capacity, so securing funding and land for a new facility is an important goal for over the next several years.

INFRASTRUCTURE FUNDING AND MAINTENANCE

The funding and responsibility for any infrastructure required for this service will be dependent on the resulting governance and funding structure chosen by the local partners.

PUBLIC TRANSIT INFRASTRUCTURE FUND (PTIF)

The first phase of the [Public Transit Infrastructure Fund](#) provided investments of [\\$160 million in federal and provincial funding](#) to improve public transit systems in BC Transit-served communities outside Metro Vancouver. The second phase of PTIF will involve additional federal and provincial funding for BC Transit projects over the next 11 years. There may be opportunities to leverage funding from the second phase of the PTIF to develop the infrastructure required for regional and interregional transit services in the Sea to Sky Region.

FARES

Within the BC Transit model, local partners keep the fare revenue from the transit services operating within their community. Consequently, setting fares is ultimately the responsibility of the participating local partners. Discussions about fare levels could assist in deliberations regarding regional transit service funding, but final fare decisions would likely occur during the implementation plan process after the governance and funding decisions have been established.

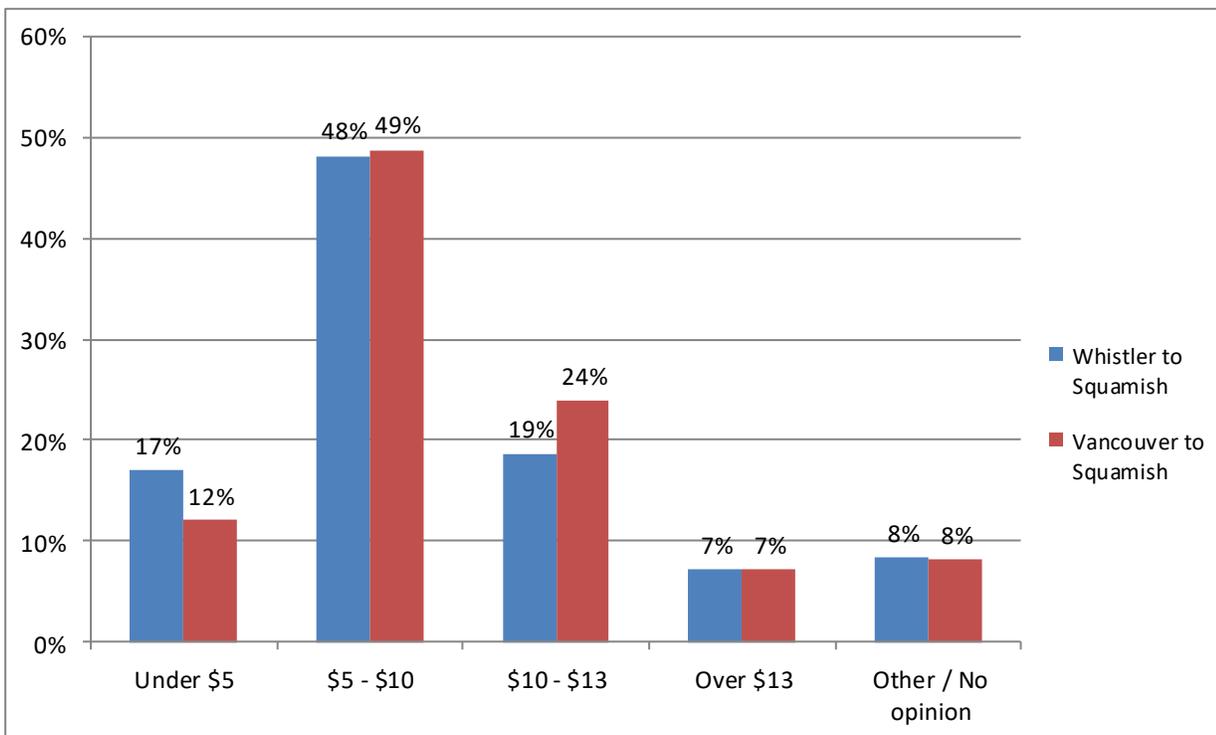
Pemberton and Whistler

On the existing Sea to Sky regional service between the Pemberton area and Whistler, an adult cash fare is currently \$4.50.

Whistler, Squamish, and Vancouver

To provide decision makers with information, the second phase of public engagement gathered feedback from the community on fares for proposed regional transit service between Whistler and Squamish and Squamish and Vancouver. Based on the results, fare expectations from the community were reasonably consistent for the segments between Vancouver and Squamish and between Whistler and Squamish (Figure 7). Although approximately 80% of participants identified a one-way fare of \$5 or more for each segment, approximately 50% identified a fare between \$5 and \$10 as the most reasonable.

Figure 7 – Respondent Fare Recommendations (by Route Segment)



Initially, Sea to Sky regional transit users transferring to TransLink services would be required to pay an additional fare, but opportunities to integrate fare products can be further explored in the future.

NEXT STEPS

Governance, Funding and Cost Sharing

Before implementing Sea to Sky regional or interregional transit service, decisions around regional governance and funding structures need to be made by the participating local partners.

Governance

As identified in the Sea to Sky Transit Future Plan, the development of a regional governance structure could streamline the implementation of regional and interregional transit along the Sea to Sky Corridor and provide benefits in terms of operational efficiencies and improved customer experience.

Although decisions around governance and local funding are ultimately the responsibility of the participating local partners¹⁴, BC Transit can provide guidance based on experience from other communities within BC. For example, there are examples of several different types of regional transit governance and funding structures currently in operation throughout BC.

BC Transit recommends the formation of a higher-level working group involving the senior leadership of the participating local communities and BC Transit to guide decision-making around regional governance and funding for this service. These deliberations should consider how to incorporate the Líl'wat and Squamish Nations into discussions around funding and governance. Additionally, these discussions may allow the opportunity to integrate the existing 99 Pemberton Commuter service into the governance, funding, and cost-sharing structure with the other Sea to Sky regional and interregional transit services.

Currently, there are two basic types of governance models that operate within BC Transit communities including regional systems and transit commissions.

¹⁴ In the case of the Sea to Sky service, this would likely involve discussions between Pemberton, Whistler, Squamish, the Squamish-Lillooet Regional District, Metro Vancouver, Líl'wat Nation, and Squamish Nation.

REGIONAL SYSTEMS

The regional systems form of governance is currently in place in all BC municipalities outside Metro Vancouver and the Victoria Capital Region (where a regional transit commission has been established). In the regional systems model, transit is provided through a partnership between BC Transit (on behalf of the provincial government), local partners (e.g. municipalities or regional districts), and in most cases, third party (private) transit operating companies.

Other regional transit services provided under the regional systems model include the Fraser Valley Express and the Highway 16 regional transit service. For both of these services, an overlapping regional district acts as the decision making body, with the equivalent in the Sea to Sky area being the Squamish-Lillooet Regional District. The Squamish-Lillooet Regional District already includes voting members from the member municipalities including two elected officials from Squamish, one from Whistler¹⁵, Pemberton, and Lillooet, and four additional Electoral Area directors. If this governance model were desired for a Sea to Sky regional transit service, additional funding would be required to increase the staff capacity at the Squamish-Lillooet Regional District, so as to provide local staff oversight for the regional transit service.

Under a regional systems model, the local transit systems in Squamish, Whistler, and Pemberton would continue to be governed by the local partners; conversely, the regional and interregional services could be governed by the SLRD, with the ongoing input of the local partners to ensure there is integration and connectivity.

TRANSIT COMMISSIONS

The only transit commission in BC today is the Victoria Regional Transit Commission (VRTC), which provides service to municipalities in the Capital Regional District. Decisions about fares, routes and service levels are made by the Commission, based on information and planning provided by BC Transit. In addition, the VRTC is responsible for the local share of funding. This funding comes from the fare revenue, property taxes, and a motor fuel tax. Additional information regarding the motor fuel tax is included in the Funding section (pg. 31).

A commission represents transit service areas designated by BC Transit, and must provide the necessary clerical and technical resources to enable it to carry out its responsibilities. The transit service area may encompass a partial, complete, or more than one regional district. Transit commission members are appointed by the Lieutenant Governor in Council from persons holding elected office on a municipal council or regional district board. Additionally, the minister must designate the chair of each regional transit commission.

¹⁵ Whistler's representation on the SLRD will increase to two members sometime in 2017 to coincide with the increased population identified through the 2016 Census.

APPLICATION TO SEA TO SKY REGIONAL AND INTERREGIONAL SERVICE

Table 18 summarizes some of the key tradeoffs between the two primary governance models.

A regional transit commission in the Sea to Sky area would be responsible for managing both the Sea to Sky regional transit service and the Whistler, Squamish, and Pemberton local transit systems; consequently, under a transit commission, these communities would lose local authority over fares and service levels within their transit systems.

Table 18 – Benefits and Drawbacks of Possible Governance Models

Governance Model	Benefits	Challenges
Regional Systems	Local partners retain complete control of their own local transit systems	Can be more difficult to achieve consensus on regional decisions
Transit Commission	Can result in a more regional approach to decision making	Local partners have less control of their own local transit systems

Funding

As identified within the Sea to Sky Transit Future Plan, under the BC Transit Act, local partners are responsible for determining the extent of transit service provided in their communities and then funding their legislated share of the cost of this service¹⁶. Existing local funding sources include property taxes, municipal and regional district taxes (MRDT)¹⁷, passenger fares, advertising revenue, and other commercial revenue sources¹⁸ (Table 19). For developing infrastructure required for this service, there may be the opportunity to leverage funding from the Public Transit Infrastructure Fund (pg. 27).

The Sea to Sky Transit Future Plan also includes a comprehensive list of alternative funding sources, and this information is included in Table 20 as well. Pursuing alternative funding sources outside the existing BC Transit model are up to the local partners to research.

¹⁶ For the majority of conventional transit services in regional systems, the approximate provincial and municipal shares are 46.69% and 53.31% respectively. The Highway 16 transit service has a different cost sharing ratio.

¹⁷ The RMOW and the District of Squamish currently collect a MRDT, but the RMOW is the only community in BC that currently allocates a portion of this funding for transit services.

¹⁸ See the Sea to Sky Transit Future Plan for additional information on existing funding sources (pg. 201-202).

Table 19 – Existing Funding / Revenue Sources for Transit in British Columbia

Existing Funding Source	Description	Key Observations
Property Taxes	Taxes collected on the value of properties	Property taxes are a common source of transit funding across Canada. The SLRD does not collect property taxes directly. Rather, taxes are collected by the member municipalities of Squamish, Whistler, Pemberton and unincorporated areas based on property assessment values.
Passenger Fares	Revenue collected through transit fare products	Fare products include cash fares, tickets, and bus passes.
Advertising Revenue	Revenue from advertising on BC Transit buses	Advertising on BC Transit buses across the province is currently managed by a third-party contractor, with an emphasis on Conventional bus advertising. Today, only Squamish Transit engages in exterior fleet advertising. The RMOW manages interior bus advertising on the Whistler Transit System fleet.
Commercial Revenue Sources	Other Commercial Revenue	Depending on local market demand and the capacity of local facilities, additional opportunities to support third-party commercial initiatives may be possible over the life of the Transit Future Plan. BC Transit continues to work with its local government partners to identify opportunities to leverage existing assets and products to generate incremental revenue.
Municipal and Regional District Taxes (MRDT)	Hotel tax charged along with accommodation fees	The Municipal and Regional District Tax (MRDT) is administered under the Sales Tax Act. The MRDT is an additional two or three per cent tax added to the Provincial Sales Tax portion of an accommodations invoice. The revenue is returned to the host municipality monthly based on the monthly remittances from the accommodations sector to the province. Although this tax is collected in many communities around the province, the Resort Municipality of Whistler is currently the only community in BC that allocates a portion of this funding for transit services. This allocation has been in place since 1991 when the Whistler Transit System first offered the free Village Shuttle services modeled on free transit services offered in ski resorts in the US.

Table 20 – Potential Alternative Funding / Revenue Sources for Transit in British Columbia

Alternative Funding Source	Description	Key Observations
Motor Fuel Tax	Tax levied on motor fuel sales within the region to be used for transit	<p>Implementing a motor fuel tax requires provincial legislative changes to the Motor Fuel Tax Act.</p> <p>The Victoria Regional Transit Commission (VRTC) is the only BC Transit system with a dedicated motor fuel tax, and collects 3.5 cents per litre on clear gasoline and diesel sold within the Victoria Regional Transit Service Area to fund transit¹⁹. When the VRTC motor fuel tax was implemented in 1993, it was accompanied by a reduction in the provincial transit funding contribution, so an increase in total local funding is not necessarily guaranteed.</p>
Auto Insurance Tax	Fee paid by vehicle owners through auto insurance payments	Requires provincial legislation.
Driver's Licence Tax	Tax levied when issuing or renewing driver's licenses	Requires provincial legislation. Drivers' licenses are renewed every five years.
Vehicle Registration Levy	An additional levy on top of existing registration fees for vehicles registered in the region.	Requires provincial legislation. Vehicles are registered once initially and when a vehicle changes ownership.
Parking Sales Levy	A tax levied on paid parking transactions as additional sales tax	Implemented by municipal governments.
Highway Toll / Cordon Charge	Toll on drivers entering or exiting a zone or region	Requires provincial legislation.

¹⁹ <http://www2.gov.bc.ca/assets/gov/taxes/sales-taxes/publications/mft-ct-005-tax-rates-fuels.pdf>

See pages 4 and 5 for the dedicated BC motor fuel tax rates by region including the Victoria Regional Transit Service Area, the South Coast BC Transportation Service Region, and the remainder of the Province.

Carbon Tax	Tax levied on carbon dioxide emissions from fuel consumption for transportation and other purposes	A carbon tax is currently implemented in British Columbia. Would require provincial legislation for use towards funding transit.
Crowdfunding	Funds raised through the collection of contributions from the general public	Best suited for funding discrete projects, trials, or ideas; can be geographically sourced (E.g. a local community association crowdfunds bus shelter and bench installation).
Development Cost Charges	A special charge on new development within the transit service area	Most effective in cities that are experiencing a great deal of concentrated growth. More suitable for funding transit infrastructure projects. If only applied near transit exchanges, high development fees could discourage Transit-Oriented Development.
Sales Tax	A special sales tax within the transit service area	Requires provincial legislation.
Third Party Revenue Contributions / Partnerships	Funds raised through the collection of contributions from private industry	Funding directed towards a particular transit service. Examples include a free event shuttle, making an existing service fare free for a particular time of day or on an event day or a season. This could offset farebox revenue and make a designated route free for customers (currently a pilot project is underway in Whistler where funding has been raised to make Route 7 free from 8 p.m. to 8 a.m. during the winter season). Could be explored on a Regional scale for Sea to Sky communities for a particular transit service.
Utility Levy	A special transit levy to all utility accounts in the region	Currently used in Metro Vancouver. May require provincial legislation.

Cost Sharing

Within BC Transit communities, cost sharing arrangements are used in the following situations:

- where transit services are extended into jurisdictions adjacent to the local partner holding the partnership with BC Transit (E.g. a bordering municipality, regional district, or First Nation); or
- between member municipalities and electoral areas within a Regional District.

Cost sharing is determined in a variety of ways throughout BC Transit communities, and parameters used in other communities include:

- service hours by area
- route length by area
- number of stops by area
- passenger activity by area
- population by area
- property assessment by area

The advantage of multiple local funding partners is that the local share of overhead and capital costs can be shared by multiple partners. However, individual service priorities are consensus based which can slow decision making processes.

Timeline

A 2018 implementation timeline is unlikely since decisions about governance and funding are still required, and the deadline for confirming expansion funding requiring new vehicles is summer of the year preceding an expansion. Consequently, Table 21 identifies the timeline and next steps required for a September 2019 implementation.

Table 21 – Proposed Timeline for September 2019 Implementation Date

Date	Deliverable
August 2017	Finalize Report, Presentation slides, and STS Regional TIPs Letter for Council Presentations
Fall 2017 - Spring 2018	Local partners develop governance and funding model for service
June 2018	Approve three year budget service expansion hours and buses
Fall 2018	Develop implementation plan for Sea to Sky regional transit service
Winter 2018	Approve implementation plan
Spring - Summer 2019	Finalize schedules, marketing materials, and infrastructure requirements for implementation
September 2019	Implement service
2020	Sea to Sky Transit Future Plan Refresh process and post-implementation review

CONCLUSIONS AND SUMMARY

Connecting communities along the Sea to Sky Corridor was identified as a key priority in the Sea to Sky Transit Future Plan, and the Sea to Sky Corridor Regional Transit Study was identified as an important next step towards developing regional and interregional transit service along the Sea to Sky Corridor. This study was undertaken in collaboration with the Squamish-Lillooet Regional District (SLRD), the District of Squamish, the Resort Municipality of Whistler (RMOW), the Village of Pemberton, the Lil'wat Nation, and the Squamish Nation, and was led by a Project Working Group which included members from each of these partners. Additionally, a comprehensive, two-phase public engagement process and a market demand analysis were conducted as part of this study to develop both the business case and the proposed service details for a regional and interregional transit service along the Sea to Sky Corridor.

Based on market demand analysis and public consultation feedback, there is the potential for substantial regional and interregional transit ridership along the Sea to Sky Corridor, with an estimated 575 average daily rides. In the short-term, eight buses and 15,100 annual service hours would be required to provide six round trips on weekdays and four round trips on weekend days along the segment between Whistler, Squamish, and Vancouver, and an additional two daily round trips on the segment between the Pemberton area and Whistler. Additionally, the regional and interregional transit service standards and performance guidelines identified in the Sea to Sky Transit Future Plan provide a guide for future regional transit investments over the next 25 years. Beyond transit service options, this study also includes information to guide infrastructure requirements, transit fares, and the next steps required to implement regional and interregional transit service along the Sea to Sky Corridor.

The following steps are required before service can be implemented:

- The participating local partners must select a governance model for making decisions on service levels, fares, and cost-sharing.
 - BC Transit recommends the formation of a higher-level working group involving the senior leadership of the participating local communities and BC Transit to guide this decision-making process.
- The locally selected governance structure must confirm the service levels, fares, and cost-sharing for the service.
- Funding for the service must be confirmed by both the local partners and the Province.

APPENDIX

Appendix A – Proposed Bus Stop Details

Stop Location	New Stop	Right of Way(s)	Difficulty	Notes
WedgeWoods	Yes	MoTI	Medium	Work with MoTI towards stops on Hwy 99. No easy turnaround options within Wedgewoods.
Existing Whistler Hwy 99 Stops	No	MoTI	Low	Bus Stop Information update required
Rainbow	Yes	MoTI	Medium	Work with MoTI toward stop(s) on Hwy 99
Whistler Village	No	RMOW	Low	Bus Stop Information update required
Whistler Creek	No	RMOW	Low	Bus Stop Information update required
Cheakamus/ Function	Yes	MoTI	Medium	Introduce new stops on Highway 99 at Alpine Lake Road/Cheakamus Lake Road. Explore Park & Ride opportunities.
Black Tusk/ Pinecrest	No	SLRD	Low	Can use existing bus stop infrastructure and turnaround location. Potential to improve bus stop infrastructure and amenities at existing stop
Brackendale	Yes	MoTI	Medium	New bus stops on Highway 99 at Depot Road. Explore Park & Ride opportunities.
Garibaldi Village ²⁰	Maybe	Squamish / MoTI	Low	Use existing stops on Garibaldi, Diamond Head, and Mamquam.
Squamish Industrial Park	Maybe	Squamish	Low	May wish to use roundabout on Commercial Way only (would require new bus stop). If using commercial way, discovery way, and industrial way, no new stops are required.
Downtown Squamish	Yes	Squamish	Medium	Bus Stop Information update required
Squamish Nation	Yes	MoTI / Squamish Nation	Medium	Potential for new stops on Hwy 99 or at Casino / Totem Hall

²⁰ In the Long-term, consider securing land for a transit exchange and Park & Ride near Garibaldi Village. An exchange will likely be needed long-term for local transit network improvements.

Stop Location	New Stop	Right of Way(s)	Difficulty	Notes
South Squamish Parks	Yes	Squamish	Medium	Potential for new stop somewhere within the overflow parking lot on the west side of the highway - challenges with parking management and bus turnaround. Could integrate with future ferry movement at Darrell Bay. Transit signal priority for left turn at Hwy 99.
Britannia Beach	Yes	SLRD	Low	Proposed new stop somewhere along Copper Drive using the Museum as a turnaround. Traffic signal priority for the bus may be required at the intersection of Copper Drive and Hwy 99 for left turn. Explore Park & Ride opportunities.
Furry Creek	Yes	MoTI	High	Would require substantial highway infrastructure improvements (additional highway on and off ramp infrastructure required ; no easy way to introduce a matching set of safe and efficient northbound or southbound stops)
Lions Bay	No	MoTI / Lions Bay / TransLink	N/A	Could use existing Route C12 bus stops in both directions. Must work with TransLink for agreement
Kelvin Grove Way	No	MoTI / Lions Bay / TransLink	N/A	Could use existing Route C12 bus stops in both directions. Must work with TransLink for agreement
Ansell/Seascape	No	MoTI / Lions Bay / TransLink	N/A	Could use existing Route C12 bus stops in both directions. Must work with TransLink for agreement
Horseshoe Bay	No	MoTI / West Vancouver / TransLink	Low	Must work with TransLink for agreement
Park Royal	No	MoTI / West Vancouver / TransLink	Low	Must work with TransLink for agreement. Same routing as 257 Horseshoe Bay / DT Vancouver service
Downtown Vancouver	No	MoTI / City of Vancouver / TransLink	Medium - High	Must work with TransLink to determine if a stop and layover location is possible. Service could terminate at Park Royal or Lonsdale Quay if Downtown Vancouver is infeasible through discussions with TransLink and Metro Vancouver