

District of Squamish Transit Business Plan



Prepared by:
 UMA Engineering Ltd.
 275 – 3001 Wayburne Drive
 Burnaby, BC V5G 4W3
 Tel: 604.438.5311
 Fax: 604.438.5587
www.uma.aecom.com

Prepared for:
 BC Transit
 and
 District of Squamish

August 1, 2008

**District of Squamish Transit Business Plan
Final Report**

Prepared by:
UMA Engineering Ltd.
275-3001 Wayburne Drive
Burnaby, British Columbia V5G 4W3
Tel 604-438-5311

D398-005-00

August 1, 2008

The attached Report (the "Report") has been prepared by UMA Engineering Ltd. ("UMA") for the benefit of BC Transit and the District of Squamish in accordance with the agreement between UMA and Client for the services described in the Report (the "Agreement"), and is subject to the budgetary, time and other constraints and limitations set forth in the Agreement.

The information and data contained in the Report, including without limitation the results of any inspections, sampling, testing and analyses and any conclusions or recommendations of UMA (the "Information"), represent UMA's professional judgement in light of the knowledge and information available to it at the time of preparation of the Report. UMA has not updated the Report since the date that the Report was prepared. Further, UMA has relied upon the accuracy of the information provided to it by Client in order to prepare the Report and UMA has not independently verified the accuracy of such information, nor was it required to do so. Thus, UMA shall not be responsible for any events or circumstances that may have occurred since the date on which the Report was prepared which may affect the information contained therein, or for any inaccuracies contained in information that was provided to UMA by Client.

UMA makes no guarantees or warranties whatsoever, whether express or implied, with respect to the Report, the Information or any part thereof and UMA shall not, by the act of preparing or issuing the Report and the Information, be deemed to have represented that the Report or the Information is accurate, exhaustive, complete or applicable to any specific use.

Except as required by law, the Report and the Information are to be treated as confidential and, unless otherwise agreed to by UMA and Client, may be used and relied upon only by Client and its officers and employees, subject to the foregoing limitations. UMA accepts no responsibility, and denies any liability whatsoever, to parties other than Client who may obtain access to the Report or the Information for any injury, loss or damage suffered by such parties arising from their use of, reliance upon, or decisions or actions based on the Report or any of the Information unless those parties, prior to using or relying on the Report or the Information, have obtained the express written consent of UMA and Client to use and rely on the Report and the Information, and signed an Authorized User Agreement in a form provided or agreed to by UMA.

This Disclaimer is attached to and forms part of the Report.

"© 2008 UMA ENGINEERING LTD. ALL RIGHTS RESERVED

THIS DOCUMENT IS PROTECTED BY COPYRIGHT LAW AND MAY NOT BE REPRODUCED IN ANY MANNER, OR FOR ANY PURPOSE, EXCEPT BY WRITTEN PERMISSION OF UMA ENGINEERING LTD."

Revision	Date	Issue/Revision Description
	February 29, 2008	Interim Report
	March 19, 2008	Interim Report revised with comments addressed
	May 21, 2008	Draft Final Report
	July 8, 2008	Final Report
	July 30, 2008	Client request for changes
	August 1, 2008	Final Report with Client Changes

UMA ENGINEERING LTD.

Report prepared by:

Report reviewed by:

A handwritten signature in black ink that reads "Bill Lambert". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

Bill Lambert, M.P.A., M. Plg., MCIP
Senior Transportation Planner

A handwritten signature in black ink that reads "Cordelia Crockett". The signature is cursive and elegant, with a prominent loop at the end of the last name.

Cordelia Crockett, EIT
Transportation Planner

Table of Contents

Executive Summary	iv
Context	iv
Recommendations	v
1.0 Introduction	1
1.1 Plan Objectives	1
1.2 Key Contents of Final Report.....	1
2.0 Public Consultation Process	3
2.1 Common Themes Expressed through Public Consultation	3
2.1.1 Commuter Services.....	5
2.2 Other Service Issues.....	6
2.3 Council Vision	7
3.0 Key Trends in the Squamish Transit System.....	8
4.0 Key Markets in Squamish	17
4.1 Transit Market Analysis.....	17
4.2 Population	17
4.3 Demographic Profile.....	18
4.4 Community Profile.....	19
4.5 Land Use and Housing Profile	19
4.6 Employment	20
5.0 Issues and Opportunities.....	21
5.1 Issues.....	21
6.0 Transit Service Design and Structure Scenarios	25
6.1 Transit Objectives/Principles.....	25
6.2 Transit Market Analysis.....	26
6.3 Potential Alternative Future Transit Service Improvement Packages	
– Local and Commuter Routes	27
6.3.1 Alternative Local Route Service Improvement Options	27
6.4 Five Year Transit Capital Program.....	40
7.0 Transit Supportive Programs	42
7.1 Objectives of Programs.....	42
7.2 Marketing	42
7.3 Fares and Fare Strategy	43
7.4 Transit Infrastructure	47
7.5 Transit Asset Management.....	47

7.6	Transportation Demand Management (TDM) Programs	48
7.6.1	Applicable TDM Measures for District of Squamish with Transit Systems and Other Areas Complementary to Transit	51
7.7	School and Squamish Transit Systems Coordination.....	53
7.8	Sustainable and Transit-Oriented Development (TOD).....	53
7.8.1	Key Design Principles for TOD	54
7.9	Potential Schedule	55
8.0	Short and Long Term Recommendations and Plan Monitoring	62
8.1	Short-Term Recommendations.....	62
8.2	Long-Term Recommendations	62
8.3	Monitoring	63
8.4	Future Linkages with Metro Vancouver-TransLink	63

List of Appendices

Appendix A	Fall 2007 Open House and Transit On-Board Surveys
Appendix B	Fall 2007 and June 2008 Open House Presentation, Poster Boards and Displays
Appendix C	Other Responses
Appendix D	Howe Sound School District Transit Routes

List of Figures

Figure 1	- Conventional Service Hours and Ridership for Squamish Transit System - 1991 to 2008.....	12
Figure 2	- Productivity in the Squamish Transit System 1991 - 2006.....	12
Figure 3	- Existing Transit Routes.....	14
Figure 4	- Custom Transit System Service Hours and Ridership in Squamish - 1991-1996.....	16
Figure 5	- Productivity in Squamish Custom Transit System.....	16
Figure 6	- Population Growth in Squamish and Regional District.....	17
Figure 7	- 2006 Population Growth by Age Group Percent Distribution	18
Figure 8	- Recommended Service Plan Changes at Conclusion of 5 Year Transit Business Plan for Squamish.....	28
Figure 9	- Recommended Transit Service in Squamish Downtown with 5 Year Transit Business Plan ...	31

List of Tables

Table A	- Recommended Local, handyDART and Commuter Bus Service Improvements in Five Year Squamish Transit Business Plan - 2008/2009 to 2012/2013	vi
Table 1	- Squamish Transit System - Historical Trends	9
Table 2	- Characteristics of Transit Services for BC Smaller Communities for Comparison - 2006/2007.	10
Table 3	- Characteristics of Ridership from Conventional Transit System - Two Week Counts in 2006 and February 2007	13
Table 4	- Characteristics of Ridership - Two Week Counts in 2006 and February 2007.....	13
Table 5	- Squamish Custom Transit Trends	15
Table 6	- Squamish Population Projection – 2005 Growth Management Study.....	19
Table 7	- Squamish - New Residential Units 2005-2007	20
Table 8	- Keys to Increasing Transit Ridership	26
Table 9	- 2008/2009 Implementation Strategy.....	30
Table 10	- Cost of Whistler to Squamish of Daily Commuter Service All Year Round (4 return trips)	36

Table 11 – Costs and Potential Staging of Transit Service Improvement Packages - 2008/2009 - 2012/2013	37
Table 12 – Five Year Transit Capital Program.....	40
Table 13 – Squamish Local Transit System Fare Structure	43
Table 14 – Squamish Commuter Transit Services Fare Structure	46
Table 15 – Applicable Transportation Demand Management Measures for District of Squamish	49
Table 16 – Potential Staging of Other Transit Service Supportive and Complementary Improvements in District of Squamish - Continue Initiatives Started in 2008/2009 through the Five Year Business Plan	56

Executive Summary

Context

Key points from this Squamish Transit Business Plan, in terms of its context, include:

- The District of Squamish transit system is under-resourced for a British Columbian municipality in terms of its population size. The City of Kitimat, for example, has 60% of the population of Squamish and double the transit service hours of Squamish. As well, the current and future development levels in Squamish, the potential future commuter market generated by projected growth in the very accessible Pemberton-Metro Vancouver corridor (i.e. with new upgraded Sea to Sky Highway), and the need to serve key transit destinations, such as Quest University, the Adventure Centre and the Brennan Park Recreation Centre, indicate a need for a significant enhancement of the Squamish transit system. It is felt that there is a latent demand for transit service which has not been served adequately by operating two buses for the three long distance routes with a 45 to 60 minute frequency. The service at times is unreliable as it is operating three routes with two buses, and the transit system does not have enough schedule time. As well, one of the conventional buses at times must be replaced with a handyDART vehicle due to schedule issues, or maintenance work on one of the two buses.
- There is strong public and Council interest to significantly improve the transit system. This public interest was shown by the good attendance at the public open house held in November 2007 on the transit business plan, a strong response to the surveys distributed at the open house and on the buses, and in the Council's support shown in the visioning session on the future transit system. There was also strong support for the completed draft Transit Business Plan and the 2008/2009 Implementation Strategy presented to Squamish Council on June 24th and by those who attended a public open house that same day.
- There are strong pressures for population and employment growth in the community due to its central location relative to Whistler and Metro Vancouver, its significantly improved highway access as result of the recent upgrading of the Sea to Sky Highway for the 2010 Olympics, and its ability to provide lower cost housing relative to those markets. The Squamish-Lillooet Regional District will experience British Columbia's fastest growth rate to 2031, during which time the regional population is expected to double. Much of this growth will take place in Squamish. The provincial growth rate is forecast to be 37% to 2031, which is the equivalent of about 1.25% a year. Squamish will experience three times this growth rate.
- The key transit markets are adult commuters and students. There is potential to capture more ridership from captive riders and choice riders (i.e. riders who have ready access to a car for trips) if significant improvements are made in the following areas:
 - Improving service frequency and reliability;
 - Enhancing service coverage and access to specific destinations;
 - Providing more direct routes with more scheduled time for improved reliability;
 - Extending hours of service in the evenings and on the weekends;
 - Providing service on Sundays and statutory holidays;
 - Enhancing the existing commuter service between Squamish and Whistler, and introducing new commuter service between Squamish and Metro Vancouver. In addition, connections to the private transit provider (Greyhound) services need to be improved from the local transit systems (i.e. introduce shared ride taxis to meet early and late trips from Brackendale and Garibaldi-

- Highlands), and the fare system needs to be harmonized and streamlined between municipal and private sector commuter service; and
- Enhancing the overall comfort and convenience on the transit system in terms of providing comfortable, safe and warm off-street transit exchanges with shelters, providing more bus stops with shelters and benches, improving the accessibility of bus stops, and providing improved and up-to-date service information for the Rider's Guide. Note: The addition of more buses for service improvements and spares, and the provision of new off-street transit exchanges will improve the transit service reliability, safety, and convenience.
 - In order to ensure the success of future strong investments in improving the local, custom and commuter transit services available in Squamish, Squamish Council should provide an equally strong commitment to the following initiatives: being supportive of smart growth and transit-oriented development in the downtown area; building a main off-street transit exchange in the downtown area to provide a strong profile for transit and a smaller off-street exchange in the Highlands area ; introducing downtown parking charges and cycling and pedestrian network improvements in order to encourage greater use of the transit system; and supporting the initiation of a wide spectrum of other transportation demand management (TDM) measures.
 - There is currently a high mid-day ridership. As well, there is very likely a latent demand for more evening and weekend service to primarily serve shopping and social/recreational trips created by the extensive new retail opportunities being provided in Squamish in the Highlands and Wal-Mart shopping areas.
 - There are several prominent destinations in the community which are not well-served by transit (e.g. retail areas such as Wal-Mart, Quest University, Capilano College, the Brennan Park Recreation Centre, the Adventure Centre, and new and future developing areas in downtown).
 - There is a need for Squamish to obtain good input and advice in their discussions and negotiations regarding future service connections to Metro Vancouver, financing of services, and their relationship to the new governance structure announced for TransLink.
 - There may be an opportunity to capture efficiencies of service by combining public transit and school bus systems, as well as operational efficiencies in the joint purchase of vehicles and fuel.

Recommendations

Key recommendations from this Squamish Transit Business Plan, in order to serve existing and future identified markets, capture new ridership and enhance the sustainability of Squamish's transportation system, include the following transit service improvements outlined in Table A, and a number of the complementary transit capital investments, fare changes, transportation demand management measures, and transportation supportive land use initiatives. It should be noted that similar level investments in service (i.e. amount of funding) will have double the impact on increasing ridership versus fare reductions.

The following transit service improvements and their staging are recommended and shown in Table A. Over the five years of the Squamish Transit Business Plan, these improvements will increase the bus fleet as follows: conventional bus fleet for local service from 2 to 10 vehicles; the handyDART fleet from 2 to 4 vehicles; and the buses used for commuter service from Squamish for services to Whistler and Metro Vancouver from 3 to 6 vehicles.

Table A - Recommended Local, handyDART and Commuter Bus Service Improvements in Five Year Squamish Transit Business Plan - 2008/2009 to 2012/2013

Local Service	handyDART Service	Commuter Service
2008/2009 Fall	2008/2009 Fall	2008/2009 Fall
Improve service to Highlands, Loggers Road and Industrial Road east of highway with Brackendale and Garibaldi - Highland routes with completion of overall of Centennial Drive across the highway		Squamish-Whistler recently made all year round service
Modify routing on existing 3 transit routes to better serve Quest University and the downtown area, Highlands Shopping Centre, and Wal-Mart; and improve routing service to the following areas: Valleycliffe route to serve new area - Balsam Way/Cherry Point; and Garibaldi-Highland route to serve Thunderbird Ridge/Glacier View Drive, Quest University (initially one morning trip and one afternoon trip), Loggers Lane and Brennan Park Recreation Centre; and Garibaldi-Highlands and Brackendale routes to better serve Discovery Way and Wal-Mart. Modify the routing for all transit routes in the Downtown area to provide improve coverage and to make it easier to extend routes when the Waterfront and other downtown areas are redeveloped		Conduct market research and review to determine demand for Squamish to Metro Vancouver computer service. Obtain research on a premium service for this connection undertaken by TransLink.
Put more time in the schedules of routes to improve service frequency in peak and off-peak periods for some trips and service reliability. For example, service will be every 30 minutes between Downtown, Howe Sound Secondary, Capilano College, Wal-Mart and Highlands Shopping Centre area		
Select and purchase property for two new off-street transit exchanges - the primary exchange being located in the downtown area and the other mini exchange near the Highlands Shopping Centre area		
2009/2010	2009/2010	2009/2010
Extend weekday and evening service to 9:00 pm	Add a Taxi Saver coupon to complement the handyDART service	Initiate a Squamish to Metro Vancouver commuter service with four round trips a day serving Horseshoe Bay, Park Royal and Lonsdale/SeaBus.
Introduce Sunday and statutory holiday service for nine hours		Provide shared ride taxi trips to meet early morning and late evening trips from Brackendale and Garibaldi-Highland areas.
Introduce 30 minute peak period service on all routes		

Local Service	handyDART Service	Commuter Service
2010/2011	2010/2011	2010/2011
Introduce a new route along Highway 99 between Brackendale and the new downtown off-street transit exchange	Add one more vehicle to handyDART system and double the hours	Negotiate increases service and fare harmonization with Greyhound Sea to Sky Highway service and the Squamish-Whistler and Squamish-Metro Vancouver services
Open the downtown and Highland Shopping Centre area transit exchanges and modify routes as required		
2011/2012	2011/2012	2011/2012
Improve midday frequency of service on all 4 routes to every 30 minutes		
2012/2013	2012/2013	2012/2013
Improve peak period frequency of service on all 4 routes to every 15 minutes	Add a another handyDART vehicle as spare or replacement	
Introduce a new bus to continue to improve service reliability and to serve new development		
Provide summer time service to some local recreation areas with a premium fare		

During the five years of the plan, the conventional bus service hours are increased from 7,000 hours and 2 buses today to 36,600 hours and 10 buses, including an addition of 3,200 vehicle hours and 1 bus in 2008/2009.

Note: The timeframe for which BC Transit and Squamish will be able to achieve the recommended transit and related program improvements, will, of course, be dependent upon the financial commitment that BC Transit and the Squamish Council want to dedicate to these recommended transit system improvements, capital investments and complementary support programs.

The service improvements have been deliberately placed in service package options for staging their introduction in each of the five years of the Plan, so that they can be moved to alternative years for their implementation, if desired by Squamish and BC Transit.

Custom Bus Service: Over the five-year period, the Plan recommends doubling the custom service from 2,000 to 4,000 annual hours, providing a spare/replacement vehicle and another in-service vehicle by adding two vehicles, and introducing a Taxi Saver program (subsidized taxi coupons) to complement the handyDART transit system. These improvements are recommended in order to more appropriately serve the existing and growing population of older residents and especially those over eighty as they increase as a proportion of the total population, and to place Squamish more in line with other growing BC communities in terms of total paratransit service hours.

Commuter Bus Service: The Plan recommends increasing the number of trips on the Squamish-Whistler route by harmonizing public transit services with the private sector Greyhound services, including the coordination of fares and transfers between the two systems. The Plan also recommends introducing a Squamish to Vancouver route with connections to Horseshoe Bay, Park Royal, and Lonsdale, as well as examining the harmonization of this service with the private operator service of Greyhound. This potential commuter service to Metro Vancouver should also be discussed and co-ordinated with TransLink's plans to possibly introduce a high quality and premium fare highway coach commuter service within its service area, and offer this same service for connections outside Metro Vancouver (i.e. to Fraser Valley and Pemberton-Metro Vancouver corridor).

The Squamish local net share of the five year total operating cost of the recommended conventional, handyDART and commuter bus services increases from \$311,000 to \$1,323,000 between 2007/2008 and 2012/2013.

The five year Transit Service Plan and its related details and supportive initiatives are outlined in Section 6 and Tables 11 through 16.

Transit Capital Investments

The Plan recommends the following transit capital investments to complement the recommended service improvements and provide a safer and more customer friendly environment for transit users:

- Introducing a main off-street transit exchange/transportation hub in the downtown and a mini off-street transit exchange in Highlands Shopping Centre area by 2010/2011 with initial site selection, property purchase and planning and design starting in 2008/2009. These exchanges will provide safer and more comfortable transfers between buses and improve the efficiency of operations.

- Providing significantly more shelters (i.e. there are currently only two shelters) and benches to 10% to 20% of bus stops in Squamish in the next five years with a concentration of effort in 2008-2010, with community art and schedules displays at these shelters and bus stop areas starting in 2008/2009.
- Establishing a program to make current bus stops more accessible, with a concentration of effort in 2008-2010 in order to create a better environment for customers who find using accessible buses difficult now (i.e. use BC Transit Accessible Bus Stop Guidelines to enhance the bus stop design themselves for accessibility and ensure there are level and good sidewalk connections to the bus stops).
- Designing and building an enhancement to the existing local bus maintenance and storage facility in Squamish in 2009-2010 so that maintenance needs of a recommended larger bus fleet (i.e. when the local service fleet size is greater than 4 buses) can be satisfied more efficiently and effectively in Squamish.
- Placing bike storage facilities at the two new transit exchanges in order to extend the reach of bus services, continuing to place bike racks on new buses, and responding to the public expressions in this transit service review for improved cycling-transit integration.
- Increasing transit schedule information at key stops and the new transit exchanges.
- Planning for a regional Smart Fare Card in 2008 to 2010 and implementing in 2011/2012.

A five year Transit Capital Plan is summarized in Table 12 which outlines \$10.265 million of capital expenditures, including new bus purchases, two new off-street exchanges and an enhancement to the Squamish bus maintenance and storage facility to accommodate the maintenance requirements of an expanded bus fleet. Excluding the buses which are purchased by BC Transit, total estimated capital costs for Squamish in the five year capital component of the business plan area are \$4.415 million, of which the Squamish net share would be \$2.150 million including the public transit capital grants it would receive from the federal government and BC Transit.

Fare Strategy

The plan recommends using an alternative multiple of tickets (i.e. use 10 for 9) in order to more clearly indicate the savings and encourage this fare media's use. The Plan also recommends that Capilano College and Quest University, as well as high school students should be permitted to purchase a new four-month school semester pass at a cost of \$80.00, in order to encourage their ridership for school and other trips. The Plan recommends that the 'schools day only' monthly pass be eliminated and as compensation, the student monthly pass price be reduced from \$30.00 to \$25.00. The Plan is also recommending that Squamish introduce a more flexible transfer policy that would allow travel on any bus in any direction for a 90 minute period. This would allow passengers to use a transfer to make a return trip or for a stopover, as long as the second trip is within the 90 minute period.

The Plan also recommends the possibility of developing and implementing Smart Card fare technology by 2011/2012, and that it is examined in relationship to commuter services in the Squamish, Whistler, and Metro Vancouver corridor. The first step towards this objective would be to have some discussions between all the parties (Whistler, TransLink, Squamish and BC Transit) and possibly conduct a market research survey into the Card's attributes, pricing points and its appeal to transit customers. This could also be done in association with the discussion between these parties and Greyhound in attempting to get some harmonization of service and fares in the Sea to Sky Corridor.

Transportation Demand Management (TDM) and Transit Supportive Land Use Measures

There is a need to support the effectiveness and efficiency of the significant investments being recommended to improve local, commuter and handyDART transit service by supporting the following initiatives:

- Implementing transportation demand management (TDM) measures such as introducing downtown parking charges, making improvements to the cycling and pedestrian networks; and
- Implementing other transit supportive land use measures, such as promoting Smart Growth and transit-oriented development in the downtown, in existing built-up areas, and in new growth areas.

Note: The downtown parking charges could be used to fund the operating costs of improved transit service and/or downtown streetscape, sidewalks, bus shelters and cycling facilities.

Other recommended initiatives also include the following:

- Creating a full time Squamish staff position whose function would be to coordinate Squamish's interests in the transit system with BC Transit, the operating company and other Squamish Departments, and as well look after a comprehensive Squamish TDM program to support transit initiatives.

These and other TDM measures will improve the performance of the transit system, support Squamish's interests in enhancing the transit system, and promote the increased use of active transportation modes in Squamish (i.e. transit, walking and cycling). Other municipalities in Canada have found that transit improvements are far less effective if they are not at the same time supported by higher density and mixed land use near transit and the implementation of broad based TDM programs.

Other Complementary Initiatives

The Plan recommends a number of complementary measures to also support the service improvements including the following:

- Regularly updating the Rider's Guide when service changes are made and enhancing the Guide by including maps of pedestrian and cycling pathways in the District, starting in 2008/2009;
- Indicating which trips in the Rider's Guide will also serve schools and use handyDART vehicles, starting in 2008/2009;
- Using a Community Task Force to establish a branding strategy for the transit system to provide more of a local profile (2009/2010), and place more information on the bus system on the Squamish website;
- Indicating when there may be a strong possibility that a handyDART vehicle may be used on some trips due to a shortage of vehicles, until the conventional bus fleet is expanded; and
- Undertaking other marketing initiatives (e.g. establishing a local transit system branding system) by means of a District Transit Task Force to increase ridership on the transit system and improve its profile and community and political support for improvements to its service, convenience, reliability and comfort.

The fare strategy, TDM policies and other complementary policies which are essential to achieving the Transit Business Plan's objectives and supporting the recommended service improvements and transit capital investment recommendations are outlined in Section 7 and Tables 13 through to Table 16.

Transit System Monitoring

It is recommended that BC Transit and District of Squamish combine resources to ensure that the following items are continuously monitored to ensure the best allocation of resources for the transit system and a high level of service for customers:

- The ridership on existing routes to ensure appropriate frequencies and hours of service through conducting regular on-off counts;
- The location and forms of new development to ensure that they are coordinated with transit;
- The ridership on summer routes to determine if the number of daily trips should be modified through on-off counts;
- The ridership on commuter routes to determine if the number of daily trips should be modified, through on board survey and ridership counts;
- The number of “no-shows” occurring (i.e., buses that are making an unscheduled short-turn and skipping sections of the route);
- The fare recovery ratio;
- The monitoring of revenue rides/per capita, operating cost/vehicle hour and vehicle hours/capita;
- The number of prepaid fare users versus cash fares; and
- HandyDART trips that could be provided by regular routes if they were made more accessible.

Future Linkages with Metro Vancouver-TransLink

The new provincial legislation governing TransLink contemplates TransLink discussing with the communities along the Sea to Sky Highway, including Squamish, the extension/linkage of some of TransLink’s service and programs to these communities. It is recommended that Squamish obtain some professional transportation consulting to assist with any discussions or negotiations with TransLink in regard to extension of services or programs to Squamish.

1.0 Introduction

A new five year Transit Business Plan (2008-2013) has been prepared for the District of Squamish. This process was initiated in mid-November 2007 with the intent of presenting a draft Plan to a public open house on June 24, 2008 and a final Plan to Council in July 2008.

BC Transit's Municipal Systems Program, accounting for nearly 80 transit systems beyond the Cities of Victoria and Metro Vancouver, has set ambitious growth over the next ten years so that it can meet or exceed the Provincial Transit Plan target of doubling transit service province wide by 2020. Squamish transit will likely see even faster growth throughout this period and beyond.

1.1 Plan Objectives

The Transit Business Plan has the following objectives:

- Improve the efficiency and effectiveness of the local transit services as a first priority, and as well the development of enhanced commuter transit connections between Squamish and Whistler, and a new commuter transit connection between Squamish and Metro Vancouver;
- Develop complementary and integrated strategies and programs which will support the transit system service improvements in areas such as fares, transit capital investments, transportation demand management programs, and marketing strategies;
- Determine the transit system's short-, medium-, and long-term operating and capital needs to meet existing customers needs, potential market needs, and take advantage of increased provincial and federal transit funding;
- Identify the key transit markets and the means to increase their transit market share, as well as identifying new opportunities for ridership growth;
- Examine opportunities for improving the integration between the conventional and paratransit transit systems in the District, as well as opportunities for efficiencies between the public and school bus systems; and
- Identify service and performance monitoring guidelines for the transit system.

1.2 Key Contents of Final Report

This final report summarizes the Squamish Transit Business Plan as follows:

- The public consultation process and what themes, issues and opportunities were heard in regard to the current transit system, and what desires were expressed about future changes;
- The vision for the future transit system expressed by the District of Squamish Council;
- Key trends in regard to the Squamish transit system and a comparison to other transit systems within its Tier 3 grouping of similarly-sized communities in British Columbia;
- The existing and future key transit markets and demographics, land use, development, housing, population, and employment features of the District of Squamish;
- The existing school bussing system for Howe Sound School District No. 48 which serves the elementary and high schools in Squamish;
- An evaluation framework for examining future transit service and other improvements;
- Recommended service improvement option packages and other complementary actions/ improvements for enhancing the public conventional and custom transit systems in Squamish and providing new or improved transit service links to Whistler;
- A five-year capital investment plan and budget;

- An evaluation of these proposed service enhancement option packages, complementary strategies and actions and five year capital investment plan;
- A detailed action plan relating to transportation demand management and other complementary initiatives that will support the transit plans and its objectives of increasing ridership and improving the environment for customers; and
- The plan for monitoring the performance of the transit system in Squamish and the success in implementing this five-year business plan.

This final report, combined with the Implementation Strategy for September 2008 service and fare changes, was presented in draft form to Squamish and BC Transit representatives of the Project Steering Committee in late May, 2008 and to the Squamish Council meeting and at a public open house on June 24, 2008. Comments from these consultations and presentations have been addressed in this final report. This final report will be presented to the Squamish Council.

2.0 Public Consultation Process

2.1 Common Themes Expressed through Public Consultation

To obtain initial public input for this Plan, a public open house was held in Squamish on November 27, 2007. Public input was collected via comments written on poster boards which posed questions and via completed surveys. Approximately 130 people attended this open house and 48 surveys were completed.

On December 6, 2007, comments on the existing and future issues and opportunities for the Squamish transit system, including handyDART, were obtained through 207 surveys completed by customers riding on the transit system.

In a meeting with Squamish District Council on December 12, 2007, Council provided input on their five-year vision for the transit system.

Copies of the displays and open house, and on-board transit surveys are included in Appendices A and B. Individual comments made from the surveys are captured in Appendix C. Common themes expressed through all of these public consultation means are summarized in this section.

The draft Five Year Transit Plan and the fall, 2008 Implementation Strategy was also presented at a public open house and to Squamish Council on June 24, 2008. The Council and public feedback was very supportive of the overall Five Year Transit Plan and the fall, 2008 Implementation Strategy that had been developed. The attendees at the June open house indicated that the Implementation Strategy and overall five-year Plan had addressed most of the issues/challenges indicated below:

- **Service Frequency and Reliability:** There was strong support expressed in all the public input for significantly increasing the service frequency (from hourly service to every 15 to 30 minutes), especially in the peak periods (6:00 am to 8:30 am and 3:00 pm to 6:30 pm). This strong support for improving transit service frequency was expressed in order to initiate use of the transit system by new riders and/or increase the use of the local transit system by existing riders. As well, this support was related to making the transit service more reliable - another key component of the transit system desired by users and non-users. Often routes have to be short-turned to enable schedules to be met. There are only two buses providing the scheduled service which places a significant strain on the transit system to meet schedules when it is held up by traffic incidents or disabled buses. At times, the handyDART bus is even used on the conventional transit system because of problems with one of the two buses used for conventional transit service. There was also support expressed for reducing the length of the routes to improve their reliability. These items dominated the requests expressed in both the open house and on-board surveys.
- **Timing of Service:** There were many comments about having trips more appropriately timed to meet school start and finish times; having more buses at peak school times to avoid overcrowding; and scheduling service to meet the needs of the employees starting and finishing work at the hospital.
- **Centrally-Focused Off-Street Downtown Transit Exchange and Off-Street Transit Exchange in Highland Shopping Area:** There was support expressed for having the local transit services all connect to a customer-friendly, off-street transit exchange/inter-municipal transportation hub located in the downtown area. This main exchange/terminal could be paired with an off-street and mini sub-exchange in the Highlands Shopping Centre area. More frequent direct services on the existing routes could provide frequent connections between the new main exchange/transportation hub in the downtown area and the smaller exchange in the Highlands.
- **Non-Peak Period Service:** There was strong support expressed for extending service on weekday evenings (first priority) to 9:00 pm, extending service on Saturdays to 9:00 pm or 10:00 pm (second priority), and introducing service on Sunday and holidays (third priority) to enable residents to make required work trips, go shopping, and make entertainment and social trips.

- **New Buses and Smaller Buses:** There was some support expressed for use of newer buses, as customers indicated that they have experienced buses breaking down. There was also some support expressed for the use of smaller buses for off-peak periods.
- **Service to New Community Areas and Destinations:** There was a common recognition expressed from all the public input that Squamish had significantly changed in recent years as a result of the influx of new residents and new developments. Also, there was a strong public sentiment that Squamish was going to continue to experience a great deal more change in future years in terms of newly developed residential and employment areas and community destinations, as well as significant changes as a result of the implementation of the new Waterfront Plan. There were common sentiments expressed that the influx of new residents in recent years had higher expectations for transit service as many had come from areas such as where public transit service was excellent.
- **Key Reasons for Using Transit**
The key reasons for using the bus in Squamish expressed by residents, in order of importance, were:
 - No access to a vehicle;
 - Low environmental impact of using the bus;
 - Less expensive;
 - Relaxing;
 - Bus stops are close to home; and
 - The transfer connections are good.

Many participants in the public consultation process expressed the need for transit service to the following destinations which are now not well serviced by transit:

- Commercial areas: Wal-Mart, Canadian Tire, Home Depot, and Highlands Shopping Centre;
- Community facilities: walk-in-clinic, Quest University, elementary and high schools (e.g. Mamquam School), movie theatres, cemetery, Adventure Centre, Brennan Park Recreational Centre and Brew Pub;
- Downtown - new growth areas such as the Waterfront Plan;
- Residential areas: Raven's Plateau, Thunderbird Ridge, Cherry/Balsam Way, and Garibaldi Estates; and
- Recreational areas: Shannon Falls Provincial Park, Alice Lake Provincial Park, Stawamus Chief Provincial Park, Cat Lake, Brohm Lake, Britannia Beach, and Squamish Valley Golf and Country Club.

Other important transit service improvements and other items that would complement transit services expressed by Squamish residents included the following:

- **New Fare Media:** Specific changes requested in regard to transit fare media included:
 - **U-Pass and High School Pass:** There was support expressed for examining the development of Quest University and high school student deep-discount transit pass programs (e.g. universal pass for university students) on the basis that all students purchase a pass. These programs have been used successfully in other areas to significantly increase ridership and build a long-term transit culture.
 - **More Outlets for Transit Fare Media:** Strong support was expressed to increase the number of outlets selling bus passes and tickets.
 - **Multi-Ride Cards:** There was limited support for multi-ride cards (i.e. 30-50 rides) which could be used on commuter services or paying for rides via credit/debit card.

- handyDART: Specific changes requested by the public in regard to the handyDART service included the following:
 - Improved Frequency and Hours of Service: Need to improve handyDART service in terms of more buses and service frequency, and total transit service hours commensurate with a growing community.
 - Vehicles assigned to conventional and handyDART services: Do not use handyDART buses for conventional services when conventional buses are out of service.
 - Training of Drivers: Teach drivers how to use the lift to accommodate empty strollers.
 - Increased Seating: handyDART buses do not have enough seats.
- Other options: Provide discount taxi saver coupons for use of accessible taxis to supplement the handyDART service, and provide a more cost-efficient means of paratransit service other than the handyDART buses. This can be achieved by implementing a Taxi Saver Program where eligible handyDART users can purchase a set amount of discounted taxi fares each month.

Howe Sound School District Bus System

Howe Sound School District No. 48 has 9 buses serving 12 bus routes during peak periods. These routes serve the Don Ross and Howe Sound Secondary Schools and the Squamish and Brackendale Elementary Schools. These services duplicate, to some extent, the public transit routes in Squamish.

There may be opportunities through this project to discuss with the School District possible partnering in terms of purchasing fuel and vehicles with BC Transit, and ways that services could be optimized or even combined between the public and School District bus systems. Appendix D lists the school bus routes.

2.1.1 Commuter Services

Comments made in regard to commuter transit services from Squamish included the following:

Transit Service: Squamish to Whistler: There was strong support for significantly enhancing the transit service between Squamish and Whistler. Specific requests included:

- Operating service throughout the day;
- Operating the service during the entire year;
- Providing earlier morning trips for workers in Whistler and later return trips in the PM peak period;
- Using shared-ride taxis (through a local taxi firm) to provide connections from Brackendale and the Garibaldi-Highlands areas for early morning and later evening commuter trips now not served by local routes;
- Operating the service more frequently;
- Providing up-to-date information on service schedules, delays, etc., through an up-to-date Rider's Guide and through the provision of updated bus schedule at the bus stops and on the District's website;
- Do not keep moving the bus stops for this service; and
- Negotiate arrangements with Greyhound to allow free transfers from its Whistler to Squamish service to local transit services in each of the communities, and make the fare policies and systems of the municipal commuter services and Greyhound services similar and easier for customers to understand/harmonize them.

Transit Service: Squamish to Metro Vancouver: There was strong support for initiating a transit connection between Squamish, and operating it all day and during the entire year. Specific requests made included:

- Operating four trips into Vancouver in the morning and four return trips in the evening for commuters. Also provide some mid-day trips and one later PM trip;
- Offering one-way fares between \$5 and \$10, with \$5 to \$6 being the most popular;
- Conducting discussions with Greyhound in terms of developing possible partnership arrangements for this service;
- Connecting the service with Horseshoe Bay, Park Royal, and the SeaBus at Lonsdale; and
- Negotiating arrangements with Greyhound to allow free transfers from its Squamish to Vancouver service to local transit service in Squamish and Vancouver and making the fare policies and systems of the municipal commuter and Greyhound services similar and easier for customers to understand.

An important issue that arose during the fall 2007 Public Open House discussion was the need for Squamish to obtain good input and advice in its discussions and negotiations regarding future service connections to Vancouver, financing of services, and the relationship with the new governance structure announced for TransLink. Recently announced changes to TransLink (now called South Coast British Columbia Transportation Authority) could lead to an expansion of their network into the Fraser Valley and the Sea to Sky Corridor.

2.2 Other Service Issues

Other prominent service issues included:

- **Short-Turning Transit Routes:** Routes are now being short-turned due to ridership demands, a lack of buses for the existing three long routes, and customers are being left behind. This results in a very unpredictable schedule for the transit customer.
- **Updating of Rider's Guide:** There is a need for more frequent updates of the Rider's Guide, and improved and more visible bus schedule information is needed at the bus stops and on the District's website.
- **Improved Shelter and Provision of Benches:** There is a requirement for more benches and shelters on routes. There are now only two bus stops with shelters.
- **Bus Stop Enhancement:** There is a need for improved bus stops (i.e. to make them accessible-landing pads, curb cuts etc.), and provisions for sidewalk connections to bus stops, putting schedule information at more stops, and displaying community area at some prominent stops.
- **Bike Storage Facilities and Bike Racks:** There is a need for bike storage facilities at exchanges. Provision of these bike facilities will extend the range of the bus routes and allow residents greater access to the service. Bike racks also need to be put on future new buses.
- **Enhanced Local Bus Maintenance Depot:** There was a need expressed for enhancement of the existing bus maintenance facilities and staff to be located in the Squamish bus maintenance depot facility located in the industrial area near Wal-Mart, as the bus fleet size increases above 4 buses. This would improve the responsiveness to bus maintenance requirements as the size of the bus fleet increases in Squamish.
- **Splitting of Routes:** There was a request to split the Garibaldi-Highlands route into two, servicing the Highlands and the Estates separately, or to have more buses assigned to this route to ensure that this service is reliable.
- **Increase Safety on Buses and at Stops:** There is a perception by many customers that the safety and security could be improved at the bus stops and on the buses.
- **Use of Emergency Access:** There was a suggestion to use the emergency access route between Northridge and Plateau to provide more reliable and direct service, and enhance coverage in Valleycliffe.

2.3 Council Vision

District staff and the consultant met with Squamish Council on December 12, 2007. Council members expressed their five-year vision for the transit system which included the following components and ideas:

- Significantly increase the community awareness of the transit system as the perception is that many people are not aware and therefore do not use the system. Increase awareness through new marketing and education initiatives.
- Integrate the public transit system with the school bus system by coordinating fuel and bus purchases and services.
- Establish lower fares in the summer to encourage ridership.
- Pursue the development of high school and university discount transit passes to encourage increased use and to develop a long-term transit culture.
- Establish a presence for the transit system in the downtown area and in areas of future development. Examples include the area addressed in the Waterfront Plan, operate a diesel-hybrid or electric shuttle bus in the downtown area and combine the service with walkability improvements.
- Significantly increase the frequency of the transit system in Squamish to 15 – 30 minutes all day long and provide weekday and weekend evening service.
- Implement sustainable transportation measures which will support the transit system, (e.g. Smart Growth, consider parking charges in downtown area, etc.)
- Incorporate the use of the rail line (streetcar) through Squamish in some way as part of the transit system, perhaps with linkages to Brackendale.
- Provide supporting measures which will encourage greater use of the transit system – more, better lit and safer shelters, improved sidewalk connections to bus stops, and a main transit exchange for bus connections.
- Break car dependency and the auto mindset in the District, and provide a reliable, time-competitive, and comfortable transit travel alternative.
- Use revenues from parking to make transit improvements.
- Use shelters to display “community art”.

3.0 Key Trends in the Squamish Transit System

Table 1 illustrates some trends from the Squamish transit system between 1991 and 2006, drawn from BC Transit records. Table 2 indicates some trends among the twelve transit systems in the Tier 3 BC Transit grouping, in which the Squamish transit system is placed. The populations of these communities range from 10,000 in Kitimat to 19,500 in both Sunshine Coast and Cranbrook. The source of this data is BC Transit. Some key observations from examining these tables include the following:

- The Squamish transit system has almost doubled (93% increase) in total annual service hours from 3,601 hours in 1991 to 6,947 hours in 2006/2007, and this growth has outpaced the population growth in the same the period. The population has increased 24.3% from 12,027 in 1991 to 14,953 in 2006/2007. There was doubling of conventional transit service hours between 1995 and 1996, but the service hours have remained flat since 1996, while ridership increased by 48%.
- The Squamish transit system is significantly under-resourced in comparison to other communities in the Tier 3 grouping, as measured in total buses and service hours. (Squamish has 2 buses and 6,947 annual service hours versus averages of 3.5 buses per community and 10,169 annual service hours in the overall grouping.) As a result, the ridership that the Squamish transit system is able to capture is lower than its peer communities.
- There are two handyDART buses.
- Squamish Council's municipal contribution to the transit system is the third lowest among the 12 communities in the Tier 3 grouping; it was \$175,000 in 2006/2007 while the average municipal contribution for transit for the communities in this group is \$302,000. The service hours per capita for the Squamish transit system is 0.48 versus 0.68 for the Tier 3 grouping.

Tables 3 and 4 provide snapshots of the weekly ridership trends from 2 two-week counts on the Squamish transit system in 2006 and 2007 and from the transit systems in BC in the Tier 3 communities.

Key observations from this information include the following:

- Squamish has a higher adult ridership share than comparable transit systems - 43.2% versus 33.5% in its grouping, and a slightly lower students' ridership share - 44.1% in Squamish and 46.1% in its Tier 3 community grouping. It also has a lower share of BC bus pass users than other Tier 3 community groupings.
- Squamish has lower average weekday ridership - 577 riders - than the average 698 weekday riders in the transit systems in its Tier 3 community grouping, and it has lower evening ridership - 5.9 riders per hour - than the average 11.9 riders per hour in its tier community grouping. This is due to the smaller transit system in Squamish, in terms of routes, buses, and vehicle hours, and a very limited evening transit service in Squamish.

Figure 1 indicates the change in the ridership, vehicle hours, and productivity of the Squamish transit system between 1991 and 2007/2008. While ridership has increased approximately 40% between 1996 and 2007/2008, vehicle hours in the community have slightly decreased 2.8% between 1996 and 2008. Figure 2 indicates the service productivity which has increased approximately 40% between 1991/1992 and 2007/2008.

Table 1 - Squamish Transit System - Historical Trends

Year	Service Hours	Rides	Productivity (rides per service hour)	Cost Recovery (% of total costs recovered from fares)	Total Cost	Revenue	Net Municipal Share	Cost per hour	Revenue per Ride	Cost Per Ride
1991	3,601	54,132	21.3	32.1%	\$150,269	\$48,236		\$41.73	\$0.89	\$2.78
1992	3,662	55,124	15.1	29.6%	\$165,641	\$49,030		\$45.23	\$0.89	\$3.00
1993	3,613	60,767	16.8	28.4%	\$191,580	\$54,378		\$53.03	\$0.89	\$3.15
1994	3,579	69,545	19.4	31.3%	\$199,812	\$62,483		\$55.83	\$0.90	\$2.87
1995	3,343	71,371	21.3	30.5%	\$209,417	\$63,824		\$62.64	\$0.89	\$2.93
1996/97	7,148	98,842	13.8	21.1%	\$504,281	\$106,510		\$70.55	\$1.08	\$5.10
1997/98	7,588	97,602	12.8	20.6%	\$509,784	\$105,045		\$67.18	\$1.08	\$5.22
1998/99	7,579	95,146	12.6	18.4%	\$519,298	\$95,324		\$68.52	\$1.00	\$5.46
1999/00	7,688	107,581	14.0	23.2%	\$485,961	\$112,942		\$63.21	\$1.05	\$4.52
2000/01	7,374	118,231	16.0	26.5%	\$498,579	\$132,217		\$67.61	\$1.12	\$4.22
2001/02	7,339	122,299	16.7	28.5%	\$496,246	\$141,478		\$67.62	\$1.16	\$4.06
2002/03	7,229	134,180	18.6	28.8%	\$519,346	\$149,819		\$71.84	\$1.12	\$3.87
2003/04	7,032	148,876	21.2	28.3%	\$517,216	\$146,504		\$73.55	\$0.98	\$3.47
2004/05	6,912	145,961	21.1	27.7%	\$540,013	\$149,517		\$78.13	\$1.02	\$3.70
2005/06	7,848	158,947	20.2	28.8%	\$608,255	\$175,348		\$77.50	\$1.10	\$3.83
2006/07	6,947	146,670	21.1	27.4%	\$600,562	\$164,372	\$175,952	\$86.45	\$1.12	\$4.09
% change 1991 to 2006/07	93.0%	171.0%	0.9%	-4.7%	299.7%	240.8%		107.2%	25.8%	91.7%
% change 1996/97 and 2006/07	-2.8%	48.3%	52.9%	6.7%	19.1%	54.3%		22.5%	3.7%	-19.85

Source: BC Transit

Table 2 – Characteristics of Transit Services for BC Smaller Communities for Comparison - 2006/2007

	Terrace	Dawson Creek	Kitimat	Port Alberni	Cranbrook	Average for All Tier 3 (12 communities)
Population	14,700	10,500	10,000	18,700	19,500	14,583
Type of Transit System	7 Fixed Routes	6 Fixed Routes	6 Fixed Routes	4 Fixed Routes	6 Fixed Routes	
Total Vehicles	2 buses	2 buses	5 buses	3 buses	3 buses	3.5 buses
Days and Hours of Operation	7:00 am to 10:00 pm weekdays – every 60 minutes; and Saturday – 9:30 am to 10:00 am to 6:30 pm – every 60 minutes	7:30 am to 6:30 pm Monday to Friday - every 30 minutes; and Saturdays 9:30 am to 6:00 pm - every 30 minutes	7:30 or 8:00 am to 10:00 pm Monday to Friday - every 30 minutes on most routes; Saturday and Sunday – 10:00 am to 7:00 pm every 30 to 60 minutes varying for routes	6:30 am to 6:30 pm Monday to Saturday - every 30 minutes on most routes	7:00 am to 9:30 pm Monday to Friday - every 30 minutes on most routes; and 9:00 am to 6:00 pm on Saturdays and 10:00 am to 6:00 pm on Sundays	
Service Utilization - Annual Revenue Passengers / Rides Per Capita	168,574/11.5 rides per capita	122,299/11.6 rides per capita	161,349/16.1 riders per capita	239,423/12.8 rides per capita	184,067/9.4 rides per capita	224,398/15.1 rides per capita
Annual Vehicle Hours	7,908	5,909	11,989	11,276	12,226	10,169
Fares	Cash \$1.50 – adult \$1.25 students and seniors; and 10 tickets - \$14.50 for adults and \$11.50 for seniors and students; adult pass - \$31.00	Cash \$1.75 - adult \$1.50 students and seniors; and 10 tickets - \$15.75 for adults and \$13.50 for seniors and students; adult pass - \$50.00	1 Zone Cash \$1.75 - adult \$1.50 students and seniors; 2 Zone - \$2.00 and \$1.75; and 1 Zone - 10 tickets - \$15.75 for adults and \$13.50 for seniors and students, and 2 Zone - \$18.00 and \$15.75; adult pass - \$39.00	Cash \$1.75 - adult \$1.50 students and seniors; and 20 tickets - \$33.25 for adults and \$28.50 for seniors and students; adult pass - \$48.00	Cash \$1.75 - adult \$1.50 students and seniors; and 10 tickets - \$15.00 for adults and \$12.00 for seniors and students; adult pass - \$40.00	Cash range from \$1.50 to \$1.75 for adults to \$1.25 to \$1.50 for seniors and students; Tickets \$11.50 to \$16.62 for adults and \$11.50 to \$14.25 for 10 tickets; and \$31.00 to \$50.00 for adult monthly pass
Operator	Contractor	Contractor	Contractor	Contractor	Contractor	Contractor

	Terrace	Dawson Creek	Kitimat	Port Alberni	Cranbrook	Average for All Tier 3 (12 communities)
Annual Operating Cost	\$515,983	\$580,305	\$1,338,973	\$905,589	\$859,374	\$826,202
Revenues and Cost Recovery	\$123,880 24.1%	\$124,029 21.4%	\$165,927 12.4%	\$164,304 22.2%	\$204,953 21.6%	\$241,214 29.2%
BC Transit Share	\$205,709	\$237,401	\$454,529	\$422,819	\$375,096	\$376,669
Net Municipal / Share and Cost Per Capita	\$177,952 \$11.94 per capita	\$209,245 \$19.93 per capita	\$500,308 \$50.03 per capita	\$310,582 \$16.60 per capita	\$353,183 \$18.11 per capita	\$301,904 \$20.70 per capita
Cost Effectiveness (Cost per Ride)	\$3.06 per ride	\$4.74 per ride	\$8.30 per ride	\$4.23 per ride	\$5.16 per ride	\$4.13 per ride
Amount of Service (Service Hours per Capita)	0.55 hours per capita	0.56 hours per capita	1.20 hours per capita	0.60 hours per capita	0.63 hours per capita	0.68 hours per capita
Service Utilization (Revenue Passengers Per Hour)	21.3	20.7	13.5	21.2	15.1	22.1
Cost Efficiency (Direct Operating Expenditures per Total Vehicle Hours)	\$65.25	\$98.21	\$111.27	\$65.74	\$53.53	\$81.24

Figure 1 - Conventional Service Hours and Ridership for Squamish Transit System - 1991 to 2008

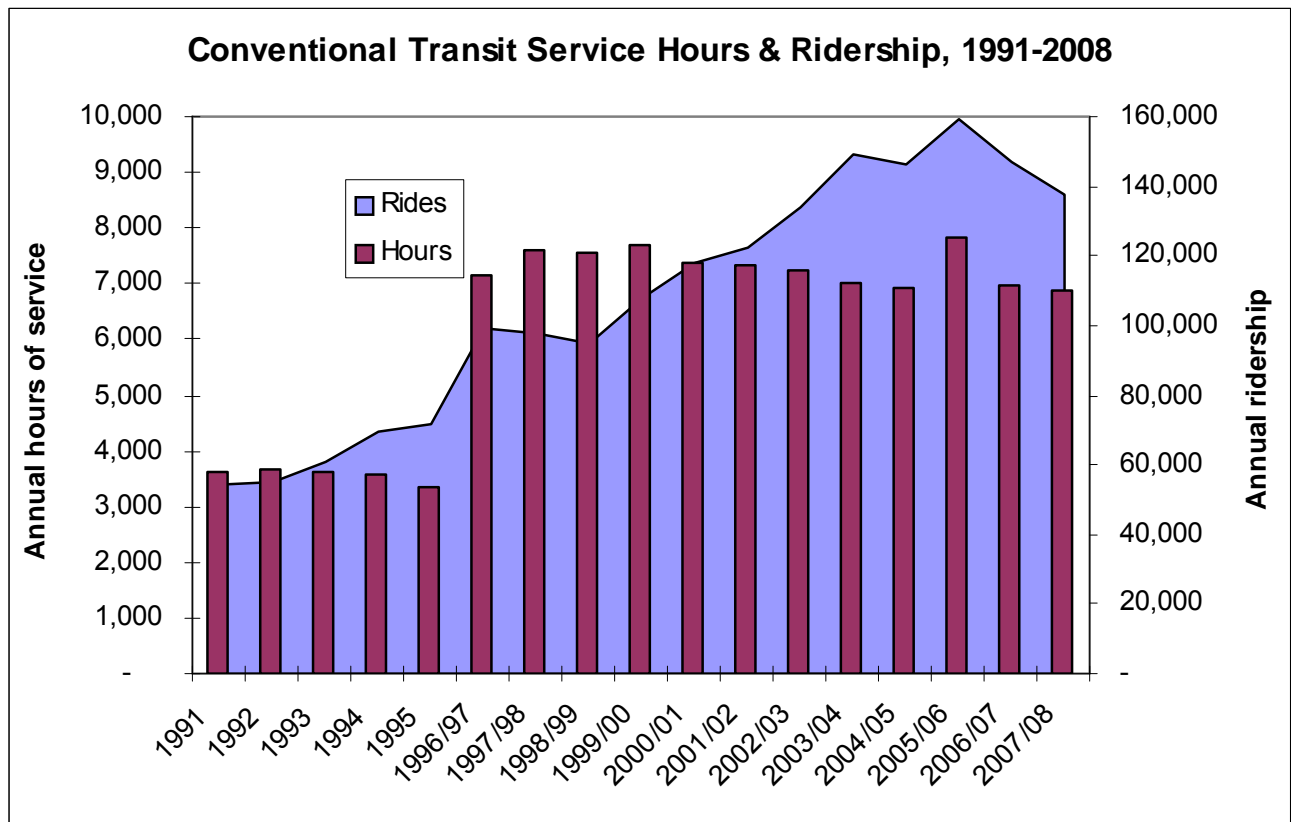


Figure 2 - Productivity in the Squamish Transit System 1991 - 2006

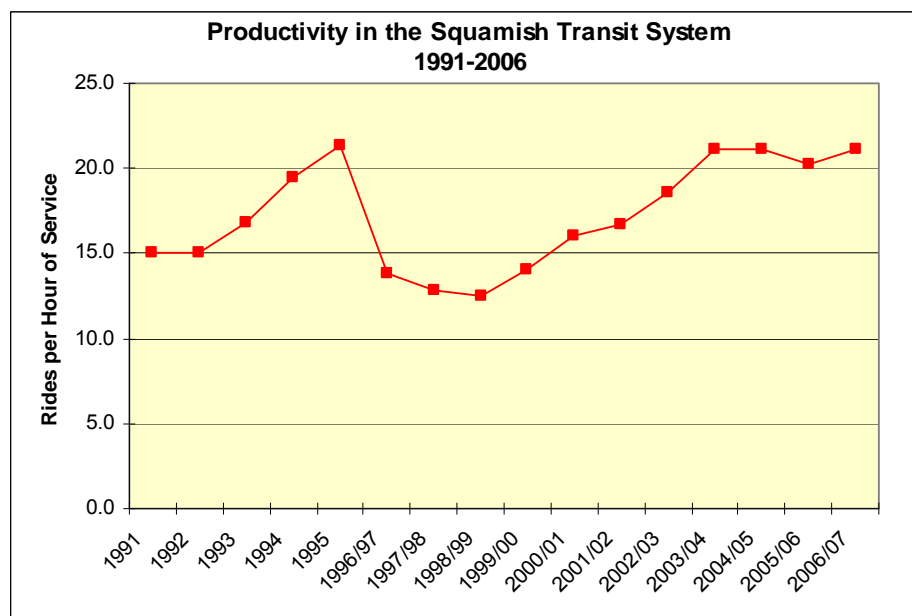


Table 3 – Characteristics of Ridership from Conventional Transit System - Two Week Counts in 2006 and February 2007

	2006/2007 Ridership	Average Weekday	Sat.	Average Monthly Ridership	AM Peak	Midday	PM Peak	Evening
Squamish - 2006	155,000	625	268	14,197	25.1%	46.6%	25.5%	2.8%
Squamish - 2007	155,000	528	239	12,042	25.4%	48.8%	22.2%	3.6%
Average of 2006 and 2007 counts		577	258	13,119	25.2%	47.8%	23.8%	3.2%
Average of Tier 3	216,505	698	309	14,568	25.1%	43.6%	26.7%	4.7%

Source: BC Transit

Table 4 – Characteristics of Ridership - Two Week Counts in 2006 and February 2007

	Adults	Students	Seniors	BC Passes	AM Peak Rides / Hour	Midday Rides / Hour	PM Peak Rides / Hour	Eve. Rides / Hour	Avg.	Transfer Rate
Squamish - 2006	43.0%	44.1%	7.5%	5.4%	15.1	17.1	20.0	4.9	16.0	8.3%
Squamish - 2007	43.3%	44.2%	8.6%	3.9%	26.4	25.7	20.7	6.8	22.0	6.4%
Average of 2006 and 2007 counts	43.2%	44.1%	8.1%	4.7%	20.8	21.4	20.3	5.9	19.0	7.4%
Average of Tier 3	33.5%	46.1%	8.0%	12.4%	24.0	20.3	22.2	11.9	20.9	13.3%

Source: BC Transit

Existing Transit Routes in Squamish

Figure 3 indicates the existing routes on the transit system: the Brackendale route from this neighbourhood in the north end of Squamish to the downtown area; the Garibaldi-Highlands route from this residential area to the downtown core; and the Valleycliffe route from this residential area to the downtown core.

Figure 3 - Existing Transit Routes



Custom Transit

Key charts indicating the service hours and performance of the Squamish custom transit system are shown in Table 5 below. There have been almost no improvements to the Squamish custom transit system in the 1991 to 2007 period (in terms of the hours of service), despite the increase in the population in the District and the increase in the members of the population requiring the use of custom transit services. Since 2002/2003, there has been a significant drop (i.e. 31%) in the handyDART ridership. One factor behind this decrease in ridership was the changes made to the funding of physiotherapy and other programs, which in turn reduced demand for travel with some people with a disability.

Table 5 - Squamish Custom Transit Trends

Year	Hours	Rides	Productivity	Total Operating Cost	BC Transit Share	Net Municipal Share
1991	2,000	1,914	1.0			
1992	2,256	2,603	1.2			
1993	1,995	3,381	1.7			
1994	1,737	4,228	2.4			
1995	1,688	4,656	2.8			
1996/97	1,797	6,357	3.5			
1997/98	1,850	6,400	3.5			
1998/99	1,930	6,694	3.5			
1999/00	1,955	6,643	3.4			
2000/01	1,929	7,842	4.1			
2001/02	1,846	7,687	4.2			
2002/03	1,933	8,507	4.4			
2003/04	1,968	6,970	3.5			
2004/05	1,903	6,325	3.3			
2005/06	2,007	5,439	2.7			
2006/07	1,980	5,851	3.0	\$133,830	\$78,567	\$44,407

Figure 4 - Custom Transit System Service Hours and Ridership in Squamish - 1991-1996

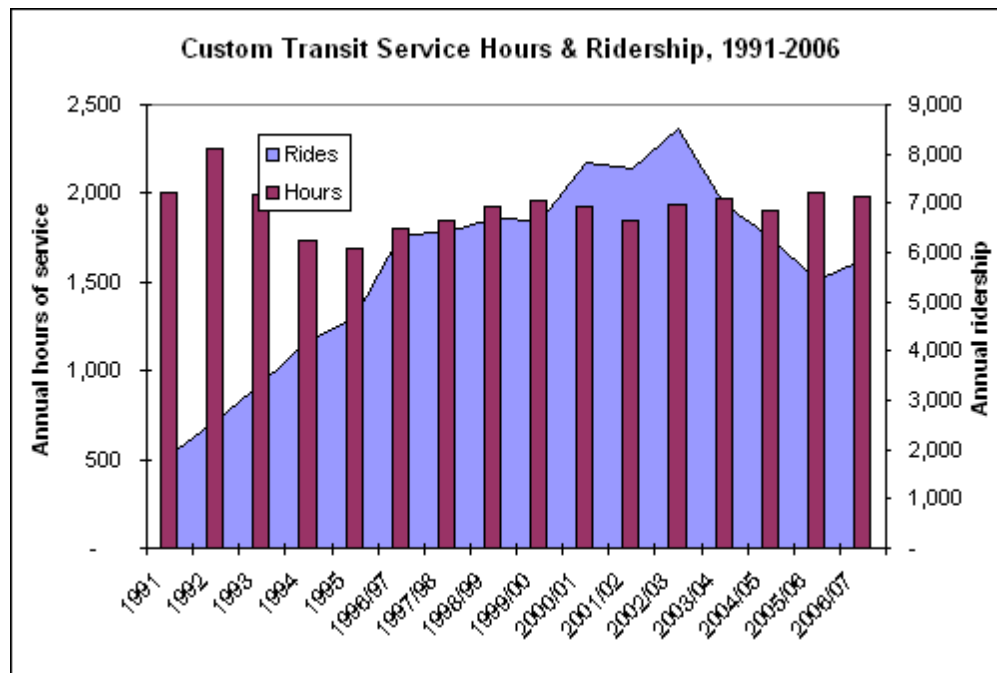
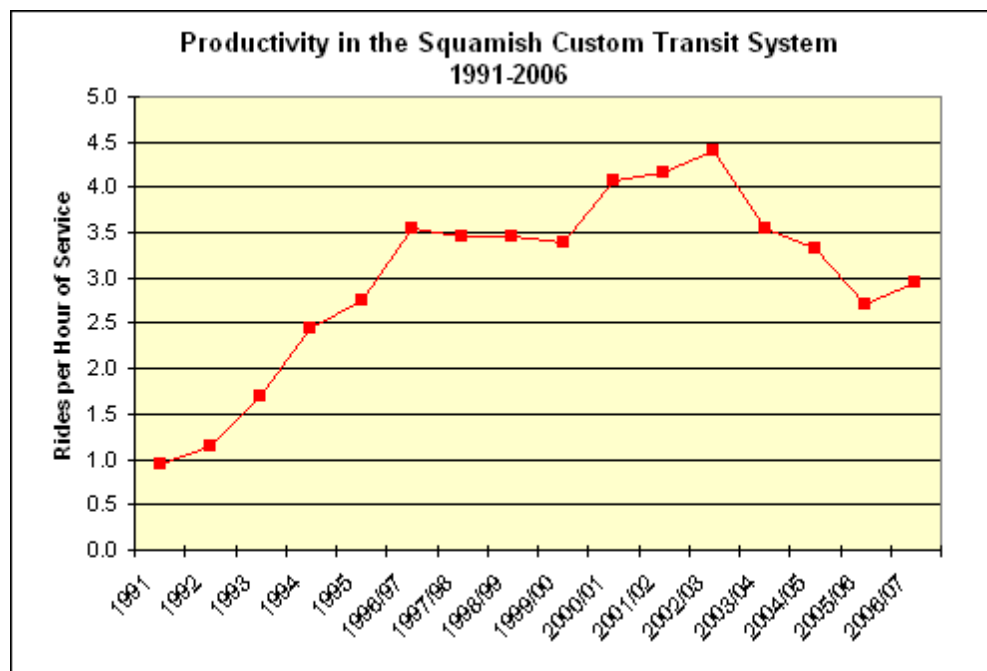


Figure 5 - Productivity in Squamish Custom Transit System



4.0 Key Markets in Squamish

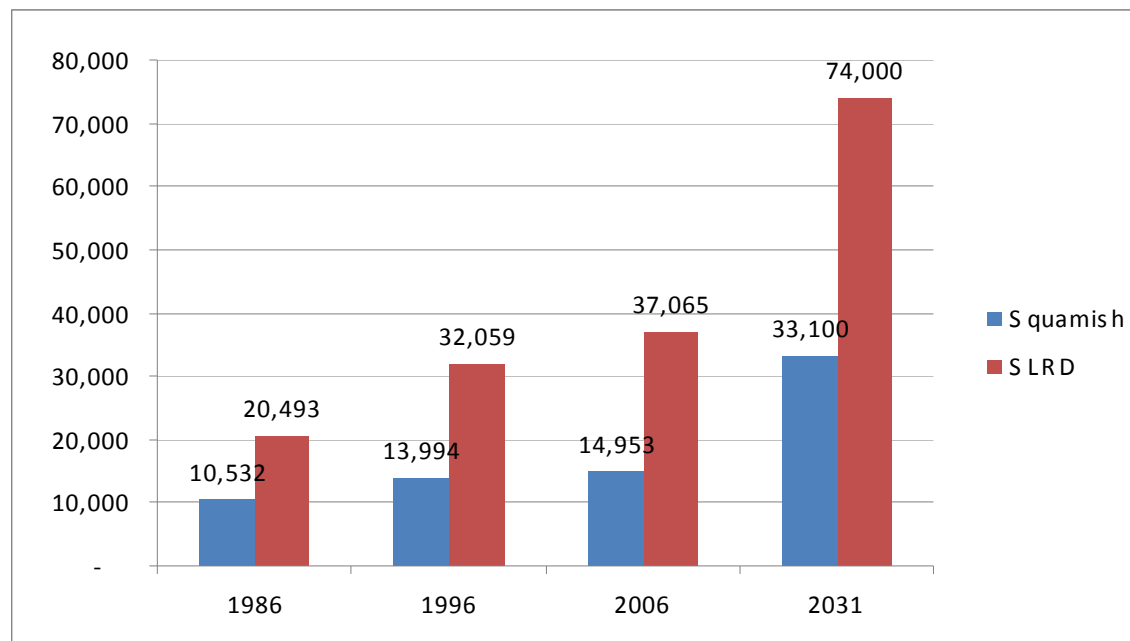
4.1 Transit Market Analysis

An assessment of current and future markets for transit is essential for the development of a business plan. Key factors such as population growth, demographic change, land use patterns, and future development potential will all have major influence on the potential for transit service.

4.2 Population

The 2006 Canadian Census recorded 14,953 residents in the District of Squamish, a 7% increase over 1996 and 47% above 1986. The Squamish-Lillooet Regional District population grew much faster during these 20 years, due to the rapid growth in Whistler and the Pemberton Valley (see Figure 6). Whistler is quickly reaching its capacity and its growth rate has slowed considerably in the last few years. Population growth in Squamish will drive the regional growth statistics in the next two decades.

Figure 6 – Population Growth in Squamish and Regional District



Last decade's trend of slow population growth in Squamish will be short-lived. BC Stats is projecting that the Squamish-Lillooet Regional District will experience British Columbia's fastest growth rate to 2031, when the regional population will double, and much of this growth will take place in Squamish. The provincial growth rate is forecast to be 37% to 2031, to the equivalent of 1.25% growth per year. Squamish will experience three times that growth rate.

Population forecasts in the 2005 Squamish Growth Management Study give a mid-range forecast of 33,100 residents by 2031, which is even higher than the BC Stats projection. The low-range projection was for 26,000 residents and the high-range projection exceeded 41,000 residents. The mid-range projection has population growing at nearly 4% a year to 2011, then 2.6% annually to 2021, and 2.4% beyond 2021. This is the equivalent of an average of 650 new residents every year.

The major source of British Columbia's population growth to 2031 will be migration into the province. International migration will account for 61% of the growth, inter-provincial migration for 36%, and natural increase just 3%.

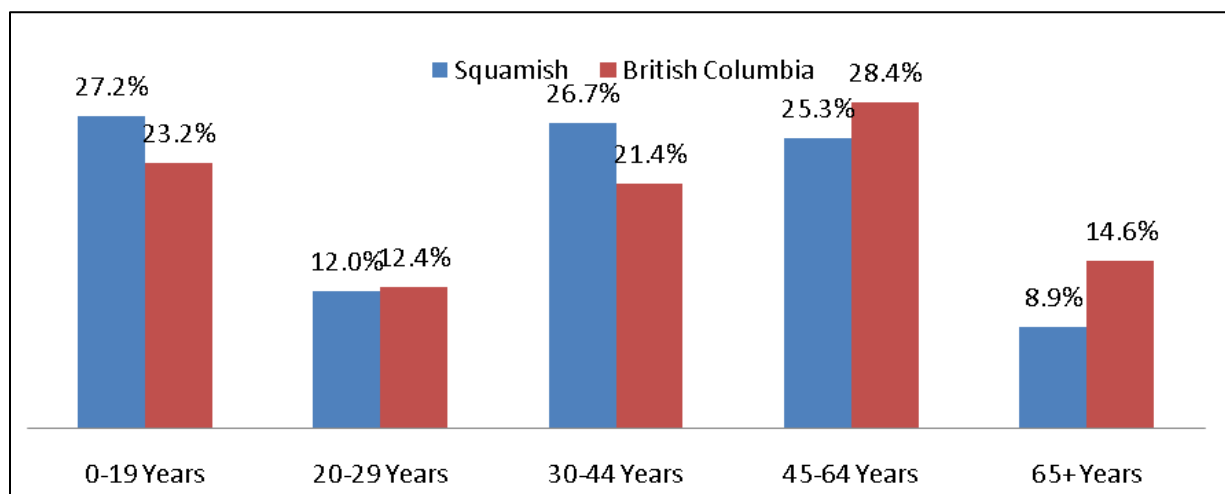
Recently, Squamish has been experiencing an influx of new residents and a building boom indicative of the trend toward much faster population growth. Last year's growth rate was a healthy 3% in Squamish, and there is every indication that this is the start of a longer term trend. The close proximity to two million residents in Metro Vancouver, Whistler, the 2010 Winter Olympics, and the region's attractiveness for outdoor recreation will combine to greatly increase the number of people who will live, work, visit, and pass through the Squamish region. These will all be new potential markets for transit. Many of the new residents moving into Squamish come from larger communities where transit service is usually more comprehensive and more frequent. These residents come with high expectations of transit.

4.3 Demographic Profile

Age has a direct bearing on an individual's propensity to use transit. Changes in the demographic profile within a community can have a more profound impact on transit ridership than absolute changes in population numbers. Two key markets for transit in every community are students and young adults (aged 15 to 24) and seniors. Both groups have a high propensity to use transit, although for different reasons.

British Columbia's population is aging quickly - the median age has risen from 35.9 to 40.8 years in the last decade alone. Squamish's population has also aged but at a slower rate, from a young 32.8 years in 1996 to 35.9 years today. Squamish's current population is significantly younger than the 40.8 year median age in British Columbia or Vancouver's median age of 39.1 (see Figure 7). Younger populations tend to be more mobile than older ones. There are slightly more men (51%) than women (49%) in Squamish, the exact opposite of the BC profile.

Figure 7 - 2006 Population Growth by Age Group Percent Distribution



Squamish has a higher proportion of children under age 19 and a lower proportion of seniors than does British Columbia. The higher proportion of young people bodes well for transit ridership in the years ahead as young people are frequent transit users. Opportunities also exist to find transit solutions and programs such as U-Pass for the students at Quest University, Capilano College and high schools. Conversely, a lower proportion of seniors are a negative influence on transit as seniors are also frequent transit users. Fewer seniors also mean less demand for handyDART services.

In absolute numbers, there are more people aged 19 to 24 years old in Squamish than the total number of seniors over age 70 (see Table 6). But this will change over time, as seniors will go from 8.9% of the 2006 population to 15.2% in 2031 while the 55 and over population will rise from 16% to 26%. Seniors will become an increasingly important market to transit, in spite of 2006 statistics. By 2031, the municipal population will double and the number of seniors will quadruple. This will have a profound impact on transit services as the demand for door-to-door services like handyDART will see significant growth, quite the opposite of the past decade.

Squamish has a higher proportion of adults in the 30-44 age group. This age group will be proportionately less dominant in future populations to 2031. This demographic does not have a strong transit riding history and this group will be a challenge for transit, as it is in every community. However, Squamish's economic development plan focuses on developing environmental and knowledge-based industries and many employees in this work group will be drawn from this age bracket. Targeting their work trip is the place to start.

Table 6 - Squamish Population Projection – 2005 Growth Management Study

	2006	2011	2021	2031
Total Population	14,954	20,300	26,100	33,100
% aged 15 - 24 years	12.8	16	13	11
% over age 65	8.9	9	11.9	15.2
Median age Squamish	35.9			38.2
Median age BC	40.8			44.5

4.4 Community Profile

The 2006 Census recorded an average household size of 2.6 persons in Squamish, down from 2.8 a decade earlier. The number of households with children has declined while the number of one-person households has increased.

Squamish has a diverse ethnic and linguistic population. A third of immigrants are from India. Nine European and six Asian languages comprise the top 15 languages (other than English or French) spoken in Squamish. Ten percent of residents report speaking a language other than English or French at home compared to nearly 16% in Vancouver. Squamish has a higher percentage of Punjabi-speaking residents than does British Columbia. Several BC communities are now producing multi-lingual transit Rider's Guide, and specifically marketing transit to non-English speaking residents, students and visitors. These products have been very well received in these communities. This would be a worthwhile strategy in Squamish.

Fifty percent (50%) of residents lived at the same address as they had five years earlier and a further 23.6% moved within the community. Seventeen percent moved into the area from elsewhere in BC, 4.8% moved from another province and only 4% from another country. 93.5% of Squamish residents are Canadian citizens.

4.5 Land Use and Housing Profile

Squamish faces a number of transportation challenges given its geographic location. The Mamquam River constrains internal roads in the north-south direction, Highway 99 and the Mamquam Blind Channel impede east-west road connectivity, and the rail line can impede movement from the only highway entrance into downtown. The highway upgrade work now underway will improve access to Squamish as well as improve safety and reliability of the highway. The volume of through traffic will increase as the 2010 Olympics draws near.

Squamish's strong desire and plans for smart growth development will be a very positive factor for public transit. Locating many new residents in close proximity to downtown and concentrating commercial/retail development into well defined areas will allow transit to effectively serve these areas with frequent and direct service. Locating transit 'hubs' in key areas while the areas are developing will allow transit to develop as the area grows and will not have to be retrofit into the area in the future. Transit will be able to effectively market its services to those living and working in these areas of smart growth.

There are 5,625 dwelling units in Squamish today. This number is expected to grow by over 8,000 units to 13,900 by 2031, when single family dwellings will account for 7,400 units, townhouse and other ground-oriented developments for 4,000 units, and apartments for 2,500 units.

There are a number of centrally located, former industrial lands that will be home to major residential redevelopment projects over the next 20 years. Their close proximity to downtown will be excellent for transit service, enhanced pedestrian walkways, cycling trails, and other facilities. The District is already looking at Transit Oriented Development policies and initiatives to encourage greater choice in mobility options and to reduce the reliance on the automobile for personal transportation. These can range from reducing parking requirements in exchange for enhancing alternatives (walking, transit, car share, cycling) to providing bus passes for all units in a particular development or other such incentives. The challenge is to provide more balance to the transportation options available to an individual.

Table 7 – Squamish - New Residential Units 2005-2007

	Total Units	Downtown Units	Community Wide Units	Apartment Units	Townhouse Units	Single Family Units
2005 completed units	368	130	238	77	186	105
2006 completed units	642	164	478	381	19	242
2007 applications completed	567	567	267	415	193	226
Units Under Application (November 15, 2007)	4,723	2,211	2,512	2,171	1,237	1,315

The pace of development interest is evident from the recent residential construction and development application statistics in Squamish. The number of units now under application amounts to 80% of the number of existing residential units in Squamish.

4.6 Employment

Squamish has experienced the same employment challenges of many resource-based West Coast communities in the past 20 years as resource industry employment continues to decline. There were an estimated 8,115 jobs in 2001. Growth in the number of jobs is well below the population growth rate, meaning that many new residents are working outside the community. Squamish is quickly becoming the home base for an increasing number of commuters and there are over 1,000 people who now commute daily to Whistler and over 2,000 into Metro Vancouver. To counterbalance these trends, Squamish is attempting to attract more environmental and knowledge-based/high tech employment positions to the community.

There will be significant employment growth in the construction, education, hospitality, retail, and commercial services sectors with strong population growth. Wal-Mart and Home Depot alone account for nearly 450 jobs. This change has already begun and the 2006 Census stats for employment and journey-to-work will confirm it (with numbers). In 2006, 88% of the journey-to-work trips were made by car.

5.0 Issues and Opportunities

These issues and opportunities for the public transit system in Squamish identified and briefly discussed in this section have been identified from the following sources:

- The public and Council input ;
- The feedback from the operator and drivers;
- Input from BC Transit planning staff;
- Input from the Squamish Planning Department representative on the overall Project Team; and
- The experience of the consultant in working with communities such as Squamish.

5.1 Issues

Transit Service

- A significant gap exists between the transit service that is being delivered today in Squamish and what is expected by transit riders and the community residents, and what is needed to serve the recent and projected growth in the community and encourage much greater use by community residents. Some of these expectations come from the fact that recent newcomers to Squamish have moved from communities where transit service is much more frequent than that found today in Squamish.
- To achieve higher ridership potential and to meet the transit user and community expectations of improved transit service in Squamish in terms of increased frequency, longer service hours on weekday evenings and on weekends and improved reliability of service, a significant number of new buses for additional service will be required. In addition, there will be a need for improved transit facilities (e.g. the introduction of new off-street exchanges, more shelters and accessible bus stops) to provide safer and more comfortable environments for customers, increase ridership, improve operational efficiency, and implement other complementary actions (e.g. new fare strategies and marketing initiatives) to support service enhancements. These service and other improvements will require a significant increase in investment in the transit service in Squamish by both BC Transit and the District. The (local property tax) funds advanced by Council for improved transit provide 27% of the cost of providing the transit service, and other funds come from riders (the fare recover ratio is 27%) and BC Transit (46%). Given the relatively small percentage of the total cost of service that Council has to provide, it is in the interest of Council to increase the amount of transit service in its region.
- It can be very useful for local Councils to review fare levels on a regular basis (ie every 2 years) or especially when service levels are significantly increased, in order to recover annual cost increases due to inflation and maintain a financially prudent cost-recovery ratio. At the same time, there is a need to consider some restructuring of the fare system in Squamish in order to attract more riders and reward loyal riders. This is discussed below.
- It will be a double challenge for transit to keep pace with the rapid growth expected in the next two decades. Transit has to first catch up to the development that has taken place to date and then match the growth as it continues into the future.

Local Administration of Transit

Squamish has a planner in the Planning Department for part of the time, and some of the time of the chief Financial Manager, both to look after the local interests of their Squamish transit system. The allocation of a full time Squamish staff position should be introduced as Squamish's transit systems grow in size with this Plan. This will be required in order to manage and co-ordinate Squamish's transit

service and capital investments and interests in the transit system growth with BC Transit, the operating company and other Squamish Departments, and as well look after a comprehensive Squamish TDM program.

Opportunities

Transit Service

- There is broad community interest in improving the community transit system, as observed by Council's strong vision for the transit system and the public input to date through the open house attendance and completion of surveys.
- Plan / schedule transit services accordingly to allow enough time (running and recovery) to avoid short-turning routes. This is especially important on school trips with high passenger volumes.
- Avoid using the handyDART spare if possible.
- Maintain and improve connections between each neighbourhood and its closest commercial centre.
- Allow for high frequency services along key commercial corridors between Downtown and Highlands Shopping Centre, including Wal-Mart and Garibaldi Village.
- Provide a service to new developed areas and future development areas, where feasible.
- Better coordinate bus trips times with school bell times.
- Plan for service to Quest University.
- Look at the opportunity to use the planned highway underpass to provide improved service to Recreational Centre.
- Plan for regional connections in both directions, to Metro Vancouver as well as improvements to the Squamish-Whistler service.
- There is an opportunity to create a fourth route to serve between the Downtown area and Highlands Shopping Centre area and to link to the Valleycliffe route to create 20-minute service between Downtown and Highlands through "dovetailed" headways with other routes.
- A summer only route could be introduced to serve key outdoor recreation areas, such as climbing and hiking destinations and could also link to Adventure Centre.
- There is a need to have the potential introduction of timed specials to Quest University to serve key class start and end times.
- Include a Taxi Supplement service in the Brackendale and Garibaldi-Highlands areas to provide early morning neighbourhood connections to the Squamish-Whistler Commuter service. This is similar to how Mission provides service to early morning West Coast Express (WCE) trips. Prospective early morning WCE passengers call the handyDART line at least a day ahead; handyDART dispatch collects names and addresses and then dispatches them to a taxi company who then picks up passengers in a shared-ride system and takes them to the station for their train.

Federal Funding

- Squamish Council has \$56,000 available in 2007 from federal capital infrastructure funds to make improvements to the transit system. In future years, federal transit capital contributions and provincial contributions for operating and capital transit investments are very likely to increase and be maintained for a long time. This is due to the federal government's recent announcement of a permanent transfer of gasoline revenues to the provinces for infrastructure investments and the recent BC public transit program announcements that including purchasing more buses for service expansions and service enhancements in order to contribute to meeting the province's climate change objectives and targets.

School District and Public Transit System Integration

- The integration of the public transit system with the school bus system could be examined through an arranged audit of both transit systems to explore the opportunities for increasing efficiencies (in vehicle and fuel procurements), reducing duplication of services, and improving overall transit service. Many communities have examined this strategy, and some have succeeded in combining the school and public systems to generate increased service effectiveness and efficiency.

Fare Strategy

- The development of a common high school and university transit pass could be explored in order to increase transit ridership and develop a long term transit culture among students that could continue as they enter the labor force. In addition, family or employer passes could be used to reward loyal riders and encourage increased ridership. Ultimately, a Regional Transit Smart Card may be developed for the Metro Vancouver and adjacent regions to provide even more flexibility and convenience with transit fare media.
- Implement 90 minute time-based, any route, and any direction transfers (like Vancouver, Kelowna and Abbotsford).
- Revise ticket pricing to reflect 10 rides for price of 9 or 10 rides for price of 8 structures to more easily convey savings to passengers.
- To gain more post-secondary school students, allow full time Capilano College and Quest University students with photo ID to qualify to use the existing student monthly pass.
- Eliminate the current \$20/month school day only pass and replace it with an \$80 Semester Pass for school and post-secondary students. The Semester Pass is essentially a bundle of four regular student monthly passes, such as for September – December. In other words, by purchasing all four months together, students and parents would still have access to the pricing of the existing school day only pass ($4 \times \$20 = \80), but would now be able to travel on all days.

Downtown Transit System

- A presence for the transit system could be established in the downtown area and in areas of future development. For example, with the development of the Waterfront Plan, a diesel-hybrid or electric shuttle bus could be operated in the downtown area and combined with improvements for walkability in the downtown area.

Complementary Support Actions for Transit

- Squamish Council will need to implement the sustainable transportation measures which will support the transit system by encouraging increased ridership, such as Smart Growth, and consider parking charges in the downtown area, etc.
- Squamish Council could support measures which will encourage greater use of the transit system through the following means: making bus stops accessible with the provision of landing pads that accommodate wheelchair ramps on the buses; providing level sidewalk connections to these accessible bus stops; providing more and better lit shelters; establishing a main downtown transit exchange/transportation hub for safer off-street bus transfers and future passenger rail and ferry connections; and constructing a mini transit exchange in the Highlands Shopping Centre area for bus connections.
- Squamish Council could use revenues from downtown parking to fund additional transit improvements and cycling and pedestrian mobility improvements.

Marketing / Customer Information

- Squamish Council and staff could work with community groups to support the funding of bus shelters which would reflect the local communities by displaying “community art” on the shelters.
- Include Squamish-Whistler commuter schedule in the Rider’s Guide.
- If there is still a sizable chance that the handyDART vehicle will be used as a spare for the conventional system, consider indicating which trips would be affected in the Rider’s Guide.
- Include more information in the Rider’s Guide on school trips and consider putting out a separate school service flyer such as in Powell River and Abbotsford.
- Include more schedule and route information at bus stops, especially key destinations and exchange points.

6.0 Transit Service Design and Structure Scenarios

6.1 Transit Objectives/Principles

It has been shown in many transit systems throughout the world that the keys to increasing ridership among existing riders and capturing new “choice riders” who have access to a car for mobility is to enhance the transit system in the following four areas of transit objectives/principles in order of priority as listed:

i) **Frequency of Service** - Improve the frequency of service, first in AM and PM peak periods, then midday periods, then on weekends, and last in late evening periods. Elasticities for transit frequency improvements are usually high and can range around 0.5 to 0.6. This means that for a 10% improvement in transit service frequency, a transit system could experience a 5% to 6% increase in ridership. Of course, there are specific categories of frequency improvements for which customers’ reactions can be even more responsive, such as changing from a 60-minute to a 30-minute frequency or improving the service from a 30-minute frequency to a 15-minute frequency.

ii) **Reliability of Service** - Enhance service reliability by the following means: add more schedule time to serve the transit routes; make the routes as direct as possible, where possible, as the number of buses and routes in the transit system increases, and through-trips can be made without inconvenient transfers; avoid substituting smaller vehicles for conventional vehicles (i.e. don’t substitute handyDART vehicles for conventional transit vehicles); avoid short-turning vehicles on routes; provide more direct services; and implement transit priority measures along the transit corridors (e.g. bus lanes, intersection bus queue jumpers, and transit signal priority at intersections). These measures can better ensure that services match the transit schedule with fewer delays.

iii) **Improve Convenience** - Make the transit system more inviting by implementing the following actions: establish new and appropriate levels of transit services (in terms of hours of service, service frequency, type of vehicle used, etc.) to new residential areas and major new institutional, commercial, or office destinations; establish direct and easy-to-understand routes; provide good transit connections in neighbourhoods to the closest neighbourhood commercial centres; maintain an up-to-date Rider’s Guide; have schedule information at exchanges and major stops; provide easy web access to transit information; and provide comfortable, safe, and well-located transit exchanges to enable timely connections between transit services.

iv) **Improve Comfort** - Improve the comfort of the transit system by increasing the number of bus shelters in the community, by having sufficient buses so that passenger loads can be distributed among buses and passengers do not have to stand for long distances on certain routes, and by having heated shelters at key transfer points or exchanges.

Table 8 summarizes these four keys to increasing ridership.

The existing three transit routes serving the District of Squamish - Brackendale, Valleycliffe and Garibaldi-Highlands - are shown on Figure 3 and use two buses. These routes operate every 45 to 60 minutes between 7:00 am and 6:30 pm during weekdays, except for Fridays, when they operate every 45 to 60 minutes to 9:00 pm. On Saturdays, the routes operate between 8:00 am and 6:00 pm every 60 minutes. The routes are long and therefore often unreliable and have to be short-turned, especially the Brackendale and Garibaldi-Highlands routes, in order to try stay on schedule for most

portions of the routes. This results in customers being missed on those portions of the route that do not get served as a result of the short-turn.

Table 8 - Keys to Increasing Transit Ridership

INCREASING PUBLIC TRANSIT USAGE	
SERVICE	COMFORT
<ul style="list-style-type: none"> • Good service coverage • Frequent service in peak and off-peak periods all week long 	<ul style="list-style-type: none"> • Able to get a seat • Attractive bus stops
CONVENIENCE	RELIABILITY
<ul style="list-style-type: none"> • Easy to use • Information on use is readily available 	<ul style="list-style-type: none"> • Consistent travel times • Priority given to transit along transportation corridors

6.2 Transit Market Analysis

There is significant potential for increasing transit ridership in the District with the following major factors at play contributing to this potential:

- Strong support from residents and Council in general for the transit system shown by the consultation program for this project;
- The significant use of the existing transit system despite it being very under-resourced with only two conventional buses and 7,000 annual service hours and 45 to 60-minute frequencies on three long and unreliable routes;
- The existing demographic profile of Squamish with a high number of youth under 19 having no access to an automobile and requiring transit service for mobility;
- The strong potential population and employment growth in Squamish given its position in the Metro Vancouver to Pemberton growth corridor and with excellent highway access from Metro Vancouver making it an attractive bedroom community for Metro Vancouver; and
- Its current and projected pace of residential, institutional, and commercial development and the growth of existing schools such as Quest University and Capilano College.

Building upon the above-noted factors, the key markets for future local and commuter transit ridership in the District of Squamish and to other areas like Whistler and Metro Vancouver are:

- The existing captive market: students, workers, and seniors who do not have regular access to a vehicle;
- The commuter market: residents who live in Squamish and commuters going to work opportunities in Whistler and Metro Vancouver; and
- The choice market: other Squamish residents who have access to a vehicle but want to have alternative mobility options when they can't or choose not to use a car, perhaps because they are motivated to make travel choices that contribute to a healthy environment.

6.3 Potential Alternative Future Transit Service Improvement Packages – Local and Commuter Routes

6.3.1 Alternative Local Route Service Improvement Options

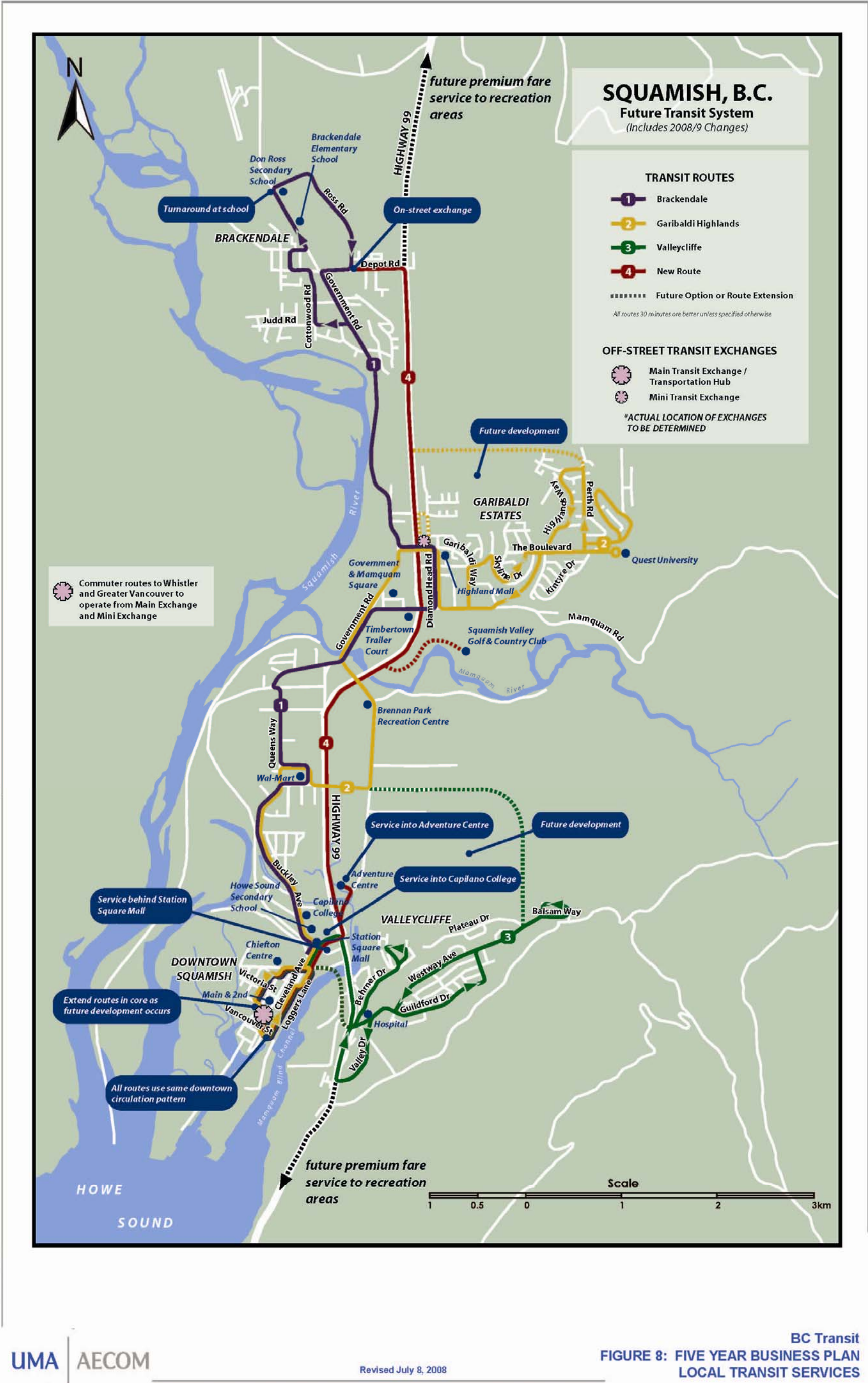
The recommended total summary of conventional, custom and commuter transit services that could be in place in Squamish at the end of the five-year business plan period (2012/2013) to meet the objectives of this Plan, including increasing ridership and to address the identified issues and opportunities are shown in Figure 8 and outlined in Table 11.

This final Squamish Transit Business Plan is based upon the following key inputs: public input on the Plan at public open houses in November and June; a Council visioning session in December 2007 and council session on the draft Plan in June 2008; open house surveys distributed at public open houses, on the buses and other sites; several site visits to the system; riding the transit system; analysis of the current route system with the old and new operations managers and staff of the transit system and BC Transit; input from Squamish staff from the Planning Department and BC Transit; and an evaluation of service and complementary options and initiatives relative to the following four objectives of the Plan:

- i) Ability to increase ridership;
- ii) Responsiveness to public input on the common themes of frequency and reliability of transit service;
- iii) Responsiveness to public input on the common themes of the comfort and convenience of transit service; and
- iv) Ability to respond to community growth pressures and serve existing and new growth areas effectively, efficiently, and directly. These existing and new growth areas include Downtown Squamish, new population/employment areas, and important transit destinations such as the Adventure Centre, Capilano College, the Brennan Park Recreation Centre, Thunderbird Ridge and Glacier View, Balsam Way, Station Square Shopping Centre, and Quest University.

The recommended local transit service package options which make up the components of the recommended Five Year Transit Business Plan for Squamish 2009/2009 to 2012/2013 and the fall 2008/2009 Implementation Strategy are shown as they would be in Figure 8 and are described below:

Figure 8 - Recommended Service Plan Changes at Conclusion of 5 Year Transit Business Plan for Squamish



Local Transit Service Improvement Package Options

There are options for improving the transit service in Squamish to respond to public and stakeholder input, increase ridership among existing riders, and capture new riders, especially those new riders with a choice.

This report proposes that the following service improvement option packages would be staged in 2008/2009 as part of this year's Implementation Strategy, and over the next five years as part of the implementation of the overall Transit Business Plan. Service options packages are described below. The estimated service hours, additional ridership, total costs, fare revenue, and the provincial and local funding shares are indicated with each transit service enhancement package option. The service improvements have been deliberately placed in service package options for staging their introduction in each of the five years of the Plan, so that they can be moved to alternative years for their implementation, if desired by Squamish and BC Transit.

These service option packages have been guided by the transit principles/objectives outlined for new service additions in Section 6.1. These service option packages have been costed and the ridership estimated for this strategic transit business plan using BC Transit's standard excel spreadsheet costing and ridership formula used for small transit systems.

The staging and year of the introduction of these service package improvement options would be dependent upon the amount of financial contributions for service hours and new buses contributions that both BC Transit and the District of Squamish wished to fund. Recommended transit capital expenditures (see Table 10) would be funded through Squamish contributions, BC Transit contributions and federal public transit capital program funding which is now approximately \$70,000 annually for the District of Squamish.

The introduction of a new main transit off-street exchange in the downtown area and a mini and off-street-exchange in the Highlands Shopping area will require two to three years to implement due to the need to acquire the property, plan and design the facilities, and finally construct them.

Proposed Service Improvement Option Package - 2008/2009

Modify Routing on the Existing Three Bus Routes to Better Serve Existing Areas such as Downtown, Brenna Park Recreation Centre, areas of the Valleycliffe and Garibaldi-Highlands communities, Wal-Mart area, schools, community destinations and facilities, new growth and Quest University: Modify the routing of the three bus routes in the downtown area, as shown in Figure 9, to provide improved service coverage in the western part of the downtown area in order to serve new developments, and to begin to establish a routing which can be easily modified when increased development occurs in the downtown (i.e. Waterfront Plan is implemented). This routing includes providing transit service behind the Station Square Mall, extending some afternoon and evening trips of the Garibaldi-Highlands route to Quest University to correspond to the travel needs of their students who live on campus but who may have off-campus activities in the afternoons and evenings. Quest University currently has approximately 200 students and plans to have 600 or more students in the next five years for a total of 800 by the end of this Plan. There is also a growing number of activities that take place on campus that are expected to draw people from the community, and so this should be monitored so that more trips are extended, if necessary.

Modify the Valleycliffe transit route to provide new service to the east along Westway to serve the residential areas on Cherry/Balsam Way. (Note: in the future, this route could connect to the downtown through a new Clarke Road overpass linked to Cleveland (See Figure 8). Modify the routing on the Garibaldi-Highlands route to provide transit service to the Thunderbird Ridge, Glacier View and Quest University.

Improve Service to Highlands Shopping Area, Loggers Road, and Industrial Road east of the Highway (i.e. Brennan Park Recreational Centre) with Brackendale and Garibaldi-Highlands

Routes: With the overpass expected to be completed in the fall of 2008 at Centennial Drive across the Sea to Sky Highway, this service improvement option package entails the following service changes: modifying the routing of both the Brackendale and Garibaldi-Highlands transit routes to provide connections to an on-street mini exchange at the Highlands Shopping area and for the Garibaldi-Highlands routing to be changed to travel along the Sea to Sky Highway, Centennial Drive, Loggers Road, and Industrial Drive in order to serve the Brennan Park Recreational Centre, as this area does not currently have transit service. This change will improve service connections and provide additional service coverage in Squamish.

Add Time to Route Schedules to Improve Service Reliability and Frequency: Through the addition of one bus to the existing Squamish transit system, time will be added to the schedules of each of the three routes to improve their reliability and on-time performance, especially during peak periods. For example, service will be very 30 minutes between Downtown, Howe Sound Secondary, Capilano College, Wal-Mart and Highlands Shopping Centre.

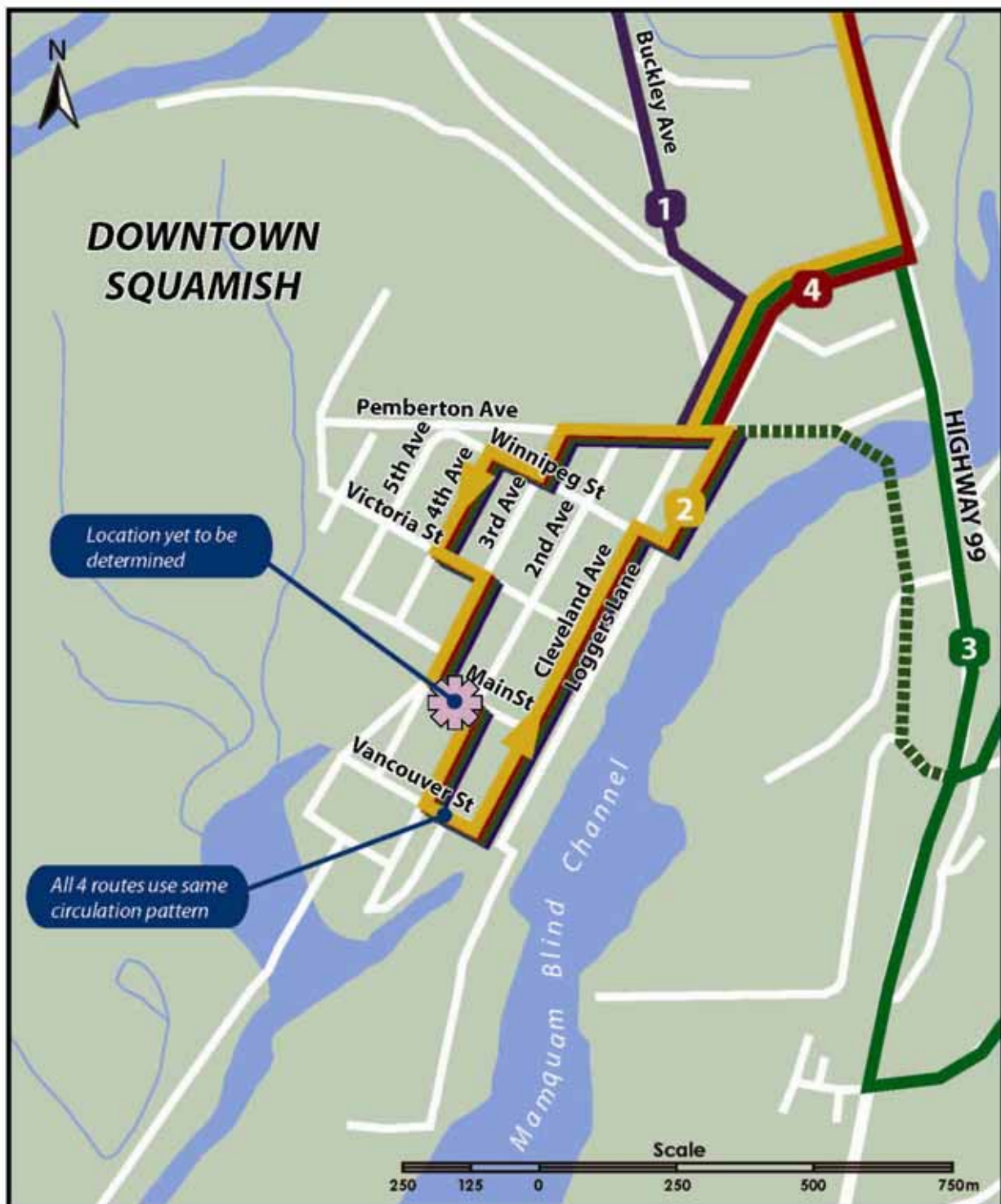
Table 9 below summarizes the service, ridership, and costs for the proposed expansion in both the part year 2008/2009 and on an annualized basis:

Table 9 - 2008/2009 Implementation Strategy

Description of Service	40 foot Buses	Mini Buses	Hours	Rides	Revenue	Total Cost	Net Municipal Share	Provincial Share
Comprehensive System Restructuring and Schedule Reliability Improvements	1	0	3,200	53,800	\$60,300	\$252,400	\$90,000	\$112,100
Annual Total	1	0	3,200	53,800	\$60,300	\$252,400	\$90,000	\$112,100
Part-Year Impacts			1,910	32,200	\$36,100	\$151,000	\$53,900	\$67,100

Notes: All figures show additional annual impacts. Part-year is based on service from August 25, 2008 to March 31, 2009.

Figure 9 – Recommended Transit Service in Squamish Downtown with 5 Year Transit Business Plan



*** Select Transit Exchange Sites, Purchase Property (if required) and Begin Planning and Preliminary Design for Main Downtown Transit Exchange/Transportation Hub and Mini-Transit Exchange in the Highland Shopping Centre Area:** To enable these exchanges to be opened in 2010/2011, the property for these sites should be selected this year - 2008 - and planning and preliminary design studies should be initiated in early 2009. This would enable detailed design to take place in late 2009 and construction to occur in the summer or fall of 2010 with openings in late 2010 or early 2011. These two exchanges will provide safe and comfortable locations for passengers to transfer between routes, unlike the off-street bus stops today. The Downtown exchange/transportation hub can also serve as an important component of the downtown Waterfront Plan and be potentially linked into ferry and passenger rail services in the future.

Proposed Service Improvement Option Package - 2009/2010

Extend Weekday and Saturday Evening Service and Provide New Service on Sundays and Statutory Holidays: This service enhancement option would provide extended weekday evening hours of service on each of the three existing routes - Brackendale, Garibaldi Highlands, and Valleycliffe - to 9:00 pm, and these routes would continue to operate every 60 minutes to match the service now provided on Friday evenings. Also, later evening service on Saturday on these routes and the provision of Sunday and statutory holiday transit service, would be part of this overall service improvement option package. These service changes would provide improved mobility for many of the existing senior and student customers who are captive riders and do not have means of mobility in the evening hours for social and recreational trips.

Proposal 1: Extend Weekday and Saturday Evening Service to 9:00 pm and introduce 9:00 am to 6:00 pm Service on Sunday and Statutory Holidays

Service hours:	3,700	Total cost:	\$298,400
Additional vehicles:	1	Revenue:	\$69,700
Additional ridership:	62,200	Provincial share:	\$128,900
		Net local cost:	\$99,800

Provide Enhanced Frequency of Service during Peak Periods: Improve the frequency of service during peak periods on all three transit routes to 30 minutes during the am peak (6:00 to 9:00) and pm peak (3:00 to 6:00) periods.

Proposal 2: Increase Peak Frequency on 3 routes to 30 minutes

Service hours:	4,500	Total cost:	\$387,800
Additional vehicles:	2	Revenue	\$84,700
Additional ridership	75,600	Provincial share	\$160,100
		Net local cost	\$143,000

Proposed Service Improvement Option Package - 2010/2011

Provide New Route #4 between Brackendale and Downtown Transit Exchange/Transportation Hub: Provide a new Sea to Sky Highway transit route, every 30 minutes, between the Brackendale area, the Highlands Shopping Centre area and its new mini-off-street exchange, and the downtown area at the new transit exchange/transportation hub. This service would provide connections to the Adventure Centre, now not served by transit, and serve destinations along the highway.

Provide a New Main Downtown Off-Street Transit Exchange and Transportation Hub: Open a new downtown off-street transit exchange/transportation hub in the downtown area to which all four transit

routes would connect. Locate this exchange in such a way that it could be a hub for possible future ferry and passenger rail connections to Squamish.

Provide a New Mini Off-Street Transit Exchange in the Highlands Shopping Centre Area: Open a new off-street mini-transit exchange in the Highlands shopping area at the new transit route #4 and the Brakendale and Garibaldi-Highlands transit routes would connect the two new transit exchanges in the Highlands area and in the downtown core will provide safer and more comfortable areas for customers to transfer from routes.

Proposal 3: New Route - Brakendale to Downtown along Sea to Sky Highway all Week Long including Sundays and statutory Holidays

Service hours:	5,200	Total cost:	\$438,800
Additional vehicles:	2	Revenue	\$97,900
Additional ridership	87,400	Provincial share	\$184,000
		Net local cost	\$156,900

Proposed Service Option Package - 2011/2012

Improve the Mid-day Frequency of all 4 routes to every 30 minutes: Improve the frequency of service on all four routes in weekday mid-day periods – 9:00 am to 3:00 pm - from every 60 minutes to every 30 minutes.

Proposal 4: Increase Mid-day Service Frequency - 4 routes to 30 minutes

Service hours:	6,000	Total cost:	\$434,000
Additional vehicles:	0	Revenue	\$112,900
Additional ridership	100,800	Provincial share	\$202,600
		Net local cost	\$118,500

Proposed Service Option Package - 2012/2013

Provide Enhanced Peak Period Frequency of Service for 4 routes: Improve the frequency of service during peak periods on all four transit routes to 15 minutes during the AM peak (6:00 to 9:00) and PM peak (3:00 to 6:00) periods.

Proposal 5: Increase Peak Period Frequency to 15 minutes on 4 routes

Service hours:	6,000	Total cost:	\$496,800
Additional vehicles:	2	Revenue	\$112,900
Additional ridership	100,800	Provincial share	\$211,000
		Net local cost	\$172,900

Provide a New Bus for Improved Reliability of Service and to Serve New Development: Provide an additional bus to Squamish for the four routes in Squamish in order to improve the reliability of service, to avoid having to short-turn buses, and to avoid using the handyDART buses because of maintenance problems with the conventional buses. These buses will be required as well to provide additional service coverage to serve new developments and the growing Quest University.

Provide Summer Time Service to Area Recreational Destinations: Introduce a new summer time only transit service which would have a premium fare (e.g. \$5.00 or \$6.00), and recover a very high proportion of its costs through fares (i.e. 80%), and provide service connections to some of the areas key recreational destinations: Shannon Falls Provincial Park, Alice Lake Provincial Park, Stawamus Chief Provincial Park, Cat Lake, Brohm Lake, Britannia Beach, and Squamish Valley Golf and Country Club. This service could be introduced initially with a morning trip and a late afternoon return trip, operate seven days a week, connect to the Adventure Centre, and make use of the spare bus.

b) Improvements to Custom Services 2008/2009 to 2012/2013

The current handyDART paratransit system for Squamish has one handyDART vehicle and one spare vehicle. To respond to the growing senior population as the population over age 60 expands significantly in Squamish in the next 5 to 10 years and in order to better serve persons with disabilities who will not be able to use the conventional transit system, it is recommended that:

- Two new handyDART vehicles are purchased in the 2009 to 2013 period – in 2010/2011 - one for service expansion and one replacement;
- A Taxi Saver Coupon system be established for the handyDART paratransit system in Squamish in 2009/2010 (i.e. initial amount of 5,000 hours) as is currently offered in many comparable municipal transit systems in BC in order to supplement handyDART service in cost-effective way. With this Taxi Saver program, eligible handyDART users are able to receive up to 50% subsidy from this program if they use taxis for trips as an alternative to the handyDART vehicles; and
- The hours of service are doubled within the term of the Five Year Transit Business Plan as service has not been improved since the service was initiated in 1991.

Proposal 6: Enhance custom service by adding one vehicle and additional hours

Service hours:	2,000	Total cost:	\$125,800
Additional vehicles:	1	Revenue	\$9,000
Additional ridership:	6,000	Provincial share	\$55,600
		Net local cost	\$61,200

The recommended summary of all the proposed conventional, commuter and custom transit service improvements are described and summarized in Table 11.

c) Improvements to Commuter Routes

With significant improvements to the Sea to Sky Highway and shorter travel times between Metro Vancouver and Whistler, and the higher cost of residential accommodation and commercial space in Whistler and Metro Vancouver compared to Squamish, there will be continued growth pressures in Squamish – population and employment. To respond to these pressures and changes, there is a need to provide continued improvements in commuter bus services linking these destinations.

Currently, BC Transit, Whistler and Squamish jointly fund a commuter transit service linking these municipalities. This service was just recently approved by Squamish and Whistler Councils to operate all year round and provides four daily trips with free transfers to the local transit systems. Greyhound also operates 8 to 9 daily trips between Whistler and Squamish.

Currently, only Greyhound operates a commuter service between Metro Vancouver and Squamish.

TransLink is currently investigating the market for high quality commuter bus service using highway coaches between Metro Vancouver and destinations along the Sea to Sky Highway. This service would

have a high cost recovery rate (i.e. with fares comparable to Greyhound's). This service would only be introduced after discussions with BC Transit, the municipalities along the Sea to Sky Corridor, and Greyhound.

Proposed Service Option Package - 2008/2009

Squamish to Whistler Service - no planned changes. It was recently announced that this service would operate all year round, and Squamish and Whistler are funding this service improvement.

Proposed Service Option Package - 2009/2010 to 2012/2013

Introduction of Shared Ride Taxi Service for Early Morning and Late Evening Commuter Services. A shared ride taxi service is arranged with a local taxi firm to pick up and drop off customers on early morning and late evening trips from the Brackendale and Garibaldi areas. Most of the costs are covered by taxi customer fares (split 3 or 4 ways) but Squamish has to contribute an annual amount for this service for both commuter services to Whistler and Metro Vancouver. This additional cost to Squamish is \$5,000 annually.

Squamish-Whistler and Squamish-Metro Vancouver Commuter Services

The ultimate Transit Business Plan for 2012/2013 would make improvements with the commuter service to Whistler and introduce a new commuter service connecting with key destinations in Metro Vancouver.

The Squamish-Whistler route would be expanded in stages over the five years of the Plan from four trips a day in the fall of 2008 to an all-day service, with 8 or 9 trips per day, provided all year round.

This service, at 8 or 9 trips a day, would be a harmonization of the existing Greyhound service, which is currently 9 trips a day, and the Squamish-Whistler Sea to Sky commuter service.

It is recommended as well that a new commuter route between Squamish and Metro Vancouver, connecting to the Horseshoe Bay ferry terminal, Park Royal Shopping Centre transit exchange in West Vancouver, and the Lonsdale Quay / SeaBus Terminal in North Vancouver, be established in the fall of 2009 with four daily trips. This route could then be improved in stages, expanding to all-day and year-round service by 2012/2013 with 8 or 9 daily trips. Again, this service with 8 or 9 trips a day, however, could be a harmonization of the existing Greyhound service which currently runs 9 trips a day and the Squamish-Whistler Sea to Sky commuter service. Alternatively, this service could be operated by a private contractor hired by TransLink.

It is recommended that both these commuter services connect with the new downtown transit exchange/transportation hub and the Highlands area transit exchange when they are open in 2010/2011.

Negotiations should take place between the Resort Municipality of Whistler, the District of Squamish, BC Transit, TransLink, and Greyhound to accomplish the following:

- Harmonize the schedules and fares of two commuter services – Whistler-Squamish and Squamish-Metro Vancouver - and the Greyhound service in the Sea to Sky Corridor so private and public resources are optimized and the services, fares, and schedules are easy for customers to understand and use; and
- Ensure that there is fare integration to provide seamless transfers and travel from the commuter services in the corridor to the Whistler, Squamish, and Metro Vancouver transit services.

The net local share of the total cost of the current Sea to Sky commuter service between Whistler and Squamish for an all year round service (after fare revenues are included), and recently approved by both local Councils is \$60,500 for Squamish in 2008 (see Table 10), and increasing to \$89,500 in 2012/2013 (i.e. includes counting fare revenue).

Table 10 - Cost of Whistler to Squamish of Daily Commuter Service All Year Round (4 return trips)

	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
Total Operating Cost	\$597,000	\$610,000	\$648,000	\$687,000	\$728,000
BC Transit Share	\$279,000	\$279,000	\$288,000	\$310,000	\$320,000
Local Share	\$318,000	\$331,000	\$360,000	\$377,000	\$408,000
Transit Fares	\$187,000	\$191,000	\$194,000	\$206,000	\$218,000
Municipal Administration	(\$10,000)	(\$11,000)	(\$11,000)	(\$11,000)	(\$11,000)
Estimated Net Local Share	\$121,000	\$130,000	\$155,000	\$160,000	\$179,000
District of Squamish Share for all year round	\$60,500	\$65,000	\$77,500	\$80,000	\$89,500
Resort Municipality of Whistler Share for all year round	\$60,500	\$65,000	\$77,500	\$80,000	\$89,500

A very approximate cost for a Squamish to Metro Vancouver commuter service in 2009/2010 would be in the order of \$67,000 for Squamish's local share, increasing to approximately \$99,000 in 2012/2013 (including fare revenues). **This assumes that Metro Vancouver would assume 50% of the total operating costs, net of fares and BC Transit contributions, and that BC Transit would purchase the three buses required to introduce this Squamish to Metro Vancouver commuter service.**

Proposal 7: All year round Squamish to Metro Vancouver commuter service with 4 round trips a day with stops at Horseshoe Bay, Park Royal and Lonsdale in 2009/2010

Service hours:	5,800	Total cost:	\$513,200
Additional vehicles:	3	Revenue	\$170,500
Additional ridership	97,400	Provincial share	\$208,200
		Net local cost	\$134,500

These commuter services could be offered by the current contractor for the Whistler and Squamish transit services, and/or a current transit service provider in these corridors - Greyhound, TransLink, or by a combination of these private sector service providers through a partnership agreement between the parties.

Prior to developing the planning concept and design for a Squamish to Whistler commuter service, BC Transit and Squamish should obtain TransLink's current market research survey work on the establishment of such a service, and perhaps augment this research with additional market research surveys to fill in any gaps in this information. TransLink researched the potential customer receptiveness to alternative pricing points and service attributes of a high quality highway coach service providing Squamish-Metro Vancouver linkages.

Table 11 – Costs and Potential Staging of Transit Service Improvement Packages - 2008/2009 - 2012/2013

	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
Population	17,000	17,800	18,600	19,400	20,300
LOCAL SERVICE LEVELS and total conventional and handyDART buses	- 2 conventional buses with 7,000 hours would be increased to 3 buses for conventional service in the fall of 2008 - handyDART system with one bus and one spare	- 5 conventional local service buses	- 7 conventional local service buses	- 9 conventional local service buses	- 10 conventional local service buses
a) Conventional Service – Local Service Improvement Packages Base Total Operating Cost in 2007/2008 was \$624,000 and Local Share in 2006/2007 was \$233,000					
Hours of Operation Improvements		Extend weekday and Saturday evening service - Introduce Sunday and statutory holiday service Total Cost = \$298,000 Local Share = \$100,000			
Service Frequency Improvements		Provide 30-minute peak period service Total Cost = \$388,000 Local Share = \$143,000		Provide 30-minute midday service Total Cost = \$434,000 Local Share = \$119,000	Provide 15-minute peak period service Total Cost = \$497,000 Local Share = \$173,000
Other					
Route Modifications or new Route for Improved Service Coverage	<ul style="list-style-type: none"> - Improve service to Highlands, Loggers Road and Industrial Road east of Highway with Brackendale and Garibaldi-Highland routes with completion of overall of Centennial Drive across the highway. - Put more time in the schedules of routes to improve service frequency in peak and off-peak periods for some trips and service reliability. For example, service will be very 30 minutes between Downtown, Howe Sound Secondary, Capilano College, Wal-Mart and Highlands Shopping Centre - Modify routing on existing 3 transit routes to better serve Quest University and the downtown area, Highlands Shopping Centre area, Wal-Mart area, and improve routing service to areas: Valleycliffe route to serve new area - Balsam Way/Cherry Point; and Garibaldi-Highland route to serve Thunderbird Ridge/Glacier View Drive and Quest University (initially one morning trip and one afternoon trip) and Loggers Lane and Brennan Park Recreation Centre; and Garibaldi-Highlands and Brackendale routes to better serve Discovery Way and Wal-Mart. Modify the routing a for all transit routes in the Downtown area to provide improve coverage and to make it easier to extend 		Provide New Route #4 between Brackendale and Downtown Transit Exchange/ Transportation Hub. Provide a new Sea to Sky Highway transit route every 30 minutes, between the Brackendale area, the Highlands Shopping Centre area and new mini-off-street exchange, and the downtown area at the new transit exchange/ transportation hub. This service would provide connections to the Adventure Centre. Total Cost = \$439,000 Local Share = \$157,000		Provide Summer Time and Daily (7 days a week) morning and Late Afternoon Only Trips to Area Recreational Destinations which would have a premium fare to recover a high proportion of its costs (i.e. some of the destinations such as the Valley, Shannon Falls and Alice Lake and the Chief Park, Cheekye, Brohm Lake, Britannia Beach, and Squamish Golf and Country Club. Use spare bus.)

	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
	routes when the Waterfront and other downtown area redeveloped. Both routes would connect with on-street mini exchange at the Highlands Shopping area. The routing for the Garibaldi-Highlands service would be changed to travel along the Sea to Sky Highway, Centennial Drive, Loggers Road and Industrial Drive in order to serve the Brennan Park Recreational Centre and these areas not now provided with transit service.				
Schedule Reliability and Spare Bus Improvements				Provide an additional bus to Squamish for the four routes in Squamish to improve the reliability of service and have another spare bus, to avoid having to short turn buses, to avoid using the handyDART buses because of maintenance problems with the conventional buses and to have another spare. These buses will be required as well to provide additional service coverage to serve new developments, and to the growing Quest University.	Provide an additional bus to Squamish for the four routes in Squamish just to improve the reliability of service and have another spare bus, to avoid having to short turn buses, to avoid using the handyDART buses because of maintenance problems with the conventional buses and to have another spare. These buses will be required as well to provide additional service coverage to serve new developments, and to the growing Quest University.
Peak Annual Hours for Conventional Transit Services	Increase from 7,000 hours in April 2008 to 10,200 hours in September 2008	10,200 hours plus 8,200 hours = 18,400 hours	18,400 hours plus 5,200 hours = 23,600 hours	23,600 hours plus 6,000 hours = 29,600 hours	29,600 hours plus 6,000 hours = 36,600 hours
Sub-Total - Conventional Total Operating Cost in 2007/08 of \$688,000 and Net Total Local Share-\$233,000	\$0.940 million and Net Local Share = \$0.323 million	\$1.536 million and Net Local Share = \$0.566 million	\$1.980 million Net Local Share = \$0.743 million	\$2.414 million Net Local Share = \$0.862 million	\$2.911 million Net Local Share = \$1.035 million
b) Custom Transit Service Improvements in 2007/08 the Total Operating Cost was \$129,000 and local share was \$46,000					
Service improvements and handyDART Vehicles		\$ Initiate Taxi Saver Program - \$5,000 annually	\$5,000 plus Two additional handyDART vehicles and 2000 hours to supplement paratransit service	\$5,000	\$5,000 4 handyDART vehicles in total
Operating Costs for Custom Transit	\$129,000 and local share - \$46,000 with 2,000 hours	\$135,000 and local share - \$47,000 with 2,000 hours	\$267,000 and local share - \$112,000 with 4,000 total hours	\$273,000 and local share - \$117,000 with 4,000 hours	\$280,000 and local share - \$122,000 with 4,000 hours
Sub-Total – Custom	\$125,000 with \$44,000 local	\$140,000 with \$49,000 local	\$272,000 with \$114,000 local	\$278,000 with \$119,000 local	\$285,000 and local share - \$124,000
c) Commuter Service Improvements					
Squamish-Whistler Commuter Service	Continue to operate 4 trips daily but establish local taxi trips (2 in morning and 2 in the evening) to enable customers using the Brackendale and Garibaldi-Highlands routes meet early and late commuter trips- users pay fee to cover most of costs bus net cost to Squamish of estimated \$5,000 annually		Harmonize trips and fares with private sector operator - Greyhound who provide nine daily trips, and have free transfers to local transit systems in Metro Vancouver, Whistler and Squamish		

	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
Squamish to Metro Vancouver Commuter Service		- Establish all day service between Squamish– Metro Vancouver all year round - Include stops at the Horseshoe Bay ferry terminal, West Vancouver - Park Royal, and Lonsdale - Sea Bus terminal with 4 trips / day - 3 new buses required for Squamish to Metro Vancouver commuter service	Harmonize trips and fares with private sector operator - Greyhound who provide nine daily trips, and have free transfers to local transit systems in Metro Vancouver, Whistler and Squamish		
Squamish Commuter Service to Whistler – Net Local Share	\$61,000	\$65,000	\$78,000	\$80,000	\$90,000
Squamish Commuter Service to Metro Vancouver – Net Local Share		\$67,000 (assumes Metro Vancouver covers 50% of local cost)	\$77,000	\$89,500	\$99,000
Shared Ride Taxi Costs (Squamish-Whistler Service)		\$5,000 net cost share	\$5,000 net cost share	\$5,000 net cost share	\$5,000 net cost share
Sub-Total Net Local Share for Commuter Service	\$61,000	\$137,000	\$160,000	\$176,000	\$194,000
Total Net Local Share – conventional, paratransit and commuter services	\$0.428 million	\$0.752 million	\$1.017 million	\$1.157 million	\$1.323 million
Fares - conventional Services Fare Revenue Target of Total Operating Cost	30% Fare Revenue Recovery Target	30% Fare Revenue Recovery Target	30% Fare Revenue Recovery Target	30% Fare Revenue Recovery Target	30% Fare Revenue Recovery Target
Total Capital Costs (see Table 12) for Service Improvements, includes buses	\$1.170 million	\$3.375 million	\$3.775 million	\$1.425 million	\$520,000
Sources of Financing for These Initiatives					
• BC Transit - 46.7%%					
• Squamish – 53.3%					
• Estimates of Other Revenue - Gas Tax for Public Transit Capital	\$70,000	\$75,000	\$80,000	\$85,000	\$90,000
Evaluation Criteria					
<i>Increase Ridership</i>	●	●●	●	●●	●●
<i>Respond to Public Input Common Themes - Frequency and Reliability of Service</i>	●●	●●	●●	●●	●●
<i>Respond to Public Input Common Themes - Comfort and Convenience of Service</i>	●	●	●	●	●
<i>Ability to Respond to Growth Pressures - serve New Growth Areas and New Population/ Employment</i>	●	●	●	●	●



6.4 Five Year Transit Capital Program

The recommended five year capital investment plan and budget to implement and support the bus service enhancement program and it complementary initiatives is outlined below in Table 12.

Table 12 – Five Year Transit Capital Program

	Short Term - 2008/2009 to 2009/2010	Medium Term - 2010/2011 to 2011/2012	Longer Term - Post 2012/2013	SUB TOTAL and GRAND TOTAL COST
Provide New Shelters and Benches	10% of stops	15% of stops	20% of stops	\$35,000 annually
Sub-Total				\$175,000
Improve the accessibility of bus stops with the provision of landing pads and improving sidewalk connections to bus stops areas				\$35,000 annually
Sub-Total				\$175,000
Bus Exchange Bike Storage Facilities		Establish Bike Storage Facilities at New Transit Exchanges - \$15,000		\$15,000
Sub-Total				\$15,000
New Service Expansion Buses	2 new conventional buses - \$0.90 million	3 more new conventional buses for local service - \$1.350 million - 3 more buses for commuter Squamish to Metro Vancouver service - \$1.95 million - 2 handyDART buses - \$0.300 million	3 more new conventional buses for local service - \$1.350 million	8 new conventional buses - \$3.60 million - 2 handyDART buses - \$0.300 million - 3 commuter buses - \$1.95 million
Sub-Total				\$5,850,000
Enhance Local Bus Maintenance Depot	Purchase property in industrial area close to main transit exchange, if required for expansion of existing maintenance facility	Plan and design enhanced bus maintenance and storage facility	Open enhanced new local bus maintenance depot	
Sub-Total				\$1,000,000
Potential New Smart Card	Conduct Initial Investigations and Have Discussions with BC Transit, Whistler and Metro Vancouver		Introduce Regional Smart Card	
Sub-Total				\$600,000
Required Capital Facilities and Cost	Purchase property and complete planning and design for new main exchange in downtown and mini transit exchange in Wal-Mart area	Build and open new main transit exchange/ transportation hub and mini transit exchange		
Sub-Total	Planning and design - \$200,000	Two exchanges – 4 bay mini transit exchange - \$750,000 and larger main exchange - 7 bays and terminus for inter-municipal 1,500,000		\$2,450,000
GRAND TOTAL COST				\$10,265,000 minus bus costs = \$4,415,000
Sources of Capital Financing for above-noted initiatives				
BC Transit - 46.65%				
Squamish – 53.35%				
Estimate of Gas Tax for Capital	\$145,000	\$165,000	\$90,000	\$400,000 for capital costs
NET LOCAL SHARE including Gas Tax Capital– Capital (none for buses)				\$2,150,000

	Short Term - 2008/2009 to 2009/2010	Medium Term - 2010/2011 to 2011/2012	Longer Term - Post 2012/2013	SUB TOTAL and GRAND TOTAL COST
Evaluation Criteria				
Increase Ridership	●	●	●	
Respond to Public Input Common Themes - Frequency and Reliability of Service	●	●	●	
Respond to Public Input Common Themes - Comfort and Convenience of Service	●	●	●	
Ability to Respond to Growth Pressures -serve New Growth Areas and New Population/Employment	●	●	●	

Strong

●

Medium

●

Low

●

Note: The capital and operating cost figures are meant to be estimated costs, and not exact for a Strategic Transit Business Plan.

7.0 Transit Supportive Programs

7.1 Objectives of Programs

In this section of the report, several complementary programs and strategies are outlined that are recommended that District of Squamish undertake in co-operation with BC Transit and other pertinent stakeholders. These actions are recommended in order to complement and increase the effectiveness and efficiency of the Squamish/BC Transit investments in improving the transit system in the District in the next five years in the Five Year Transit Business Plan. These complementary programs and strategies will also respond to the public input issues and opportunities and to the four key objectives for the transit system (service, reliability, comfort, and convenience) and contribute to increasing transit ridership.

These programs and strategies relate to the following areas which will support the transit system service enhancements:

- Marketing and customer information initiatives;
- Fares and fare strategies;
- Transit infrastructure;
- Transit asset management;
- Transportation demand management programs;
- School and Squamish transit system service co-ordination and opportunities for shared purchases; and
- Transit-oriented development.

7.2 Marketing

Marketing and Customer Information Initiatives

To improve the marketing of the Squamish transit system the following initiatives should be undertaken:

- i) **Rider's Guide:** The Rider's Guide provides route, schedule and other transit information. The Guide should be updated annually or whenever there have been any significant schedule and service changes. The information in the Guide should include the schedule for the Squamish-Whistler service. As well, the Guide should indicate what trips on routes are likely to be serviced by the handyDART vehicle which is now used as a spare for the conventional transit system. As well, information should be provided in the Guide on school trips. The District should consider working with the School District No. 48 to develop and distribute a separate school service flyer such as in Powell River and Abbotsford. To assist immigrants living in Squamish a limited number of the Guides could be published in foreign languages.
- ii) **Schedule Information:** The District should include more schedule and route information at bus stops, especially key destinations and exchange points.
- iii) **District Website:** The District should make modifications to its website to feature transit information much more prominently including work from this project. The District should rely on linkages back to the BC Transit website when there are significant advantages such as linking the service schedules

with a future BC Transit Trip planner service. This measure will serve to increase the local awareness and identification with the Squamish transit system as a local service rather than a provincial service.

iv) **Branding and Marketing Strategy:** To provide the Squamish transit system with more of its own identity and profile and to raise community awareness of the transit system, the District should establish a branding and marketing Transit Task Force that includes stakeholders and respected citizens that would look at all aspects of the transit service as well as develop a branding and logo system. This would create a new image for the transit system and generate some community ideas as to how the transit system could be advertised to increase ridership. This would raise the profile of transit in the District among the general public and increase the community sense of pride in its transit system.

v) **Expand Marketing Reach:** Market the Squamish service directly to First Nations, the Punjabi community and foreign students.

vi) **Conduct Market Research Survey for Squamish-Metro Vancouver Commuter Transit Service:** In co-operation with BC Transit, TransLink and Greyhound, conduct market research to establish the demand and ideal features of a Squamish-Metro Vancouver commuter transit service. In the survey, identify Squamish residents who would be willing to provide their e-mail addresses to the District to be used as a sounding board for Squamish-only service initiatives and this Transit Business Plan via web-based surveys.

vii) **Bus Shelters:** Squamish Council and staff could work with community groups to support the funding of bus shelters which would reflect the local communities by displaying “community art” on the shelters.

7.3 Fares and Fare Strategy

The existing Squamish transit system fare structure and recommended changes for 2008/2009 are shown below in Table 13.

Table 13 – Squamish Local Transit System Fare Structure

Cash Fares	Current	Recommended
Adult	\$1.75	\$1.75
Student/Senior	\$1.50	\$1.50
Tickets	(20 tickets)	(10 tickets)
Adult	\$29	\$15.75
Student/Senior	\$24	\$13.50
Monthly Passes		
Adult	\$39	\$39
Senior/Student	\$30	\$25
School Days Only	\$20	--
Semester Passes		(4 months)
Student	--	\$80

The following fare changes for the fall of 2008 and their rationale are outlined below.

Eliminate the School Days Only Pass: Squamish currently has both a regular \$30 monthly student pass which is good for unlimited travel, and a \$20 school days only pass which is only valid on days when school is in session. It is recommended that the school days only pass be eliminated. The

regular student monthly pass is a better way to encourage students to use transit for other non-school trips, such as weekend travel for shopping or recreation, and build regular transit habits. In order to reduce the cost impact on students and their parents, it is recommended that the regular student/senior monthly pass price be reduced from \$30 to \$25. In the past year, nearly 1,000 school days only passes were sold in Squamish compared with 75 regular student/senior passes, so there would be no negative impact on revenue with a \$25 monthly pass. It is expected that all those currently purchasing school days only passes would switch to the regular monthly pass, resulting in a net revenue increase of \$4,800 annually.

High School Semester Pass: These are bundles of 4 monthly student passes which are sold at a further 20% discount, resulting in a price of \$80 for 4 months. These passes further encourage students to develop regular transit riding habits. Introducing the semester pass at the same time as the school days only pass is eliminated means that students who commit to 4 months would be able to get unlimited access to transit for \$20 per month – the same as they currently pay for the restricted school days only pass. Although the cost per month is lower for the semester pass, this tends to be offset by the 4-month commitment period. For example, some students purchasing monthly passes may choose not to purchase a pass for December, but the December pass would be included in a semester pass purchased in September. As a result, the revenue impact is projected to be negligible.

Extend Student Pass Products to Post-Secondary Students: It is recommended that full time post-secondary students with photo ID be eligible for the student monthly pass. This would help to encourage regular transit use among post secondary students. Post-secondary students would continue to pay the adult fares for cash and tickets. Currently, post-secondary students form a relatively small market for transit in Squamish, so the impact on revenue is likely to be small.

Re-price Tickets: Squamish Transit tickets are currently priced at \$29 (adult) and \$24 (senior/student) for 20 tickets. Since the tickets come in sheets of 10, tickets should be re-priced to reflect this and to make the savings more evident. Selling tickets by sheets of 10 would also reduce the cash outlay required of occasional transit users. It is recommended that tickets be priced at sheets of 10 for the price of 9 cash fares. This would amount to \$15.75 for adults and \$13.50 for seniors and students.

Flexible Transfer Policy: Currently, transfers are valid for travel in only one direction. It is recommended that Squamish introduce a more flexible transfer policy that would allow travel on any bus in any direction for a 90 minute period. This would allow passengers to use a transfer to make a return trip or for a stopover, as long as the second trip is within the 90 minute period. This policy has been implemented in Vancouver, Victoria, and a number of the municipal systems.

The flexible fare policy would have some impact on revenue since some passengers who previously paid for a return fare would now be able to use a transfer. However, this impact is likely to be small. Roughly 70% of transit trips involve work or school trips, so it is unlikely that passengers would be able to take advantage of a return trip within 90 minutes. Cash and tickets account for about 50% of riders in Squamish. It is estimated that only 15 to 20% of transit trips in Squamish could potentially take advantage of the return transfer, but passengers will actually do so for only a fraction of those trips. Any negative revenue impact would be partly offset by higher ridership resulting from the more flexible policy.

Other issues with the current fare structure and recommendations for the Squamish Transit Business Plan are outlined below:

Issue 1: Fare System Cost Recovery and Setting Fares

Fares covered 27.4% of total costs for the Squamish Transit System in 2006/07. While this is higher than the average 22.6% cost recovery for other similar sized transit systems in B.C., many comparable

transit systems operating across Canada have 30 to 35% cost recovery. Fare changes have been made infrequently in Squamish.

Recommendation

As the transit system is significantly improved in the next five years with implementation of the plans service improvements and operating costs are expected to increase significantly (i.e. driven by expected significant increases in fuel prices and labour costs for operators and maintenance staff), UMA is recommending that the Squamish transit system should review fares on a regular basis (i.e. every two years) to ensure that the cost recovery level is financially viable. A high percentage of these costs should be passed on to the cash fares so that frequent users of the transit system who purchase passes and tickets are rewarded as loyal customers.

Issue 2: Fares for Regular Customers versus Infrequent Users

The fare system does not reward loyal customers who buy monthly passes enough, in terms of discounts for using passes versus cash or tickets. The fare system does not provide a high enough disincentive to using cash fares which are used by infrequent users and impose a cost on the transit system for handling fares. An objective of a revised fare structure would be to try to minimize the use of cash fares as much as possible in order to reduce the cash handling costs and get more regular users.

Recommendations

- **Maximize Revenue from Prepaid Fares:** The District should attempt to maximize the revenues that it gets from prepaid fares such as passes and tickets as they have a number of advantages to the customers and transit system:
 - ease of use for customers, since exact changes are not required each time the passenger boards;
 - there are no direct out-of-pocket costs to use the bus which puts the bus on a more equal footing with the automobile;
 - regular users generally receive the biggest price break encouraging commuter travel on transit;
 - since the cost of any additional trip is free, passengers who typically buy passes for commuting may be encouraged to use transit non-commuting trips, as well, which in turn has the potential to increase ridership during off-peak periods; and
 - local municipalities receive larger revenue amounts up front and in a consistent manner.
- **Smart Fare Card:** To simplify the fare system, make it more convenient for customers, and enable the transit system to more easily reward frequent and loyal customers, Squamish could work with BC Transit, Whistler, and TransLink to investigate the development and implementation of a Whistler-Squamish-Metro Vancouver transit system Smart Fare Card.
- **Fares for Regular Customers versus Infrequent Users:** An objective for the fare strategy should be to try to minimize the use of cash fares as much as possible in order to reduce the cash handling costs and get more regular users. Therefore, the discount for using tickets or passes should be increased by raising cash fares, and cash fares should be consistently increased more than passes and tickets when general fare increases are implemented.
- **Number of Fare Outlets:** There are not enough outlets for purchasing fares in Squamish and additional outlets should be pursued.

A sample transfer fare policy is shown below.

Sample Two-Way Transfer Policy

(It is recommended that after an initial phase-in and test period, the confirmed policy be printed on the back of system transfers).

- Transfers are valid on any route on the date of issue and allows travel, **including return trips**, for a period of up to 60-90 minutes from the time of issue. (Time limit amount to be confirmed by staff.)
- Transfers are issued only at the time of fare payment by ticket or cash and must be kept for the entire trip as proof of payment.
- Transfers must be shown clearly to the driver every time a passenger boards a bus.
- The transfer will expire at the time indicated on the front of the transfer.
- Transfers are non-transferable.

Fare System for Commuter Transit Services - Whistler to Squamish

There are several significant issues with the fare systems for the Whistler-Squamish services (see Table 14). These include:

- Free transfers to and from the Greyhound service and the local systems in Squamish and Whistler are not permitted, whereas free transfers are permitted between the municipal service to and from the local systems.
- The differences in fare policies and systems between the municipal commuter service and Greyhound services are confusing for customers.

Table 14 – Squamish Commuter Transit Services Fare Structure

Squamish Transit Fares	Commuter Service (New Fares Approved By Whistler Council on May 5, 2008)
Squamish to Whistler and return	Sea to Sky service operated jointly by Squamish and Whistler with 4 daily trips to meet work times in Whistler and emergency ride home service; tickets can be used on both Whistler and Squamish local transit systems for free transfers
	Adult - \$5.00 cash fare or 10 tickets for \$45.00 or monthly pass for \$145.00; Seniors/students - \$4.00 per trip
Private Greyhound Service	Provides additional daily trips - 8 to 9 trips daily Sell Faresavers for 20 tickets for \$80.00 but cannot be used for transferring to and from Squamish and Whistler transit systems

Key Commuter Service Fare Strategy Recommendations

Negotiations should be held among BC Transit, Whistler, Squamish, and Greyhound to attempt to harmonize the fare and transfer policies for a consistent Squamish to Whistler Sea to Sky commuter transit service which still offers Emergency Ride Home service, permits free transfers to both local transit systems in Whistler and Squamish, and the services and fares offered by Greyhound. With potential service being considered for the Squamish to Metro Vancouver trips, these discussions and negotiations should also include TransLink.

7.4 Transit Infrastructure

Key transit infrastructure, in addition to the buses required to support the proposed transit service improvements, include the following:

New Transit Exchanges

Purchase the property for the main transit off-street exchange/transportation hub in the downtown area and the land required for mini transit off-street exchange near the Highlands Shopping area in 2008/2009, complete planning and design work in 2009, and open these facilities in 2010/2011.

Bus Stop Accessibility

For many of the bus stops in Squamish, the accessibility could be significantly enhanced by sufficiently sized landing pad, nearby curb cuts, and level sidewalk connections. The District, working with BC Transit and its accessibility guidelines, should dedicate funds in each year of the five-year capital program to improve the accessibility of the bus stops. This will encourage more customers to use the conventional transit system versus the handyDART system, for which individual trips are much more costly.

New Shelters and Benches

Building new shelters and installing benches in many shelters in stages over the length of the term of the Plan, which a percentage (%) target established for each year (i.e. 10% of bus stop locations in first year and increasing to 20% of bus stops in subsequent years, with an emphasis on the highest boarding stops and bus stops which are very exposed to the elements). There are currently only two shelters on the transit system.

Bike Racks on Buses and Cycling Facilities

Providing bus bicycle racks on the District's future additions to its bus fleet as acquired and provide bike storage facilities at the new transit exchanges in 2010/2011.

Squamish Local Transit Maintenance and Storage Facility

Expand and enhance the local bus maintenance and storage facility by 2010/2011 when the total bus fleet of Squamish is over four (4) buses. The planning and designing of this expansion should occur in 2008/2009, and this facility should be ready by 2010/2011.

7.5 Transit Asset Management

As the transit system in the District of Squamish expands, the District should ensure that the systems' assets in terms of bus stops, exchanges, and perhaps its own transit maintenance facility in Squamish, are incorporated into the District's Asset Management Plan which should have five components:

- A strategic approach to defining the goals for the maintenance, operation, and improvements of all the transit capital assets;
- A planning and programming process that translates these goals into tangible actions that will result in the attainment of those goals;
- An inventory and a related data and analytical system that measures the extent and condition of the assets, predicts the future condition of the assets, and monitors progress towards the defined goals;

- A program implementing process that maintains the strategic review of the assets, includes all relevant departmental areas of the District and uses the most efficient and effective tools to implement programs; and
- A monitoring system that regularly measures the condition of the assets, progress towards goals, and reports these findings to District managers.

7.6 Transportation Demand Management (TDM) Programs

Support and Logic for TDM Programs

Many Canadian cities have been, for decades, in a continuous cycle of responding to growing transportation demands of increasing population and trips by concentrating their efforts on building more roads. These same communities are now recognizing that there are significant financial, operating, maintenance, and construction costs for such activities, and that there are social and environmental limitations to relying solely on new roadway infrastructure to meet these increasing travel needs. More and more municipalities are moving in the direction of supporting transportation demand management (TDM) as a strategy and involving a number of program and policies.

The TDM program and policy objectives include:

- Encouraging people to travel more efficiently by traveling less and traveling together; and
- Using travel modes that use fewer resources, thus creating fewer undesirable impacts than cars (e.g. public transit, cycling, walking, and carpooling), and reduce the demand for automobile travel.

TDM programs and policies do not preclude new investments in road infrastructure, but aim at reducing future expenditures in this area, focusing them on strategic and staged road infrastructure improvements, and integrating them more effectively with other travel modes such as cycling, walking and transit.

TDM strategies look for reasonable ways to manage the demand for travel and attempt to influence the purpose (why), destination (where), and mode (how) of personal travels decisions by:

- Making non-automobile travel options such as transit more attractive and easier to use;
- Helping people better understand how their travel decisions affect the community and building positive attitudes towards alternative travel options through public education; and
- Using incentives and disincentives to influence personal travel decisions by counteracting the hidden costs of driving alone.

The benefits TDM can bring to the community include the following:

- Reducing municipal road operating and capital costs;
- Decreasing the personal costs of travel in terms of car ownership and operating costs;
- Improving the management of auto congestion and improving travel times and reliability for goods movement and transit;
- Reducing environmental impacts from the construction and operation of roads in terms of air and water pollution; and
- Creating more vibrant communities, especially in terms of the use of public realm and open spaces.

The main categories of TDM techniques can be placed into the following three categories:

1. **Encouraging Alternative Travel Behaviour:** These techniques increase the availability and quality of efficient modes of travel (cycling, transit, and walking) as a method of reducing travel by the automobile.
2. **Managing Automobile Use:** These techniques manage automobile traffic by actively or passively discouraging travel by car. These techniques are the most controversial and difficult to implement.
3. **Reducing the Need to Travel:** These techniques reduce the need to travel by the spread of the use of telecommunications technologies and delivery services encouraging new urban development patterns that reduce the need for longer trips.

Table 15 below indicates a range of TDM techniques within each of the three main categories, their potential impacts and their applicability to developing urban areas such as the District of Squamish.

Table 15 – Applicable Transportation Demand Management Measures for District of Squamish

Category & Techniques	Impacts			Applicability to Small Cities
	Improve Traffic Congestion Management	Increase Transit Ridership	Reduce Emissions	
A. Encouraging Alternative Travel Behaviour				
Promotion of Cycling and Walking				
Improve District Pedestrian & Cycling Infrastructure	●	●●●	●	High
Install cycling facilities (e.g. bike lockers and racks) at future transit exchanges and at key bus stops	●	●●●	●	High
Install bike racks on buses	●	●●●	●	High
Employer Programs				
Establish District employee comprehensive TDM program - provide fleet of fuel efficient cars for city trips, encourage carpools by providing preferential parking and establishing carpool matching program either internally or by using outside resources; and provide subsidized transit passes, etc.	●	●●●	●●●	High
District and Employer Alternative Work Schedules - compressed, flextime, setting employees up to work at home, etc.	●●●	●	●●●	High
Charge employees for parking at District work locations	●●●	●	●●●	Medium

Category & Techniques	Impacts			Applicability to Small Cities
	Improve Traffic Congestion Management	Increase Transit Ridership	Reduce Emissions	
Transit				
Transit Service Improvements - frequency, reliability, coverage, comfort and convenience	●	●●●	●●●	High
Transit Priority Measures - provide priority for transit vehicles at traffic signals and provide queue jumpers at intersections to enable buses to bypass congestion at these traffic bottlenecks	●	●●●	●	Low
Establish park and ride locations in hard to reach areas by transit with direct and frequent transit services from the lot - use future parking lot as transit-oriented development site	●	●●●	●	Low to Medium
Parking Management				
Establish Carpool Lots	●●●	●	●●●	Medium
Establish High Occupancy Vehicle (HOV) Lanes on roads	●●●	●	●●●	Low
Encourage Car Sharing Pools in District - cars are rented for short periods	●●●	●	●●●	Medium
Ridership Program (informal or organized carpools & vanpools) with or without Guaranteed Ride Home Program	●●●	●	●●●	Medium to High
Encourage Transportation Management Associations to established to encourage and support greater use of alternative modes - transit, cycling and walking	●●●	●	●●●	Low
Establish Public, Community and Employer Outreach Activities and TravelSmart Programs to Promote Transportation Demand Management Actions	●	●	●	High
Use Telecommunications Technology to encourage telecommuting and reduce trips	●●●	●	●	Low
B. Managing Automobile Use				
Parking Management and Pricing - increase downtown area parking pricing and improve parking supply management (i.e. reduce parking supply directly in downtown and require reduced parking requirements sin the zoning by law)	●●●	●●●	●●●	Medium

Category & Techniques	Impacts			Applicability to Small Cities
	Improve Traffic Congestion Management	Increase Transit Ridership	Reduce Emissions	
Establish Road and Bridge Pricing and Area Congestion Charges	●	●	●	Low
Provide preferential parking for carpools - provide the most desirable parking locations for carpools	●	●	●	Medium
C. Reduce Need to Travel				
Increased Land Use/Transportation Coordination	●	●	●	High



Moderate Impact



High Impact



Low Impact

7.6.1 Applicable TDM Measures for District of Squamish with Transit Systems and Other Areas Complementary to Transit

There is the opportunity, through the implementation of the Squamish Transit Business Plan and its 5 year action and investment plan, to enhance the Squamish transit system service and to undertake TDM actions and measures which would complement the transit system ridership and at the same time encourage greater use of active modes such as cycling and walking. These TDM actions and initiatives can assist in deferring significant road network infrastructure maintenance and capital costs. A TDM program can be developed which fits the culture of Squamish and has the appropriate mix of incentives and disincentives that works to achieve the following objectives:

- Supporting reducing trip-making;
- Increasing the use of the transit, pedestrian, and cycling network;
- Deferring future transportation capital operating and capital costs,
- Improving the management of traffic congestion; and
- Reducing greenhouse gas emissions.

TDM initiatives from Table 15 that are recommended for Squamish include the following:

Parking

Develop a parking management strategy in the downtown area, which will encourage a greater number of trips to be made by non-automobile modes that includes strategies for peak and off-peak pricing, the location of parking, the shared use of parking between land uses, and the supply of parking relative to demand. This strategy should examine the possible implementation of parking charges in the downtown core of Squamish as a means of encouraging more frequent daily turnover of this valuable land on downtown streets. Downtown parking fees should be marketed as a source of funds for improvements to non-motorized transportation modes in Squamish (e.g., transit stops and services, cycling paths and networks, facility enhancements, and sidewalk upgrades for better accessibility, condition, and coverage).

Carpooling

Partner with Jack Bell Ridershare or other similar community carpool organizations to bring their web-based ridematching initiative to residents of Squamish. These organizations can assist Squamish to establish a web-based ridematch program, such as www.carpool.ca, which would be accessible to Squamish staff and to employees of firms who want to find carpool partners, reduce emissions, and reduce driver stress.

Transit

Continue to enhance conventional transit service within Squamish through the following actions:

- Improvements to the frequency of transit service, both in peak periods and in off-peak periods;
- Introduction of improved transit service in the evenings and on statutory holidays, and improved service on the weekends;
- The provision of improved transit service coverage, to provide service to institutions such as Quest University and other prominent land uses;
- The introduction of measures to make transit trips easier for customers such as providing enhanced walking and cycling connections to the transit service, providing bike racks on buses and bike storage areas at future transit exchanges, and upgrading the accessibility of bus stops and shelters; and
- The introduction of new buses attractive to local and commuter transit service uses, the provision of new buses both for service expansion and for replacement of older buses.

Pedestrian and Cycling Initiatives

- Networks - enhance the cycling and pedestrian/trail networks in Squamish and their interconnections to the existing and future transit network and prominent Squamish destinations.
- Bicycle Parking Handbook – develop for cyclists, developers, architects and building owners. This guide includes information on the various types of bicycle parking, tips on where to locate parking and how much parking to provide.
- New Cycling Information Line – develop a new telephone hotline and email address to provide the public with a direct conduit to cycling information (see cycle@calgary.ca).
- Bikeway and Pathway Map – develop a new pathway and bikeway map which includes updates to the pathway and bikeway system, new topographic base mapping and information on new programs being offered by the District. This release of the map should also identify pathways with snow removal and enclosed bike parking sites and storage facilities. Place this information on Squamish's website and in an enhanced Rider's Guide.
- Wide Curb Lanes for Cyclists - in an effort to improve conditions for cycling in Squamish on the street, the District could adopt a new cross-section for major standard roads. This new standard includes a 4.3 metre wide curb lane in both directions. In addition to the widened pavement, bicycle stencil pavement markings are provided to indicate the area for cyclists. A modified standard has also been adopted for existing major roads, and is implemented as road resurfacing occurs. This involves reducing the inside lane typically from 3.7 m to 3.4 m, and widening the curb lane from 3.7 m to 4.0 m.

Overall District of Squamish Employee and Employer TDM Programs

Establish a comprehensive District of Squamish TDM program for employees. The objective of this program would be to both reduce work trips and convert more work trips to more sustainable transportation modes (transit, walking and cycling). Once this program is established, use its success

to work with major Squamish employers to introduce a similar TDM program. Designate a District staff member to be assigned the role of managing and developing the District's TDM program, and to work with Squamish employers to develop similar programs.

Develop Squamish TravelSmart Program

Develop a TravelSmart Program which is an innovative approach to reducing car travel. TravelSmart Programs have been used successfully with many small, medium and large cities in Europe and North America to work with designated community areas to provide targeted marketing and information materials to increase the sustained use of non-automobile modes for an increased proportion of trips.

Many people are interested in using transit, cycling, walking and ridesharing, but may need more information to better use these travel modes. Through a combination of information, incentives, and rewards. TravelSmart encourages people to think more about their transportation options and allows them to make more informed travel choices.

There are several key principles of TravelSmart:

- **Target interested households.** TravelSmart focuses on households that indicate that they are interested in increasing their use of alternative transportation.
- **Offer personalized support and resources.** Direct contact and individualized information, tailored to meet households' specific travel needs, is an effective means to encourage people to think more about their travel choices.
- **Focus on households.** By focusing on households, TravelSmart addresses the full range of trips originating from home, not just the work commute trip. Participants can start by considering alternative transportation for small trips, close to home.
- **Reward those who already use alternative transportation modes.** Households that already regularly use public transit, cycle, or walk are offered a small reward to encourage their continued use of these modes.

7.7 School and Squamish Transit Systems Coordination

Both Squamish Transit and the School District No. 48 operate transit systems in Squamish. There may be opportunities for optimizing the service resources and purchases of these respective transit systems. Discussions and negotiations should take place to see if there are opportunities and potential partnership arrangements in terms of combining vehicles purchases and fuel purchases and explore a possible merger of the Squamish and School Board bus system services.

7.8 Sustainable and Transit-Oriented Development (TOD)

To support the five year Transit Business Plan for Squamish, it is important that the District, through policies and initiatives in the Municipal Transportation Master Plan and Municipal Development Plan, support transit-oriented development (TOD) in the downtown and other District residential/commercial nodal areas/hubs. The TOD development should include moderate to higher density office, retail, industrial, entertainment, and residential development, located within easy walking distance to major transit stops (i.e. bus stops, major bus exchanges). This generally incorporates a mix of residential, employment, and shopping opportunities designed for pedestrians without excluding the automobile. TOD can be new construction or redevelopment of one or more buildings whose design and orientation facilitate transit use.

The TOD plan should seek to create vibrant, livable, human-scale communities with a strong identity and "sense of place". There should be an effort to transform under-utilized and automobile-oriented

areas into mixed-use neighborhoods, promote alternatives to driving, and manage growth through compact development.

7.8.1 Key Design Principles for TOD

Public Realm

The street and pathway network is the basic framework of the public realm and should provide frequent connections and a comfortable walking environment. Public spaces, such as civic buildings, transit stations, pocket parks, parks and open spaces, plazas, and civic buildings, should form the physical and virtual heart of the community.

Density

Development in central areas, particularly around transit hubs, should:

- Be higher-density in order to foster activity and interest at the street;
- Maximize the number of people within walking distance of retail, transit, and other services; and
- Take advantage of existing infrastructure.

Diversity

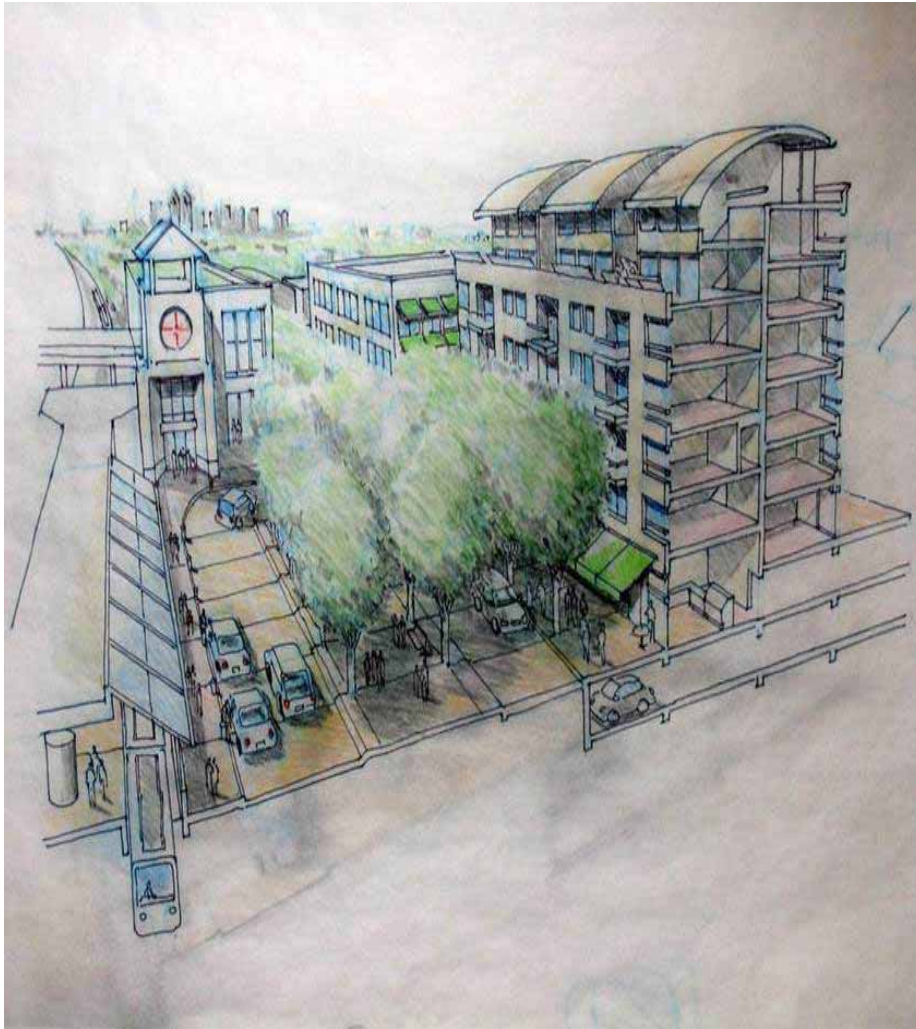
Development should integrate diverse land uses within the community, the block, and the building. A variety of housing should accommodate all income ranges and household sizes.

Design

Development should be pedestrian-friendly and human-scale, with frequent doors and windows at the street, façade variation, and minimal setbacks. Urban design and architectural style should recognize the area's character, traditions, and ecology.

Public Involvement

Projects should draw upon community residents, business owners, and other local stakeholders as valuable resources for ideas and information.



Optimized Use of Road Space



Pedestrian/Transit Friendly Street



Mixed and Higher Density
Development near Transit

7.9 Potential Schedule

A potential schedule for the staging of the implementation of these key complementary measures to support the recommended transit service improvements is shown in Table 16.

Table 16 – Potential Staging of Other Transit Service Supportive and Complementary Improvements in District of Squamish - Continue Initiatives Started in 2008/2009 through the Five Year Business Plan

Complimentary Action	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
Marketing and Customer Information	Targeted Marketing: Market service directly to First Nations, Punjabi community and foreign students.				
		Web Based Input Panel: Establish, through a brief market research telephone survey, an on-going group for conducting web based surveys on feedback on implementation of transit plan.			
	Rider's Guide: Update the Guide annually to reflect significant schedule and service changes. Put in the Guide the schedule for the Squamish-Whistler service; trips likely to be serviced by the handyDART, and information on school trips. Consider working with the School District No. 48 to develop and distribute a separate school service flyer. To assist immigrants living in Squamish, a limited number of the Guides could be published in foreign languages.				
		District Website: The District should make modifications to its website to feature transit information much more prominently including work from this project.			
	Schedule Information: Include more schedule and route information at bus stops, especially key destinations and exchange points.				

Complimentary Action	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
	Branding Contest: Select a Task Force in Squamish to establish a distinctive logo and image brand for the Squamish transit system. A branding strategy would raise the profile of transit in the district among the general public and increase the community sense of pride in its transit system.				
Fares and Fare Strategy	Fare Sales Outlets: Establish more sales outlets at convenient community locations and with various hours which span the day.				
	Maximize Revenue from Prepaid Fares: The District should attempt to maximize the revenues that it receives from prepaid fares. Therefore, an objective for the fare strategy should be to try to minimize the use of cash fares as much as possible in order to reduce the cash handling costs and get more regular users. Therefore, the discount for using tickets or passes should be increased by raising cash fares and consistently increasing cash fares more than passes and tickets when general fare increases are implemented.				
	Recovery Rate and Timing of Fare Increases: The Squamish transit system should review fares at least every two years or when significant service improvements are made and ensure that the cost recovery rate is financially viable.				
	Fare Complexity: To reduce fare complexity, the current \$20/month school day only pass should be eliminated and replaced with an \$80 Semester Pass for high school and post-secondary students. The senior and student day, monthly and tickets should be only one combined fare category –student/senior. The discount established for a student/senior day pass, monthly pass, or ticket or cash fare from an adult pass or cash fare, should be consistently 15%.				

Complimentary Action	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
		Smart Fare Card: Squamish should work with BC Transit, Whistler and TransLink to investigate the development and potential implementation of a Whistler to Squamish to Metro Vancouver transit system Smart Fare Card. First undertake discussion and conduct market research on attributes of card.			
	Transfer Policy: Implement a 90 minute, time-based, any route, and any direction transfer, for the convenience of customers.				
	Pricing Multiple for Tickets: Ticket pricing should be revised to reflect 10 rides for price of 9 rides to more easily convey savings to passengers.				
	Fares Needs of College/University: To gain more post secondary school students, allow full time Capilano College and Quest University students with photo ID to qualify to use the existing student monthly pass.				
	Fares for Regular Customers versus Infrequent Users: An objective for the fare strategy should be to try to minimize the use of cash fares as much as possible in order to reduce the cash handling costs and get more regular users. Therefore, the discount for using tickets or passes should be increased by raising cash fares and consistently increasing cash fares more than passes and tickets when general fare increases are implemented.				
Transportation Demand Management	Downtown Parking Charges: Implement downtown parking charges and dedicate these funds to improving the transit system and active transportation modes.	Continue and monitor	Continue and monitor	Continue and monitor	Continue and monitor

Complimentary Action	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
	Overall District of Squamish Employee and Employer TDM Programs: Establish a comprehensive District of Squamish TDM program for employees. Designate a District staff member to be assigned the role of managing and developing Squamish's TDM program, and to work with employers to develop similar programs.				
		Develop Squamish TravelSmart Program: Develop a TravelSmart Program which is an innovative approach to reducing car travel. TravelSmart Programs work with designated community areas to provide targeted marketing and information materials to increase the sustained use of non-automobile modes for an increased proportion of trips.			
	Pedestrian and Cycling Initiatives – Networks: enhance the cycling and pedestrian/trail networks in Squamish and their interconnections to the transit network. <ul style="list-style-type: none"> • Bicycle Parking Handbook – develop for cyclists, developers, architects and building owners a Bicycle Parking Handbook. • New Cycling Information Line – develop a new telephone hotline and email address to provide the public with a direct conduit to cycling information (see cycle@calgary.ca). • Bikeway and Pathway Map – develop a new pathway and bikeway map which includes updates to the pathway and bikeway system, new topographic base mapping and information on new programs being offered by the District and put it in the Rider's Guide. 				

Complimentary Action	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
	<ul style="list-style-type: none"> Wide Curb Lanes for Cyclists - in an effort to improve conditions for cycling in Squamish on the street, the District could adopt a new cross-section for major standard roads. This new standard includes a 4.3 metre wide curb lane in both directions. In addition to the widened pavement, bicycle stencil pavement markings are provided to indicate the area for cyclists. A modified standard has also been adopted for existing major roads, and is implemented as road resurfacing occurs. This involves reducing the inside lane typically from 3.7 m to 3.4 m, and widening the curb lane from 3.7 m to 4.0 m. 				
		Carpooling: Partner with Commuter Connections or another similar community carpool organizations, to bring their web-based ridematching initiative to residents of Squamish.			
Transit Asset Management	Develop in conjunction with working with BC Transit an asset management system for the transit assets in Squamish.				
Transit-Oriented Development					
Partnership Arrangements with School District No. 48	Examine vehicle and fuel partnerships for joint purchases in these areas to generate savings, a possible means to merge the services.	Explore joint service – school board and public bus systems	Implement joint service arrangements if work proves positive with combined savings.		
Designate or Hire Full Time Squamish Transit/TDM Coordinator	Designate or Hire Full Time Squamish Transit/TDM Coordinator				

Complimentary Action	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
Total Five Year Costs for these Initiatives - Average \$50,000					
COSTS	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Evaluation Criteria					
<i>Increase Ridership</i>	●	●	●	●	●
<i>Respond to Public Input Common Themes - Frequency and Reliability of Service</i>	●	●	●	●	●
<i>Respond to Public Input Common Themes - Comfort and Convenience of Service</i>	●	●	●	●	●
<i>Ability to Respond to Growth Pressures - serve New Growth Areas and New Population/ Employment</i>	●	●	●	●	●

Strong ● Medium ● Low ●

Note: The capital and operating cost figures are meant to be estimated costs, and not exact at this stage in the project.

8.0 Short and Long Term Recommendations and Plan Monitoring

8.1 Short-Term Recommendations

The short-term recommendations for improving transit service in Squamish are based on evidence that the local transit system is currently under-resourced relative to other comparable sized transit systems, and the indications from the public input and market analysis that there is a significant amount of latent demand for improved service which would increase ridership.

The addition of a bus and increased operating funds in 2008 for the local transit system would allow extended service hours during weekday evenings and Saturday evenings, service on Sunday and statutory holidays, improved levels of reliability, and the ability to extend service to Quest University to meet the needs of students for certain trips.

Another short-term recommendation is to change the routing of buses in the downtown area to better coordinate with existing and future development. Short-term recommendations for capital improvements include: the installation of bus shelters at more stops, with an emphasis first in the downtown area and at key transfer points; and initiating the process of constructing off-street transfer exchanges in the downtown core (i.e. transportation hub as well with future potential rail and ferry linkages), and in the Highlands Shopping Centre area. The short-term service improvements would be reinforced through an improved fare policy, a modified transfer policy, and transportation demand management strategies such as installing bike racks on buses.

Short-term recommendations aimed at improving service for passengers using the Squamish-Whistler commuter service include establishing a taxi connecting service. Provision for this service would involve contracting with the local taxi service to meet two morning departures from Squamish and two afternoon arrivals from Whistler and serve residents of the Brackendale and Garibaldi-Highlands areas.

8.2 Long-Term Recommendations

Long-term recommendations for the transit system in Squamish are based on predictions of significant population growth in Squamish and continued support for transit and other sustainable transportation modes in this region by Council and the local population. Recommendations for the local transit system include continued fleet expansion so that there are 10 conventional buses available in 2013, additional routes and modifications to existing routes to better serve the local demand and have enhanced reliability, improved frequencies in the peak periods, service on Sundays and statutory holidays, and a summer-only and premium fare route to recreational areas.

Various transit infrastructure and facility improvements are also recommended, such as more shelters and accessibility features at bus stops and a bus maintenance/storage facility in Squamish. Recommendations for the paratransit system include an additional handyDART van and the establishment of a Taxi Saver Program to supplement this service. As for the commuter transit services, the long-term recommendation is to provide services that connect Squamish to both Whistler and Metro Vancouver throughout the day and during the entire year. Transportation demand management strategies and sustainable land use policies be applied in the long term by the District to complement these transit improvements include reviewing and introducing Smart Fare Cards for fare payment and directing the

expected growth to locations and in new forms in the Squamish area that can effectively be served by transit, reduce automobile dependence, and allow a greater number of trips to be made by cycling or walking.

Given the anticipated growth in the Squamish transit system and a growing need for the transit system to coordinate its services with other transit services (i.e., TransLink, Greyhound, and School District No. 48) and local development activity, it is recommended that an individual be designated the transit and transportation demand management coordinator for the District of Squamish. Currently, much of the management of the system is undertaken by BC Transit and the District does not have sufficient personnel to undertake the data collection, policy-making, and resource allocation needed to make the system better for local needs.

8.3 Monitoring

The following items need to be continuously monitored to ensure the best allocation of resources for the transit system and a high level of service for customers:

- The ridership on existing routes to ensure appropriate frequencies and hours of service through conducting regular on-off counts;
- The location and forms of new development to ensure that they are coordinated with transit;
- The ridership on summer routes to determine if the number of daily trips should be modified, through on-off counts;
- The ridership on commuter routes to determine if the number of daily trips should be modified, through on board survey and ridership counts;
- The number of “no-shows” occurring (i.e., buses that are making an unscheduled short-turn and skipping sections of the route);
- The fare recovery ratio;
- The monitoring of revenue rides/per capita, operating cost/vehicle hour and vehicle hours/capita;
- The number of prepaid fare users versus cash fares; and
- HandyDART trips that could be provided by a regular route if it were made more accessible.

The Plan also recommends the creation of a Squamish staff position whose function would be to co-ordinate Squamish’s interest in the transit system with BC Transit, the operating company and other Squamish Departments, and as well look after the Squamish TDM program. These and other TDM initiatives will improve the performance of the transit system, support Squamish interests in enhancing the transit system, and promote the increased use of active transportation modes in Squamish (i.e. transit, walking and cycling).

8.4 Future Linkages with Metro Vancouver-TransLink

The new provincial legislation governing TransLink contemplates TransLink discussing with the communities along the Sea to Sky Highway, including Squamish, the extension/linkage of some of TransLink’s service and programs to these communities. It is recommended that Squamish obtain some professional transportation consulting to assist with any discussions or negotiations with TransLink in regard to extension of services or programs to Squamish.

Appendix A
Fall 2007 Open House and Transit On-Board Surveys

District of Squamish Transit Plan

November 27, 2007

Over the next six months, BC Transit and the District of Squamish will be developing a 5 year Transit Plan. The purpose of this plan is to develop improvements for the local transit services, regional transit service connections to Whistler and to Great Vancouver and the handyDART services, with a focus on local services. The objective of this plan will be to develop transit improvements which will serve to better meet the needs of existing customers and attract new ridership.

Please assist us to improve the transit service in Squamish by taking a few minutes to complete this survey.

1. Please indicate the nearest roadway intersection where your residence is located?

2. How often do you usually ride Squamish Transit? Please check one box.

Note: please count each one way trip; for example, to and from work would be two trips.

- | | | |
|---|--|---|
| <input type="checkbox"/> 11-15 trips per week | <input type="checkbox"/> 2-5 times per week | <input type="checkbox"/> Several times per year |
| <input type="checkbox"/> 6-10 trips per week | <input type="checkbox"/> Several times per month | <input type="checkbox"/> Never or rarely |

3. What bus route (s) do you usually take for your transit trips?

- | | |
|---|---|
| <input type="checkbox"/> Brakendale | <input type="checkbox"/> Squamish-Whistler commuter |
| <input type="checkbox"/> Highlands | <input type="checkbox"/> handyDART bus |
| <input type="checkbox"/> Valleycliffe | |
| <input type="checkbox"/> Combination - please specify | <hr/> |

4. Please indicate the approximate percentage of your transit trips that are taken for each of the following purposes with the total being 100%.

Commute to work	<hr/> %	Shopping	<hr/> %
Commute to Post Secondary Institution	<hr/> %	Social/Recreational	<hr/> %
Commute to High School/Elementary School	<hr/> %		

5. Now thinking about all the trips you make in a week using any form of transportation, what percentage of your total trips are made by transit? Note: please count each one way trip, for example to and from work would be two trips.

- ☐ Less than 5%
 ☐ 10-20%
☐ 5% to 10%
 ☐ More than 20%

6. Please indicate your **top two reasons** for using transit rather than using an automobile for trips. Please rank **the 2 choices** by placing a **1** beside **the most important reason** and a **2** beside **the least important** of the three reasons.

- _____ I do not have access to a car.
 _____ I find the bus less expensive than taking a car.
 _____ I can relax on the bus.
 _____ Taking the bus means that I lower my environmental impact in making trips.
 _____ Transfer connections between the commuter and local routes are reliable.
 _____ The bus service is close to my home.
 _____ Other, please specify. _____

7. How would each of the following changes impact your use of Squamish Transit?

Change to Transit Service	Use Transit more often	Use Transit less often	No impact on use of Transit
Local bus service operating more frequently	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Extend the hours of service later in evenings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide improved regional transit connections to Whistler from Squamish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide a connecting transit service from Squamish to Greater Vancouver	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Higher gasoline prices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide a U-Pass for high school and university students (Quest University) – this is a discounted pass as all students are required to fund through student fees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide more transit service on Saturday	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide more transit service on Sunday and statutory holidays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide improved information about the transit system by an updated ride guide and on the District's website	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide improved sidewalk connections to bus stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Change to Transit Service	Use Transit more often	Use Transit less often	No impact on use of Transit
Lower transit fares	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide bicycle racks on the buses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide newer buses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide more handyDART service via more buses and/or provide discount tickets for using accessible taxis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve safety and security riding the transit system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide more reliable transit service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improve safety on the buses and at bus stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide a centrally located and new transit exchange in downtown area where all bus routes would meet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provide service to more destinations - please specify below destinations required for transit service. Destinations can be buildings or areas not now served by transit or proposed new developments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional Destinations and/or Comments:

8. In which age group do you fall?

- ☐ 16-24 years
 ☐ 25-34 years
 ☐ 35-44 years
☐ 45-54 years
 ☐ 55-64 years
 ☐ 65 years or older?

9. Do you have access to a vehicle? Please choose the answer that best describes your situation.

- ☐ Do not have access to a vehicle
 ☐ Own a vehicle
 ☐ Have unlimited access to a vehicle
 ☐ Have limited access to a vehicle

10. Gender

☐ Male

☐ Female

Please provide any additional comments:

Thank you very much for your assistance in completing this survey which will be used to improve public transit services in Squamish.

**For more information on the plan, please contact planning@squamish.ca
or
go to the District website at: www.squamish.ca**

Please leave this completed form with us,
or
dropped off at Squamish City Hall, care of Heather Evans
or
fax it to Bill Lambert, UMA Engineering Ltd. at 1-604-438-5587

District of Squamish Transit Plan

On-Board Transit Survey

Over the next six months, BC Transit and the District of Squamish will be developing a 5 year Transit Plan. The purpose of this plan is to develop improvements for the local transit services, the regional transit service connections to Whistler and to Great Vancouver and for handyDART services, which will serve to better meet the needs of existing customers and attract new ridership. The emphasis in the plan will be on local service improvements.

Please assist us to improve the transit service in Squamish by taking 5 minutes to complete this survey and deposit the survey in the holder located behind the transit operator or mail it to us in the self addressed envelope with prepaid postage.

1.a) Please indicate the nearest roadway intersection where you originally began this trip.

b) Please indicate the nearest roadway intersection or major landmark at your final destination.

2. What bus route(s) do you usually take for your transit trips?

☐ Brakendale

☐ Squamish-Whistler commuter

☐ Highlands

☐ handyDART bus

☐ Valleycliffe

☐ Combination - please specify

3. Please indicate your **top two reasons** for using transit rather than using an automobile for trips. Please rank **the 2 choices** by placing a **1** beside **the most important reason** and a **2** beside **the least important** of the two reasons.

☐ I do not have access to a car.

☐ I find the bus less expensive than taking a car.

☐ I can relax on the bus.

☐ Taking the bus means that I lower my environmental impact in making trips.

☐ Transfer connections between the commuter and local routes are reliable.

☐ The bus service is close to my home.

☐ Other, please specify.

4. Please indicate the approximate percentage of your transit trips that are taken for each of the following purposes with the total being 100%.

Commute to work %

Shopping %

Commute to Post Secondary Institution %

Social/Recreational %

Commute to High School/Elementary School %

5. Rank the following factors, indicating the four most important that would encourage you to use transit more frequently. Rank the **most important factor with a 1** and the **fourth most important factor with a 4**.

Change to Transit Service	Rank
Local bus service operating more frequently	
Extend the hours of service later in evenings	
Provide improved regional transit connections to Whistler	
Provide a connecting transit service from Squamish to Greater Vancouver	
Higher gasoline prices	
Provide a U-Pass for high school & university students (e.g. Quest University) – this is a discounted pass all students are required to fund through student fees	
Provide more transit service on Saturday	
Provide more transit service on Sunday and statutory holidays	
Provide improved information about the transit system by an updated ride guide and on the District's website	
Provide bicycle racks on the buses	
Provide newer buses	
Provide more handyDART service via more buses and/or provide discount tickets for using accessible taxis	
Improve safety and security riding the transit system	
Provide more reliable transit service	
Improve safety on the buses and at bus stops	
Provide a centrally located and new transit exchange in downtown area where all bus routes would meet	

6. What additional local destinations would you like the transit system to provide service to that it does not today? This can either be to existing buildings or to new developments being built. Please list.

7. How often do you usually ride Squamish Transit? Please check one box. Note: please count each one way trip; for example, to and from work would be two trips.

- ☐ 11-15 trips per week
 ☐ 2-5 times per week
 ☐ Several times per year
☐ 6-10 trips per week
 ☐ Several times per month
 ☐ Never or rarely

8. In which age group do you fall?

- ☐ 17 years and under
 ☐ 18-24 years
 ☐ 25-44 years
☐ 45-64 years
 ☐ 65-79 years
 ☐ 80 years plus?

Additional comments:

Thank you for your assistance in completing this survey which will be used to improve public transit services in Squamish. For more information on the Transit Plan being developed for Squamish please contact planning@squamish.ca or the District website at www.squamish.ca.

Appendix B
Fall 2007 and June 2008 Open House Presentation, Poster Boards and Displays

Welcome to the District of Squamish Transit Plan Open House

November 27, 2007

Transit Plan for Squamish

Plan Purpose

1 Identify five year transit service improvements:

- the priority focus is on local transit routes
- handyDART services
- also examine transit services to Whistler and future connections to Greater Vancouver

2 Identify related programs to improve transit:

- fares and new programs
 - e.g. discounted U-Pass for students
- cycling and walking connections to transit services
- improved transit information
 - District website and updated ride guide
- capital investments
 - e.g. more buses, transit exchanges

Process for Open House

We want to listen to you tonight!

Tell us your vision and priorities for the Squamish transit system by three means:

- 1 Tell us and write down your ideas and thoughts about transit on the sheets of paper near each of the displays or on maps of routes.**
- 2 Vote on your top priorities**
 - blue dots - most important priorities**
 - red dots - important**
- 3 Complete a survey and provide more detailed comments.**

Benefits of Transit Plan

- **Provides additional community mobility for work, recreational, school and other trips**
- **Provides efficient use of community resources:**
 - **energy**
 - **road space**
- **When transit is well connected with cycling and walking trails, it extends the range of all “active” transportation modes - walking, transit and cycling**
- **More people on transit improves the mobility for required auto trips and goods movement by trucks**
- **Enhances the sustainability of the District of Squamish as a community, e.g. supports land use changes**

Facts About Squamish Transit

- Serves 15,000 population and future projected growth
- Conventional system - uses 2 buses and has one spare bus
- Three routes - Brackendale, Valleycliffe and Highlands which operate every 45-60 minutes
- Winter Squamish to Whistler service
- Annual Operating Cost - \$540,000
- Fare recovery of total cost - 31%
- Revenue passengers 150,000 annually
handyDART - 2 buses

Transit Fares

	Cash	20 Tickets	Monthly Pass
Adults	\$1.75	\$29.00	\$39.00
Seniors	\$1.50	\$24.00	\$30.00
Students	\$1.25	\$24.00	\$20.00 to \$30.00

handyDART: 1 zone - \$1.75; 2 zones - \$2.50

What new destinations in Squamish need transit service?

New destinations include:

- Existing community facilities or areas not now served by transit
- Potential future developments in the community

*Please place your ideas
via stickies or priorities via dots here or
show on local route maps*

What is the ideal frequency of transit service for you to use it more often?

*Please place your ideas
via stickies or priorities via dots*

**During peak periods:
6:00 to 8:30 am and 3:30 to 6:30 pm?**

During off peak periods?

- Mid-day 8:30 am to 3:30 pm?**
- Evenings 6:30 to 11:00 pm?**
- Saturdays?**
- Sundays and holidays?**

Transit Service Connections to Whistler

*Please place your ideas
via stickies or priorities via dots*

- **What are your priorities for improving Squamish to Whistler service for you to use it more often? Now there are 4 daily trips between November and April.**
- **Operate this service more frequently daily?**
- **Operate this service all year long?**
- **Improve information about the service?**

How can the handyDART transit services be improved?

*Please post your
ideas via stickies*

- **Provide more service via more handyDART buses?**
- **Provide discount coupons for use of accessible taxis?**
- **Other suggestions?**

Transit Service Connections to Greater Vancouver

Please post your ideas via stickies

- **How often should a transit service to Greater Vancouver operate on a daily basis?**
 - Please indicate trips per day or frequency
- **Where should such as service connect to Greater Vancouver?**
 - Downtown Vancouver?
 - West Vancouver - Park Royal?
 - Other areas?
- **What fare should be charged for such a transit service?**

What are your top 4 priorities for improving transit services for you to use them more?

Please indicate your priorities via dots

- Operate service more frequently?
- Extend the hours of service later in evenings?
- Provide improved regional transit connections to Whistler and Greater Vancouver?
- Provide improved transit service information via an up to date ride guide, and/or on the District's website?
- Improve handyDART service?
- Lower fares?
- Provide bicycle racks on the buses?
- Provide newer buses?
- Provide more reliable service?
- Provide improved sidewalk connections to bus stops?
- Establish a centrally located transit exchange where all bus routes would meet?
- Extend service to new destinations and areas?
Please list.
- Other ideas - please specify.

What alternative fare programs would you support?

*Please post your
ideas via stickies*

- **Annual pass for all university students (high school too).**
- **Electronic multi-ride (30-50) card (versus tickets). Same card could be used on Whistler/Vancouver services.**
- **Paying for your ride via credit/debit card.**

How do you stay in touch with the Transit Plan process?

**Submit comments on Squamish
Transit Business Plan to:**

planning@squamish.ca

or

peter.murray@bctransit.ca

or link into

www.squamish.ca

**for more information
on the project**

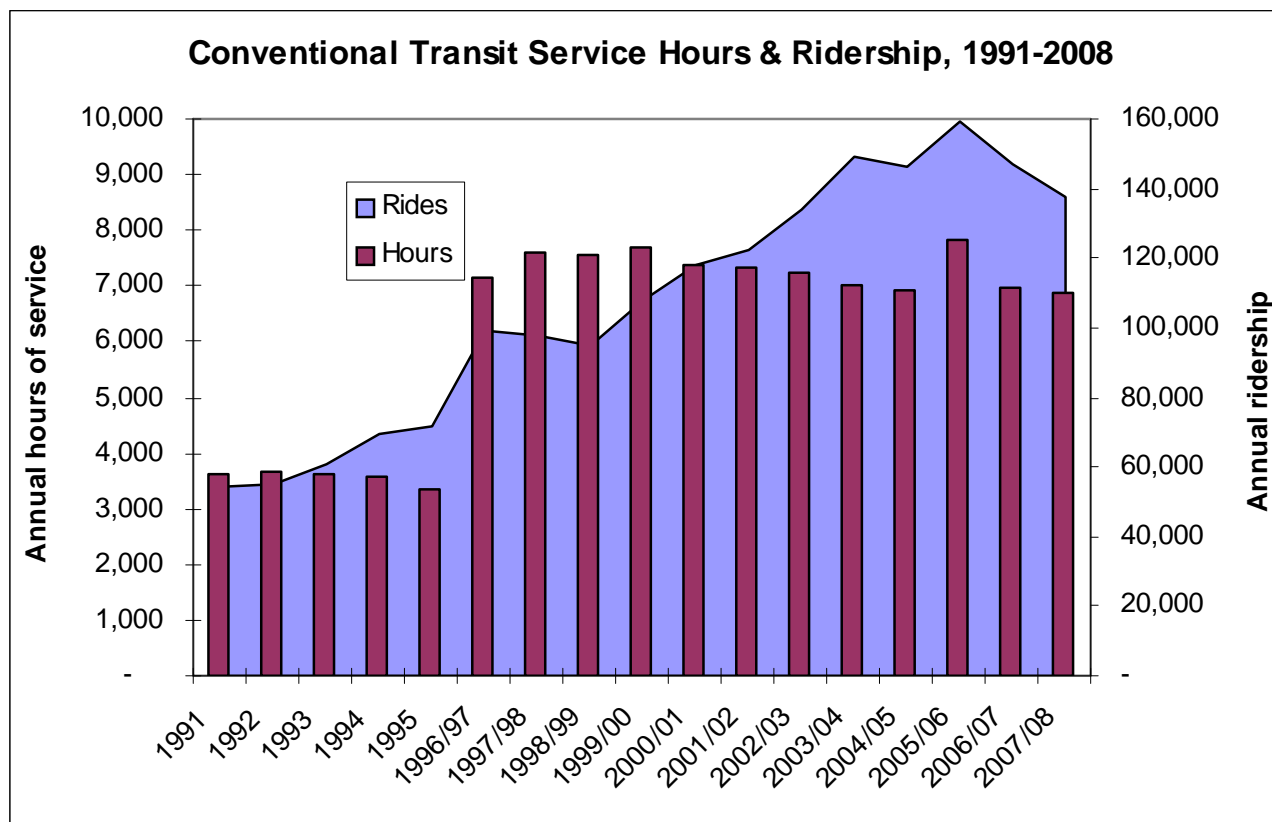


SQUAMISH TRANSIT SERVICE & FARE PROPOSALS

DISTRICT OF SQUAMISH
JUNE 24, 2008

Tania Wegwitz, Senior Transit Planner, BC Transit
Peter Murray, Transportation Planner, BC Transit
Bill Lambert, Senior Transportation Planner, UMA Engineering Ltd.

Squamish Transit Service and Ridership Trend



Existing Service: Key Themes

- Schedule reliability
- Consistency
- Service to new areas
- Frequency
- Coordination with bell / work times
- Hours & days of service



SQUAMISH TRANSIT 2008/09 EXPANSION PLAN

Service Proposal: August 25, 2008

- Adds 1 bus, 3,200 service hours
- Creates stable base for future
- Addresses reliability, consistency:
 - Downtown routing + other
 - 30 min service to key points
- New areas of service:
 - Balsam Way / Cherry Drive
 - Discovery Way, Wal-Mart
 - Loggers Lane, Brennan Park Rec Centre
 - Thunderbird Ridge / Glacier View Drive
 - Quest University



Cost Impacts

- Detailed costs on page 3 of 2008/09 Implementation Plan
- 47% more hours, 54,000 more passengers
- **Total Cost:**
 - \$252,000 (annual)
 - \$151,000 (2008/09)
- **Net Municipal Cost:**
 - \$90,000 (annual)
 - \$54,000 (2008/09), \$30,000 (2008 Calendar)
 - Based on \$60,000 more annual revenue
- **Vehicles:**
 - 1 conventional bus



Integrated Fare Improvement Proposal

- Eliminate \$20 School Days Only Pass
- New student monthly pass: \$25 (down from \$30)
- New Semester Pass: Four months for \$80
- Extend Student Pass products to post-secondary
- Flexible Transfer Policy:
 - Any trip, any direction, 90 minutes



SQUAMISH TRANSIT 2008/09 EXPANSION PLAN

Fare Structure Comparison

Squamish Transit System Fare Structure		
	Current	Recommended
Cash Fares		
Adult	\$1.75	\$1.75
Student/Senior	\$1.50	\$1.50
Tickets	(20 tickets)	(20 tickets)
Adult	\$29	\$29
Student/Senior	\$24	\$24
Monthly Passes		
Adult	\$39	\$39
Senior/Student	\$30	\$25
School Days Only	\$20	--
Semester Passes		(4 months)
Student	--	\$80



2008/09 Recommendations

It is recommended that the District of Squamish:

1. Approve the proposed expansion to conventional service for the Squamish Transit System;
2. Approve the fare proposals as outlined in this document;
3. Direct staff to proceed with implementation of service as outlined in this plan, including preparation of an amendment to the existing 2008/09 Annual Operating Agreement, and integration of any minor adjustments to proposed routing and schedules stemming from public consultation June 24, 2008.



Business Plan Goals

- Improve efficiency and effectiveness of service:
 - Conventional
 - handyDART
 - Regional connections
- Identify related programs
- Short, medium, and long range options
- Further integration & service monitoring guidelines



Business Plan Timeline & Status

Completed Tasks:

- Public Involvement Phase I (Nov-Dec, 2007)
- Analysis & Proposal Development (Jan-Mar, 2008)
- Technical testing & draft plan creation (Apr-Jun, 2008)

Remaining Tasks:

- Public Involvement Phase II (Jun 2008)
- Report finalized & presented (Jul 2008)
- First implementation of improvements (Aug 25, 2008)



Key Business Plan Findings

Service & Market Trend

- Conventional hours unchanged since 1996
- handyDART hours unchanged since 1991
- Low hours/capita, esp. given future growth (.47 vs .68)
- Youth a key potential market

Buses & Facilities

- More & newer buses
- Enhanced and expanded local bus maintenance facility
- Enhance stops and exchanges (shelters, amenities)



Key Business Plan Findings, Continued

Commuter Services

- Year-round Squamish-Whistler Commuter
- Improved connections, esp. early/late
- Service to Metro Vancouver
- Improved coordination & information

Other Requests

- Post-secondary passes, more fare outlets
- handyDART improvements
- Cycling, walking & recreation integration
- Increased local identity
- Public information



SQUAMISH TRANSIT FIVE-YEAR BUSINESS PLAN UPDATE

Summary of Proposed Squamish Transit Service Improvements, 2008/09 to 2012/13							
Preliminary numbers based on consultant's report. Final costs and scope will be based on further input and discussion with the District of Squamish							
Service Description	Hours	Vehicles	Rides	Revenue	Total cost	Net local share	Provincial share
Conventional Transit Service							
2008/09							
Comprehensive system restructuring and schedule reliability improvements.	3,200	1	53,800	\$60,300	\$252,400	\$90,000	\$112,100
2009/10							
Extended evening service and introduction of Sunday service.	3,600	1	60,500	\$67,800	\$291,400	\$98,000	\$125,600
30-minute peak period service frequency on three routes.	4,500	2	75,600	\$84,700	\$387,800	\$143,000	\$160,100
2010/11							
New route: Brackendale to downtown via Hwy 99	4,700	2	79,000	\$88,500	\$402,800	\$147,100	\$167,200
2011/12							
Statutory Holiday service	400	-	6,700	\$7,500	\$29,000	\$8,000	\$13,500
30-minute midday service frequency on four routes.	6,000	-	100,800	\$112,900	\$434,000	\$118,500	\$202,600
2012/13							
15-minute peak period service frequency on four routes.	6,000	2	100,800	\$112,900	\$496,800	\$172,900	\$211,000
Conventional Transit Service Total	28,400	8	477,200	\$534,600	\$2,294,200	\$777,500	\$992,100
Regional Commuter Service							
Squamish to Whistler year round commuter service	2,900	-	27,900	\$73,000	\$325,000	\$94,000	\$152,000
Squamish to Metro Vancouver commuter service (4 round trips per day).	4,200	3	58,800	\$153,000	\$397,000	\$90,200	\$154,100
Regional Commuter Service Total	7,100	3	86,700	\$226,000	\$722,000	\$184,200	\$306,100
Paratransit Service							
Increased paratransit service.	2,000	1	6,000	\$9,000	\$125,800	\$42,200	\$74,600



Draft Complementary Actions

- Plan for new exchanges (2008/09 – 2009/10)
- Fare outlets, Rider's Guide, website, cycling/pedestrian info (2008/09)
- New bus shelters & accessibility (2008-10)
- TDM, Smart Growth, TOD land use planning (2008-13)
- Bike racks on new buses and bicycle storage at new bus exchanges (2009/10)
- Increased schedule information at stops (2009/10)
- Community task force and branding strategy (2009/10)
- Bus maintenance facility (2009-13)
- Review and introduce regional Smart Card (2011/12)





CONTACTS & FURTHER INFORMATION

Tania_wegwitz@bctransit.com PH: 250.995-5632
Peter_murray@bctransit.com PH: 250.995.5634
Bill.lambert@uma.aecom.com PH: 604.438.5311

www.busonline.ca

Appendix C Other Responses

Buses until at least 9.00 pm
 Buses early in day 6.00 to 6.30 am
 Let transfers be used until time expires
 Buses are never on time and are too infrequent
 Need bus service during evening and weekends-big impact on social life
 It is very important for buses to run on Sundays, plus later in the night and as well earlier in the morning
 It is very important for the buses to run on Sundays plus later in the night as well as earlier in the morning
 I hope this project will be granted because bus service is really poor here in Squamish.
 I think you are doing good job but more financial support could make it easier on us all.
 I would prefer service from 6.00 am to 10.00 pm and 7 days a week. There should also be good commuting service to Whistler and to Greater Vancouver.
 Put two buses on at 3.00 pm to pick up school kids the 3.09 pm at Bakendale pick up students from all schools and goes downtown and to Valleycliffe. The bus is way too crowded and dangerous and there is no room for any other passengers Two buses at that time would be excellent.
 I hear people asking for bus schedules all the time and they are not available Due to vandalism there is no shelter and same reason no schedule behind plexiglass. It would be an asset to have shelters new the shopping malls.
 I can afford to have a car but I choose not to I walk; use my bike to take the bus. I would take the bus a lot more if service would be extended in the evenings and weekends. This lack of service has a big impact on social life
 I find the drivers very friendly and accommodating .We need buses to run later and on Sundays and holidays
 The buses are never on time and too infrequent.
 I would like to see bus service earlier-6.00 to 6.30 am
 I would love alter access and access to all amenities in town.
 I would really appreciate bike racks on buses the drivers are very pleasant and most usually helpful.
 Improved marking of bus stops
 Need more buses at 3.00 pm for school trips
 Need bus schedule on time
 Would be nice to have a shelter, especially in the winter, for the downtown town centre
 You are doing a fine job
 Improved shelters
 Better access to schedules
 Thanks for advertising these issues Look forward to improvements

I moved here form Vancouver 2 months ago and since then the bus has broken down a couple of times and I have had to call someone from work to pick me up Consider the hours that stores are open.
 T o met my needs, later evening service and Sunday service would do it. I believe more riders will use the service with extended service.
 Need earlier stop at hospital around 7.20

Better do something quick, we are getting bigger by the minute.
 I am glad there is a bus that goes to Mamquam, keep up the good work
 Better service at night

Buses should run everyday until 10.00 pm Students living on hospital hill should receive the discount rate also-\$10.00
 The buses need to be on time Late for work at 9.00 am everyday
 Please run on Sundays and run the buses once half an hour.
 The town is expanding so the buses need to expand
 Its difficult to get to events and make connection when needed as it is time consuming A day is wasted getting there and back would like to get here and back soon
 Capilano College needs a bus top
 The bus is too crowded
 Please act on survey and improve service
 Go to lakes in the summer
 Sunday service would be nice
 Need faster service from Brackendale to the hospital
 Don't replace the conventional buses with handyDART buses-too packed
 Bus service Monday to Friday is too limited
 Need later Friday and Saturday service to assist people in getting home from bar safer
 Need bike racks on buses
 Start bus earlier than 6.00 am for some people who have to go too work
 When buses re not running taxis are making all the money
 Need Sunday /holiday service
 Map trail heads locations on bus routes
 Why is there double service on Government Road-have one service go down Government Road and one on Sea to Sky Highway
 Need better bus shelters
 Provide summer service to Alice Lake and Shannon Falls
 Wal-Mart would be good area for bus exchange
 Provide direct bus from Wal-Mart to downtown area
 Need service to walk in clinic
 Need service to adventure centre and civic centre
 Make some bus stops safer for customers e.g. paisley and Perth
 Use smaller buses
 Make your phone number for the bus company work during all service hours

Appendix D
Howe Sound School District Transit Routes

SQUAMISH AREA BUS ROUTES

<u>Bus Route No. 1 (a)</u>		Garibaldi Highlands to Don Ross Secondary	
Driver:	Leave	The Boulevard & Perth	7:50 a.m.
Pam Temple-Hurley		The Boulevard & Highlands Way North	7:54 a.m.
	Arrive	Don Ross Secondary School	8:05 a.m.
<u>Bus Route No. 1 (b)</u>		Garibaldi Highlands to Howe Sound Secondary	
Driver:	Leave	The Boulevard & Perth	8:16 a.m.
Pam Temple-Hurley		The Boulevard & Highlands Way North	8:19 a.m.
	Arrive	Howe Sound Secondary School	8:31 a.m.
<u>Bus Route No. 16 (a)</u>		Garibaldi Highlands to Don Ross Secondary	
Driver:	Leave	Perth & Portree	7:50 a.m.
Loretta Cloutier		The Boulevard & Highlands Way North	7:53 a.m.
	Arrive	Don Ross Secondary School	8:05 a.m.
<u>Bus Route No. 16 (b)</u>		Garibaldi Highlands to Howe Sound Secondary	
Driver:	Leave	Perth & Portree	8:16 a.m.
Loretta Cloutier		The Boulevard & Highlands Way North	8:19 a.m.
	Arrive	Howe Sound Secondary School	8:31 a.m.
<u>Bus Route No. 21 (a)</u>		Garibaldi Estates to Don Ross Secondary	
Driver:	Leave	Garibaldi Way & Mamquam Road	7:57 a.m.
Kim Larsen		Garibaldi Way & Diamond Road	7:59 a.m.
		Diamond & Diamond Head	8:01 a.m.
		Garibaldi Way & Tantalus	8:02 a.m.
	Arrive	Don Ross Secondary School	8:07 a.m.
<u>Bus Route No. 21 (b)</u>		Garibaldi Estates to Howe Sound Secondary	
Driver:	Leave	Garibaldi Way & Tantalus	8:15 a.m.
Kim Larsen		Diamond & Diamond Head	8:16 a.m.
		Garibaldi Way & Diamond Road	8:17 a.m.
		Garibaldi Way & Mamquam Rd.	8:18 a.m.
	Arrive	Howe Sound Secondary School	8:29 a.m.
<u>Bus Route No. 22(a)</u>		Wagon Wheel & Timbertown to Don Ross Secondary	
Driver:	Leave	Wagon Wheel	7:53 a.m.
Peter Lewis		Timbertown	7:55 a.m.
	Arrive	Don Ross Secondary	8:05 a.m.
<u>Bus Route No. 22(b)</u>		Wagon Wheel & North Yards to Howe Sound Secondary & Squamish Elementary	
Driver:	Leave	Timbertown	8:18 a.m.
Peter Lewis		Wagon Wheel	8:19 a.m.
		Three Rivers	8:21 a.m.
		Brothers Place	8:24 a.m.
	Arrive	Howe Sound Secondary	8:30 a.m.
	Arrive	Squamish Elementary	8:34 a.m.

Bus Route No. 2 (a)

Driver:	Leave	Midnight Way	7:56 a.m.
Pat Weiss		Cheakamus Crossing	7:57 a.m.
		Cheekye Reservation	8:05 a.m.
	Arrive	Don Ross Secondary School	8:09 a.m.
	Arrive	Brackendale Elementary School	8:12 a.m.

Bus Route No. 2 (b)

	Leave	Brackendale Elementary School	8:15 a.m.
Driver:		Judd Road & Government Road	8:17 a.m.
Pat Weiss		Cottonwood Road & Judd Road	8:18 a.m.
		Eagle Run & Government Road	8:21 a.m.
		Government Road & Harris Road	8:23 a.m.
		Spiral Trailer Court	8:25 p.m.
	Arrive	Howe Sound Secondary School	8:35 a.m.

Bus Route No. 3

		Upper Squamish to Don Ross Secondary & Howe Sound Secondary	
Driver:	Leave	19 Mile Store	7:50 a.m.
Graham Teanby		Wall St.	7:52 a.m.
		Constantin's	7:53 a.m.
		Gould's	7:54 a.m.
		Anderson Beach Road	7:55 a.m.
		Tantalus Acres	8:07 a.m.
		Cheekye Crossing	8:10 a.m.
	Arrive	Don Ross Secondary School	8:12 a.m.
	Arrive	Brackendale Elementary School	8:15 a.m.
	Leave	Brackendale Elementary School	8:16 a.m.
		Depot Road & Hope Road	8:18 a.m.
		Depot Road & Ross Road	8:20 a.m.
	Arrive	Howe Sound Secondary School	8:30 a.m.

Bus Route No. 4

		Britannia Beach to Squamish Elementary & Howe Sound Secondary	
Driver:	Leave	Klahanie	7:40 a.m.
Jean Davis		The Beach (Britannia Beach)	7:50 a.m.
		Level Two	7:51 a.m.
		Level Three	7:54 a.m.
		Stawamus Reserve	8:09 a.m.
		Raven's Plateau (Westway & Balsam Place)	8:13 a.m.
	Arrive	Plateau Dr. (Plateau Cres south intersection)	8:15 a.m.
	Arrive	Howe Sound Secondary School	8:27 a.m.
		Squamish Elementary School	8:32 a.m.