

**REGIONAL DISTRICT OF NANAIMO**

**TRANSIT SELECT COMMITTEE  
THURSDAY, FEBRUARY 25, 2016  
12:00 PM**

***(RDN Committee Room)***

**A G E N D A**

**PAGES**

**CALL TO ORDER**

**MINUTES**

2-3 Minutes of the regular Transit Select Committee meeting held October 8, 2015.

**UNFINISHED BUSINESS**

**BC TRANSIT UPDATES**

RDN and CVRD Inter-Regional Service Discussion Report Presentation.

**REPORTS**

4-37 RDN and CVRD Inter-Regional Service Discussion Report.

38-39 Qualicum First Nation Transit Service Report.

40-41 Cost Analysis - Free Transit on Future Election Days.

**ADDENDUM**

**BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS**

**NEW BUSINESS**

**ADJOURNMENT**



**DISTRICT OF NANAIMO**

**MINUTES OF THE TRANSIT SELECT COMMITTEE  
MEETING HELD ON THURSDAY, OCTOBER 8, 2015 AT 12:00 NOON  
IN THE RDN COMMITTEE ROOM**

**Present:**

Director T. Westbroek	Chairperson
Director A. McPherson	Electoral Area 'A'
Director M. Young	Electoral Area 'C'
Director B. Rogers	Electoral Area 'E'
Director J. Stanhope	Electoral Area 'G'
Director B. Veenhof	Electoral Area 'H'
Director M. Lefebvre	City of Parksville
Director Colin Haime	District of Lantzville
Director Bill McKay	City of Nanaimo
Director B. Bestwick	City of Nanaimo
Director J. Hong	City of Nanaimo

**Also in Attendance:**

P. Thorkelsson	Chief Administrative Officer, RDN
D. Trudeau	GM, Transportation & Solid Waste Services, RDN
D. Marshall	Manager, Fleet Operations, RDN
J. Logan	Supt, Transportation Planning & Scheduling, RDN
M. Moore	Senior Regional Transit Manager, BC Transit
M. Lockley	Senior Transit Planner, BC Transit
G. Foy	Traffic & Transportation Planning Engineer, CON
M. Sparks	Recording Secretary, RDN

**CALL TO ORDER**

The meeting was called to order at 12:00 pm by the Chair.

**MINUTES**

MOVED Director Stanhope, SECONDED Director Lefebvre that the minutes of the regular Transit Select Committee meeting held July 16, 2015 be adopted. CARRIED

**COMMUNICATIONS/CORRESPONDENCE**

MOVED Director Stanhope, SECONDED Director Bestwick that the correspondence be accepted. CARRIED

**BC TRANSIT UPDATES**

**Extension of Route #7.**

Maria Lockley provided information regarding future interregional service strategy directed at commuter type services.

## **REPORTS**

### **Taxi Saver – handyDART Cost Comparison**

D. Trudeau reviewed the report and provided an overview of the services offered and the costs of the handyDART and Taxi Saver Programs.

MOVED Director Lefebvre, SECONDED Director Stanhope that the Board receive this report for information. CARRIED

### **Route 15/15A Analysis**

D. Trudeau reviewed the report and gave an overview of the current 15/15A routes within the Conventional Transit System.

MOVED Director McKay, SECONDED Director Lefebvre that the Board direct staff to retain Route 15 VIU Connector in the Conventional Transit System. CARRIED

## **NEW BUSINESS**

### **Free Transit – Election Day**

MOVED Director McKay, SECONDED Director Stanhope that staff prepare a report on the cost analysis of free transit for future election days. CARRIED

## **ADJOURNMENT**

MOVED Director Stanhope that the meeting be adjourned. CARRIED

## **NEXT MEETING**

The next meeting of the Transit Select Committee is set tentatively for January 21, 2016 in the RDN Committee Room.

---

CHAIRPERSON

---

**TO:** Dennis Trudeau  
Interim CAO

**DATE:** February 11, 2016

**FROM:** Daniel Pearce  
A/ Director, Transportation Services

**MEETING:** TSC – February 25, 2016

**FILE:** 8770-20-IRSDR

**SUBJECT:** RDN and CVRD Inter-Regional Service Discussion Report

---

### RECOMMENDATIONS

1. That the Board receive this report for information.
2. That the Board direct staff to work with BC Transit to implement Option 1 within the *Regional District of Nanaimo and Cowichan Valley Regional District Inter-Regional Service Discussion Report*.

### PURPOSE

To bring forward the *Regional District of Nanaimo and Cowichan Valley Regional District Inter-Regional Service Discussion Report* (Appendix A).

### BACKGROUND

BC Transit, in collaboration with the Regional District of Nanaimo (RDN), and Cowichan Valley Regional District (CVRD), commissioned a report to explore the feasibility of an inter-regional transit service between the CVRD, RDN and Comox Valley Regional District. The report was developed with consultants SNC Lavalin and explored the potential ridership markets between key regional centres on Vancouver Island, specifically across each of the three transit region boundaries from Cowichan Valley to Campbell River. The report analyzed the available public and institutional data sources to determine:

- The primary transit markets that would use the inter-regional type service if it was implemented.
- Development of a high level of understanding of where travel takes place.
- Critical analysis of travel data with other population metrics to indicate what percentage of transit ridership could be achieved from these travel patterns and habits in the localities.

BC Transit, CVRD and RDN staff completed an analysis on the data obtained between the RDN and the CVRD and included it in the *Regional District of Nanaimo and Cowichan Valley Regional District Inter-Regional Service Discussion Report* (Appendix A). The raw data obtained between the RDN & Comox Valley Regional District has not been analyzed and will be brought forward at a future time.

The Inter-Regional Service Discussion report provides an analysis to help understand potential transit use across the regions. The report notes that the estimation methodology and rating provided for the captive market results is to help understand where ridership demand for non-peak services may exist. The analysis did not include other travel groups who may use an inter-regional service if it was implemented. The goal of the study was to help determine what type of service model would address

the existing and future travel demand and to substantiate additional expenses and resource allocation. The results of the study between the RDN and CVRD were derived from postal code data provided by major employers and post-secondary institutions. The results show that Vancouver Island University (VIU) would lead the potential market. Based on the microscopic analysis, using a range of mode share percentages, the following results were reached:

- A ridership of 300 passenger trips per day is the best case forecast for the corridor between CVRD and VIU. This is based on converting the commuting habits of the Nanaimo VIU population traveling from the Cowichan Valley areas.
- Commuter transit demand between the RDN to the CVRD is estimated to be low with between 12 to 26 transit rides.
- Zero estimated rides for RDN commuters wanting to travel to the Nanaimo Airport.

### **Opportunities and Challenges**

The Inter-Regional Service Discussion report (Appendix A) indicates a good propensity for travel from CVRD to VIU. The report also shows opportunities exist to expand local service on Route 7 Cinnabar/Cedar to connect with CVRD services at either Ladysmith or Nanaimo Airport. Further, there may be a good opportunity to reallocate underutilized existing local transit service hours operating in Ladysmith to an inter-regional service connecting Ladysmith residents to VIU or downtown Nanaimo.

Challenges are largely centered on administrative processes, funding and governance agreements that would need to be addressed between the two regions. The Province of B.C. has also said there is no additional expansion funding for transit operations over the next three (3) years.

### **Service Options**

Three (3) preliminary, high level options are outlined in the Inter-Regional Service Discussion report (Appendix A). Each option varies in specifics however there are common challenges amongst the three options. These include the need for coordinated decision making between the regions, and addressing issues such as:

- Cost Sharing
- Administration of services
- Fare structure
- Governance of operation

Further, each option took into account the existing transit services in the RDN and CVRD.

#### Option 1

Direct service between Vancouver Island University (VIU) and Ladysmith. In this option, service would include limited stops between Ladysmith and VIU, via the Nanaimo Airport. This service would cater to the CVRD and RDN commuter market.

#### Option 2

Limited stop service between Duncan and VIU, via the Nanaimo Airport. Service would operate two round trips in the morning and two in the afternoon, centered on key class times at VIU. Service would also connect Duncan to Ladysmith, and the Nanaimo Airport. This service caters to the commuter market in Duncan, Ladysmith and Electoral Area 'A' in the RDN.

Option 3

Option 3 requires the RDN to align an Inter-regional transit strategy with the existing Route 7 Cedar Cinnabar service provided within Electoral Area 'A'. The RDN and CVRD services would be separate, with a common meeting point (Ladysmith to Nanaimo Airport and Cassidy via Nanaimo Airport to VIU).

This option corresponds with the 2011 Regional District of Nanaimo Electoral Area 'A' Transit Service Review and Update and the service priorities identified within the RDN Transit Future Plan.

**ALTERNATIVES**

1. That the Board accept this report for information
2. That the Board direct staff to work with BC Transit on prioritizing Option 1 within the *Regional District of Nanaimo and Cowichan Valley Regional District Inter-Regional Service Discussion Report*, within the *RDN Future Plan*.
3. That the Board accept this report for information and provide alternative direction to staff.

**FINANCIAL IMPLICATIONS**

Initial cost implications have been developed for each of the options. Please note, these are total service costs and are not broken down between BC Transit, CVRD and the RDN. Once detailed plans are established on a preferred option, an agreement would be reached between the parties to establish cost sharing.

Option 1

Costing for option 1 : Ladysmith to VIU via Nanaimo Airport						
hrs	hrs	\$	\$	\$	\$	\$
Additional hours	Rounded off	cost/hr	Annual op cost	Cost recovery	Net cost	cost per ride
958.33	960	125	\$ 120,000	\$ 18,000.00	\$ 102,000.00	\$10.88

The estimated total annual cost for option 1 is \$120,000.

Option 2

Costing for option 2 : Duncan to VIU via Nanaimo Airport						
hrs	hrs	\$	\$	\$	\$	\$
Additional hours	Rounded off	cost/hr	Annual op cost	Cost recovery	Net cost	cost per ride
1916.66	1920	125	\$ 240,000	\$ 36,000.00	\$ 204,000.00	\$10.20

The estimated total annual cost for option 2 is \$240,000.

Option 3

Costing for option 3 : Separate services, common meeting point (Ladysmith to Nanaimo Airport and Cassidy via Nanaimo Airport to VIU)						
hrs	hrs	\$	\$	\$	\$	\$
Additional hours	Rounded off	cost/hr	Annual op cost	Cost recovery	Net cost	cost per ride
RDN	2500	100	\$ 250,000	\$ 45,000.00	\$ 205,000.00	\$8.20
CVRD	No additional costs for service from Ladysmith to Nanaimo airport, assuming service will be realigned to incorporate the additional hours and kilometers to serve the Nanaimo airport.					

The estimated total annual cost for Option 3 is \$250,000. This estimate includes a reallocation of existing route 7 resources with additional hours calculated to facilitate expanded coverage type service within Cassidy and South Wellington areas.

If Option 3 is not proceeded with then the information obtained regarding extending route 7 will be prioritized and added to the RDN Future Plan.

**STRATEGIC PLAN IMPLICATIONS**

The Board’s vision expresses a desire to build a future where the air is clean and safe to breathe. Transit service throughout the RDN allows residents the option to leave their personal vehicles at home, helping to reduce emissions and particulate matter. Further, a transit service that would operate inter-regional would allow a greater number of residents to access the transit service and further helps the local economy and helps reduce environmental emissions.

**CONCLUSION**

BC Transit, in collaboration with the RDN and CVRD, commissioned a report to explore the feasibility of inter-regional transit service between the two regional centres. The *Inter-Regional Service Discussion Reports’* (Appendix A) results show that VIU would lead the potential transit market between the two regions. Option 1 in the report would provide the most direct service between Vancouver Island University (VIU) and Ladysmith, thus being able to attract the strongest ridership. Option 1 also has the lowest estimated total cost at \$120,000, which will result in the lowest cost to the RDN. Once BC Transit’s funding is restored, inter-regional service between Nanaimo and Ladysmith could be implemented.



Director Concurrence



CAO Concurrence



Appendix A

# Regional District of Nanaimo & Cowichan Valley Regional District

## Inter-regional Service Discussion Report

*January 2016*



**TABLE OF CONTENTS**

1.0 INTRODUCTION ..... 3  
2.0 REGIONAL CHARACTERISTICS ..... 5  
3.0 INTER- REGIONAL CONNECTIVITY ..... 7  
4.0 POTENTIAL MARKETS FOR INTER-REGIONAL TRANSIT SERVICES ..... 9  
5.0 EXISTING TRANSIT SERVICES IN STUDY AREA ..... 12  
6.0 INTER-REGIONAL TRANSIT CONVENTIONAL SERVICE OPTIONS ..... 15  
7.0 INTER-REGIONAL CUSTOM TRANSIT SERVICE OPTIONS ..... 23  
8.0 SERVICE ADMINISTRATION AND FUNDING..... 24  
9.0 NEXT STEPS..... 25  
10.0 RECOMMENDATION..... 26  
APPENDIX A: Market Research Report ..... 27  
APPENDIX B: Preliminary Fare Strategy ..... 28  
APPENDIX C: Inter-regional Transit Services Across British Columbia **Error! Bookmark not defined.**

## 1.0 INTRODUCTION

BC Transit, in collaboration with the Regional District of Nanaimo (RDN) and the Cowichan Valley Regional District (CVRD), has developed this Service Discussion Report to explore the feasibility of an Inter-regional transit service between the two regional centres. The objective of the report is to complete a high level market analysis of the potential for transit riders between the two regions to confirm if a sustainable business case exists and to identify potential service models, associated costs, customer fares and timing that could be adopted to provide conventional, and potentially custom, transit services in a cost effective and efficient manner.

This report presents the findings of the study and outlines service options for consideration.

### 1.1 Study Objectives

Study objectives were developed in consultation with the Regional Districts and include:

- Support the Goals and Vision of the RDN and CVRD Transit Future Plans.
- To understand transit ridership potential between key origins and destinations including, but not limited to: downtown Nanaimo, Cedar, Cassidy, Ladysmith, Nanaimo Airport, Vancouver Island University, BC Ferries terminals, regionals hospitals, other regional shopping and employment centres and between the Town of Ladysmith and downtown Duncan.
- Evaluate opportunities using the existing transit resources available within each region to deliver a conventional transit service solution on fixed routes and schedules, and as a secondary deliverable to evaluate potential custom transit service connections.
- Develop and recommend transit service options, including operational plan and fleet required to transition existing transit systems to the proposed vision, including identifying associated hours and estimated costs along with recommendations on priorities and phasing.
- Review fare options of both regions and provide a fare strategy which could be considered for new connecting services.
- Prepare an implementation action plan for the RDN and CVRD, to summarize the above tasks for service improvements and recommend a course of action.

## 1.2 Study Area

The Regional District of Nanaimo is located mid-island and is the second most populous region on Vancouver Island. It has a population of 146,000 (2011 Census), or 40% of the Greater Victoria area. The major employment, service, retail, and population centre is the City of Nanaimo, with a population of 84,000 (2011 Census).

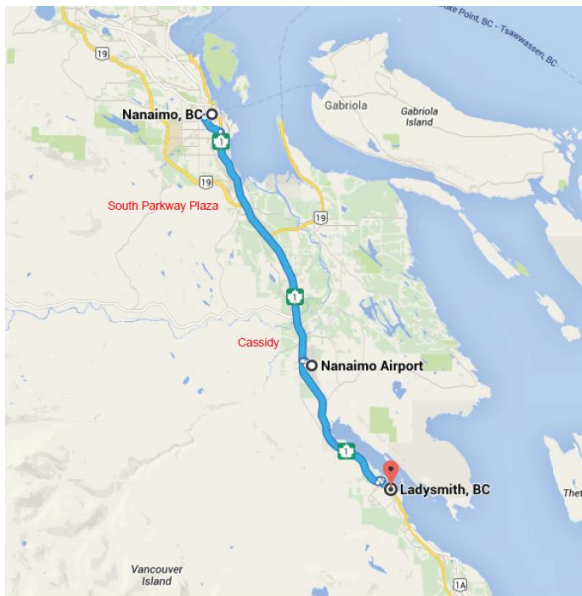
Cowichan Valley is the region that is located between Nanaimo and Greater Victoria (Capital Regional District). Its population is 80,000 (2011 Census) with only 5,000 people living in Duncan, its most urbanized centre. It is perhaps due to its location, between the two larger regions, that its population is so dispersed. The traffic generated by the CVRD is drawn toward its nearest urban centers: toward Greater Victoria to the south of the CVRD, toward Duncan in central CVRD, and toward Nanaimo north of the CVRD. Victoria and Nanaimo are such large attractors and within a relatively short distance, that they compete with Duncan for major services, retail, and employment.

For these reasons, the northern portion of the CVRD has strongest potential for inter-regional travel demand towards Nanaimo. The southern portion of CVRD has already demonstrated inter-regional travel demand towards Victoria, which is currently serviced by the Cowichan Valley Commuter (CVC) transit service operated through partnership between CVRD and BC Transit.

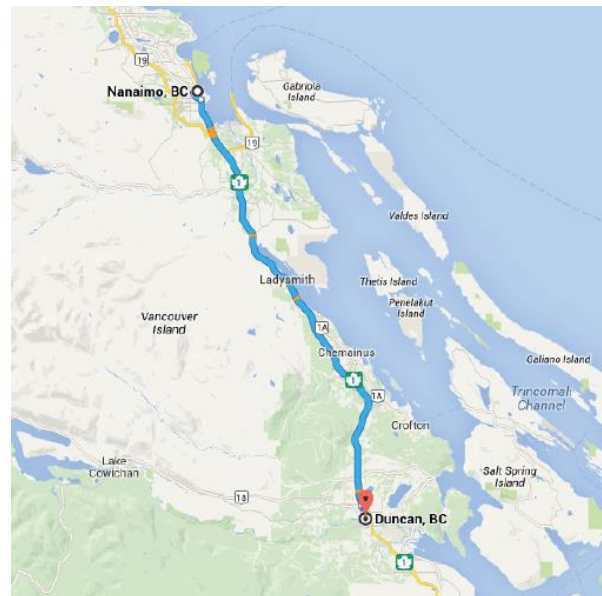
The primary inter-regional study area is outlined in Map 1 below and includes the Town of Ladysmith, areas south of South Parkway Plaza, including Cedar, Cassidy, Nanaimo Airport, and North Ladysmith.

A secondary study area (see Map 2 below) is also considered in the report to determine the demand for transit ridership between the Regional District of Nanaimo and the Cowichan Valley Regional District, the potential connections between the primary transit hubs in Nanaimo and Duncan, and the demand for connecting to these hubs within each respective transit system.

Map 1: Study area from RDN to Ladysmith



Map 2: Study area from RDN to Duncan



## 2.0 REGIONAL CHARACTERISTICS

### 2.1 Regional District of Nanaimo Land Use and Community Characteristics

The RDN includes the municipalities of Nanaimo, Lantzville, Parksville, and Qualicum Beach, seven unincorporated Electoral Areas and four First Nation communities

The regional activity centre hierarchy includes the City of Nanaimo's central business district as the principal regional activity centre which contains the most diverse concentration of urban activities including the key services of the Nanaimo Regional District Hospital and Vancouver Island University (VIU) main campus. The centers of Parksville and Qualicum contain major concentration of businesses, employment and services, local or provincial government administration and important health, education, (regional VIU campuses) cultural and entertainment facilities. Other key locations within the district such as Lantzville and Cedar contain reasonably large concentrations of business, employment and population providing a range of convenience, retail, urban services and small government offices or other types of professional services.

#### RDN Community Profile Snapshot

- Resident population at 2011: 146,600 people
- The median age is expected to increase from 46 to 55 by 2036
- It is estimated that ages 65 and over will be the fastest growing segment of the population over the next 25 years. Forecast increase of 153%
- Aging trend will be prominent in the areas of Qualicum and Parksville

Census Subdivision	Population (2011)	Population Density per km <sup>2</sup>	Median Income	% Population Youth & Elderly
Nanaimo	83,810	874	27,620	31
Lantzville	3,601	133	34,461	31
Parksville	11,997	789	27,942	45
Qualicum	8,687	457	28,740	54
Nanaimo A	6,908	112	26,894	29
Nanaimo C	2,834	2	32,027	30
Nanaimo E	5,674	75	32,076	39
Nanaimo F	7,422	27	26,123	27
Nanaimo G	7,158	142	28,871	42
Nanaimo H	3,509	12	24,729	36

## 2.2 Cowichan Valley Regional District Land Use and Community Characteristics

The largest of Vancouver Island's regional districts with an area of 3,473 sq. km, the region is characterized by urban and rural settlements throughout the valley surrounded by agricultural and forest lands.

CVRD is comprised of four municipalities, including the Town of Ladysmith, Town of Lake Cowichan, City of Duncan and Municipality of North Cowichan, nine Electoral Areas and five First Nation Communities.

The regional activity centre hierarchy includes the City of Duncan central business district as the principal regional activity centre which contains the most diverse concentration of urban activities including the Cowichan District Hospital and Vancouver Island University Regional campus.

The centres of Ladysmith, Cobble Hill, Lake Cowichan and Mill Bay contain major concentration of businesses, employment and services, local or provincial government administration and important health, education, cultural and entertainment facilities. Other key locations within the district such as Chemainus, Shawnigan Lake, Crofton and Maple Bay contain reasonably large concentrations of business, employment and population providing a range of convenience, retail, urban services and small government offices or other types of professional services.

### CVRD Community Profile Snapshot

- Resident population at 2011, BC Stats: 80,332 people
- It is estimated that ages 80 and over will be the fastest growing segment of the population over the next 25 years. Forecast increase of 107%
- Aging trend will be prominent in most areas in the CVRD.

Census Subdivision	Population	Population Density per km2	Median Income	% Population Youth & Elderly
Ladysmith	7,921	660	\$30,009	35
Duncan	4,932	696	\$22,189	38
Lake Cowichan	2,974	369	\$20,749	33
North Cowichan	28,807	147	\$28,309	34
Area A	4,393	89	\$32,585	33
Area B	8,127	26	\$34,294	25
Area C	4,796	212	\$33,355	42
Area D	1,356	189	\$34,329	35
Area E	3,854	28	\$30,456	27
Area F	1,649	0.9	\$23,000	87
Area G	2,221	7	\$26,170	33
Area H	2,332	28	\$26,978	33
Area I	1,111	3	\$22,436	27

**Note: As of 2015, Areas G and H do not currently participate in the CVRD Transit Function.**

### 3.0 INTER- REGIONAL CONNECTIVITY

BC Transit has completed long-term transit strategies (Transit Future Plans) with the RDN and the CVRD. The long-term transit strategies envision what each community’s transit network should look like 25 years from now and describe what priorities, infrastructure and investment are needed to get there. Each of the region’s strategic priorities includes the introduction of inter-regional transit services.

#### 3.1 Inter- regional strategies in the Transit Future Plans

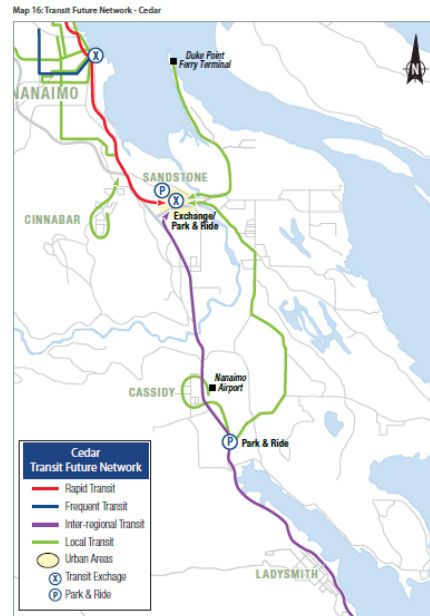
##### RDN

In the short term before the year 2019, the RDN Transit Future Plan includes two phases of inter-regional transit development. Phase one seeks to establish a transit service connection between the RDN and the Comox Valley Regional District transit systems. Phase two seeks to introduce new peak hour weekday service that connects Downtown Nanaimo, VIU and the RDN Airport with a direct service to Cowichan Valley.

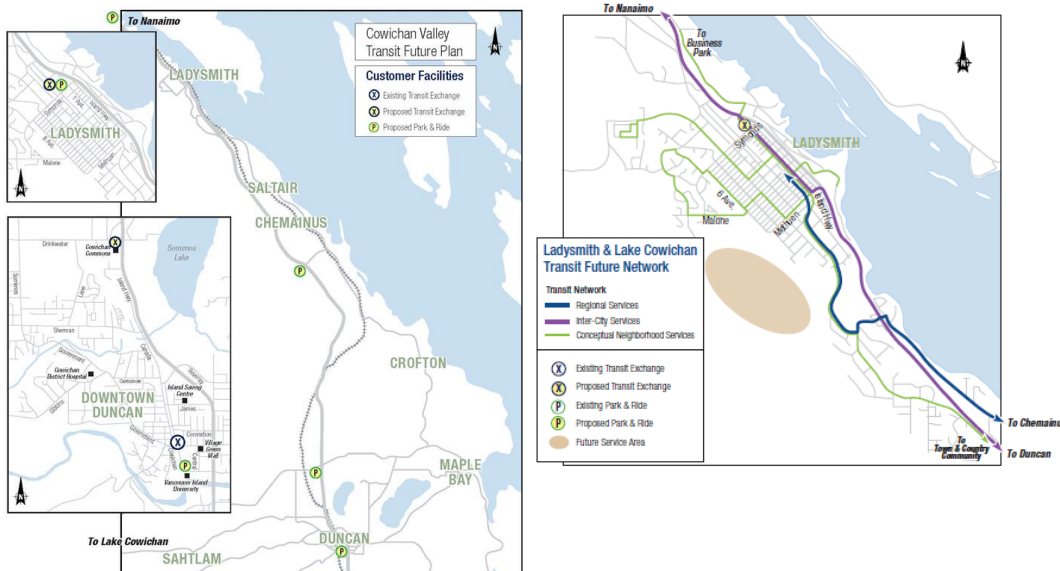
##### CVRD

In the medium term, between the years 2018 and 2027, the CVRD Transit Future Plan (TFP) outlines the introduction of inter-regional service between Duncan and Nanaimo with connections to Ladysmith, the Nanaimo Regional Airport, VIU campuses in North Cowichan and Nanaimo and future connections to the BC Ferries terminals. Following the TFP approval in 2012, the Town of Ladysmith requested that this priority be moved to short term.

Map 3: RDN Inter- regional plans as laid out in their Transit Future Plan



Map 4: CVRD Inter- regional strategies as laid out in its Transit Future Plan



### 3.2 Existing Inter-regional Transportation Options in the study area

The following section describes existing inter-regional transportation options available between the RDN and the CVRD.

#### 3.2.1 BC Transit Inter-regional Services in the Study Area

No BC Transit inter-regional services presently exist between the RDN and the CVRD.

The Cowichan Valley Commuter (CVC) was introduced in 2008 and provides peak morning and afternoon service for people travelling mainly for employment purposes from the Cowichan Valley to Victoria. The service consists of two routes, Route 66 Duncan Commuter and Route 99 Shawnigan Lake Commuter, with peak service (in the morning and the afternoon) available Monday through Friday. Between 2008 and 2015 the average number of monthly passengers on the CVC has more than doubled. The CVC service is supported by Park & Ride lots along Highway 1 at Frayne Road, Mill Bay, and Valleyview Centre, Cobble Hill. These two Park & Rides are used by a majority of riders and are currently at capacity. The current cash fare (one-way) is \$8.00 but the majority of customers use discounted monthly passes at \$192.00 and \$232.00 respectively. While this service is widely used, the details of its operation lend itself to high costs compared to the number of hours it operates. For informational purposes a list of other inter-regional services provided by BC Transit across British Columbia is provided in Appendix C.

#### 3.2.2 Other Inter-regional Transit Services

The following table outlines other non BC Transit Inter-regional transit services in operation between the two regions, including frequency of service, cost per ride and an estimate of ridership or anecdotal evidence of the commuter customer. It is reasoned that existing private transit operators may be catering more towards tourism based markets and not addressing every day trips for residents, such as trips to work, school and medical appointments.

Company	Frequency	Cost per Ride (Adult Fare)	Other relevant details
<b>Island Link Bus</b>	Once Daily(Ladysmith, Chemainus) Three services M-F (Duncan )	\$20.00	Ladysmith, Chemainus, Duncan and Mill Bay daily service to/from Nanaimo Departure Bay ferry terminal
<b>Nanaimo Airporter</b>	24/7 door to door service	Varies with destination	
<b>Tofino Bus</b>	Once daily (M-F), Vancouver to Tofino, Port Alberni	\$17 to \$100 depending on destination	Connects to Victoria
<b>Greyhound</b>	Provides limited service between Nanaimo and Duncan		



## **4.0 POTENTIAL MARKETS FOR INTER-REGIONAL TRANSIT SERVICES**

The variability in the need for inter-regional services is primarily driven by the existing and expected future need for travel by residents to a range of key services located outside their region of origin. Often residential areas located in proximity to the north or south of their regional boundary may have less travel distance to services in a neighboring region.

Inter-regional services can provide important links to multiple activity centres and communities for medical, educational, recreational or employment services. To gauge the potential for each proposed Inter-regional connection, a clear understanding of the key origin and destination points within each region and the demand for travel between regions is required.

The potential transit market analysis segment of the report is delivered through a Market Research Report (see Appendix A) developed in collaboration with consultants SNC Lavalin. The Market Research Report explored the potential ridership markets between key regional centres on Vancouver Island, specifically across each of the three transit region boundaries from Cowichan Valley Regional District to Campbell River. The report analysed the available public and institutional data sources to determine:

- The primary transit markets that would use the inter-regional type service if it was implemented.
- Development of a high level of understanding of where travel takes place.
- Critical analysis of travel data with other population metrics to indicate what percentage of transit ridership could be achieved from these travel patterns and habits in the localities.

The Inter-regional Market Research report provides a high level analysis to help understand the potential for transit use across the regional boundaries. A full description of the overall methodology and the detailed outputs is contained within Appendix A.

It is noted that the estimation methodology and rating provided for the Captive Market results is to help understand where demand for non-peak services may exist. The analysis does not include other travel groups who may use an inter-regional service if it was implemented. The goal of the study was to help determine what type of service model would address the existing and future travel demand and to substantiate additional expenses and resource allocation.

The results of the Market Research study were intended to be in order of magnitude only, separating the high to medium potential markets from the low to no potential markets. From the high level results, potential transit service options worthy of further investigation are discussed in section six of this Service Discussion Report.

### **4.1 Estimated Inter-regional Transit Demand**

The Inter-regional transit demand between the RDN and the CVRD is summarized in Map 5. The estimate comprises almost entirely of the Nanaimo VIU population (staff and students). It is recommended that any new Inter-regional transit service should be initially designed around this specific post-secondary market, with opportunity to grow and accommodate other markets as demand is warranted.

## 4.2 Commuter Market Overall Transit Demand

Commuter transit demand estimations are based on travel patterns derived from postal code data provided by the major employers and post-secondary institutions. This methodology yielded the most applicable results.

- Vancouver Island University in Nanaimo dominates the potential market.
- Based on the Microscopic analysis, using a range of mode share percentages, ridership is estimated to be from 200 to 400 passenger trips per day with demand primarily generated from the CVRD to VIU. A typical ridership of 300 passenger trips per day (or 150 return trips) is the best case forecast for this corridor. This is based on converting the commuting habits of the Nanaimo VIU population traveling from the Cowichan Valley areas.
- Commuter transit demand from the RDN to the CVRD destinations is estimated to be low with between 12 to 26 transit rides with essentially zero estimated for RDN commuters wanting to travel to the RDN Airport.
- Approximately 90 trips (one-way) per day are estimated to originate from the Town of Ladysmith, travelling to Nanaimo.



Map 5: Potential ridership for inter-regional travel

**These high level results are highly dependent on the mode split assumptions that have been applied to the macroscopic data. VIU was assumed to have a 30% mode split for transit use based on estimations derived from the review of Camosun College students travel patterns which indicated a 40% transit mode share in 2013.**

### 4.3 Commuter Market Transit Service Design - Challenges

While the Study does demonstrate the potential for a commuter market between the Cowichan Valley and Nanaimo, the accuracy of the projections generated from this research present a range of challenges that need to be further considered when designing future transit services:

- The range of attendance times in students schedules makes uniform usage challenging, unlike in a “9 to 5” scenario, where people travel to work around 8 am and travel back from work around 5 pm.
- Split campuses for some VIU programs, necessitates travel between campuses for some students, making commuter travel an unattractive option.
- Health Care facilities in the region also have a range of shift times, presenting a similar challenge with commuter travel.
- Lack of parking controls on the VIU campuses, encourage single vehicle travel, in turn providing a disincentive to consider transit as a viable option.
- Lack of a student pass program such as a “U- Pass” program is another disincentive in considering transit as a viable option, as it is now seen as additional expense.
- The current low cost of fuel is another disincentive for transit use.

### 4.4 Captive Market Overall Transit Demand

Ladysmith was the only area identified in either region as having a propensity to take advantage of the introduction of inter-regional services.

- **Captive ridership analysis for Ladysmith** indicated a low ratio of employment to population which directs a high exit migration of workers during normal morning peaks combined with a high percentage of youth and seniors can indicate a lack of amenities within the area. In summary, with major employment opportunities being outside Ladysmith, there is high potential for travel outside Ladysmith (to the RDN or southern portions of the CVRD). **Currently no direct transit connection exists to facilitate this travel.**
- **Captive ridership analysis for Nanaimo Area A** indicated a low ratio for employment /population and a high migration out of area for employment, however less than 30% of population is comprised of youth and elderly which translates to a relatively low captive demand. In summary, with major employment opportunities being outside Electoral Area A, there is high potential for travel outside to the RDN. **Currently RDN transit route 7, Cinnabar/Cedar, provides a transit connection for this travel.**

### 4.5 Overall Market Analysis Report Recommendations

Any proposed inter-regional route, between CVRD and RDN, should pass through or stop at shopping and service areas offering dual purpose trips for students and staff using the service and could provide opportunities to the captive market which has been estimated to be medium in Ladysmith and low in other residential areas of the CVRD and RDN.

## 5.0 EXISTING TRANSIT SERVICES IN STUDY AREA

It is essential to understand the existing transit services in the study area and the market that these services cater to before identifying inter-regional travel options. Transit Networks for the RDN and CVRD cover a wide range of residential and employment areas with transit services generally designed to deliver service characteristics which meet the needs of the targeted rider.

Routes designed to attract ridership generally operate on arterial roads, serve corridors with mixed land use and provide frequent or in cases express type connections between urban centres or major community type facilities like colleges and hospitals. Ridership type routes are often sufficiently competitive enough with personal vehicle travel that commuters can be persuaded to choose transit as their preferred mode for work and school travel, helping to reduce congestion on busy commuter corridors and contribute to reducing greenhouse gas emissions.

Routes designed for coverage generally serve less densely populated suburban and rural areas with a focus on connections to local centres and to frequent ridership type transit routes. Coverage routes are carefully selected in order to cover as much urban area as probable as efficiently as possible. Typically coverage type routes will have low frequencies.

This section describes the basic service characteristics of the existing routes operating in the study area:

### 5.1 RDN: Conventional Transit Service



Map 6: Route 7 Cinnabar/Cedar

#### Route 7: Cinnabar /Cedar

The route 7 Cinnabar/Cedar currently offers service to the Cedar Village, the surrounding residential area in Cedar and the residential neighbourhood of Cinnabar north of Area “A.” Most trips service as a loop through the more populous area of Cinnabar with limited trips offering combined service to Cedar and Cinnabar. All trips travel through South Parkway Plaza, where they continue in service to connect to other RDN route services at Prideaux Exchange. Routes 30, 40 and 50 extends service for the Area “A” residents providing direct travel to the many key destinations along the linear spine of the Nanaimo area (from downtown Nanaimo to the Woodgrove Centre). This route 7 service generally caters to the captive market in this area, however several students rely on the service to access the Nanaimo VIU campus

**Type of service:** Coverage style of route averaging approximately 300 boardings per weekday or 12 boardings per revenue hour.

**Service hours:** 6,500 annually.

### 5.2 RDN: Custom Transit Service

Custom or handyDART service is available to eligible people with a disability living in all areas within Electoral Area “A.” of the RDN.

### 5.3 CVRD: Conventional Transit Service



Map 7: Transit network in Ladysmith

#### Transit service in the town of Ladysmith

Local transit service within Ladysmith is provided by one bus which circulates within the different residential and commercial zones of Ladysmith. The local Ladysmith BC Transit service has been in operation since September 2013. Ridership has been slow to grow and there are continued requests to realign this service to provide more regional connections, north to Nanaimo and south to Duncan.

Local service is provided by five routes. All the routes provide connectivity within Ladysmith, with the exception of the route 35, which provides a service connection south to the town of Chemainus. Route 35 provides a “regional” connection for the residents of Ladysmith.

**Type of service:** Coverage style of service averaging four boardings per revenue hour

**Service hours:** 4,200 hours annually (all routes)

#### Route 35: Ladysmith-Chemainus



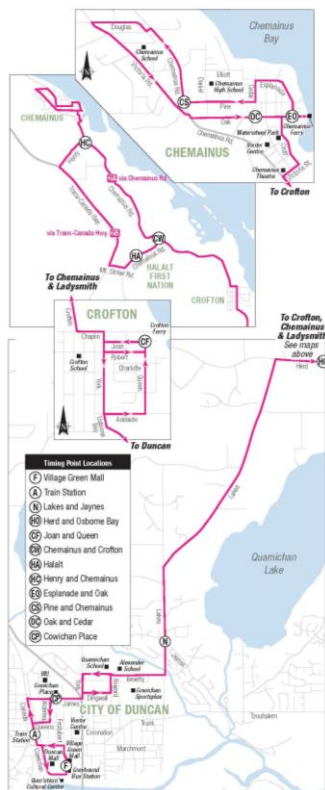
Map 8: Route 35, Ladysmith-Chemainus

This route connects Ladysmith to Chemainus. The route 35 also functions as a transfer route offering passengers the opportunity to transfer to the Route 6 to continue their journey to Duncan.

**Type of service:** Coverage style of service averaging seven boardings per revenue hour.

**Service hours:** 970 hours annually.

## Route 6: Crofton-Chemainus



Map 9: Route 6, Crofton-Chemainus

This route provides service between Duncan and Chemainus and to the ferry terminal in Crofton. This service generally caters to the captive market in Duncan and Chemainus providing the all-important regional transfer connection service for the town of Ladysmith.

**Type of service:** Coverage style of service, averaging 10 boardings per revenue hour.

**Service hours:** 4,000 hours annually

## 5.4 CVRD: Custom Transit Service

Ladysmith has limited handyDART service on Tuesdays and Fridays. The CVRD provides custom service in its service area, within 1.5 kilometers of existing fixed routes. Custom service is not currently available in CVRD Areas G (Saltair/Gulf Islands) and H (North Oyster/Diamond – between Ladysmith and the RDN) as they do not participate in the transit function.

## 5.5 Existing Transit Services Opportunities and Challenges

Given the service areas and levels of service described above, it is evident that inter-regional transit services in the study area would fill a gap for both commuter and other travel needs. The Market Research Study (section 4 of this report) supports this hypothesis.

- The Market Research Report indicates a stronger propensity for travel from CVRD to VIU. Opportunities exist to expand local service on RDN route 7 Cinnabar/Cedar to connect with CVRD services at either Ladysmith or Nanaimo Airport.
- Direct and convenient connections to the nearest urban centers are not possible using the current transit services in Ladysmith. Recently there has been increasing feedback from the Town of Ladysmith about the need for better regional and inter-regional connections. While the Market Research Study shows a higher potential for commuter

needs from Ladysmith, it is highly likely that if inter-regional services developed were connected to shopping and other services, the potential for captive travel would also be addressed.

- There may be an opportunity to reallocate underutilized existing local CVRD transit service hours operating in Ladysmith to transit connections within the CVRD (i.e. south to Duncan) with future expansion of inter-regional services connecting Ladysmith and CVRD residents to VIU or downtown Nanaimo.
- Challenges are largely centered on administrative processes, funding and governance agreements that would need to be addressed between the two regions.
- Recent provincial budget projections indicate no additional expansion funding for transit operations over the next three years. In the event the regions wish to expand transit services to facilitate inter-regional connections within the next 3 years, service hours will need to be reallocated from existing services.

## **6.0 INTER-REGIONAL TRANSIT CONVENTIONAL SERVICE OPTIONS**

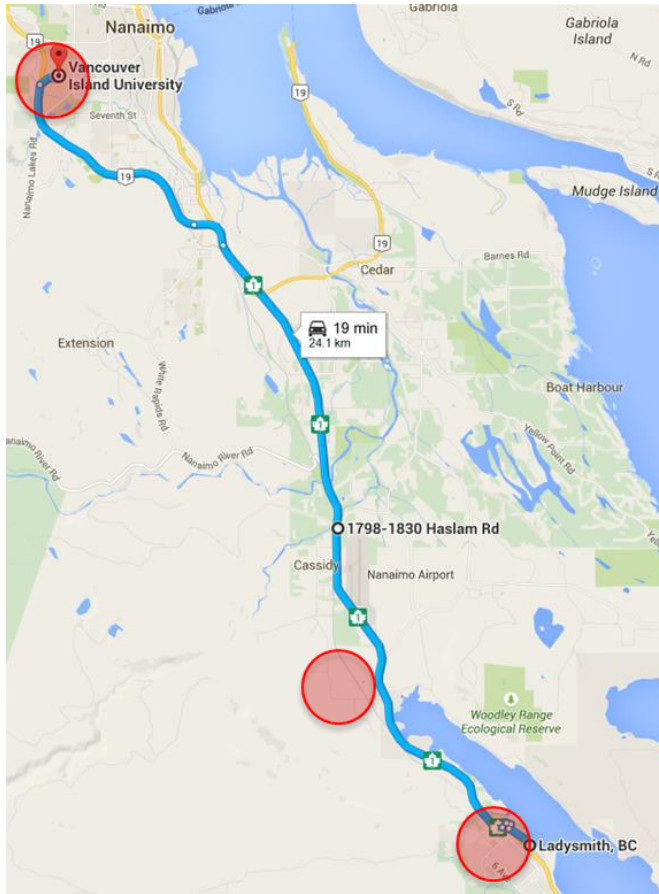
Responding to the results of the Market Analysis Study, and in collaboration with local government and BC Transit staff, three preliminary, high-level options are outlined for delivering inter-regional service in the study area. These options consider travel distance, potential routing, origin and destination, and fleet requirements with high level assumptions used to discuss the options.

Options are discussed in relation to the proposed route description, market to be served, operational requirements and the challenges and benefits. While these specifics vary for each option, the common challenge amongst the three options is the need for coordination of decision making between the regions, recognizing that there is benefit for both regions constituents; it is anticipated that the RDN and the CVRD are able to address administrative issues such as:

- Cost sharing
- Administration of services
- Fare structure
- Governance of operations

In providing these preliminary options, it is recognized that it is possible that deliberations between both local governments, and public outreach might result in a different final approach to providing inter-regional service in this corridor. These options are being presented as an illustration of transit potential in the corridor only.

## 6.1 Option 1: Shortest Direct Route Service Ladysmith to VIU



Map 10: Option 1: routing and potential stop locations

### Route description:

- This option proposes a limited stop service between Ladysmith and VIU, via the Nanaimo Airport.
- Service could operate two round trips in the morning and two in the afternoon, centered on key class times at VIU.
- Service could connect to other routes in Ladysmith within the CVRD. Within the RDN this service would connect with other routes at VIU.
- This service is designed to cater to the commuter market.
- When VIU is not in session, this service could be directed to the Nanaimo downtown exchange (Prideaux Exchange).

### Travel time and distance

Ladysmith	NAN airport	VIU
	10 mins, 9 km	
		12 mins, 15.5 km

The average distance for a one-way trip is 25 kilometers and the travel time for this trip is between 20 and 22 minutes.

## Operating Strategy

### CVRD

Since this service is designed for morning and evening peak service, it would be most efficient to use the existing fleet infrastructure and interline the adjusted local service with a new commuter peak service. Ladysmith service is currently being considered for realignment and direct connection south to Duncan. It is anticipated that any connection north would occur only after this realignment is implemented, requiring expansion of hours or reallocation of existing service hours.

### RDN

The operation strategy for the RDN would include the development of a new route and the addition of one new vehicle, requiring expansion hours.

### Infrastructure (Park & Rides)

The Nanaimo airport may be a suitable location for a Park & Ride for this route. Locating a Park & Ride at this location provides a catchment area of transit users five kilometers around the airport. This area (Cassidy and Cedar) are mentioned in the RDN Transit Future Plan (TFP) for service in the future. Locating the Park & Ride at the airport provides alternate travel options



for residents of this area that would like to connect directly to VIU or through VIU to downtown Nanaimo. A suitable location for a Park & Ride will need to be identified at Ladysmith.

### Benefits

- It may be possible to provide this service with realignment of existing operations and using existing services thereby making this option potentially cost neutral for the CVRD.
- The Nanaimo airport is an ideal, centralized location for a Park & Ride that gives the opportunity for RDN residents within a five kilometer radius of the airport the opportunity to use this service and link directly to VIU.
- There is some flexibility in the administration and operation of this service. As identified above, this service can be operated either by the RDN or the CVRD with some agreement on accommodating each other's transit operation within the adjoining transit service area.

### Challenges

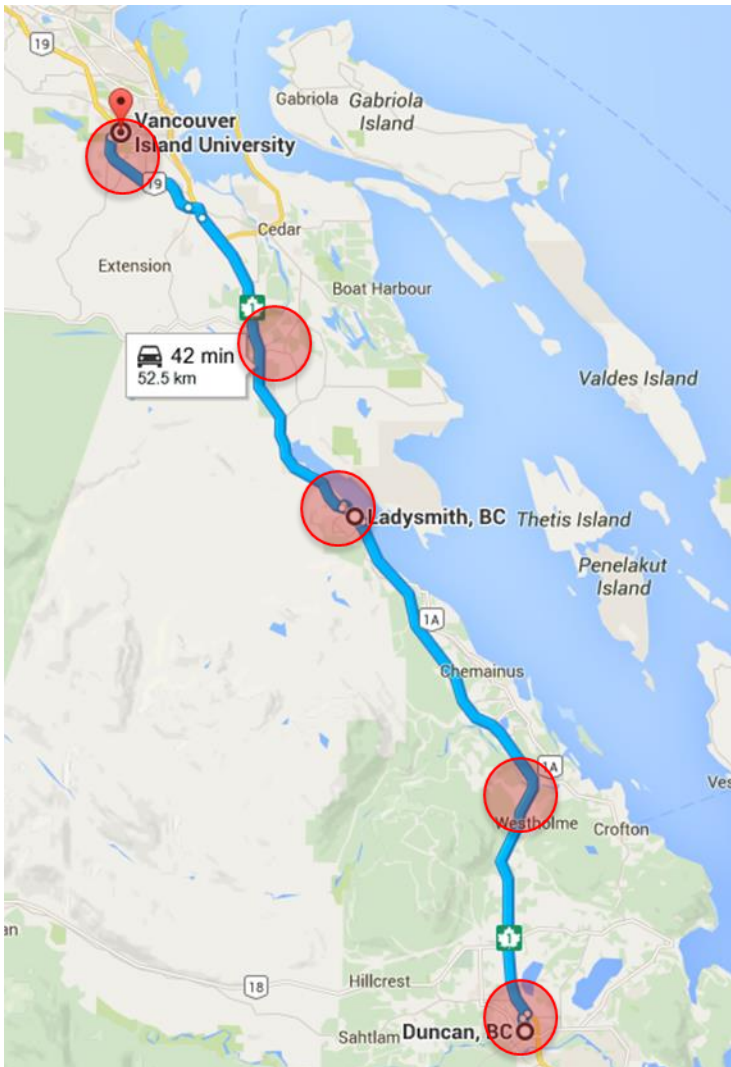
- Operational costs and revenue, if agreed, could be shared between the regions to help deliver the service in the short term, however a fair and discernible mechanism would need to be developed to substantiate the cost and revenue split based on area use.
- Potential capacity issues may arise if using the existing CVRD Ladysmith fleet as these light duty buses have a maximum load capacity of 20 passengers.

### Costs

Costing for option 1 : Ladysmith to VIU via Nanaimo Airport						
hrs	hrs	\$	\$	\$	\$	\$
Additional hours	Rounded off	cost/hr	Annual op cost	Cost recovery	Net cost	cost per ride
958.33	960	125	\$ 120,000	\$ 18,000.00	\$ 102,000.00	\$10.88

It is estimated that this service would cost approximately \$120,000 annually to operate. If the service were to go to Prideaux Exchange instead of VIU, when university is not in session, costs would increase by about 5%. These costs are approximate and do not take into account expenditures on capital improvements or administrative overheads in order to maintain this service. Please refer to table 1 (page 22) for a more detailed breakdown assumptions associated with computing costs. Please also note that if this commuter service is realigned with existing service, then a cost-neutral solution might be possible.

## 6.2 Option 2: Longest Direct Route Service Duncan to VIU



### Route description:

- This option implements a limited stop service between Duncan and VIU, via the Nanaimo Airport.
- Service could operate two round trips in the morning and two in the afternoon, centered on key class times at VIU.
- Service could also connect Duncan to Ladysmith, and the Nanaimo Airport.
- This service is designed to cater to the commuter market in Duncan, Ladysmith and Electoral Area A in the RDN.
- When VIU is not in session, this service could go to the Prideaux Exchange instead.
- It is assumed that in the mid-day the service would circulate within Ladysmith providing local service there.

Map 11: Option 2: routing and potential stop locations

### Travel time and distance

The average distance for a one-way trip is 55 kilometers and the travel time for this trip is between 50 and 55 minutes.

Duncan	Hwy 18	Ladysmith	NAN airport	VIU
8 mins, 5.4 km				
	20 min, 24 km			
		10 mins, 9 km		
			12 mins, 15.5 km	

## Operating strategy

### CVRD

Since this service is designed for morning and evening peak service, it would be most efficient to use existing fleet and infrastructure and interline with the local Duncan /Ladysmith services. It is possible that the existing bus in Ladysmith is pooled with the rest of the CVRD fleet and one bus from that fleet is used to provide this service as well as local service in Ladysmith during the mid-day. No additional buses are anticipated in the initial years of service.

### RDN

Given that the majority of the route would be located within the CVRD region, the operation strategy for this option would primarily be the focus for the CVRD. The RDN would partner in the provision of bus stops at VIU and or downtown Nanaimo and may contribute operational funding for the proportion of service offered within the RDN transit service area.

The RDN could also explore the expansion of the route 7 Cinnabar/ Cedar services to meet the inter-regional service at the Nanaimo airport allowing passengers to transfer to travel south to Ladysmith or beyond.

### Infrastructure (Park & Rides)

There is an existing informal Park & Ride located at Cowichan Valley Highway (Hwy 18) and the Highway 1 that is easily accessible off Highway 1. This would be a suitable location for a Park & Ride within the CVRD, in close proximity to Duncan but would require formalization with the Ministry of Transportation and Infrastructure (MOTI).

Another potential location for a Park & Ride mid-way between Duncan and Ladysmith is at River Road and Highway 1. This location would be ideally suited for commuters in Chemanius and Saltair, in the CVRD, wanting direct access to VIU.

At Ladysmith, a suitable location for a Park & Ride will need to be identified.

Within the RDN, the Nanaimo airport may be a suitable location for a Park & Ride for this route. Locating a Park & Ride at this location provides a catchment area of transit users 5 kilometers around the airport. This area (Cassidy and Cedar) are mentioned in the RDN Transit Future Plan for service in the future. Locating the Park & Ride at the airport provides alternate travel options for residents of this area that would like to connect directly to VIU or through VIU to downtown Nanaimo.

### Benefits

- It may be possible for the CVRD to provide this service with realignment of existing operations with the use of their existing fleet, thereby minimizing costs of this additional service.
- It provides a connection directly from Duncan to VIU, enabling students and residents that work in the RDN an alternate and sustainable commuting option.
- With three stops between Duncan and VIU, it increases the catchment area of residents in both the CVRD and the RDN that are able to access this service.
- Provides expansion of transit services for Nanaimo Area A residents

### Challenges

- Operational costs and revenue if agreed could be shared between the regions to help deliver the service in the short term, however a fair and discernible mechanism would need to be developed to substantiate the cost and revenue split based on area use.

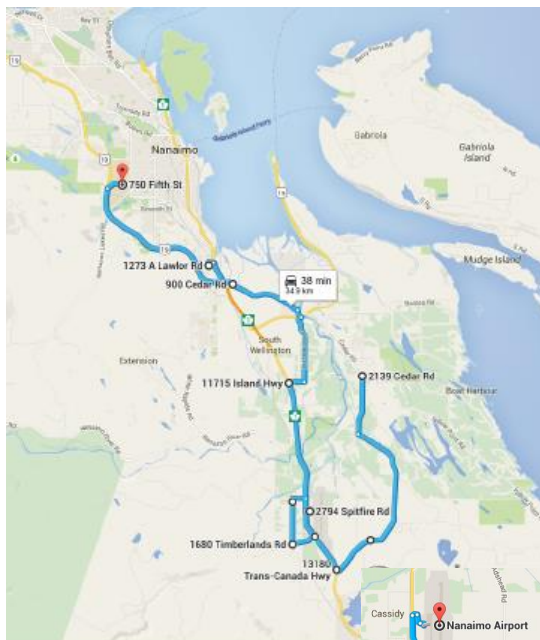
- Development of operational strategies for transit services provided by the CVRD to operate within the RDN transit service area.
- If trying to implement this option without expansion hours – i.e. through reallocation of existing service hours in local Ladysmith routes, this could mean a reduction in local service that would need to be further reviewed.

## Costs

Costing for option 2 : Duncan to VIU via Nanaimo Airport						
hrs	hrs	\$	\$	\$	\$	\$
Additional hours	Rounded off	cost/hr	Annual op cost	Cost recovery	Net cost	cost per ride
1916.66	1920	125	\$ 240,000	\$ 36,000.00	\$ 204,000.00	\$10.20

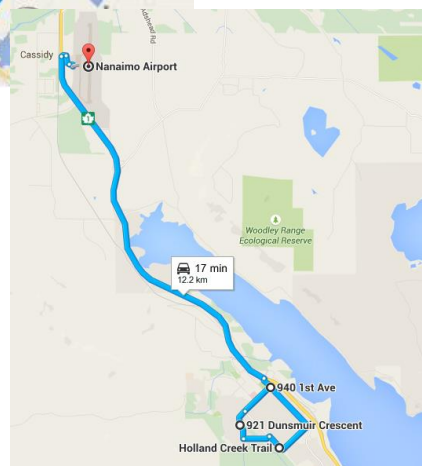
It is estimated that this service would cost approximately \$240,000 a year to operate. If the service were to go to Prideaux Exchange instead of VIU, when university is not in session, costs would increase by about 5%. These costs are approximate and do not take into account costs of capital improvements and administrative overheads in order to maintain this service. Please refer to table 1 (pg. 22) for a more detailed breakdown assumptions associated with computing costs. Please also note that if this commuter service is realigned with existing service, then these costs can be reduced substantially.

### 6.3 Option 3: Expansion/ Redesign of Existing Regional Service



Map 12: Option3: potential routing for redesign of existing services

#### Nanaimo Airport Suggested Transfer Point



**Route description:** This option explores each regional government augmenting its existing route services to meet at a common midpoint between the two regional transit service areas and scheduling the trips to allow passengers to transfer between services to complete their journey either north to Nanaimo or south to Duncan.

#### **RDN Service description**

The intent of option 3 for the RDN is to align an Inter- regional transit strategy with the existing route 7 Cedar Cinnabar service provided within Electoral Area A. This approach corresponds with the 2011 Regional District of Nanaimo Electoral Area A Transit Service Review and Update and the service priorities identified within the RDN Transit Future Plan. The major theme of the previously identified service strategies is the proposed evolution of the existing RDN route 50 into a Rapid Transit spine for the Nanaimo Region, operating between the Woodgrove Centre and downtown Nanaimo with alternating extensions operating to Vancouver Island University, South Parkway Plaza and Sandstone, offering connections to the 7 Cinnabar/Cedar at Sandstone ( or South Parkway Plaza) enabling residents to more easily connect to VIU, Downtown, Nanaimo North Town Centre , the Woodgrove Centre and many other key destinations throughout the region.

Option 3 for the RDN would be contingent on the new RDN rapid transit spine being implemented as outlined in the TFP and would then allow for services extended by the CVRD (from either Ladysmith or Duncan) to Nanaimo Airport to connect.

#### **RDN Operation strategy**

- Realignment of the Cinnabar/ Cedar service to connect to the Rapid Spine by transfer at Sandstone (or initially at South Parkway Plaza).
- Increased service frequency to the route 7 Cinnabar/ Cedar and enable extension of service to South Wellington, Cassidy (via Hwy 1 and Vowels, Hallberg and Timberlands Road) and ending at Nanaimo Airport, with the exploration of extending the service to turnaround at Ladysmith.
- It is anticipated the route design would serve the potential commuter market for passengers transferring from the CVRD services at Nanaimo Airport (or Ladysmith). The initial Inter- regional component of the new look Route 7 Cinnabar/Cedar service would provide three additional commuter trips in the morning and afternoon peaks Monday to Friday which would route directly to the downtown Nanaimo exchange.
- It is expected that 1 additional vehicle will be required to operate the initial expanded service.

#### **CVRD Service description**

To align with this service, it is proposed that the Ladysmith service be reconfigured to travel to Nanaimo airport so that it meets the service from RDN at the airport, initially two trips in the morning and two in the afternoon and then potentially increase the service to three trips to meet the RDN service, as additional hours become available. This could be cost neutral option for the CVRD.

#### **CVRD Operation strategy**

Since this service is designed for morning and evening peak service, it would be most efficient to use existing fleet and infrastructure and reconfigure local service to add the run to the

Nanaimo Airport. No additional buses will be needed for this service, if the existing service in Ladysmith is re-configured to include this service.

### Infrastructure (Park & Rides)

Locating a Park & Ride near daily services will make any Inter- regional type service more attractive. A comprehensive look at Park & Rides which would be advantageous to Inter- regional transit use is recommended with any proposed detailed service planning. All previous locations discussed in this report require further detailed investigation and assessment.

### Benefits

- Comox Valley and Campbell River use this Inter- regional service model with a small degree of success. It is estimated that approximately 12 passengers per weekday take advantage of the connecting services.
- This route option increases services for Area A residents and provides transit service from downtown Nanaimo to Nanaimo Airport for all RDN residents.
- Would require transfer at South Parkway Plaza for non-peak trips only (customers threshold for transfers is usually 2 therefore passengers transferring from Cowichan Valley (Ladysmith) service would require only 1 transfer at the Airport to access downtown Nanaimo and 2 to access VIU.

### Challenges

- This option allows each regional entity the flexibility to set service levels within their own jurisdiction, however requires specific attention to coordination of schedules to ensure connectivity at the proposed transfer point.
- The Market Research Study suggests that VIU is the predominate market destination so service to and from the airport doesn't provide customers with direct access to their ultimate destination and adds time for transfers which may reduce the propensity to use this service.

### Costs

Costing for option 3 : Separate services, common meeting point (Ladysmith to Nanaimo Airport and Cassidy via Nanaimo Airport to VIU)						
hrs	hrs	\$	\$	\$	\$	\$
Additional hours	Rounded off	cost/hr	Annual op cost	Cost recovery	Net cost	cost per ride
RDN	2500	100	\$ 250,000	\$ 45,000.00	\$ 205,000.00	\$8.20
CVRD	No additional costs for service from Ladysmith to Nanaimo airport, assuming service will be realigned to incorporate the additional hours and kilometers to serve the Nanaimo airport.					

The high level cost estimation includes a reallocation of existing RDN route 7 services with additional hours calculated to facilitate expanded coverage type service within the Cassidy and South Wellington areas and the inclusion of six weekday Inter- regional peak services operating between Nanaimo Airport and downtown Nanaimo. It is estimated that this service would cost approximately \$250,000 a year to operate. These costs are an approximate and do not take into account costs of capital improvements and administrative overheads in order to maintain this service. Please refer to table 1 (page 22) for a more detailed breakdown assumptions associated with computing costs.

## 6.4 Service Option Summary

The following table summarizes the estimated impacts for all service options presented above.

**Table 1: Service Option Summary**

	<b>Option1</b>	<b>Option2</b>	<b>Option3</b>
	Ladysmith to VIU	Duncan to VIU	Expansion/Redesign of existing
<b>Vehicles Required*</b>	1	1	2
<b>Estimated Annual Service Hours</b>	960 hours annually	1,920 hours annually	2,500 hours annually
<b>Estimated Annual Ridership**</b>	9,750	20,000	25,000
<b>Total Annual Revenue***</b>	\$18,000	\$36,000	\$45,000
<b>Total Annual Op cost</b>	\$120,000	\$240,000	\$250,000
<b>Net local share of costs</b>	\$45,600	\$91,200	\$87,500
<b>Provincial share of costs</b>	\$56,400	\$112,800	\$117,500
<b>Estimated Rides per Hour</b>	10.15625	10	10
<b>Estimated Cost per Ride</b>	\$12.31	\$12.00	\$10.00

\*Assumes a spare will be part of the larger pool of vehicles from the CVRD/RDN fleet

\*\*Estimate generated as a percentage of figures presented in Market Analysis report (refer to Map 5, pg 10 of this report)

For option 3, ridership is estimated using current ridership estimates (10 rides per hour) for the Route 7.

\*\*\* Estimate generated from an assumption of moderate 15% cost recovery in the first year, for option 3, this is assumed at 18%, given the higher ridership estimates

All figures are annual and are based on estimates that would require review based on actual date of implementation and confirmed service and operational details. Operating costs are generated on cost estimates of similar inter-regional express service provided by BC Transit. The table above includes only operational costs.

## 7.0 INTER-REGIONAL CUSTOM TRANSIT SERVICE OPTIONS

Custom Transit (also referred to as 'handyDART') is a demand responsive transit service operated with specially equipped transit vehicles and is designed to carry eligible passengers, with physical or cognitive disabilities, who are unable to use conventional, public transit without assistance. Custom Transit provides an important door to door mobility option for eligible residents in the community who require affordable transport options to undertake their daily tasks including medical, educational, employment or recreational purposes. Typically, custom service is provided within a distance of 1.5 kilometers on both sides of the existing conventional service.

If conventional service takes on limited stop and span of service characteristics, meeting the definition of Express Service, industry practice is generally not to provide custom service within that service area. However, the RDN and CVRD could explore the extension of their respective existing handyDART services to align with any new route segments introduced as part of an expanded inter-regional service. Given that custom service is not currently offered in

the most northern electoral area of the CVRD (Area H) there would still be gaps unless this area opted to participate in the transit function. The costs associated with the expansion of custom service have not been estimated as part of this exercise.

## 8.0 SERVICE ADMINISTRATION AND FUNDING

There are a number of issues related to delivering inter-regional service that should be highlighted:

### 8.1 RDN and CVRD support

As the Market Analysis Report and Inter-regional service Discussion Document was conducted on behalf of the RDN and the CVRD through BC Transit, this report must be formally received by each of the Regional Districts.

- The Transit Select Committee is the RDN body that would provide a recommendation to the Regional District Board on next steps.
- The Regional Engineering Services Committee is the CVRD body that would provide a recommendation to their Board on next steps.
- Joint Board approval and direction would be required to move forward on any cost-shared proposal.
- Joint Board approval and direction would be required where a proposed service travels across regional boundaries and is delivered wholly by either region.

### 8.2 Funding

Under the BC Transit Act, funding for transit systems must be cost shared between BC Transit and the sponsoring local governments at a prescribed rate, with passenger revenues used to offset the local share of costs. This funding arrangement means that all parties must come to the table with funding before service can be implemented. For instance, if a local government has funding for new transit services but the corresponding provincial share is not available, the service cannot be implemented.

- **Prioritization** – BC Transit uses a number of transit service performance and land use criteria to prioritize available funding for service expansions between transit systems. Therefore, moving ahead on any of the service options represented would require both available provincial funding and sufficient ranking against other requests for services within the RDN and the CVRD as well as among other communities.
- **Three Year Budgets** - BC Transit receives its funding on an annual basis from the provincial government. This annual funding arrangement means that BC Transit cannot confirm a timeframe for service implementations. The most recently announced (2015) three year budgets will provide no expansion resources for transit around the province. Therefore if the RDN or CVRD was to consider the expansion of services to facilitate inter-regional service in this corridor, this service would involve reallocation of existing services.



## 9.0 NEXT STEPS

If the Regional District of Nanaimo and the Cowichan Valley Regional District wish to pursue one of the service options that require integration, a number of steps are required in terms of approval and agreement. The following is a suggested path towards implementing integrated Inter- regional service should the regional governments wish to pursue it.

The direct shortest Option # 1, Ladysmith to VIU is used here as an example for next steps since it requires work around moving forward with integration, and is considered a good option to address the identified potential commuter market benefiting both regional communities. It would likely be easier to start discussions with this in mind and then scale back to more limited integration if each district chose to operate its own services connecting at a common point.

### **Proposed Path to Implementing System Integration for Inter- regional Service**

1. Regional District of Nanaimo Transit Select Committee receives and discusses this report and directs staff to commence further work to introduce Option 1 Inter- regional service Ladysmith to VIU and to move forward towards implementation.
2. The Cowichan Valley Regional District Regional Engineering Services Committee receives and discusses this report and directs staff to commence further work to implement Option 1 Ladysmith to VIU and to move forward towards implementation.
3. Before service could be implemented, an agreement between all parties would be needed that includes the following items:
  - a. Develop and implement a public consultation strategy for the CVRD and RDN areas that would be served by the service involving:
    - i. Stakeholder meetings to include such agencies but not limited to VIU, VIHA, Ladysmith Chamber of Commerce, Cedar and Cassidy, Nanaimo Regional Airport and Vancouver Island Economic Association (VIEA)
    - ii. Public open houses, online and paper surveys
  - b. The development of a service plan and implementation timeframe as well as the development of a governance mechanism for determining initial service levels and changing service levels in the future
  - c. A cost sharing agreement outlining responsibility for both capital and operating costs
  - d. Development of a fare strategy including fare structure and revenue sharing agreement specifically related to Inter- regional service. Appendix B includes information to be considered when developing the fare strategy. This could include recommendations that an integrated Inter- regional service be administered by only one Regional District under a separate Annual Operating Agreement (AOA) for both cost and revenue purposes.
  - e. Development of an operational plan to deliver the service including where the service would be administered, who would operate the service, where the fleet would be maintained and identification for development and maintenance of associated infrastructure such as transit stops and Park & Rides
  - f. Developing a long term agreement (5 to 10 years) prior to implementation to ensure the stability of the service

4. BC Transit creates an Implementation Agreement for sign off by the Regional Districts. This Memorandum of Understanding document outlines the detailed process and enables the development of detailed transit trip schedules, fare strategy and vehicle and driver assignment options.
5. The RDN, CVRD, and BC Transit sign the Implementation Agreement (MOU).
6. Detailed schedules and routes are developed with opportunity for input by front line transit staff. Preliminary vehicle and driver assignments and division of operational functions is created and discussed based on these initial trip schedules. An infrastructure plan is developed, along with development of any temporary strategies necessary to meet implementation.
7. A formal progress report goes to local governments outlining proposed schedules, functional divisions and cost impacts.
8. A “Sneak Peek” process is held, enabling front line transit staff, existing transit customers and the public to view and comment on proposed schedules and routings.
9. Schedules, routes, division of operational functions, infrastructure needs and cost impacts are confirmed and presented for final approval to the RDN and CVRD.
10. BC Transit creates Amendments to the Annual Operating Agreements to reflect the new service and structure.
11. Revised marketing and operational materials are created, staff training is held, prerequisite infrastructure created as required and the new service is implemented.
12. The new service is monitored, with an initial “Immediate Impacts” letter report provided to the RDN Transit Select Committee and the CVRD Regional Engineering Committee at six months of operation and a more detailed letter report provided after 12 months of operation.

## **10.0 RECOMMENDATION**

It is recommended that the Regional District of Nanaimo and the Cowichan Valley Regional District receive this report as information and direct staff on next steps in the process.

**APPENDIX A: Market Research Report**

Due to file size please see separate attachment

## APPENDIX B: Preliminary Fare Strategy

### Preliminary Information for investigating an Inter-regional Fare Strategy

The objective of a fare strategy to be developed for an Inter-regional service between the Cowichan Valley Regional District and the Regional District of Nanaimo would include the following:

1. Development of an acceptable cash fare (or range of acceptable cash fares) which would become the base of the fare structure and
2. Given the commuter market is expected to be primarily post-secondary students, determine the contribution that would be required for U-PASS inclusion.

The process to help derive an acceptable recommendation for cash fares and the subsequent prepaid fare products based on the cash fare would include an analysis of comparable Inter-regional routes in transit systems within British Columbia. For example Table 1 below shows four of the closest comparable commuter connector routes in transit systems in BC.

**Table 1: Comparable commuter fares**

	Victoria-Cowichan	Kelowna - Vernon	Nelson-Castlegar	Terrace-Kitimat	FVX*	Median	Average
Cash Fare	\$8.00	\$2.50	\$2.50	\$4.00	\$5.00	\$3.25	\$4.00
Route Distance	61	41	46	63	70	54	53
Fare Per Km	\$0.13	\$0.06	\$0.05	\$0.06	\$0.07	\$0.06	\$0.08
Top-ups permitted	NO	YES	YES	YES	NO	N/A	N/A
Average return trips/day	4.3	2.9	4.5	1.1	17	4.3	5.96

\*FVX: Fraser Valley Express. A service connecting Chilliwack, Abbotsford and Langley

The final two rows of Table 1 indicate firstly whether or not the comparable route permits fare top-ups and secondly the average number of scheduled round trips per day.

The following table applies the minimum, maximum and average fares per-kilometer of the comparable routes in Table 2 to the CVRD/ RDN Inter- regional Options, with option 1 an approximate distance of 30 kilometers and Option 2 an approximate distance of roughly 60 kilometers.

**Table 2: Derivative Cash Fares**

	MINIMUM	MAXIMUM	AVERAGE
Comparable Fare Per Km	\$0.05	\$0.12	\$0.08
CVRD/RDN Option 1 Route Distance	30	30	30
Resulting Cash Fare	\$1.50	\$3.60	\$2.10
CVRD/RDN Option 2 Route Distance	60	60	60
Resulting Cash Fare	\$3.00	\$7.20	\$4.20

The resultant analysis indicates cash fares range from \$1.50 to \$3.60 for option 1 and \$3.00 to \$7.20 for option 2.

Fare structure options building on the range of cash fares and based on BC Transit fare guidelines would be further provided to the Regional Districts.

Using the BC Transit Fare guidelines options presented to the respective regional districts would reflect the concept of the single cash fare, which eliminates cash and ticket discounts for students and seniors but continues to offer age-based discounts on monthly passes. The single cash fare is becoming a popular choice for numerous transit systems across Canada and has several benefits: it offers simplicity in the fare structure, improved quality of data collected from fareboxes, reduced reliance on operators to enforce age-based fares thereby reducing the likelihood of fare disputes and provides incentive for riders to switch to prepaid products potentially encouraging more consistent ridership all while reducing fare collection costs. If the service begins accepting U-PASS in the future, the number of passengers impacted by the single cash fare will be greatly reduced.

### **Investigating U-PASS**

As indicated by the Market Research Report, the introduction of an Inter-regional service between the two districts would primarily benefit post-secondary students. This type of service would be another targeted student service improvement following on from the recent 2015 expansion of services in the RDN and the introduction of the frequent transit route, #40 VIU Express. The Inter-regional service could therefore be the impetus for the further investigation into the introduction of a U-PASS for VIU students.

For information purposes the Inter-regional Fare Strategy would include a discussion of how a future U-PASS (or similar pass type solution) contribution would be decided giving consideration to the opportunity cost (lost revenue) to the local government in accepting U-PASS and the value of the additional service to the student.

### Appendix C : Inter-regional Route Services Across British Columbia

Appendix C : Inter-regional Route Services Across British Columbia					
Route	BASIC INFORMATION				
	Start date	Communities served	Orgs involved	No .of vehicles	Market served
Fraser Valley Express	Apr-15	Chilliwack, Abbotsford, Langley	BCT, Fraser Valley Regional District, City of Chilliwack, City of Abbotsford	8	All (currently does not accommodate UPASS)
CowichanValley Commuter	2008	Cowichan Valley, Greater Victoria	BCT, Cowichan Valley Regional District, Capital Regional District	8	Commuter ( work)
North Okanagan Connector	2008	Vernon, Coldstream, Enderby, Armstrong, Lumby, Lake Country, Oyama, Kelowna	Admistered by Regional district of North Okanagan and cost shared and funded by Vernon and Colstream with RDNO areas responsible for approx 12%	3	Students to North Okanagan College
Route	SERVICE DESIGN				
	Trips /weekday	Frequency	Span of service	One-way trip time	One-way cash fare
Fraser Valley Express	17	30 min peak, 60 min off-peak	6:30 am to 10:15 pm	67 minutes	\$5.00
CowichanValley Commuter	12	30 minutes (Rt 66) and 60 minutes (Rt 99)	5:30 AM to 8 AM, 3:45 PM to 6:45 PM	72 minutes(Rt 66) and 88 minutes (Rt 99)	\$8.00
North Okanagan Connector	10	60 minutes- frequency reduced during semester break	7:00 am to 9:00 pm	50 minutes	\$2.25
	METRICS (AOA)15/16				
	Annual Service hours	Annual revenue	Annual operational cost	Annual boardings	
Fraser Valley Express	11,800	\$207,000	\$1,512,008	69,000	
CowichanValley Commuter	4,452	\$483,781	\$1,033,842	76,065	
North Okanagan Connector	3,864	\$84,234	\$499,108	87,108	
Route	PERFORMANCE METRICS (APS 15/16)				
	op cost / service hour	Avg boardings / service hour	Cost per boarding	Cost recovery%	
Fraser Valley Express	\$127.36	6	\$25.50	12	
CowichanValley Commuter	\$221.39	14*	\$12.70	45	
North Okanagan Connector	\$124.30	30*	\$5.40	17	
* From Annual Performance Summaries					

The performance metrics for Fraser Valley Express are from the 2015/16 AOA. Service commenced April 2015- early analysis indicates the service is meeting the estimated average boardings per service hour.

---

**TO:** Daniel Pearce  
A/ Director, Transportation Services

**DATE:** February 9, 2016

**FROM:** Jamie Logan  
Superintendent, Transit Planning & Scheduling

**MEETING:** TSC - February 25, 2016

**FILE:** 8500-03- R99 DB

**SUBJECT: Qualicum First Nation Transit Service Report**

---

### RECOMMENDATION

That the Board direct staff to continue operating the route #99 Deep Bay service extension into Qualicum First Nation, and be paid for by existing Electoral Area 'H' transit contribution.

### PURPOSE

To complete a review of the extension of route #99 Deep Bay transit service into Qualicum First Nation.

### BACKGROUND

At the February 24, 2015, Board meeting, the following motion was passed:

*That the Board direct staff to work with BC Transit and the Qualicum First Nation on a one month trial to extend transit to the reserve via Route 99 and that staff report back to the Transit Select Committee on the results of the pilot.*

The transit route #99 Deep Bay operates weekly on Tuesdays between Deep Bay and Woodgrove Mall. It operates one return trip in the morning and one return trip in the afternoon. Route #99 Deep Bay bus predominantly travels along Hwy 19A when operating within Electoral Area 'H'. The existing route diverts off Hwy 19A onto several side roads such as Lion's Way, Horne Lake Road, Leon Road, and Kenmuir Road to provide easier access to residents. Currently riders that live on Qualicum First Nation could walk up and wait at the corner of Fisheries Road and Hwy 19A for bus service.

The extension of service requires the bus to travel 0.6 kms up Fisheries Road and Salish Way to the Qualicum First Nation's community hall complex and return. This would require a total of 2.4 additional kms per service day. The extension of service does not require any additional labour costs.

Annual ridership on route #99 Deep Bay for 2015 was 820 riders. The extended transit service was implemented in September 2015. Due to the service not being fully utilized at the start of the trial, staff talked to the Electoral Area 'H' Director and continued the trial service until the end of 2015. This resulted in a total of 80 rides during this period. Below is a detailed breakdown of ridership to and from Qualicum First Nation:

Month	Rides
September	30
October	12
November	38
December	0
<b>Total</b>	<b>80</b>

### ALTERNATIVES

1. That the Board direct staff to continue operating the Route 99 Deep Bay service extension into Qualicum First Nation, and be paid for by existing Electoral Area 'H' transit contribution.
2. That the Board direct staff to discontinue operating the Route 99 Deep Bay service extension into Qualicum First Nation.
3. That the Board direct staff to enter into a service agreement with Qualicum First Nation to operate the Route 99 Deep Bay service extension one day per week, to the Qualicum First Nation.

### FINANCIAL IMPLICATIONS

The service extension is accommodated within the existing driving shift with no additional labour costs. The additional annual mileage would be 125 kms per year. Based on BC Transit figures, the fuel cost is .56 per km., and the maintenance cost is .25 per km. The total additional vehicle costs would be \$101.25 per year for this extended service, and would be paid for by the existing Electoral Area 'H' transit contribution.

### STRATEGIC PLAN IMPLICATIONS

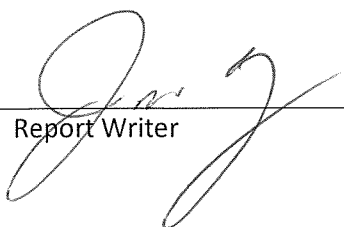
A transit service that operates in areas throughout the region allows a greater number of residents to access the transit service and further helps the local economy and helps reduce environmental emissions.

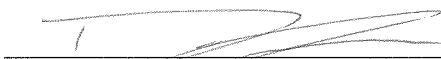
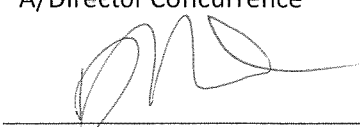
### SUMMARY / CONCLUSIONS

At the direction of the Board, staff are bringing forward this report to look at the results of the 99 Deep Bay route extension trial into Qualicum First Nation.

Implementing the trial extension was very easy to accommodate as it did not require changes to the route schedule times or any addition to the length of the driving shift. The additional mileage of routing Fisheries Road into Qualicum First Nation and return is minimal, at 2.4 kms.

Based on ridership, ease of accommodating the route change, and the minimal cost increase to operate the additional mileage, staff recommends that the service extension continue into Qualicum First Nation and be paid for by the existing Electoral Area 'H' transit contribution.

  
\_\_\_\_\_  
Report Writer

  
\_\_\_\_\_  
A/Director Concurrence  
  
\_\_\_\_\_  
C.A.O. Concurrence



---

**TO:** Daniel Pearce  
A/ Director, Transportation Services

**DATE:** February 9, 2016

**FROM:** Brandon Miller  
Superintendent, Transit Service Delivery

**MEETING:** TSC - February 25, 2016

**FILE:** 1470-01- EL

**SUBJECT:** Cost Analysis - Free Transit on Future Election Days

---

### **RECOMMENDATIONS**

1. That the Board receive this report for information.
2. That the Board direct staff to offer free transit service on future election days.

### **PURPOSE**

The purpose of this report is to provide information to the Board on the cost of providing free transit service for future election days within the Regional District of Nanaimo (RDN).

### **BACKGROUND**

At the October 27, 2015, Board meeting the following motion was passed:

*That staff prepare a report on the cost analysis of free transit for future election days.*

The Board also decided to provide free conventional and custom transit service to the public on the Canadian federal Election Day, which was held on Monday, October 19, 2015. Providing free transit service offered all of the residents within the Regional District of Nanaimo the opportunity to reach a voter station without incurring travel expenses.

### **ALTERNATIVES**

1. That the Board receive this report for information and direct staff to offer free transit service on future election days.
2. That the Board receive this report for and provide alternative direction to staff.

### **FINANCIAL IMPLICATIONS**

#### Conventional Transit

Transit revenue is separated into three main categories; cash fares, monthly fares, and ticket fares. Providing free transit on any one day will result in cash and ticket fares being waved, which represents approximately 30% of daily total revenue. Based on this information, the amount of conventional transit revenue lost on October 19, 2015, would have been approximately \$4,500. However, some passengers

inadvertently paid fares on that day which led to transit collecting \$1,007 in revenue. Therefore, the total amount of lost revenue in conventional transit on October 19, 2015 was \$3,493.

Custom Transit


The average amount of trips performed by handyDART on a typical Monday in October 2015 was 212. On October 19, 2015, the actual amount of trips handyDART performed was slightly higher at 222 trips. At \$3.25 per trip, the amount of lost handyDART revenue on October 19, 2015, was \$722.

**STRATEGIC PLAN IMPLICATIONS**

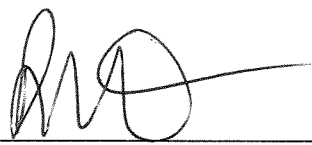
The Regional District of Nanaimo Transportation Services Department is working continuously on improving the viability and efficiency of public transit. Providing free transit service on future election days is an incentive for residents within the RDN to leave their vehicles at home, thus reducing greenhouse gas emissions.

**SUMMARY/CONCLUSIONS**

Based on the statistical fare revenue data and amount of total revenue that was lost on October 19, 2015, the cost of offering free conventional and custom transit service for future election days is approximately \$5,300. By offering free transit service on future election days, all residents within the Regional District of Nanaimo will have an opportunity to reach a voter station without incurring travel expenses. Additionally, this incentive will assist in voter turnout, reduce the amount of vehicles on the roadway, and promote the RDN transit system.

  
\_\_\_\_\_  
Report Writer

  
\_\_\_\_\_  
Director Concurrence

  
\_\_\_\_\_  
C.A.O. Concurrence