South Nanaimo Local Area Transit Plan

JUNE 2019 DRAFT

REGIONAL DISTRICT OF NANAIMO

TRANSIT future

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Contents

Executive Summary

The Regional District of Nanaimo Transit Future Plan (February 2014) provides a 25-year transit strategy for the Region with a high-level overview of the resources required to achieve the Regional District of Nanaimo's transit mode share target of 5 per cent. As a result of strong investments in the Regional District of Nanaimo Transit System, ridership has grown by more than 30 per cent over the past five years. The South Nanaimo Local Area Transit Plan provides a plan to realize the goals of the Transit Future Plan in the South Nanaimo area, which encompasses an area from Country Club Shopping Centre in the north to the rural area of Cassidy and the Nanaimo Airport in the south.

The South Nanaimo Local Area Transit Plan identifies a number of transit service improvements and infrastructure priorities for implementation over the next one to seven years. Transit service improvements were developed in collaboration with staff at the Regional District of Nanaimo, are based on transit design principles, and were revised through engagement with the public and stakeholders. This document acts as a guide for decision-making on future transit expansions. The Plan includes a proposed investment of approximately 60,000 additional service hours and calls for capital investments that include:

- An additional 25 buses added to the transit fleet;
- New transit exchanges and upgrades to transit exchanges; and
- Improvements to customer amenities at transit stops.

To increase transit ridership, the plan proposes to straighten existing routes, improve frequency and reliability, and reduce service duplication. As this is a Local Area Plan within a region with competing priorities, implementation will occur through an evaluation of priorities across the region. Adding additional hours to increase the span of service, frequency of service, and off-peak hours will provide critical enhancements to the system so that it is a reliable and realistic form of transportation.

Establishing the South Nanaimo Local Area Transit Plan requires prioritizing the transit investments and developing an implementation strategy to transform today's network into the future network. Table 1, below, provides a summary of short and medium term investments for more immediate consideration. Table 2, on the following page, summarizes all transit service improvements discussed within this plan for consideration during the full term of this Plan.

	Implementation Priorities	Service Hours Required	Buses Required
1	Restructure routes 7 Cinnabar and 30 NRGH. Introduce routes 8 Cedar and 78 Cassidy.	5,200	4
2	Restructure routes 5 Fairview, 6 Harewood, and 40 VIU Express.	5,000	4
3	Introduce route 70 Duke Point	5,000	2
4	Increase service on South Nanaimo routes	TBD	TBD
5	Establish interregional service with the Cowichan Valley Regional District	TBD	TBD

Table 1: Detailed summary of all proposed service improvements

System	Route	Service Improvements	Annual Service Hours*	Expansion Buses
Frequent Transit Network	**40 VIU Express**	**Package I**: Restructure route in downtown Nanaimo between Vancouver Island University and Prideaux Exchange	900	1
		Package II: Increase weekday frequencies	13,000	5
		Package III: Increase weekend frequencies	5,000	2
Local Transit Network	**30 NRGH**	**Package I**: Restructure route by eliminating circuitous routing around Country Club Exchange	(700)	0
		Package II: Increase weekday frequencies	9,000	3
		Package III: Increase weekend frequencies	1,600	1
	5 Fairview	**Package I**: Restructure route by streamlining service between Prideaux Exchange and Vancouver Island University, and introduce service to College Heights. Introduce with service levels similar to existing Route 5	3,200	2
		Package II: Increase weekday frequencies	5,000	2
		Package III: Increase weekend frequencies	900	1
	6 Harewood	**Package I**: Restructure route by extending service to South Parkway Plaza, and routing along Bruce and Tenth Street	900	1
		Package II: Increase weekday frequencies	8,500	3
		Package III: Increase weekend frequencies	1,300	1
	7 Cinnabar & 8 Cedar	**Package I**: Restructure route 7 by only routing to Cinnabar. Introduce new Route 8 to provide service between Cedar and Vancouver Island University, with service levels similar to route 7	4,400	3
		Package II: Increase weekday frequencies	1,200	1
		Package III: Increase weekend frequencies	3,500	2
Unserved Areas	**78 Cassidy**	**Package I:** Implement new route between Prideaux Exchange and Cassidy three days per week, with service every two hours	1,000	1
	70 Duke Point	**Package I:** Implement new route between Prideaux Exchange and Duke Point Ferry Terminal, meeting six ferries per day, seven days per week	5,000	2
	Interregional Service	Implement new service between the Regional District of Nanaimo and the Cowichan Valley Regional District, subject to Feasibility Study	TBD	TBD

Table 2: Detailed summary of all proposed service improvements
Note: All hours are estimated, further refinement is required during implementation. Hours are based on terminating at the Prideaux Exchange.

To supplement transit service improvements, investments in a rapid bus system, development of new transit exchanges, and installation of new bus shelters at key bus stops is required to enable and support service improvements as well as to enhance the customer experience.

Infrastructure Priorities	Estimated Resources
Improve Woodgrove Transit Exchange, Country Club Transit Exchange, and the Downtown Transit Exchange to continue growing the transit system. This includes: • Expanding vehicle capacity • Expanding passenger capacity (i.e., waiting space) • Reducing transfer distances	TBD
Continue to improve transit customer facilities, including shelters and bicycle facilities	TBD
Establish Park & Rides to support the interregional (CVRD to RDN) connection	TBD
Strategic Priorities	
Right-sizing initiative to match ridership with transit vehicle capacity	TBD
Complete a Rapid Transit Study for the Island Highway, develop an implementation plan, establish rapid transit stations and introduce transit priority measures	TBD
Continue to explore introduction of U-Pass at Vancouver Island University	TBD

Table 3: Summary of Infrastructure priorities and strategic priorities

This plan will be presented to the Regional District of Nanaimo's Transit Select Committee and Board for approval. Upon approval, service improvements identified within this Local Area Plan will be added to the Regional District of Nanaimo Service Improvements Priorities List, which prioritizes transit improvements for the entire region. Service improvements will be integrated into the three year Transit Improvement Process (TIPs), which is updated on an annual basis. Prior to implementation of service changes, BC Transit planning staff will work with staff at the Regional District of Nanaimo to ensure service improvements appropriately reflect local needs. Additional targeted engagement may be conducted. A Local Area Transit Plan for North Nanaimo will be developed in the coming year to identify service and infrastructure improvements for that area.

1 Introduction

This Plan identifies and prioritizes transit service and infrastructure improvements to improve the transit network over the next seven years. The plan builds on priorities identified in the Transit Future Plan (2014) and provides specific strategies for implementing the high-level Transit Future goals in the South Nanaimo Region. More specifically, this Local Area Plan:

- Identifies opportunities to support the Regional District of Nanaimo's Transit Future Plan goal to increase transit mode share to five per cent;
- Defines interim improvements for transit service and infrastructure over the next one to seven years; and
- Provides revised transit routes that more efficiently connect neighborhoods with key destinations to improve travel times and increase customer convenience.

Local Area Transit Plans provide a number of defined service improvements for implementation over the next seven years and ensure that transit improvement priorities are consistent with evolving local priorities, emergent transit demands, and BC Transit operational capacity. The Plan is informed by two public engagement processes, analysis of existing transit use, feedback from local governments and takes into account long term planning documents such as the City of Nanaimo's Official Community Plan and the City of Nanaimo's Transportation Master Plan.

This Local Area Plan recommends an increase of close to 60,000 additional service hours to grow transit ridership in the South Nanaimo area over the next seven years. This would increase the transit system by nearly 50 per cent. These expansions will support the region in supporting economic growth, social wellbeing, and climate change objectives of the region.

Figure 1: Transit is often used in combination with other travel modes.

1.1 Plan Area

The geographic scope for this Plan is shown in the map below. The area encompasses central and south Nanaimo from Country Club Centre at the northern extent to Cassidy at the south. The plan includes the jurisdictions of the City of Nanaimo as well as Regional District Electoral Areas A and C.

Figure 2: Geographic Scope of this Local Area Plan

1.2 Developing a Local Area Plan

1.2.1 Timeline

Development of this Local Area Plan began in the fall of 2017 and included a number of distinct phases to understand the current context, receive input from the public, review potential service changes with stakeholders, and draft a plan that provides a framework for short-term to medium-term growth of the transit system in the plan area. Figure 3 illustrates the key steps involved in developing this Local Area Plan.

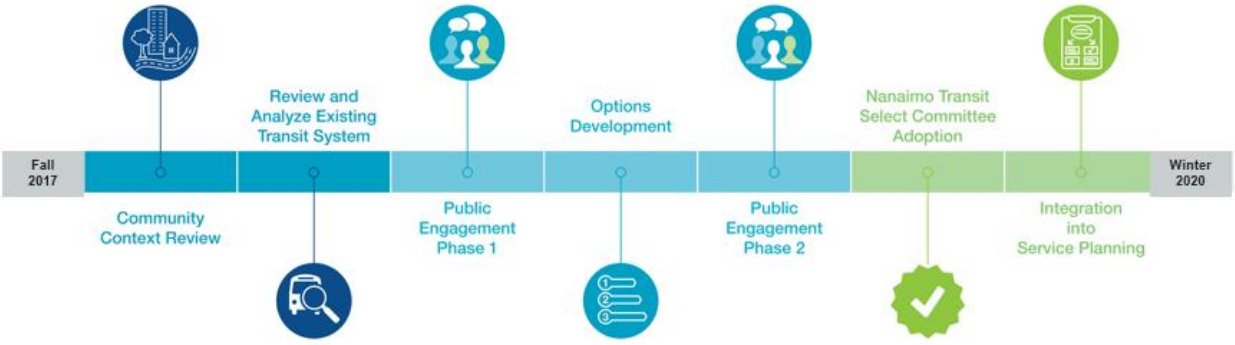


Figure 3: Timeline for the development of this Local Area Plan.

1.2.2 Informing the Plan

BC Transit has worked with staff at the Regional District of Nanaimo to develop a Local Area Plan that prioritizes transit improvements that builds upon and is informed by the Regional District of Nanaimo Transit Future Plan (2014), existing and proposed land uses, the community's demographic composition, and public input. Supporting work that contributed to this plan is summarized below.

Community Context Review: Local planning documents and recent census data provided a high-level context of the area's changing demographics and land uses. The City of Nanaimo's Official Community Plan (PlanNanaimo) and Transportation Master Plan, various neighborhood community plans, and the Regional District of Nanaimo's Transit Future Plan (2014) were reviewed.

Review of the Existing Transit System: An evaluation of the Regional District of Nanaimo's existing transit system was carried out to identify the strengths and opportunities of current bus routes in the context of emerging development patterns within the plan area.

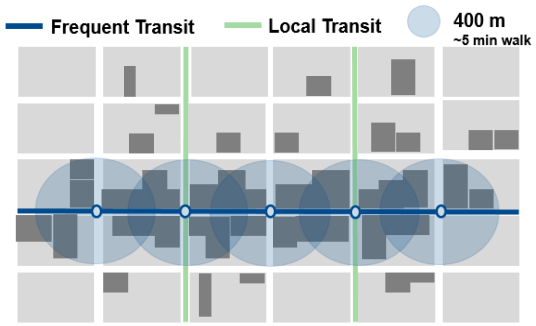
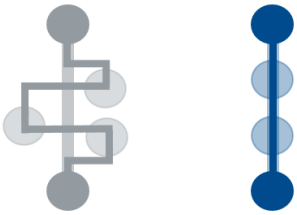
Existing Travel Patterns: Statistics Canada Journey to Work data and BC Transit's Automatic Passenger Count data were analyzed to determine ridership patterns (*See Appendix B* for a Bus Stop Activity Maps).

Project Working Group: The content, data collection, and recommendations of this Local Area Plan were developed in collaboration with a working group comprised of both BC Transit staff and staff at the Regional District of Nanaimo.

1.2.3 Transit Service Design Principles

To meet the goals of the Transit Future Plan (2014), this plan proposes to make improvements to the transit system so that is more convenient for transit users, appealing to potential transit users and cost-effective. To accomplish this, this plan proposes to streamline and realign service to support the development of a rapid transit route along regional corridors, frequent transit routes along high-density corridors, and local transit service to lower density areas with moderate transit demand.

The following guiding design principles were used to develop and refine routes:

Design Principle	Description
Service Areas of Demand 	Transit service is most productive by providing service to areas with high demand. The Regional District of Nanaimo Transit Future Plan affirms that transit service should be focused on major activity centers and residential areas within urban areas to increase ridership.
Connections to Regional Centres 	Transit is most useful when it connects residents to regional centres. Concentrating mixed-used development along transit corridors will ensure consistent and high ridership. Route 40 - the Frequent Transit Network is located on a medium-high-density corridor. Local routes feeding into route 40 are generally located in “neighbourhood” areas.
Simplify Routes 	Routes that are as direct and consistent as possible are more likely to increase ridership. This helps ensure route legibility, which refers to how easy a service is to understand and remember.

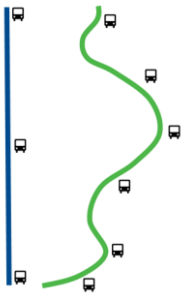
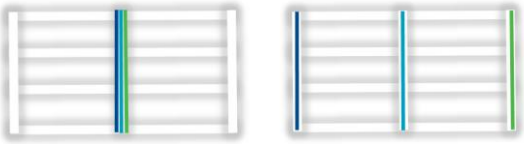
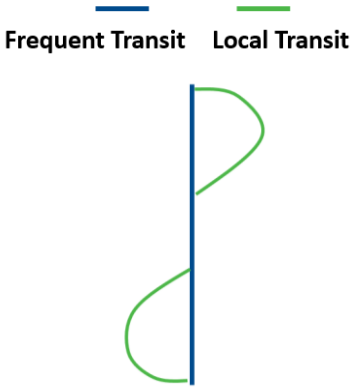
Improve Speed and Reliability 	To be competitive with the automobile, transit travel time must be competitive. Spacing bus stops appropriately along a corridor can improve speed and reliability. Transit priority measures, such as queue jumper lanes or transit signal priority also improve speed and reliability.
Avoid Service Duplication 	Transit service should operate on different corridors so they do not duplicate or compete for passengers. Routes that overlap reduce ridership on each route.
Standardize Service Categories 	Standardizing service categories allows for predictability of service. Both frequencies and span of service are consistent, increasing customer legibility.

Table 4: Principles of Transit Service Design

1.3 Community Context

The following context was developed through public engagement, stakeholder input, a survey of relevant data and reports, and close examination of the existing transit system and current Nanaimo plans. The following considerations provide critical opportunities and challenges to developing the transit system in the South Nanaimo area:

The City of Nanaimo is experiencing strong growth and provides the economic hub for the larger region. Particular intensification has occurred in the urban nodes and mobility hubs of Woodgrove Centre, Uplands Drive/Longwood Station, Country Club Centre, Nanaimo Regional General Hospital, Vancouver Island University, Linley Valley, and the downtown core. The Old Island Highway and Bowen Road corridors feature an intensive mix of commercial and non-residential development with more development planned. The Duke Point Ferry Terminal is one of the only ferry terminals in the province not served by transit, and may present an opportunity for a new multi-modal transit hub.

Electoral Area A is southeast of the City of Nanaimo and includes the rural communities of South Wellington, Cedar, Cassidy, and Yellow Point with a total 2016 population of 7,058. Residential development in this Electoral Area is primarily concentrated in Cedar along Cedar Road and in Cassidy on the west side of the Island Highway. Cassidy also encompasses the Nanaimo Airport. South Wellington contains an industrial and commercial area along the Island Highway. Cedar is the only community in Electoral Area A with existing transit service. Area A also borders the Cowichan Valley Regional District (CVRD), where there is growing interest in a connector service between the Regional District of Nanaimo and the CVRD.

Electoral Area C includes the rural communities of Extension, Arrowsmith-Benson, East Wellington, and Pleasant Valley with a total 2016 population of 2,808. Extension is the sole community that is within the geographic scope of this Local Area Plan. As Extension is a low-density rural residential community with a small population, high quality, frequent transit service is not deemed cost-effective at this time.

Figure 4: Route 7 Cinnabar/Cedar

1.4 Transit Context

Ridership on the Regional District of Nanaimo Transit System has grown by more than 30 per cent over the past five years. While many factors influence transit use, new investments typically spur growth in ridership. The Nanaimo system has benefitted from a series of substantial service expansions in accordance with recommendations contained in the Transit Future Plan (2014).

For example, in 2015, the route 40 VIU Express was established to provide frequent and reliable service between key destinations in North Nanaimo with Vancouver Island University and Downtown Nanaimo. In January 2019, 5,000 additional hours were invested in the route 40 to improve reliability, reduce pass-ups, and decrease wait time.

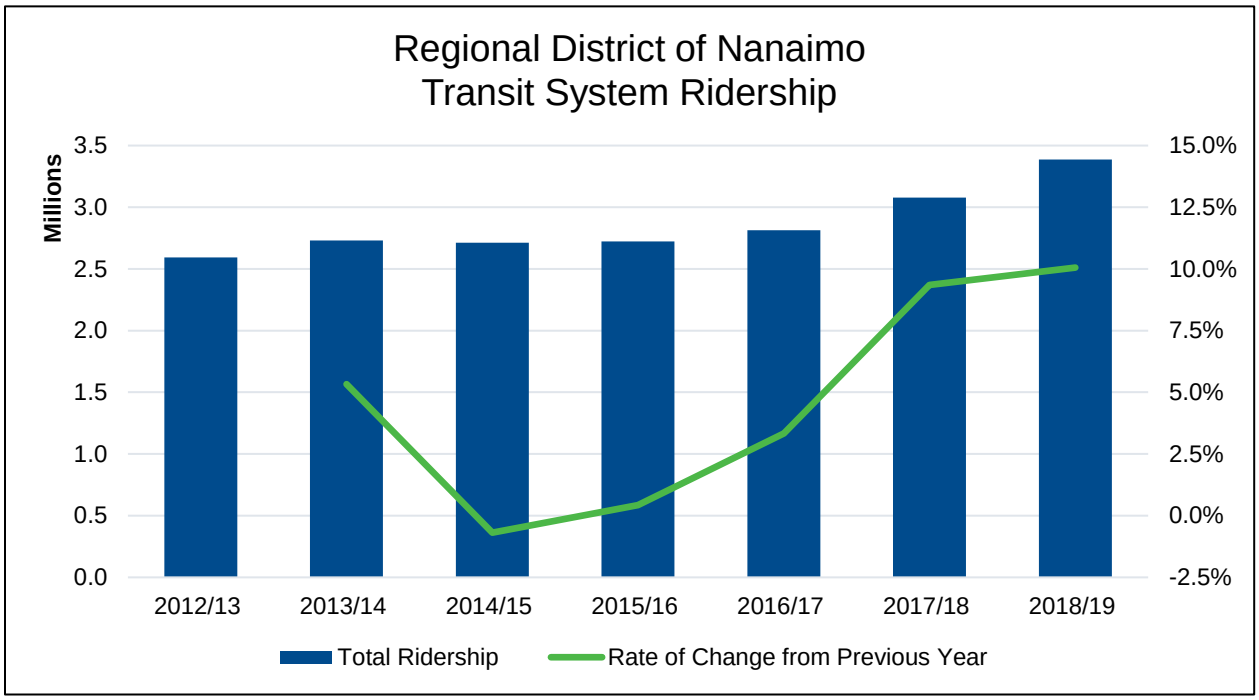


Figure 5: RDN Transit System Ridership

Current Transit Service Design: Communities grow and change as development and population growth occurs. In reviewing the current transit system, several routes were identified as unnecessarily circuitous and convoluted. Redefining routes to be more direct and straightforward will reduce trip times, increase system performance, provide additional service hours to increase the frequency or reallocate elsewhere.

Service Performance: The RDN *Service Standards and Performance Guidelines* sets route level targets for the transit system. Targets are set in terms of average boardings per trip and average boardings per revenue hour. Scaling the size of vehicles to the maximum ridership load per trip may provide an opportunity to optimize transit system efficiency.

The following routes are meeting or exceeding their targets:

- 7 Cinnabar/Cedar
- 30 NRGH
- 40 VIU Express

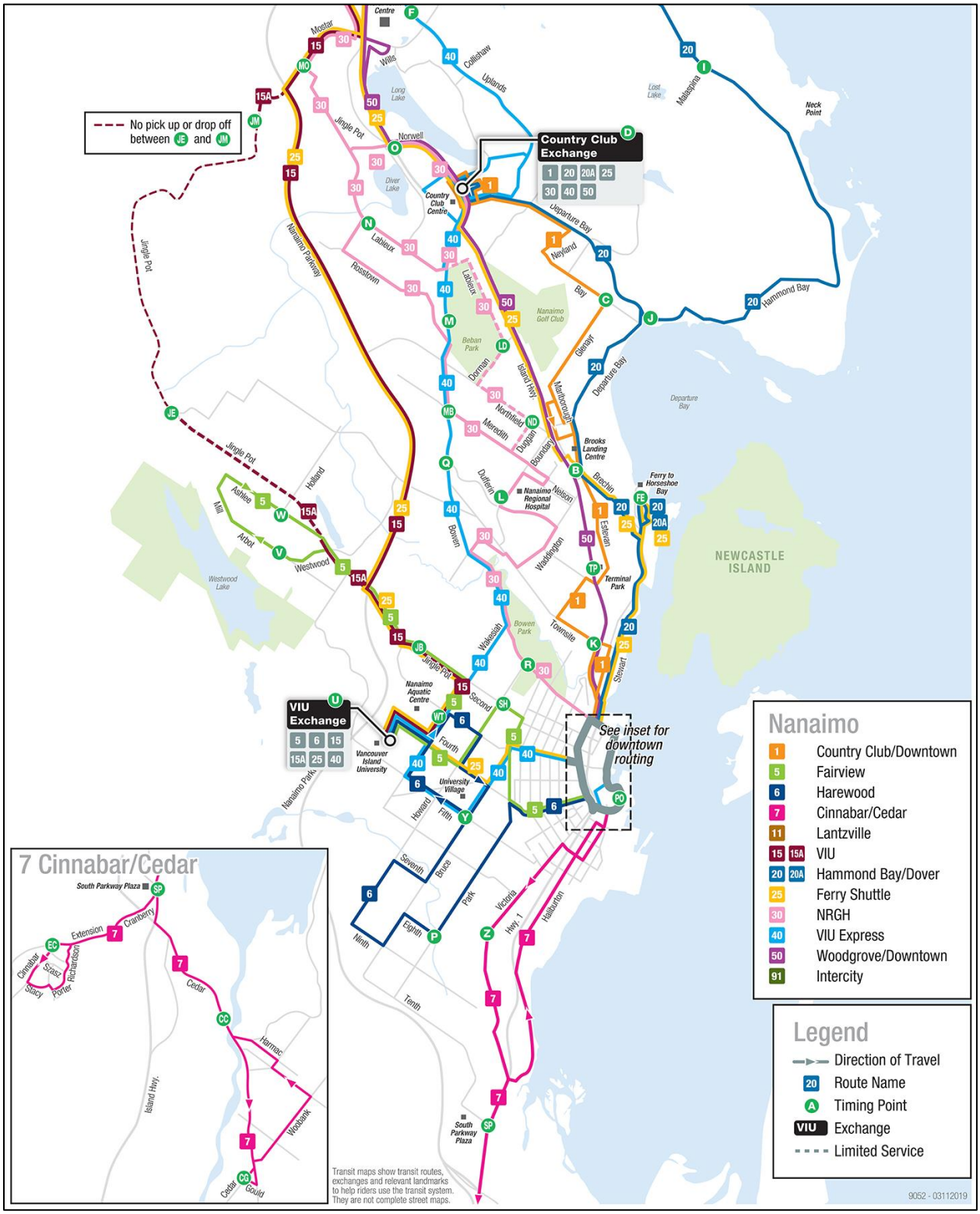


Figure 4: Current Transit Routes within Plan Area

The following routes are currently not meeting their targets:

- 6 Harewood (only underperforming in the number of boardings per trip)
- 5 Fairview

The following chart shows weekday route performance by each route considered in this Local Area Plan.

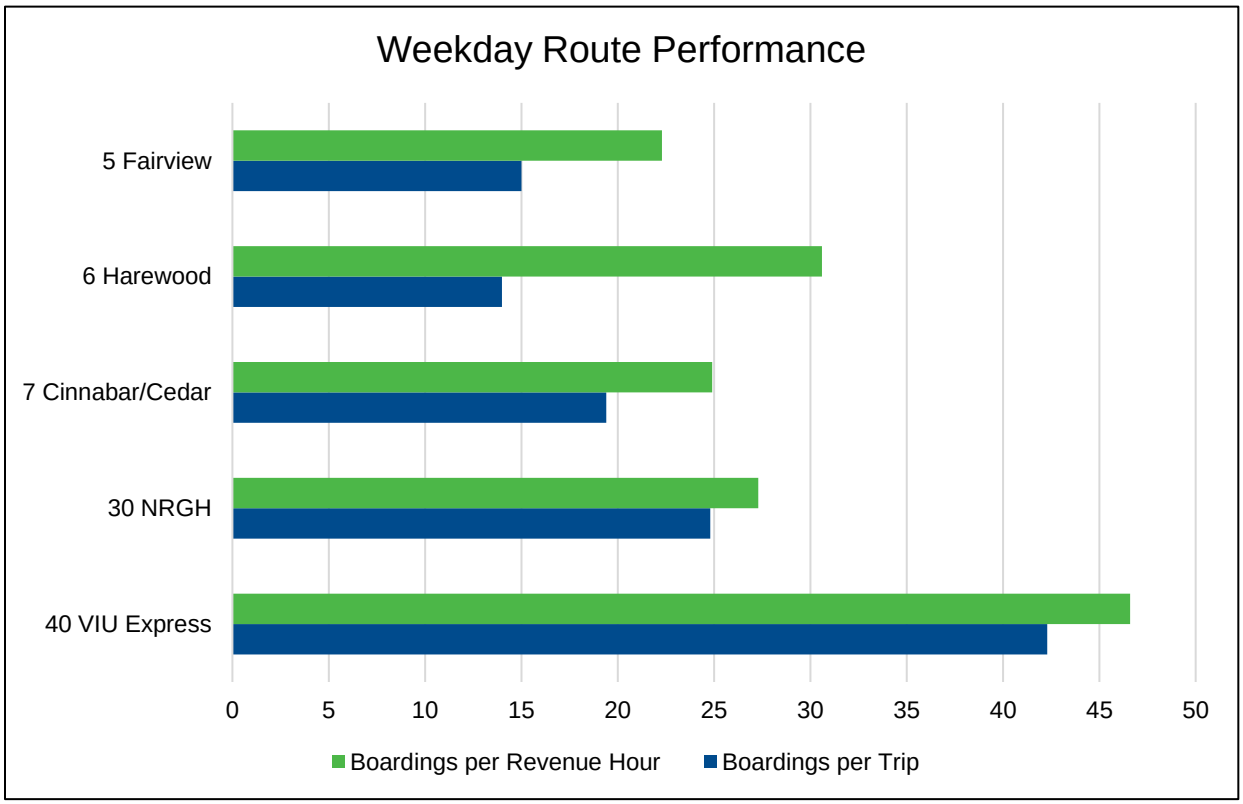


Figure 6: RDN Transit System Ridership

Transit Exchanges: Transit exchanges facilitate transfers between bus routes and allow buses to recover to maintain on-time performance. There are currently four transit exchanges within Nanaimo: Prideaux Street, Vancouver Island University, Country Club Centre, and Woodgrove Centre. As the exchanges are reaching capacity, further expansion requires additional investment in exchange infrastructure. The current locations are not situated for optimal travel time efficiency, therefore new exchange locations could allow for greater system efficiency and shorter travel times. See section 3.1 Infrastructure Planning for further discussion.

U-PASS System: Transit systems that have established Universal Pass (U-PASS) programs with post-secondary institutions significantly improve transit ridership numbers and increase transit mode share. In 2011, transit mode share at Vancouver Island University was 19 per cent, and the University set a target that 40 per cent of trips to and from the University be by transit by 2030. The Regional District of Nanaimo has initiated preliminary conversations with Vancouver Island University to establish a U-PASS system.

1.5 Public Engagement

Two phases of public engagement contributed to the development of this Local Area Plan. Phase I provided an open-ended opportunity to provide feedback on the existing system and ideas for service improvements, while phase II presented draft route alignments for more specific feedback on tentative route changes. Close to 1,100 participants were involved in the two phases of public engagement.

1.5.1 Phase I

Phase I took place in winter of 2018 and presented a detailed analysis of existing transit services including identifying challenges and opportunities. A workshop with stakeholders and the public was held in the spring of 2018 (Workshop Summary). Key messages received from the public during this first phase included the following:

- More direct service between key destinations
- More direct service on routes 6 Harewood, 7 Cinnabar/Cedar, and 30 NRGH
- Establish service to Duke Point Ferry Terminal
- Improve frequency of existing routes
- Extend span of service earlier in the morning and later in the evening
- Provide service between Ladysmith and the Regional District of Nanaimo with connections to Vancouver Island University

Figure 7: Public engagement at Vancouver Island University

Figure 8: BC Transit staff evaluate route options

1.5.2 Phase II

Phase II presented a series of route changes and new routes to address the challenges and opportunities identified in Phase I. The final concepts were shaped by a combination of professional analysis, public engagement input, and stakeholder feedback. The following themes were noted from the second phase of public engagement:

- Provide service between Ladysmith and the Regional District of Nanaimo with connections to Vancouver Island University
- Strong support for proposed route restructuring of routes 6 Harewood, 7 Cinnabar, 30 NRGH and 40 VIU Express
- Strong support for proposed new route 8 Cedar
- Establish service to the Nanaimo Airport
- Establish service to Duke Point Ferry Terminal
- Improve frequency of existing routes
- Establish service to South Wellington

From this phase and in consideration of the above themes, staff further revised service improvement and route concepts as follows:

- Modifications to route 5 to include Vancouver Island University and service to the College Heights Area.
- Modification to proposed route 30, returned route to Meredith rather than Northfield.
- Identified a phased approach to implement new route alignments as well as increased transit service frequency within the Study Area.

Figure 9: Country Grocer Public Engagement

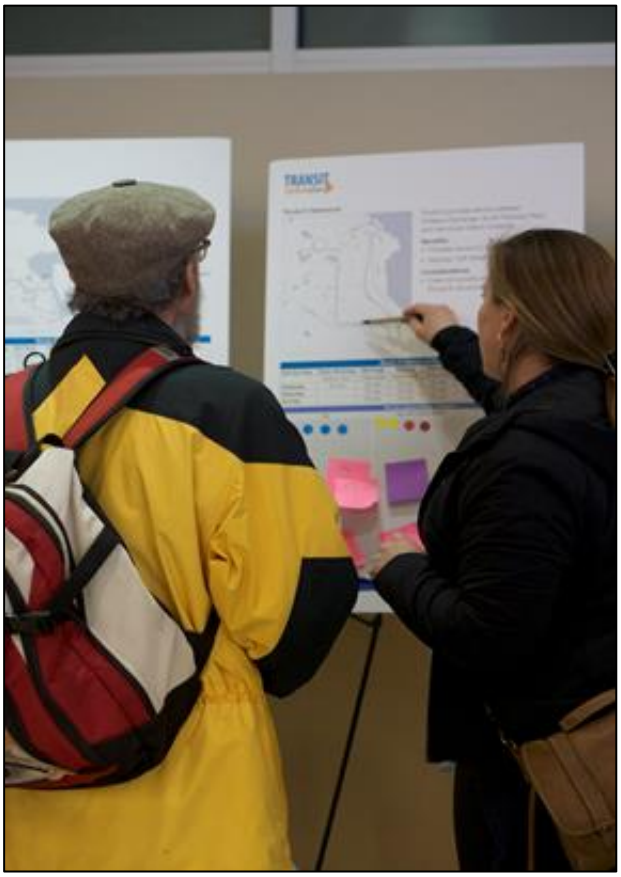


Figure 10: Port Place Public Engagement

2 Proposed Transit Changes

Proposed transit system changes – presented in the following pages – were developed using the service design principles detailed in section 1.2.3 following the Transit Future Plan Network set out in the Nanaimo Transit Future Plan, and with input received through public engagement as detailed in section 1.5. These routing configurations and service hour improvements are a framework for development of a transit system that is easy to understand, frequent, direct, and supports meeting goals of this Local Area Transit Plan.

The Three-Year Transit Improvement Process (TIPs) provides an annual opportunity to revise and update changes to local demand and align with priorities of the Regional District of Nanaimo Board. The specific service proposals outlined in this report, therefore, should be reviewed on an annual basis. Transit service changes identified for the upcoming year will be further refined through additional detailed planning and scheduling development.

Additionally, as this Local Area Plan will be implemented in combination with other areas within the Regional District of Nanaimo Transit System, priorities may be implemented according to the Regional District of Nanaimo's transit priorities for the entire region.

The Transit Future Plan defines three types of transit services that make up a network that attracts new riders:

A **Rapid Transit Network** moves passengers between major regional destinations along key transportation corridors. Service is very frequent - at least every 15 minutes from 7:00 a.m. to 10:00 p.m. – with stops at greater intervals. Investments in Rapid Bus infrastructure, technology, vehicles, and service levels combine to increase system performance. To improve travel time and reliability, Rapid Bus services may utilize an exclusive or semi-exclusive right-of-way to eliminate or significantly reduce the impact of general traffic on transit vehicles. Rapid Bus services use high capacity buses and may include future investments along the corridor in transit priority measures, right-of-way improvements, premium transit stations, corridor branding, and off-board ticketing.

The Frequent Transit Network serves medium to high density mixed use corridors. It provides convenient, fast, reliable, and frequent service – at least every 15 minutes from 7:00 a.m. to 10:00 p.m. The following route is currently the sole route on the Frequent Transit Network:

- 40 VIU Express

The Local Transit Network is designed to provide connections between neighbourhoods and local destinations as well as with the Frequent Transit Network and, eventually, the Rapid Transit Network. Currently, the following routes make up the Local Transit Network:

- 5 Fairview
- 6 Harewood
- 7 Cinnabar/Cedar
- 30 NRGH

The table on the following page details all service changes proposed by this Local Area Transit Plan.

System	Route	Service Improvements	Annual Service Hours*	Expansion Buses
Frequent Transit Network	**40 VIU Express**	**Package I**: Restructure route in downtown Nanaimo between Vancouver Island University and Prideaux Exchange	900	1
		Package II: Increase weekday frequencies	13,000	5
		Package III: Increase weekend frequencies	5,000	2
Local Transit Network	**30 NRGH**	**Package I**: Restructure route by eliminating circuitous routing around Country Club Exchange	(700)	0
		Package II: Increase weekday frequencies	9,000	3
		Package III: Increase weekend frequencies	1,600	1
	5 Fairview	**Package I**: Restructure route by streamlining service between Prideaux Exchange and Vancouver Island University, and introduce service to College Heights. Introduce with service levels similar to existing Route 5	3,200	2
		Package II: Increase weekday frequencies	5,000	2
		Package III: Increase weekend frequencies	900	1
	6 Harewood	**Package I**: Restructure route by extending service to South Parkway Plaza, and routing along Bruce and Tenth Street	900	1
		Package II: Increase weekday frequencies	8,500	3
		Package III: Increase weekend frequencies	1,300	1
	7 Cinnabar & 8 Cedar	**Package I**: Restructure route 7 by only routing to Cinnabar. Introduce new Route 8 to provide service between Cedar and Vancouver Island University, with service levels similar to route 7	4,400	3
		Package II: Increase weekday frequencies	1,200	1
		Package III: Increase weekend frequencies	3,500	2
Unserved Areas	**78 Cassidy**	**Package I:** Implement new route between Prideaux Exchange and Cassidy three days per week, with service every two hours	1,000	1
	70 Duke Point	**Package I:** Implement new route between Prideaux Exchange and Duke Point Ferry Terminal, meeting six ferries per day, seven days per week	5,000	2
	Interregional Service	Implement new service between the Regional District of Nanaimo and the Cowichan Valley Regional District, subject to Feasibility Study	TBD	TBD

Table 5: Detailed summary of all proposed service improvements
Note: All hours are estimated, further refinement is required during implementation. Hours are based on terminating at the Prideaux Exchange.

The map on the following page presents the first phase of changes proposed by this Local Area Plan, and highlights areas of key changes in yellow. Each individual service change is detailed more explicitly in the following section.

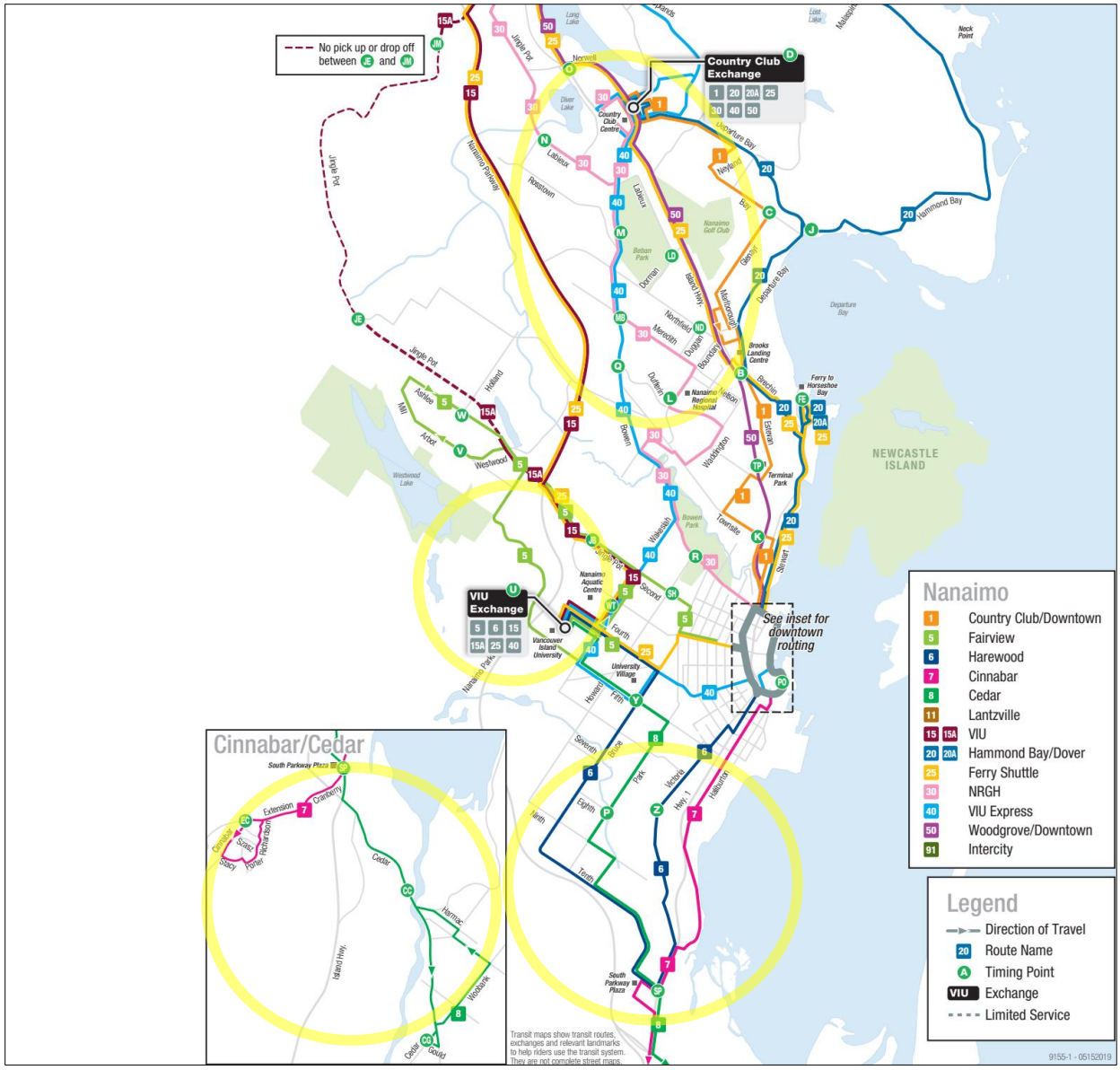


Figure 11: First phase of restructured routes with areas of key changes highlighted

2.1 Proposed Service Changes to Existing Routes

The following section outlines proposed service change concepts to existing routes. Route changes are detailed in maps indicating both proposed routing and discontinued routing. Each route section also recommends specific improvements in service hours. Resources required for both changes are detailed in summary tables.

Route 40 VIU Express

Route 40 VIU Express connects North Nanaimo and South Nanaimo along the Bowen Road corridor. Key destinations along the route include Woodgrove Centre, Country Club Centre, Nanaimo District Secondary School, Vancouver Island University, and Port Place Shopping Centre. The proposed service change simplifies route 40 VIU Express to use a more direct routing between downtown Nanaimo and Vancouver Island University.

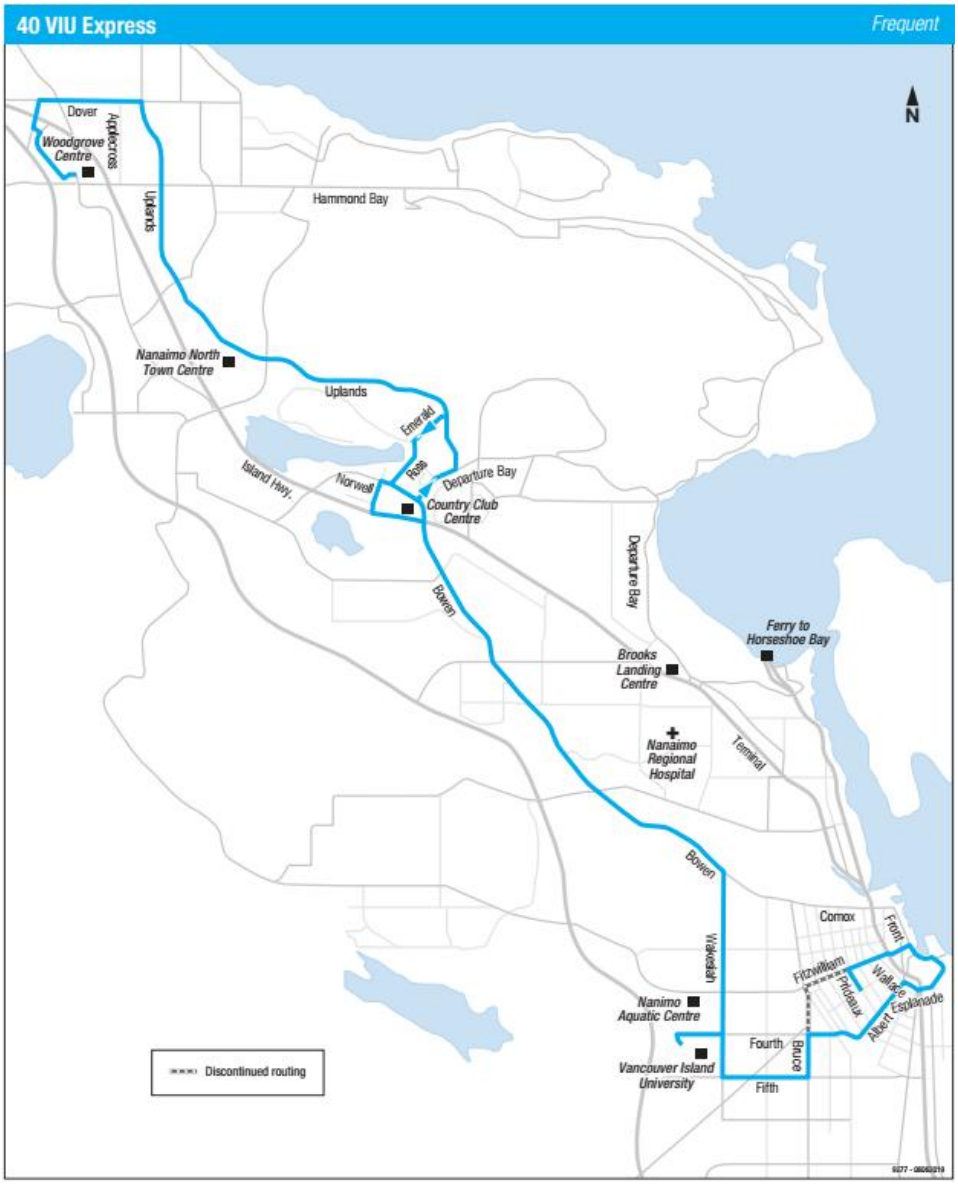


Figure 12: Proposed routing of route 40 VIU Express

Design Principles:

- Currently, route 40 VIU Express only services Port Place Shopping Centre going southbound (when using Prideaux Exchange as a terminus) causing customer confusion, so the revised routing would service Port Place Shopping Centre in both directions
- Improve travel times and directness of route

Benefits:

- Avoids route duplication around downtown
- Simpler to travel between Port Place Centre and Vancouver Island University

Considerations:

- Continues to utilize Prideaux Exchange, which is operating at capacity
- Proposed new route structure would discontinue service along a segment of Bruce Avenue and Fitzwilliam Street

Engagement Results

- 91 per cent supported the proposed changes
- 84 per cent indicated this would work better or similar

Resources Required:

Proposed Service Improvement	Est. Service Hours	Frequency Peak/Base	Service Span	Expansion Buses
Package I: Restructure route in downtown Nanaimo between Vancouver Island University and Prideaux Exchange. Introduce with service levels	900	N/A	N/A	1
Package II: Increase weekday frequencies	13,000	10 min/ 15 min	6:00 a.m. to 12:30 a.m.	5
Package III: Increase weekend frequencies	5,000	20 min/ 30 min	Saturdays: 6 a.m. to 2 a.m. Sundays: 6 a.m. to 11 p.m.	2

Table 6: Proposed Service Improvements for route 40 VIU Express

Route 30 NRGH

Route 30 NRGH (Nanaimo Regional General Hospital) serves as a connector between North and South Nanaimo that services the residential areas adjacent to the Bowen Road corridor. Key destinations along the route include Woodgrove Centre, Country Club Centre, Nanaimo Regional General Hospital and downtown Nanaimo. The proposed service change eliminates a route variant along Northfield Road and reduces circuitous routing to the Country Club Exchange.

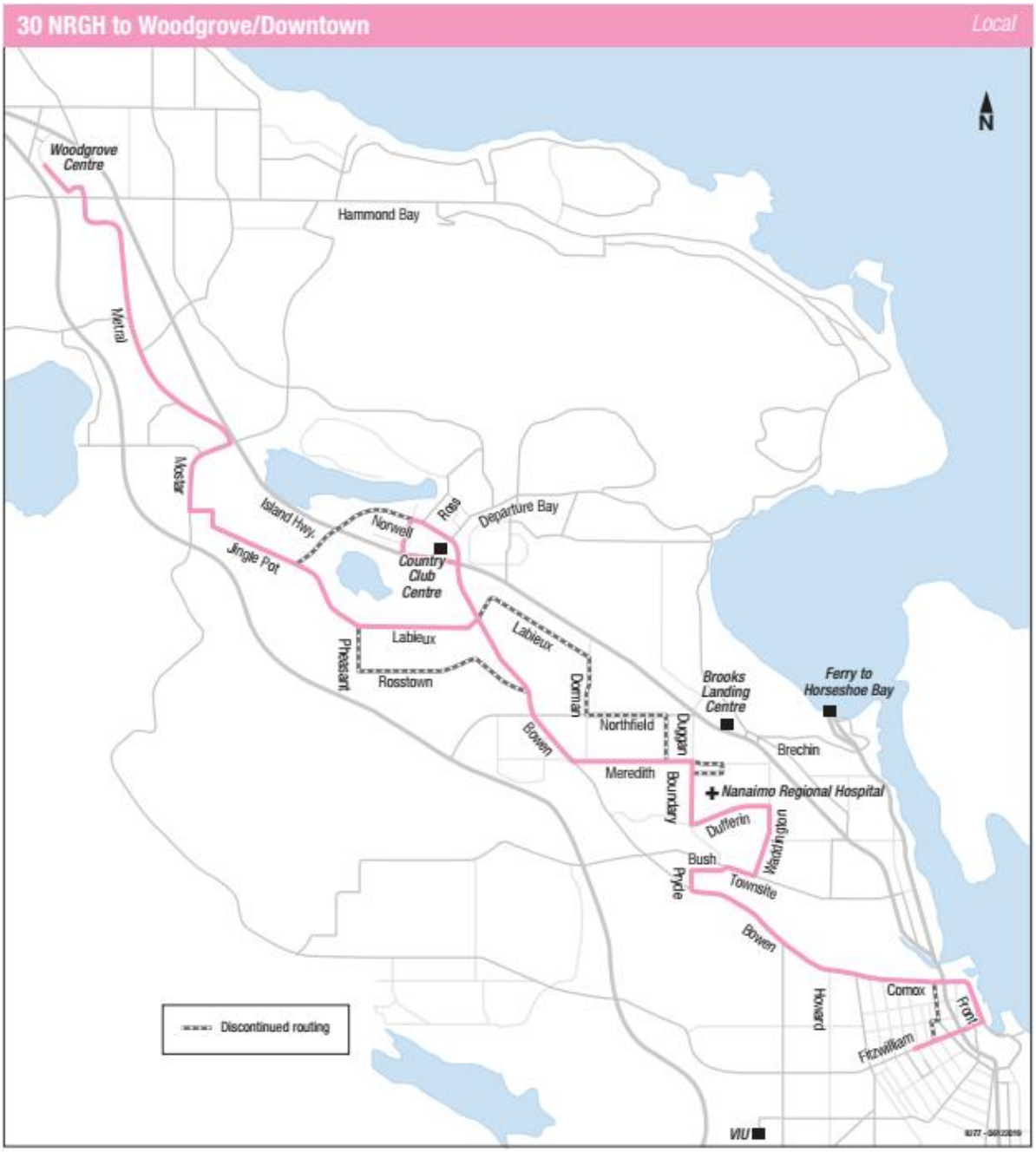


Figure 13: Proposed routing of route 30 NRGH

Design Principles:

- Route variants and circuitous routing to and from Country Club Exchange create customer confusion
- Proposed route reduces travel time between key destinations of Nanaimo Regional General Hospital and Country Club Exchange

Benefits:

- More direct service
- Potential to continue as route 7 Cinnabar at Prideaux Exchange

Considerations:

- Proposed new route structure would discontinue service on Northfield Road; BC Transit data indicates there is very limited ridership on this portion (see *Appendix B*)
- Proposed new route structure would discontinue service to Kiwanis Lodge; additional stops are located within a 400 metre walking distance to this location
- Proposed new route structure would discontinue service to Rosstown Road; some stops are located within 400 metre walking distance along Labieux Road

Engagement Results:

- 83 per cent supported the proposed changes
- 77 per cent indicated that this would work better or similar

Resources Required:

Proposed Service Improvement	Est. Service Hours	Frequency Peak/Base	Service Span	Expansion Buses
Package I: Restructure route by eliminating circuitous routing around Country Club Exchange	(700)	N/A	N/A	0
Package II: Increase weekday frequencies	9,000	15 min/ 30 min	6:00 a.m. to 12:30 a.m.	3
Package III: Increase weekend frequencies	1,600	30 min/ 60 min	Saturdays: 6 a.m. to 2 a.m. Sundays: 6 a.m. to 11 p.m.	1

Table 7: Proposed Service Improvements for route 30 NRGH

Route 5 Fairview

Route 5 Fairview connects the Westwood Lake neighborhood to downtown Nanaimo. Key destinations along the route include Vancouver Island University and Nanaimo District Secondary School. The proposed service change was significantly modified following phase 2 of public engagement to continue to provide service to Vancouver Island University and include service to College Heights.

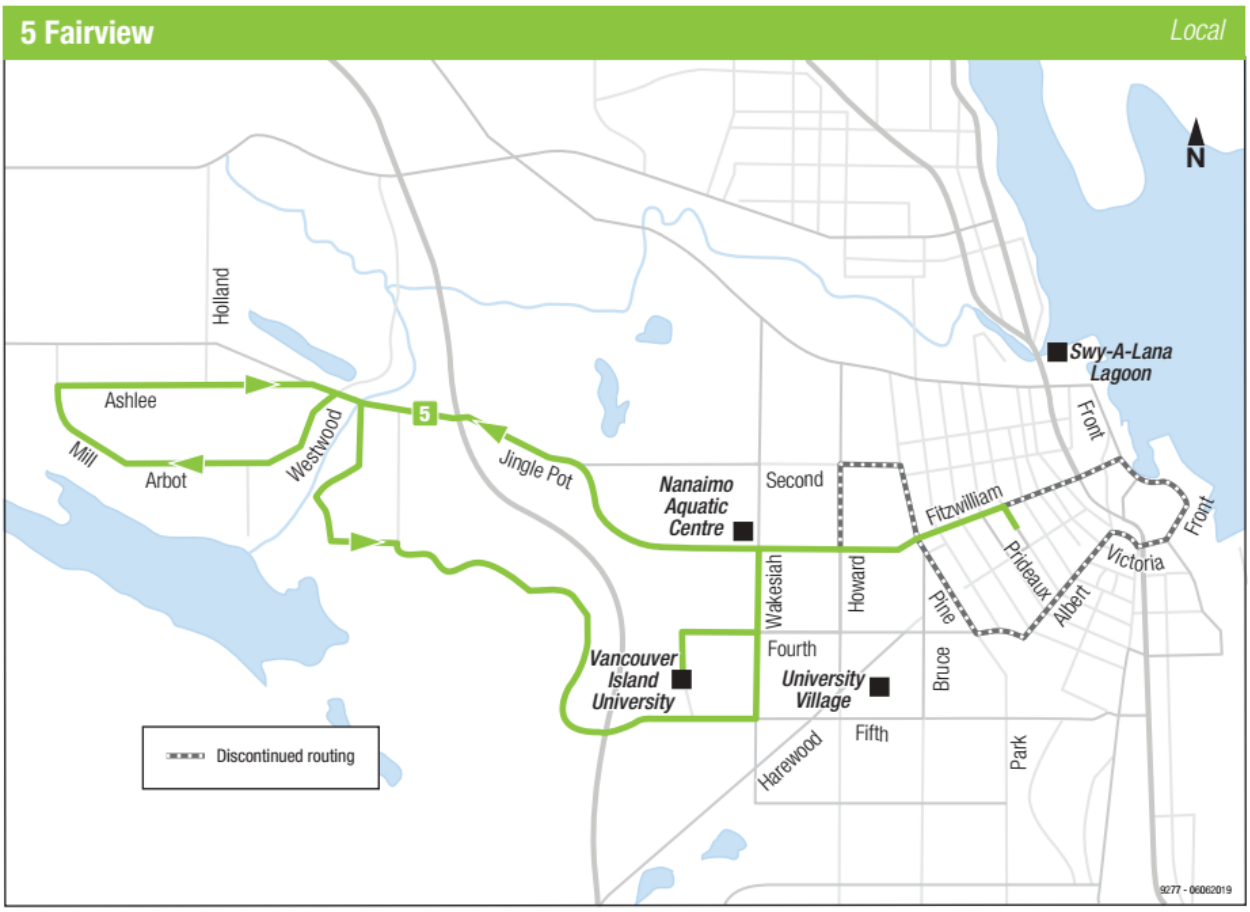


Figure 14: Proposed routing of route 5 Fairview

Design Principles:

- Services areas of demand
- Improves access to regional centres

Benefits:

- Potential opportunities to continue as route 8 Cedar

Considerations:

- Longer travel time may effect on-time performance
- Proposed route structure would discontinue service along Second Street, Pine Street, Albert Street and Front Street
- Proposed route would operate on roads currently not serviced by transit: Harwell Road and College Drive

Engagement Results:

- 59 per cent supported proposed changes
- 53 per cent indicated this change would work better or similar to current routing

Outcomes:

- Modified route proposal
- Continue servicing Vancouver Island University
- Provide service to College Heights, an area currently unserved by transit

Resources Required:

Proposed Service Improvement	Est. Service Hours	Frequency Peak/Base	Service Span	Expansion Buses
Package I: Restructure route by streamlining service between Prideaux Exchange and Vancouver Island University, and introduce service to College Heights. Introduce with existing levels similar to existing route 5	3,200	N/A	N/A	0
Package II: Increase weekday frequencies	5,000	15 min/ 30 min	6:00 a.m. to 12:30 a.m.	2
Package III: Increase weekend frequencies	900	30 min/ 60 min	Saturdays: 6 a.m. to 2 a.m. Sundays: 6 a.m. to 11 p.m.	1

Table 8: Proposed Service Improvements for route 5 Fairview

Route 6 Harewood

Route 6 Harewood connects the Harewood neighborhood to downtown Nanaimo and Vancouver Island University. Key destinations along the route include John Barsby Community School and University Village. The proposed service change realigns route 6 Harewood to service Bruce Avenue and Tenth Street and extends service to South Parkway Plaza.

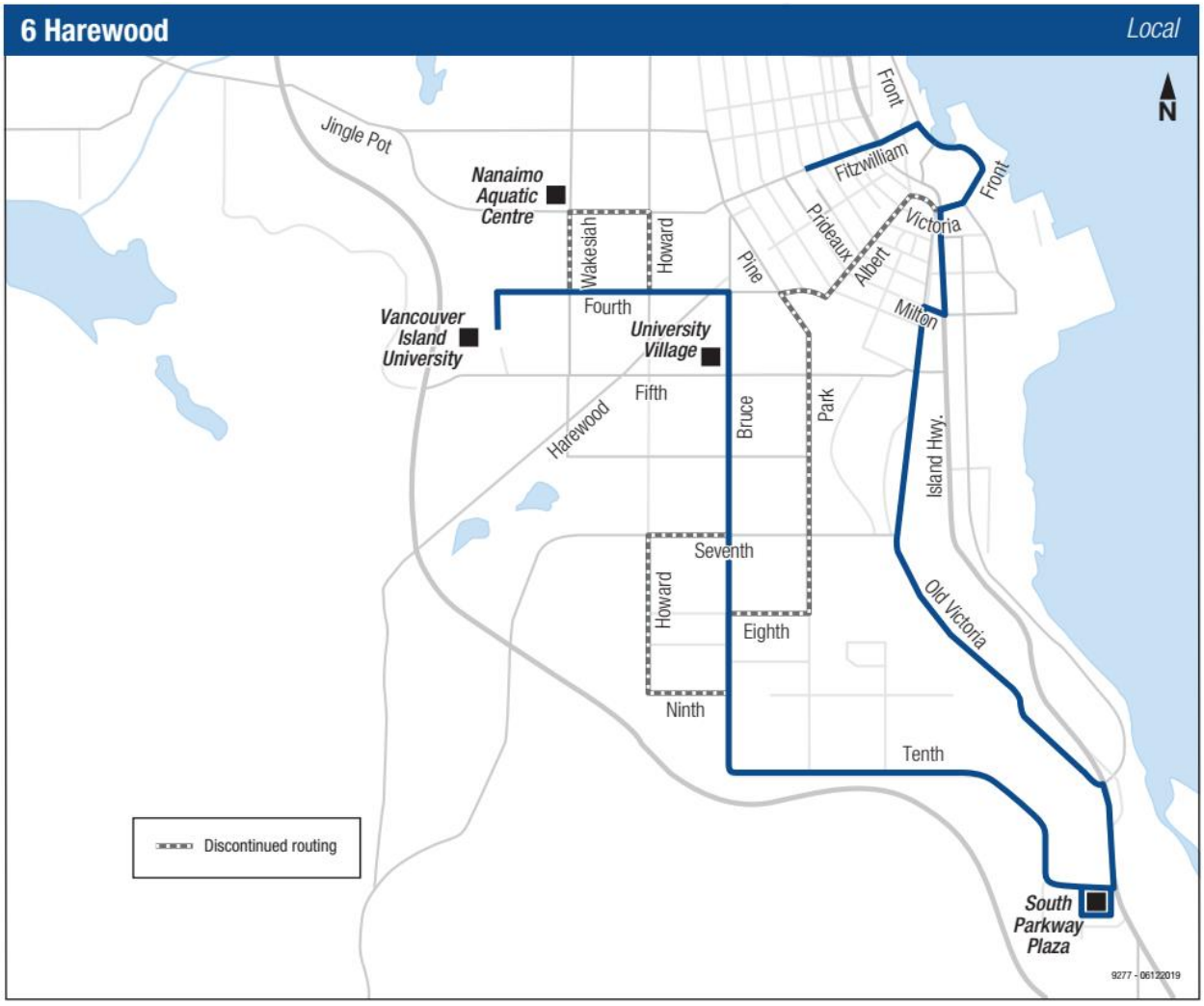


Figure 15: Proposed routing of route 6 Harewood

Design Principles:

- Improve access to regional centres
- Better service to areas of growing demand, including Bruce Avenue and Tenth Street
- More direct

Benefits:

- Provides service to South Parkway Plaza
- Services Tenth Street and Bruce Street

Considerations:

- Proposed new route would discontinue service on Albert Street, Park Avenue, Ninth Street, Howard Avenue and a segment of Wakesiah Avenue

Engagement Results:

- 85 per cent support these proposed changes
- 83 per cent indicated this would work better or similar

Resources Required:

Proposed Service Improvement	Est. Service Hours	Frequency Peak/Base	Service Span	Expansion Buses
Package I: Restructure route to provide service between Prideaux Exchange, South Parkway Plaza and Vancouver Island University	900	N/A	N/A	1
Package II: Increase weekday frequencies	8,500	15 min/ 30 min	6:00 a.m. to 12:30 a.m.	2
Package III: Increase weekend frequencies	1,300	30 min/ 60 min	Saturdays: 6 a.m. to 2 a.m. Sundays: 6 a.m. to 11 p.m.	1

Table 9: Proposed Service Improvements for route 6 Harewood

Route 7 Cinnabar

Route 7 Cinnabar connects Cinnabar to downtown Nanaimo with select trips that service Cedar. Key destinations include South Parkway Plaza in South Nanaimo and Port Place Shopping Centre in downtown Nanaimo. The proposed service change removes Cedar service from this route, which would be serviced by the proposed route 8 Cedar.

Figure 16: Proposed routing of route 7 Cinnabar

Design Principles:

- Simplifies route and is more direct

Benefits:

- Cinnabar residents do not need to travel through Cedar
- Provides connection to downtown Nanaimo
- Potential opportunities to continue as route 30 NRGH at Prideaux Exchange

Considerations:

- Transfer to route 8 Cedar at South Parkway Plaza for service to Vancouver Island University, Nanaimo District Secondary School and John Barsby Secondary School
- Proposed new route structure would discontinue service on Irwin Street, Victoria Road, Cedar Road, Holden Corso Road and Woodbank Road

Engagement Results:

- 85 per cent supported changes
- 80 per cent indicated this would work better or similar

Resources Required:

Proposed Service Improvement	Est. Service Hours	Frequency Peak/Base	Service Span	Expansion Buses
Package I: Restructure route by eliminating service to Cedar	(1,300)	N/A	N/A	0
Package II: Increase weekday frequencies	1,200	30 min/ 60 min	6:00 a.m. to 12:30 a.m.	1
Package III: Increase weekend frequencies	900	30 min/ 60 min	Saturdays: 6 a.m. to 2 a.m. Sundays: 6 a.m. to 11 p.m.	1

Table 10: Proposed Service Improvements for route 7 Cinnabar

2.2 Proposals for New Routes

This section provides summaries of three proposed new routes – 8 Cedar, 78 Cassidy and 70 Duke Point – and discusses the concept of an interregional service operated collaboratively with the Cowichan Valley Regional District.

Route 8 Cedar

Route 8 Cedar would provide service between Cedar and Vancouver Island University. Key destinations include South Parkway Plaza in South Nanaimo and Vancouver Island University. While this route is a new route, route 7 Cinnabar/Cedar is indicated – as discontinued routing – on the map below for reference.

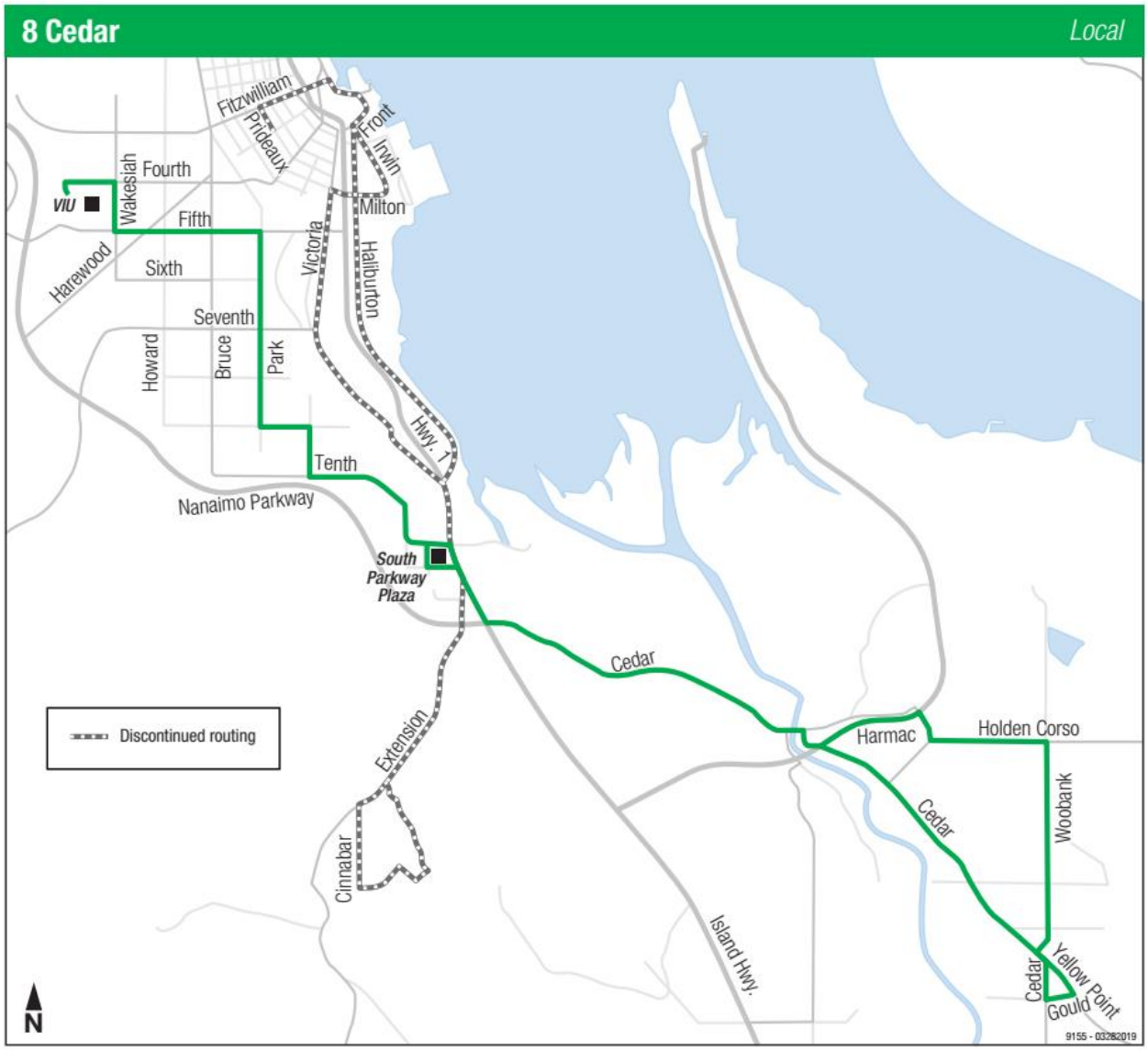


Figure 17: Proposed routing of route 8 Cedar

Design Principles:

- Better serves areas of demand, including Cedar, which currently has limited service
- Improves access to regional centres

Benefits:

- Provides more frequent service to and from Cedar to Vancouver Island University
- Potential opportunities to continue as route 15 VIU Connector at Vancouver Island University

Considerations:

- Transfer to route 7 Cinnabar/Cedar at South Parkway Plaza for service to downtown
- Should be established concurrent with replacement of 7 Cinnabar/Cedar with 7 Cinnabar as detailed in section 2.1

Engagement Results:

- 85 per cent supported changes
- 80 per cent indicated this would work better or similar

Resources Required:

Proposed Service Improvement	Est. Service Hours	Frequency Peak/Base	Service Span	Expansion Buses
Package I/II: Introduce new route to provide service between Cedar and Vancouver Island University	5,500	30 min/ 70 min	6:00 a.m. to 12:30 a.m.	3
Package III: Increase weekend frequencies	2,600	30 min/ 70 min	Saturdays: 6 a.m. to 2 a.m. Sundays: 6 a.m. to 11 p.m.	1

Table 11: Proposed Service Improvements for route 8 Cedar

Route 78 Cassidy

Route 78 Cassidy would provide the rural area of Cassidy with service. Key destinations include the Nanaimo Airport, South Parkway Plaza in South Nanaimo, and Downtown Nanaimo. Service should be flexible to accommodate demand at appropriate times for these destinations.

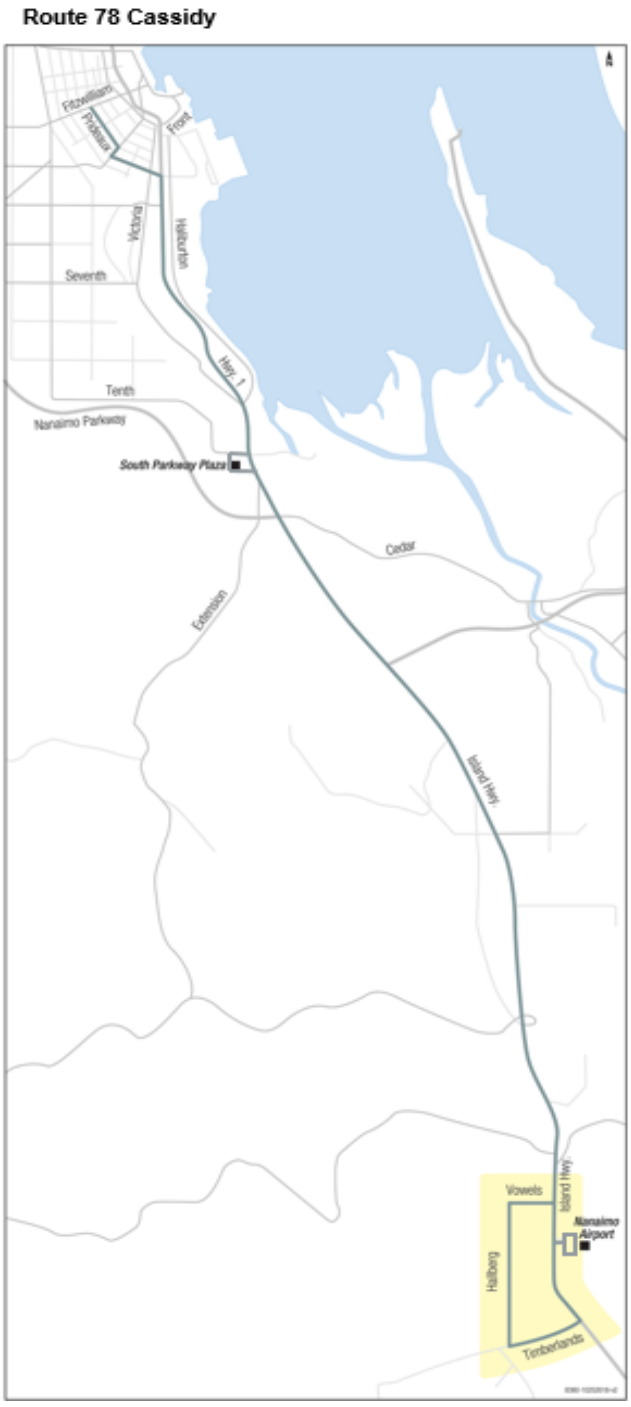


Figure 18: Proposed routing of route 78 Cassidy

Design Principles:

- Provides a valuable connection for a low income neighbourhood
- Creates connections to regional centres

Benefits:

- Provides service to Cassidy and Nanaimo Airport, which is currently unserved by transit

Engagement Results:

- 90 per cent supported route 78 Cassidy
- 90 per cent indicated this would work better or similar

Resources Required:

Proposed Service Improvement	Est. Service Hours	Frequency	Service Span	Expansion Buses
Package I: Implement Service	1,000	Every 2 hours 3 days per week	8:00 a.m. to 6:00 p.m.	1

Table 12: Proposed Service Improvements for route 78 Cassidy

Route 70 Duke Point

The route 70 Duke Point would provide service from downtown Nanaimo to the Duke Point Ferry Terminal and a nearby industrial area. The Duke Point terminal is currently not served by existing routes.

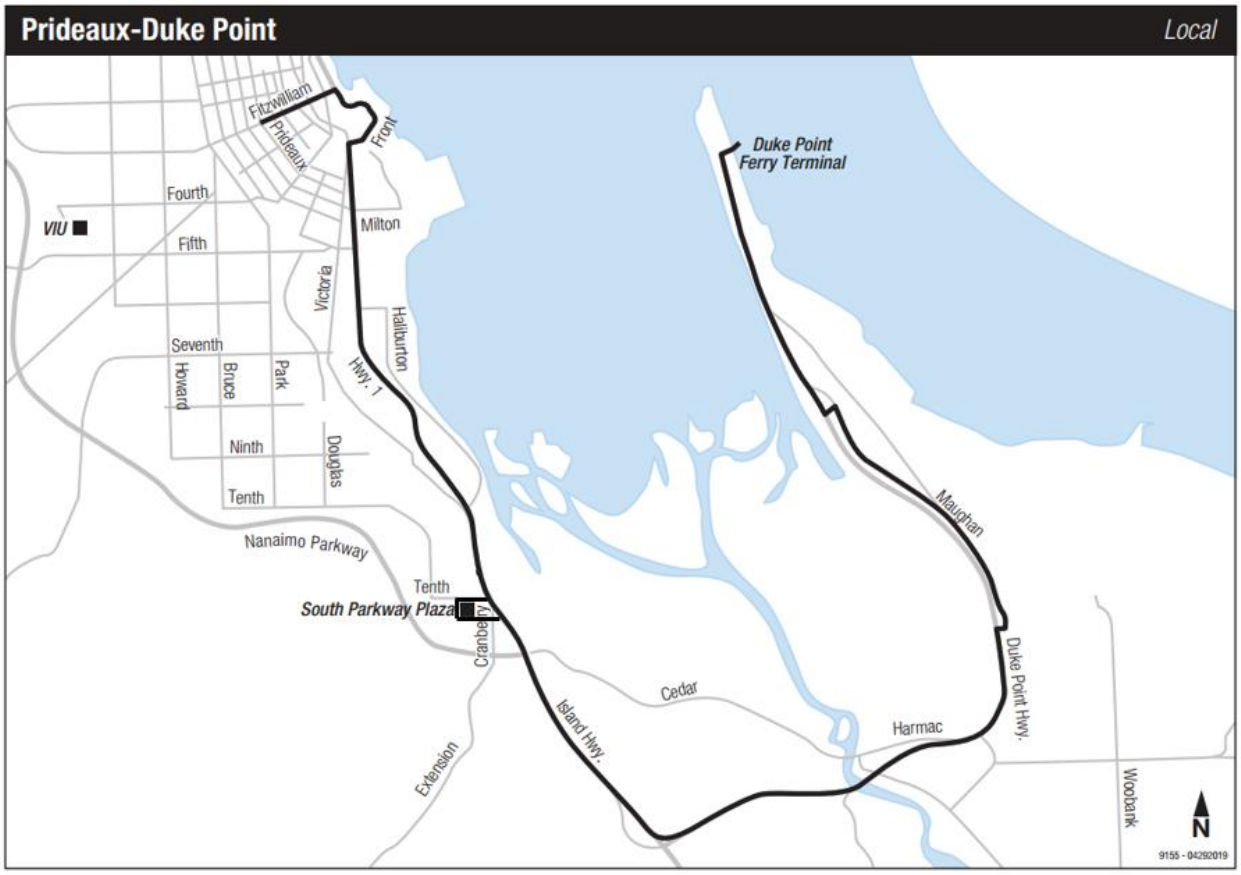


Figure 19: Proposed routing of route 70 Duke Point

Design Principles

- Services Duke Point Ferry Terminal and Cedar industrial areas
- Creates multimodal connections to Lower Mainland

Benefits:

- Connects the downtown core to Duke Point Ferry Terminal and surrounding industrial area, which is currently not serviced by transit

Resources Required:

Proposed Service Improvement	Est. Service Hours	Frequency	Service Span	Expansion Buses
Package I: Implement Service	5,000	Meet peak morning, midday, and peak evening ferry trips seven days per week	Scheduled per ferry schedule	2
Package II: Meet all ferry trips	TBD		Scheduled per ferry schedule	TBD

Table 13: Proposed Service Improvements for route 70 Duke Point

Interregional Service

Improved interregional transit service between Nanaimo and the Cowichan Valley was identified as a need through the consultation process and in the Transit Future Plan. Both regional districts have also identified improved interregional connections to the Comox Valley as a high priority.

Commuter travel to Vancouver Island University and downtown Nanaimo from Ladysmith are frequently indicated as destinations that would benefit from such a service. As well, service to the Nanaimo airport has also been identified as a need.

Interregional service would involve jointly administering the transit service and sharing the associated costs between the Regional District of Nanaimo and the Cowichan Valley Regional District. This presents specific challenges that are different from providing local service within the Regional District of Nanaimo. Before service could be implemented, an agreement between all parties would be needed that includes the following items:

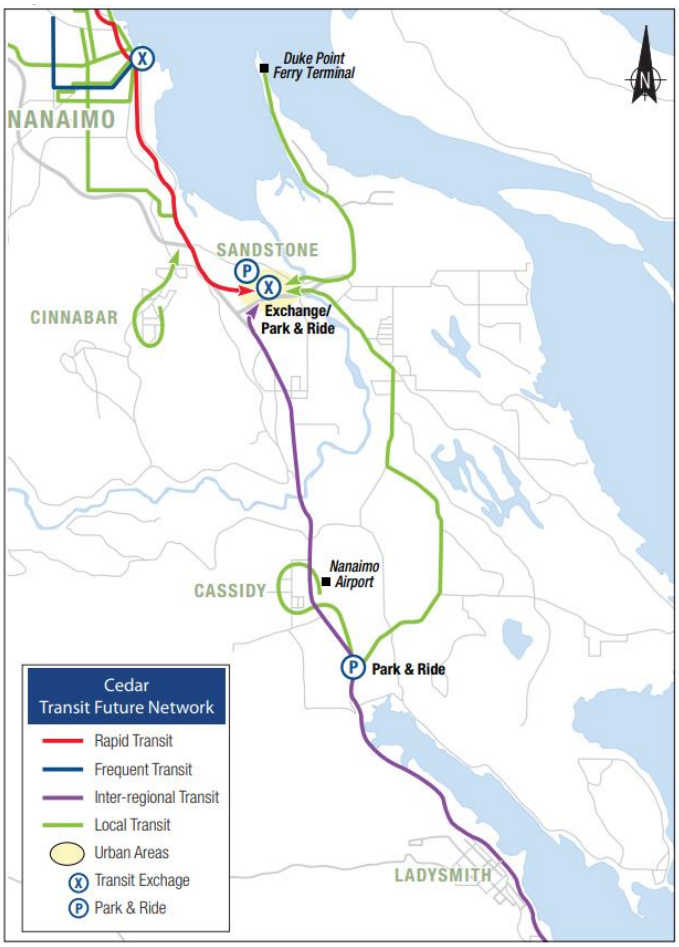


Figure 18: Possible Route to Cowichan Valley Regional District

- Development of a service plan and implementation timeframe as well as the development of a governance mechanism for changing service levels in the future;
- A cost sharing agreement outlining responsibility for both capital and operating costs;
- Development of a tariff strategy, fare structure and revenue sharing agreement specifically related to Inter-regional service that could potentially include allowing passengers to use their transit pass within the other transit system; and
- 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 of responsibilities for development and maintenance of associated infrastructure, such as transit stops and Park & Rides.

Developing a long-term agreement prior to implementing interregional services is essential to provide all parties with long-term stability. For example, without a long-term agreement outlining responsibilities one party could potentially opt out of the service agreement and leave the remaining party in a possibly unsustainable situation.

2.3 Service Implementation Plan

The following section details an implementation strategy over time for short to medium-term transit service improvements. The implementation plan prioritizes improvements in accordance the Service Improvement Priorities list with consideration to the annual hours of expansion.

	Implementation Priorities	Service Hours Required	Buses Required
1	Restructure routes 7 Cinnabar and 30 NRGH. Introduce routes 8 Cedar and 78 Cassidy.	5,200	4
2	Restructure routes 5 Fairview, 6 Harewood, and 40 VIU Express.	5,000	4
3	Introduce route 70 Duke Point	5,000	2
4	Increase service on South Nanaimo routes	TBD	TBD
5	Establish interregional service with the Cowichan Valley Regional District	TBD	TBD

Table 14: Transit Service Implementation Plan

3 Initiatives

3.1 Infrastructure Planning

3.1.1 Rapid Bus

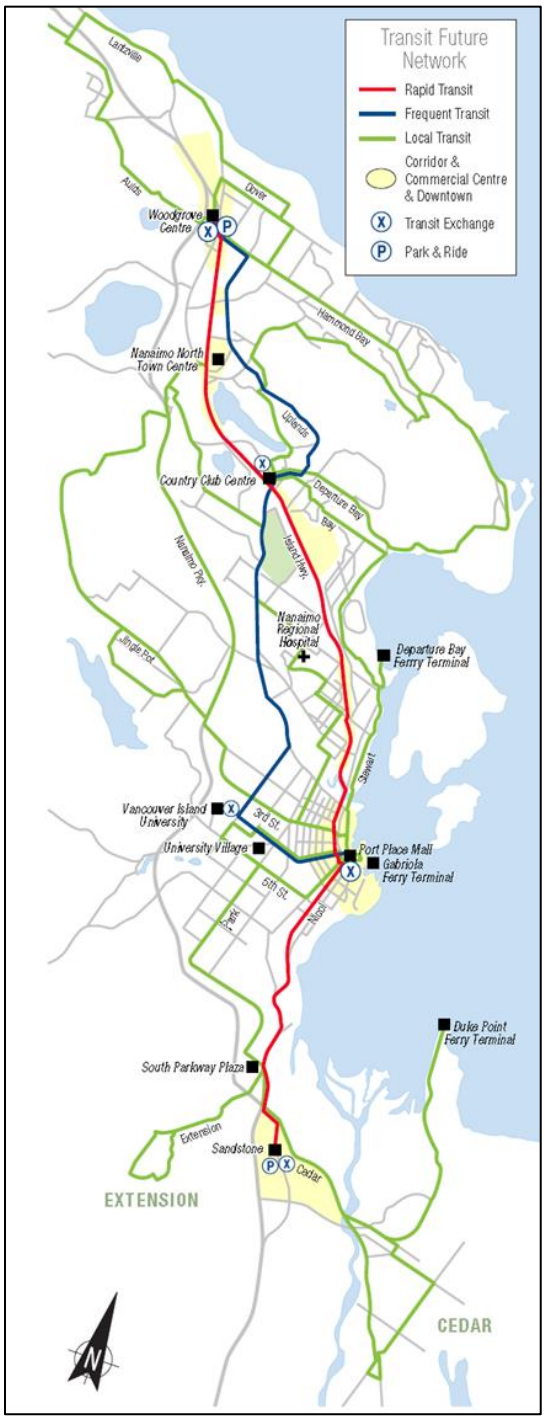


Figure 19: Potential Approximate Routing of Rapid Bus

Rapid Bus services are designed to move high volumes of passengers between major regional destinations along key transportation corridors. Service is very frequent (at least 15 minutes between 7:00 a.m. and 10:00 p.m.) throughout the week and stops less often than traditional transit services. Investments in Rapid Bus infrastructure, technology, vehicles, and service levels combine to increase system performance. To improve travel time and reliability, Rapid Bus services may utilize an exclusive or semi-exclusive right-of-way to eliminate or significantly reduce the impact of general traffic on transit vehicles. Rapid Bus services use high capacity buses and may include future investments along the corridor in transit priority measures, right-of-way improvements, premium transit stations, corridor branding, and off-board ticketing.

Rapid Bus services provide a critical component of a comprehensive transit network that would meet the existing and future needs within the Regional District of Nanaimo. Preliminary review of opportunities for Rapid Bus service suggests increased service levels on route 50 Downtown/Woodgrove in tandem with a restructured route for direct service and investments in infrastructure to establish a Rapid Bus corridor between Woodgrove Centre and the City of Nanaimo Downtown. These changes will involve increases to the frequency and span of service. Planning for a Rapid Bus service entails a planning study with the following objectives:

- Determine the transit alignment right-of-way;
- Identify opportunities for transit priority;
- Identify Rapid Transit Station locations;
- Plan for expanded transit exchanges in the downtown Nanaimo, Woodgrove Mall and Country Club Centre; and
- Provide an implementation strategy to phase infrastructure and service improvements.

3.1.2 Exchanges

Transit exchanges are typically located within the activity centres of the community, such as downtown, village centres, and shopping malls, in order to provide walkable connections with popular destinations and support existing land use patterns. If appropriately designed, transit exchanges can become effective multi-modal exchanges and pedestrian-oriented sites.

Transit exchanges should provide:

- Weather protection;
- Seating;
- Transit route and schedule information;
- Lighting; and
- Bicycle parking.

The exchanges in the Regional District of Nanaimo include Prideaux Exchange, Country Club Exchange, Vancouver Island University, and Woodgrove Exchange. Significant infrastructure improvements are immediately required to accommodate transit expansion.

The Transit Future Plan identified the need for a downtown transit exchange to support the implementation of the Transit Future Network and the land use strategy of the City of Nanaimo's downtown. Planning is underway to identify how a new transit exchange in the Downtown Nanaimo Waterfront District would be integrated with other adjacent land uses. The transit exchange should be located within an active pedestrian-oriented area along the future Rapid Transit alignment that is large enough to accommodate future growth in transit services. Amenities at the transit exchange should include transit shelters, benches, transit customer information and cycling facilities.

An interim effort has been carried out to temporarily relocate the Prideaux Exchange. The improvements detailed in Transit Future Plan support peak period transit service to increase from 45 buses per hour to over 130 buses per hour over the next 20 years.

In 2018, planning work was undertaken to develop transit exchange options to support anticipated growth. Three locations for development of new exchanges have been identified and are being evaluated for amenities and requirements. Once complete, the parties will pursue federal funding to offset costs. The following exchanges and amenities have been included:

Woodgrove Centre Exchange: This project will consist of either exchange upgrades or construction of a new exchange including:

- Up to eight bus bays and six layover bus bays
- Up to eight bus shelters
- Ancillary pedestrian wayfinding enhancements
- Lighting and landscaping

Country Club Centre Exchange: This project will improve the existing Country Club Exchange by expanding bus bays, passenger amenities and public realm improvements to further improve the transportation network, and facilitate passenger connections including:

- Construction to provide ten on-street bus bays
- Ten shelters
- Roadway and pedestrian improvements on Norwell Drive
- Lighting and landscaping

Downtown Exchange: This project will replace the existing Prideaux Exchange with a new exchange in a better location that will include the following:

- Up to ten bus bays and bus layover bays
- Up to four shelters
- Ancillary pedestrian wayfinding enhancements
- Roadway enhancements
- Lighting and Landscaping

Preliminary work on the development of these exchanges and amenities has identified a capital budget of approximately $16 million in 2018 dollars.

3.1.3 Bus Stops

The Regional District of Nanaimo Transit Future Plan identified locations where investments are required for key stops on the route 40 VIU Express. Investments for new bus stop amenities should be made on bus stops with the greatest number of boardings, as evidenced by Automatic Passenger Count Data. Transit stops with lower levels of passenger activities should, at a minimum, meet accessibility guidelines and provide a bench. BC Transit's Infrastructure and Design Guidelines provides additional design recommendations and engineering specifications for bus stops and transit exchanges.

The table below identifies key bus stops within the area of this Local Area Plan with high boarding activity and no existing shelter. These stops should be prioritized as funding becomes available or opportunities arise.

Bus Stop Location	Bus Stop ID	Average Daily Boardings
Victoria at Albert (EB)	109773	83
Wakesiah at Foster (SB)	109769	76
Bowen at Pryde (SB)	110469	66
Bastion at Skinner (WB)	110497	52
11th St 40 block (WB)	110158	51
5th at Hillcrest (WB)	110068	47
Bowen at Caspers (WB)	110076	47

Table 15: Bus Stop Activity

3.2 Matching Vehicle Type with Service Design

Current ridership levels within the Regional District of Nanaimo Transit System presents a potential opportunity to use smaller vehicles on lower capacity trips, which will increase operational efficiency allowing for savings to be reinvested back into the system. To explore this opportunity, BC Transit and the Regional District of Nanaimo will review data in closer detail to evaluate the potential benefits and impacts of adding a smaller vehicle type to the existing fleet and to develop an implementation scheme. Automatic Passenger Counter data can be used to inform trips that could employ a lower capacity vehicle. Analysis shall include consideration of scheduling and cost implications. Evaluation of alternative fuel technologies can also be explored.

The graph below identifies routes that provide opportunities for potential bus right sizing by comparing average bus capacity to the maximum number of passengers on a trip at the busiest time during the trip. Persuant to the graph below, the following routes should be considered for right-sizing: 7 Cinnabar/Cedar, 11 Lantzville, 25 Ferry Shuttle, 88 Parksville, 97 Eaglecrest, 98 Qualicum Beach and 99 Deep Bay.

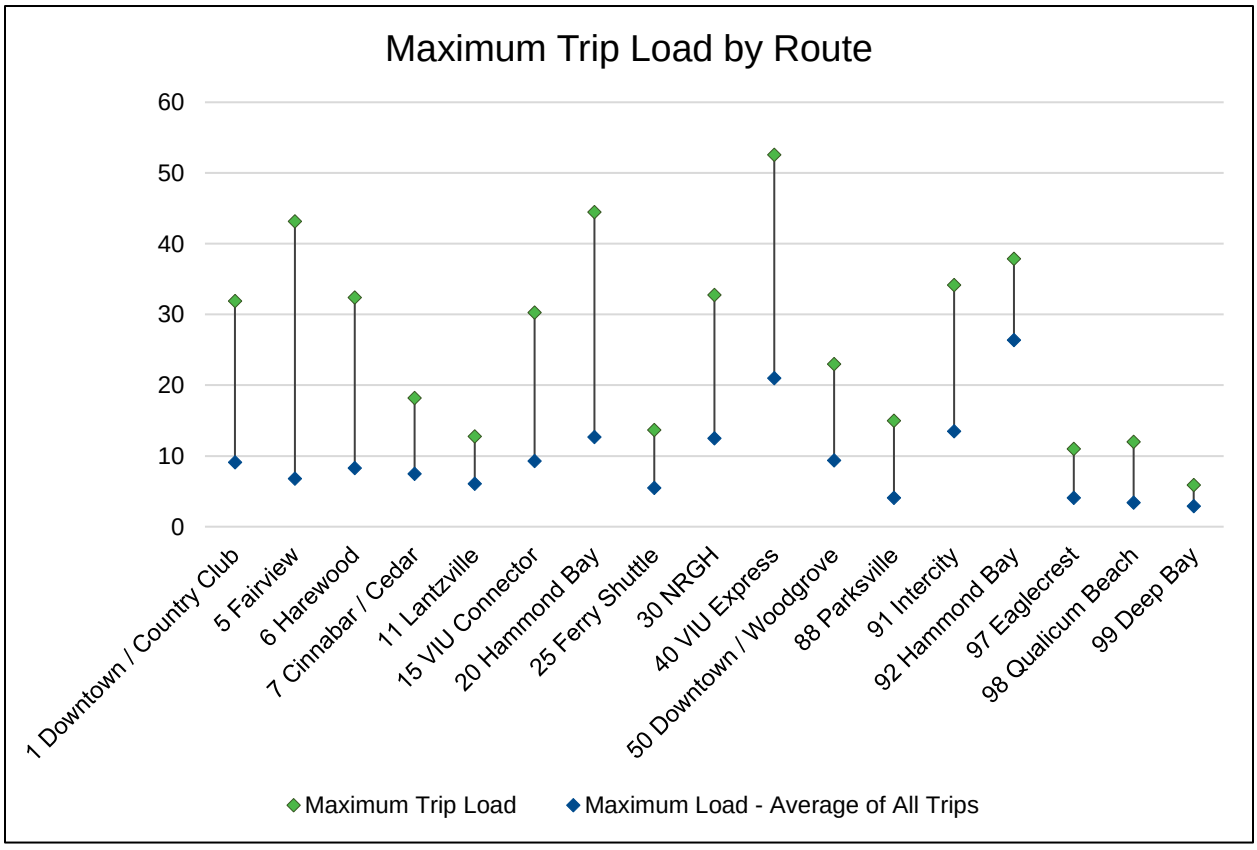


Figure 20: Maximum Load on all RDN Routes

4 Emerging Technology

New emerging technologies will have a direct impact on future mobility. Mobility as a service, autonomous and electric vehicles, and other emerging bus technologies have the potential to reshape how people choose to move throughout their communities.

The following section outlines some of these future technologies and how they could potentially affect the transit system in the South Nanaimo area.

4.1 Fleet-Related Technology

BC Transit is committed to continuously enhancing the rider experience. As part of this endeavour, BC Transit is moving forward with the installation and development of technology initiatives to improve efficiency, increase security and put passengers in control of their BC Transit experience. SmartBus is a major BC Transit project with the goal of improving fleet technology.

4.1.1 SmartBus

Phase 1

The first phase of the SmartBus program at BC Transit introduces real-time bus information, automated stop announcements, and closed circuit TV Cameras onboard each bus. The implementation of these bus technology improvements within the Regional District of Nanaimo Transit System have already been completed.

Phase 2

BC Transit is beginning a review of fare technology and fare payment systems with the intent to move to an advanced fare collection system.

The review process includes an assessment of BC Transit fare collection systems and industry wide trends in fare collection systems for transit. Recommendations from the review suggest BC Transit move towards an advance system where the customer brings their own ticket (i.e. mobile app, bank card) and includes the required onboard electronic readers and software systems to allow onboard validation/payment, and back office accounting and data management. In 2018, a request for information (RFI) to industry suppliers and subject matter experts is anticipated in order to validate the recommendations identified by the review and to collect the required information needed to write a business case for the project. Afterwards, a business case will be completed and an RFP for evaluation and response by industry suppliers will be posted."

To validate the recommendations presented in the report and collect the required information necessary to write a business case for the project a request for information (RFI) to industry suppliers and subject matter experts was posted.

The next step is to complete the business case and post an RFP for evaluation and response by industry suppliers. The intent of the RFP is to select a contractor to help BC Transit make an advanced fare collection system a reality.

4.1.2 Electric Buses

BC Transit began trialing an electric bus within the Victoria Regional Transit System in January 2018. The trial will give BC Transit a better understanding of the capabilities, range, and

operational processes and requirements of modern electric bus technology. Based on the results from this trial there may be opportunities to consider electric bus technology in other parts of the Province in the future.

4.2 Mobility as a Service

Mobility as a Service (MaaS) is the transition away from personally-owned forms of transportation to mobility options that are purchased as a service. Recent technology improvements have provided consumers options to plan, reserve, and pay for travel using an application on their electronic device. Mobility as a Service applications are capable of combining multiple travel modes into one trip, allowing multi-modal travel options for customers including walking, public transit, car share, bike share, or ride hailing.

Car and Bike Sharing

Car and bike sharing leverages the sharing economy to extend the benefits of car or bicycle ownership to individuals without the upfront costs, maintenance, and storage required for ownership. Touted benefits of car and bicycle sharing include decreasing the incidence of car ownership and promoting multimodal travel within communities, which could help build transit ridership within a community. Car and bike sharing programs can help address the first and last mile issue with transit; in other words, car and bike sharing services can extend the reach of transit by connecting transit riders between a bus stop and their trip origin or destination.

There are several different car sharing models including station based, A to B, and free-floating models. Further, there are several different car sharing business models including business to consumer, business-to-business, peer to peer, and not for profit. Similar to car sharing, there are several different bicycle sharing models include docked, dockless, workplace pool bikes, bike loans, and peer to peer sharing. Another distinguishing factor within these models is whether the bikes are geofenced or not. Many transportation-sharing services are currently seeing significant investment as technology improvements and profitable business models emerge for these services.

Ride Hailing

Ride hailing is the provision of immediate or on-demand service whereby a vehicle and driver are hired for a fee to transport a passenger, or a small group of passengers, between locations of their choice. This service may be provided by either Transportation Network Companies (TNCs) or traditional taxi operators. Although ride hailing from TNCs such as Uber or Lyft is not currently permitted in British Columbia, Provincial Legislation is currently being considered to permit and regulate the operation of TNCs within BC. As seen in many other cities that currently permit TNCs, the widespread adoption of ride hailing services can either supplement or substitute for existing fixed-route transit services depending on various contextual factors.

Autonomous Vehicles

Autonomous vehicle technology is rapidly emerging, and has the potential to drastically alter the way people move throughout their communities. The widespread implementation of autonomous vehicles would change the variety and cost of mobility options available to the public, and consequently may have implications for how public transit is planned and delivered. By changing how people get around, the emergence of autonomous vehicle technology also has implications for future land use and transportation related policy and infrastructure.

5 Moving Forward

5.1 Funding the Plan

To achieve the goals of this Local Area Plan, capital and operating investments in the transit system will be required over the next one to seven years. Annual operating costs are based on service hours that are projected to increase 60,000 hours. The plan also calls for capital investments that include:

- An additional 25 buses added to the transit fleet;
- New transit exchanges or upgrades to transit exchanges; and
- Improvements to customer amenities at transit stops.

Given the level of transit investment anticipated over the coming decades, BC Transit and its funding partners will need to evaluate stable and predictable funding sources beyond the existing mechanisms.

5.2 Keys to Success

To guide the plan from vision to reality will require an on-going dialogue between the Province, BC Transit and the Regional District of Nanaimo on transportation policy, funding and the connection between land use and transit planning.

The South Nanaimo Local Area Transit Plan builds upon the Transit Future Plan as well as local land use and transportation plans and will be used to support the vision and direction for transit in the region. Steps required for the success of the plan include integrating the transit strategy into other municipal projects, supporting travel demand management measures, transit-oriented development and transit-friendly land use practices.

This plan will be presented to the Regional District of Nanaimo's Transit Select Committee and Board for approval. Upon approval, service improvements identified within this Local Area Plan will be added to the Regional District of Nanaimo Service Improvements Priorities List, which prioritizes transit improvements for the entire region. Service improvements will be integrated into the three year Transit Improvement Process (TIPs), which is updated on an annual basis. Prior to implementation of service changes, BC Transit planning staff will work with staff at the Regional District of Nanaimo to ensure service improvements appropriately reflect local needs. Additional targeted engagement may be conducted. A Local Area Transit Plan for North Nanaimo will be developed in the coming year to identify service and infrastructure improvements for that area.

Appendix A – Population Density

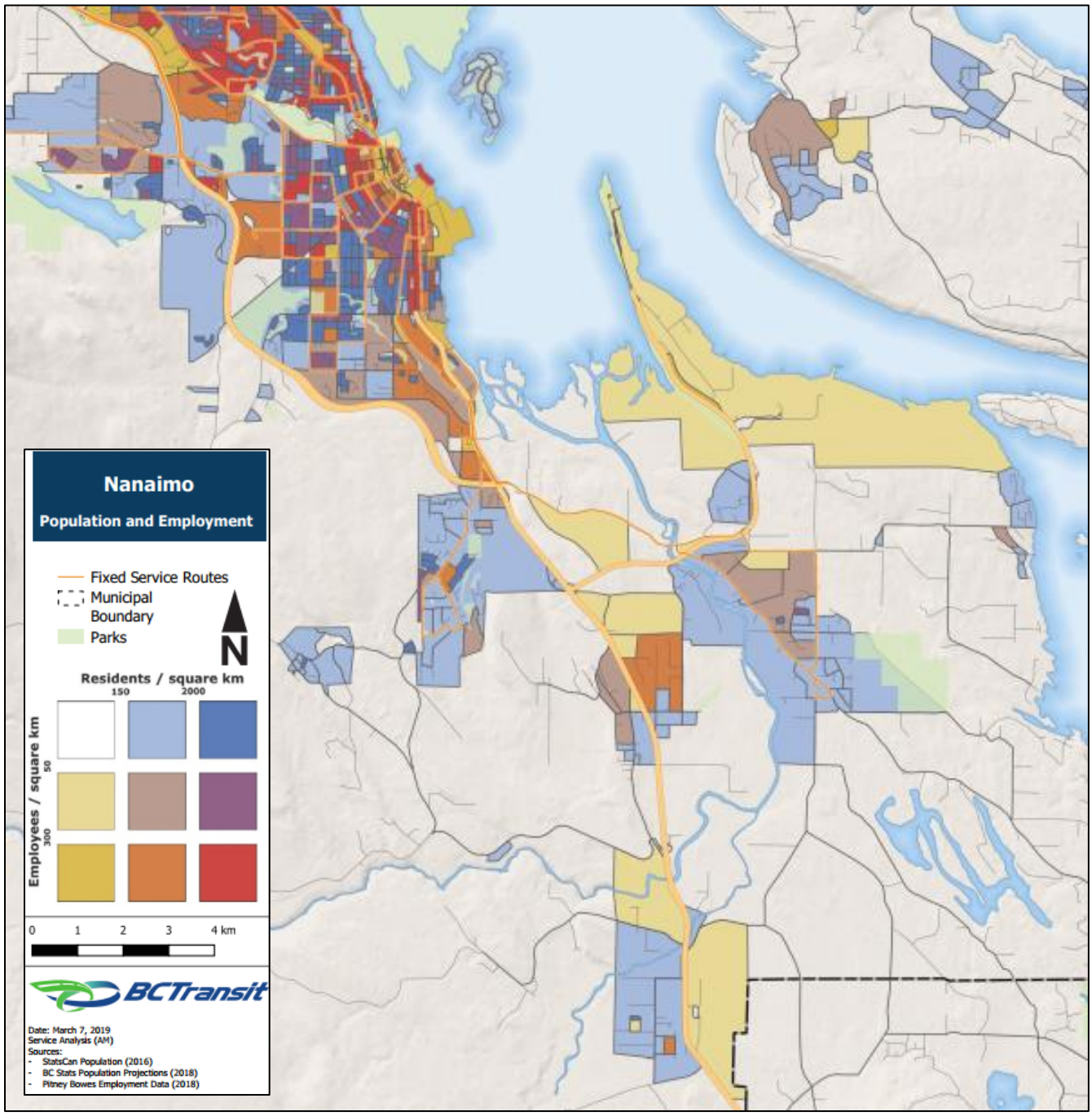


Figure 21: RDN Density Map

Appendix B – Bus Stop Activity Maps

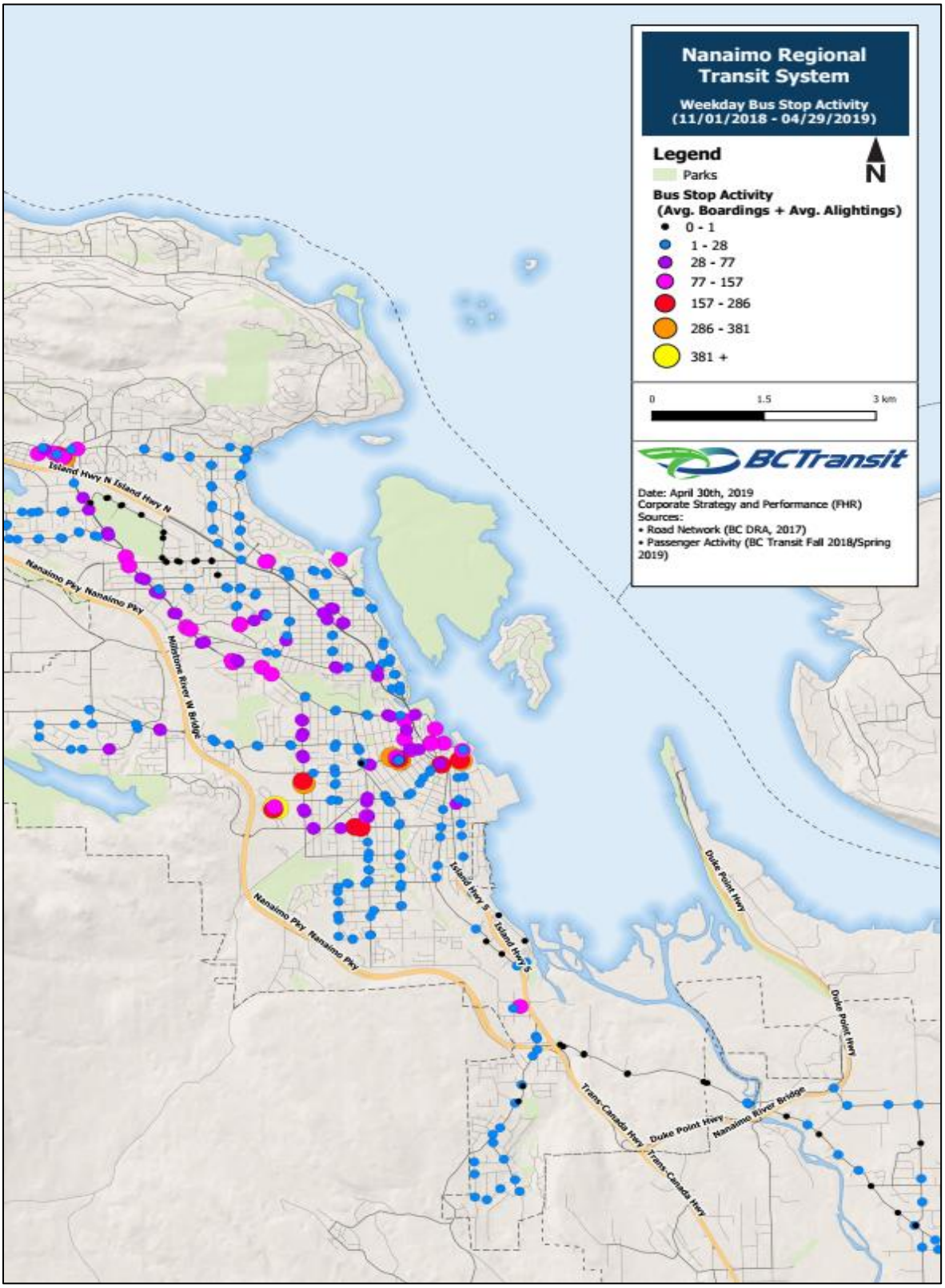


Figure 22: Average Weekday Boarding and Alightings

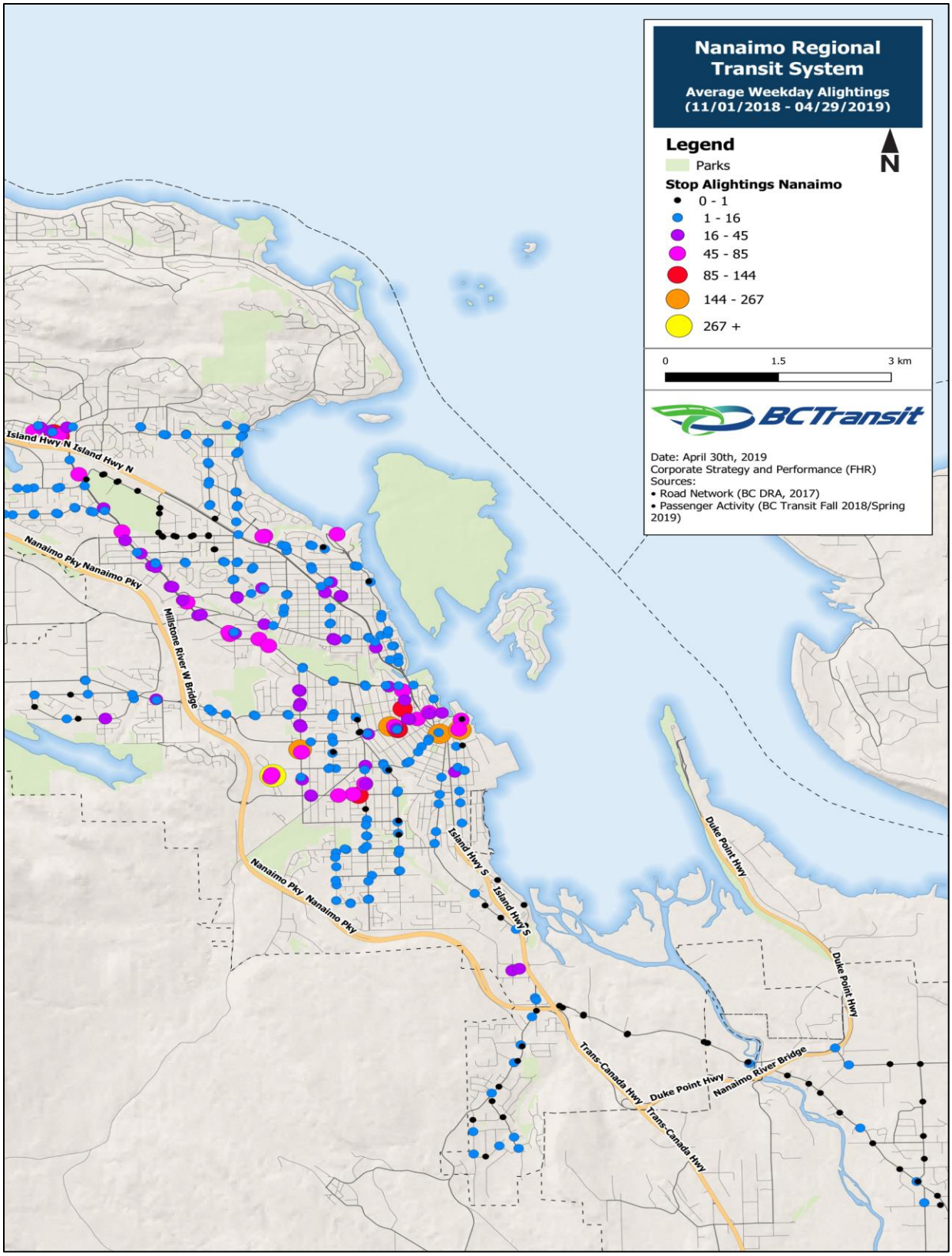


Figure 23: Average Weekday Alightings

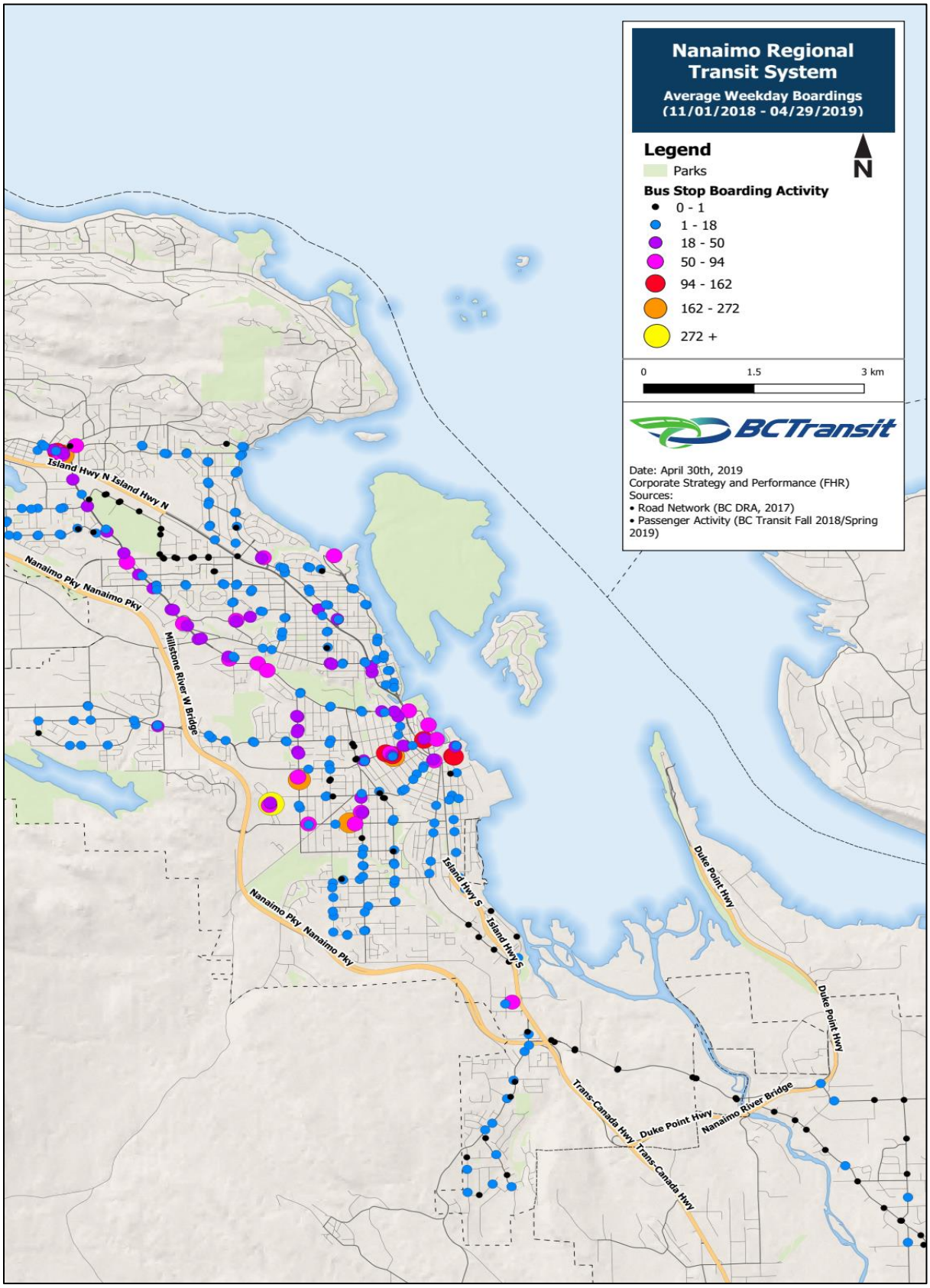


Figure 24: Weekday Boardings

Appendix C – Individual Route Performance

Frequent Transit	Trips Operated Daily	Daily Service Hours	Daily Revenue Hours	Daily Boardings	Boardings / Trip	Boardings / Rev. Hr.
Target					**30.0**	**40.0**
40 - VIU Express	97	109.0	86.2	3,883	42.3	46.6
Local Transit						
Target					**20.0**	**30.0**
5 - Fairview	29	30.6	22.0	351	15.0	22.3
6 - Harewood	37	19.6	15.6	516	14.0	30.6
7 - Cinnabar / Cedar	33	38.3	28.5	520	19.4	24.9
30 - NRGH	57	63.4	48.8	1,411	24.8	27.3

Table 16: Weekday Route Performance

Frequent Transit	Trips Operated Daily	Daily Service Hours	Daily Revenue Hours	Daily Boardings	Boardings / Trip	Boardings / Rev. hr.
Target					**30.0**	**40.0**
40 - VIU Express	48	52.8	42.3	2,297	47.9	56.4
Local Transit						
Target					**20.0**	**30.0**
5 - Fairview	24	24.0	17.7	238	11.6	18.6
6 - Harewood	30	14.5	11.9	343	11.4	27.4
7 - Cinnabar / Cedar	26	25.5	22.2	367	17.6	24.0
30 - NRGH	48	53.3	41.9	864	18.0	25.7

Table 17: Saturday Route Performance

Frequent Transit	Trips Operated Daily	Daily Service Hours	Daily Revenue Hours	Daily Boardings	Boardings / Trip	Boardings / Rev. Hr.
Target					**30.0**	**40.0**
40 - VIU Express	27	28.6	23.3	1,225	49.6	55.4
Local Transit						
Target					**20.0**	**30.0**
5 - Fairview	17	18.1	13.6	179	11.9	17.8
6 - Harewood	22	10.6	9.1	253	11.5	26.8
7 - Cinnabar / Cedar	18	20.1	16.8	253	16.9	22.3
30 - NRGH	22	25.1	19.2	556	25.3	30.0

Table 18: Sunday Route Performance

Route	Average Maximum Load	Total Maximum Load
40 VIU Express	21.4	52.6
5 Fairview	8.8	43.2
6 Harewood	8.9	32.4
7 Cinnabar / Cedar	10.1	18.2
30 NRGH	13	32.8

Table 19: Maximum Load by Route