MEMO

TO: Anne Williams, CAO, Village of Salmo

FROM: Erin Toop, WSP

Maria Stanborough, C+S Planning Group

Andrew Anderson, Anderson Business Consulting

SUBJECT: **Salmo Transportation Study Findings**

DATE: **January 19, 2022**

EXECUTIVE SUMMARY

The Village of Salmo would like to understand whether a public transit or on-demand micro-transit service for the residents of Salmo and the Regional District of Central Kootenay (RDCK) Area G is viable. The Village retained WSP in partnership with C+S Planning Group and Anderson Business Consulting to help explore the feasibility of such services.

This memo is a summary of the work completed for the project as well as our recommendations for the short-, medium- and long-term. The work encompassed:

- A community profile
- An articulation of Salmo's transit goals
- Summarizing BC Transit's Salmo service expansion plans
- Identification of key challenges
- Seven case studies from comparable jurisdictions
- Revenue and funding options
- Stakeholder consultation
- A public survey
- An evaluation of three transit options

The evaluation of transit options based its parameters upon the feedback from stakeholder and public consultation. The input helped us to define the potential system characteristics such as operating hours, destinations and fare levels.

From our review, an on-demand service would not be able to provide a consistent and reliable transit option that the public is seeking. Based on the feedback provided by the community, the Village of Salmo may consider a short-term transit option of a fixed route service that complements the current BC Transit Health Connection, with trips to Nelson on the days that the Health Connection does not operate, and trips to Trail scheduled on the alternating weekdays. This option could be implemented with or independently of BC Transit.

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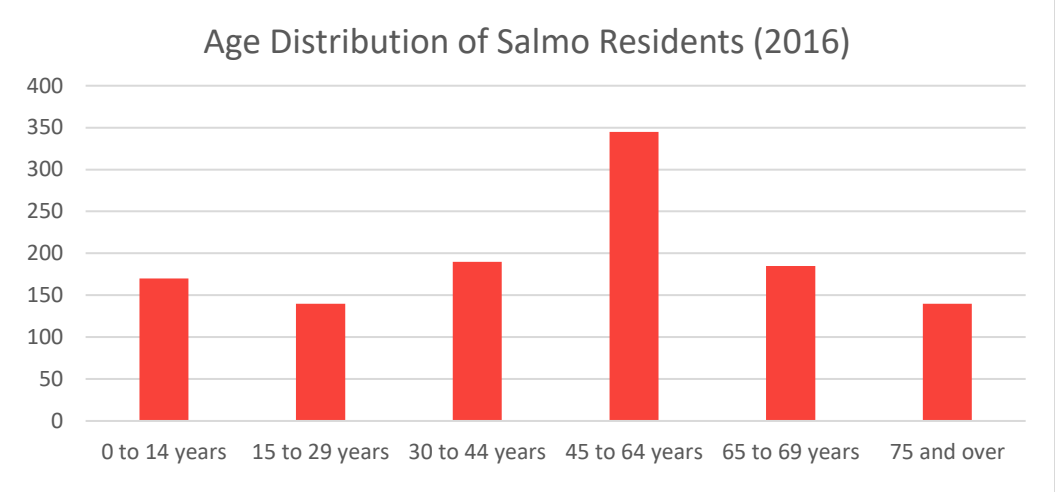
In the immediate term, the Village could consider discussions with the Kootenay Carshare to set up a carshare service for Salmo. However, any and all next steps will require further consideration by the Village of Salmo, specifically as to the costs and implementation.

COMMUNITY PROFILE

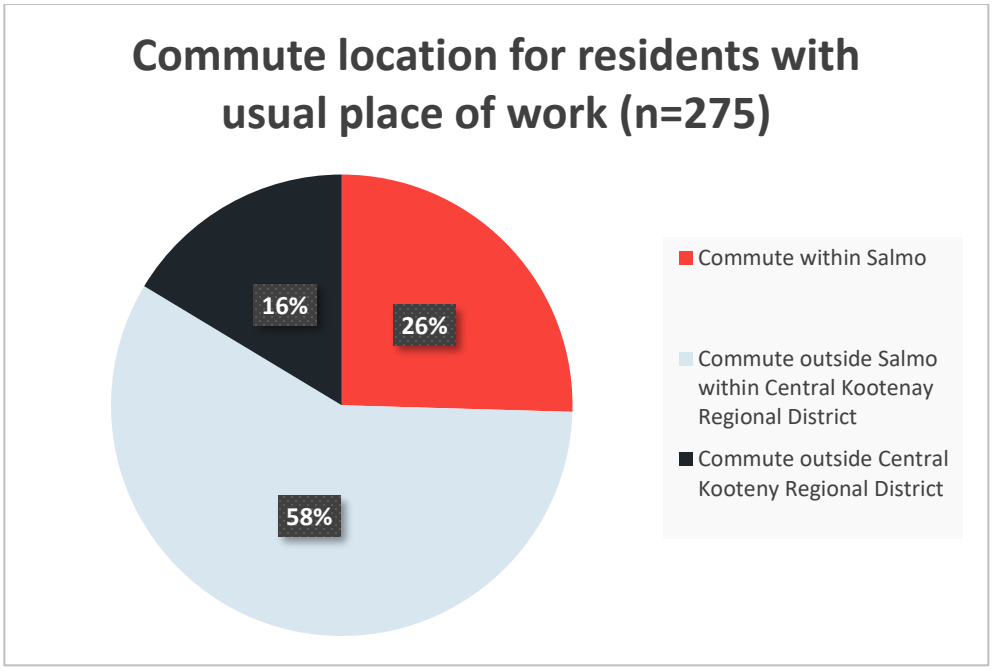
Salmo is a small urban village in the Central Kootenay region of southern BC. As the Hub of the Kootenays, it is approximately 30 minutes by vehicle from the City of Nelson to the north, the City of Castlegar to the west, and the City of Trail to the southwest. The topography around Salmo is mountainous and there are significant gaps in cellular data coverage between the communities in the transit study area, and particularly on Highway 3 between Salmo and Castlegar.

According to the 2016 Canadian Census[1], Salmo's population was 1,140 in 2016, while Area G was home to approximately people 1,623. The RDCK as a whole was home to approximately 60,000 people. The majority of Salmo's population is over 45 years old, with 29% of residents age 65 and older. The high-school and post-secondary student age groups (15 to 24 years old) represent 9% of the Village population.



Of Salmo residents who are part of the labour force (275 of the 1,140 population) 58% commute outside Salmo for work and within the boundary of the RDCK. Another 16% commute outside Salmo and outside the RDCK boundary, which could be anywhere from Trail to Cranbrook to destinations outside BC. 25% of Salmo's labour force works within the village.

1 https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=5903011&Geo2=CD&Code2=5903&SearchText=salmo&SearchType=Begins&SearchPR=01&B1=All&TABID=1&type=0



SALMO'S TRANSIT GOALS

Salmo's goals for public transit, as stated in the Village's Official Community Plan are to:

- Support and encourage public and private shuttle services within the region; and
- Raise awareness about and support ride-sharing, ride-home, and car co-op initiatives.

The Village, due to resourcing constraints, has not made it a goal to provide transit service. Rather, its goal is to support and encourage viable public transportation solutions.

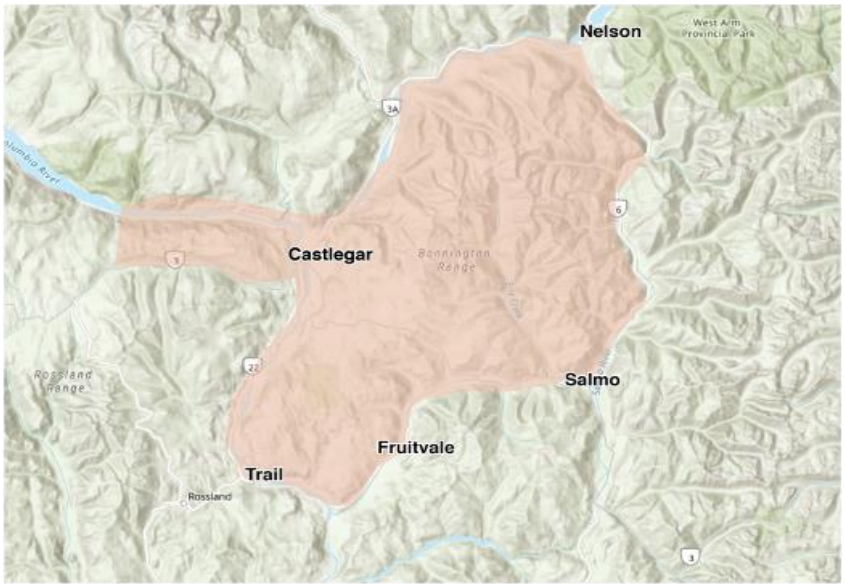
There is some existing transit service in Salmo. BC Transit currently operates a Health Bus route between Salmo, Ymir and Nelson on Tuesdays, Thursdays and Fridays, with three trips each day. Salmo's existing BC Transit Health Route is entirely funded by the Province of BC, through Interior Health and BC Transit agencies. In BC's Interior Health region, the health authority has deemed public transit essential to residents for the purposes of accessing healthcare, and in cases where no other transit service exists, Interior Health assumes the role of funder for a baseline level of service. This service is intended for basic access to healthcare and amenities in Nelson, but does not serve all purposes or destinations.

The Village is interested in reviewing the viability of a transit service that is available most days of the week and to several destinations, so that residents can depend on it for more of their travel needs.

The target user group for the public transit service is Village of Salmo and RDCK Area G residents. A summary of potential trip purposes and related destinations is shown in the table below. These trip purposes and destinations were explored through stakeholder engagement and a community survey, and prioritized to help focus transit options presented in the next technical phase of this project.

TRIP PURPOSE	POTENTIAL DESTINATIONS
Commuting to work	Teck Cominco (Trail) Atco Wood Products, Fruitvale Porcupine Wood Products Hospitals (Trail, Castlegar, Nelson) Nelson Castlegar Trail
Commuting to post-secondary school	Selkirk College Main Campus, Castlegar Secondary campus, Nelson Secondary campus, Trail
Accessing amenities like shopping, restaurants, salons, dentists	Nelson Castlegar Trail Fruitvale
Accessing health care and hospitals	Kootenay Boundary Regional Hospital, Trail Castlegar Health Centre Kootenay Lake Hospital, Nelson
Accessing regional airports	West Kootenay Regional Airport, Castlegar Trail Regional Airport
Accessing after school activities for grade school students	Salmo Nelson Castlegar Trail
Accessing recreation facilities like pools, ball fields, and possibly ski hills	Nelson Castlegar Trail Salmo Ski Hill

A conceptual transit service area map is shown in the figure below.



BC TRANSIT AND RDCK TRANSIT PLANS

In 2021 BC Transit completed a Transit Future Service Plan for the West Kootenay Transit System which includes both the Village of Salmo and RDCK Area G. The RDCK is the primary government representative for Salmo and Area G in BC Transit's West Kootenay system. The plan identifies short- and medium-term actions which impact Salmo's level of transit service.

Any future increases to Salmo's level of transit service, within the West Kootenay Transit System, are likely to be shared costs between the Village of Salmo and the RDCK. The discussion around future service increases should also include BC Transit and Interior Health, to understand the implications of additional transit service on the existing BC Transit Health Connection funding.

The 2021 West Kootenay Transit Future Plan provides some statistics about Salmo's current Health Connection, Route 72. The existing route includes approximately 15 weekly transit service hours with 18 transit trips per week. In 2019, there were 5.1 boardings per transit service hour on Route 72.

In BC Transit's public engagement event in Salmo, they heard that transit improvements between Salmo and Nelson are a higher priority than having transit service to Trail. The highest priority was achieving three round trips per day on all weekdays for the Salmo – Nelson corridor. The following table summarizes BC Transit's proposed service changes for Salmo[2]. In addition to the service changes, BC Transit's plan also includes the proposed action to develop a Salmo Park and Ride in the short-term horizon. The exact location of a park and ride was not provided.

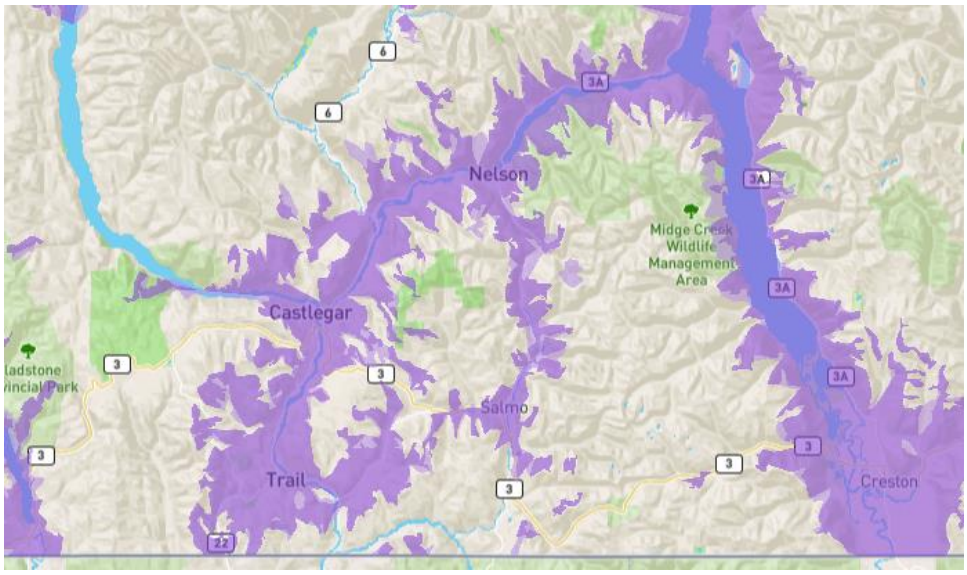
[2] BC Transit Future Service Plan for the West Kootenay Transit System, August 2021: https://www.bctransit.com/documents/1529713633637

BC TRANSIT PROPOSED SERVICE CHANGE	PROPOSED TIMING	RESOURCE IMPLICATIONS
Route 72 Salmo – Nelson: seek permission from Health Connections to adjust trip times and change the fare structure	Short-Term (2-3 years)	No change Existing service is approximately 780 annual service hours.
New Salmo – Nelson Service: introduce basic service between Salmo, Ymir and Nelson; three round trips to coincide with high school start and end, and office end time	Short-Term (2-3 years)	Some reallocation is possible but expansion resources will be required. Consult Interior regarding funding implications. The intent is to convert the existing Route 72 into this new basic commuter route. +1,300 annual service hours.
New Fruitvale – Salmo Service: extend service from Fruitvale to Salmo	Short-Term (2-3 years)	Expansion resources required. +700 annual service hours.
Enhanced Salmo – Nelson Service: expand weekday trips from 3 to 4 and introduce 3 trips on Saturdays	Longer-Term (5+ years)	Expansion resources required. +1,500 annual service hours.

KEY TRANSIT CHALLENGES

Through discussions with the Village project team, we have identified two key challenges to a successful public transit system in Salmo.

The vast **study area** is the first challenge. While some target transit users are concentrated in Salmo, the residents of Area G are spread over an area of over 400 square km. The potential transit coverage area for the destinations listed in the previous section is approximately 1,400 square km. With the limitations of the existing highway network that connects the study area communities of Salmo, Nelson, Castlegar and Trail, a transit vehicle would have to travel a considerable distance to reach each destination. There will be limitations to the number and frequency of trips that one transit vehicle can achieve each day. As well, a service area of this expanse is not conducive to a purely on-demand transit model due to the significant time required to travel between destinations. There are additional complications with the inconsistent cellular data coverage in this particular study area, as shown in the cellular coverage map below.



Source: https://www.comparecellular.ca/coverage-maps/

The second challenge is that the Village has **no operating funding or staff resources**. Thus the aim is to identify whether Salmo's transportation needs could be met through outsourcing to, or partnerships with other agencies or jurisdictions. With regard to funding, public transit in all other jurisdictions is an inherently subsidized service, with some operating contribution from the municipal level. Typically fare revenue accounts for only 10% to 20% of transit operating costs in smaller municipalities. As a rule, municipal public transit services operate at a loss, with significant operating funding provided by the municipal government. Funds are also required to sustain the administration and coordination of public transit. In small systems, coordination can typically be accomplished with a partial full time equivalent (FTE). There are other potential revenue streams such as advertising and charter income, which will be outlined in the Funding Model Opportunities section; however, these revenue streams typically account for only a small percentage of operating costs.

PRELIMINARY OPERATING MODLES

In the scope of this study, we have committed to developing up to three conceptual transit options for the Village and evaluating these options at a high level to determine their viability. The options are fully on-demand transit service, fixed route transit service and leveraging existing user-pay or membership-based transportation initiatives in the Kootenay region.

ON-DEMAND

On-demand transit service differs from fixed-route service in that it provides coverage everywhere within a defined service zone. It has no schedule or fixed routing. It may use fixed or virtual stop locations or provide door-to-door service. Passengers can book trips within the coverage zone in advance or in real time. On-demand transit service is best suited to lower passenger demands, under ten passengers per hour. Because of this, transit vehicles can be smaller and typically range from small or medium-duty buses to minivans.

On-demand transit applications or software solutions, which coordinate and optimize ride booking and driver dispatching, have increased the popularity of on-demand transit. Most on-demand transit technology vendors offer the option to have a call centre for customers who do not have smart phones or access to data plans or wi-fi, but there can be challenges for people who are uncomfortable with new technology or those who do not have access to reliable wifi or cellular data.

On-demand transit is typically best suited to provide transit coverage where there is low ridership and destinations are dispersed within a lower-density urbanized area.

FIXED-ROUTE TRANSIT WITH PROVNCIAL PARTNERSHIP

A fixed-route transit solution to better connect Salmo and Area G residents with Nelson, Castlegar, Fruitvale and Trail could be accomplished in partnership with BC Transit, as the provincial agency has near-term plans in alignment with Salmo’s transit goals. It is possible that the Village could launch its own enhanced fixed-route system as a pilot project in the interim, which could be handed over to BC Transit in the two- to three-year horizon.

A key benefit to BC Transit’s service is that it is a “one stop shop” where all functions are provided including transit service planning, public engagement, transit operations and fleet procurement. This can be an attractive option for local governments, like the Village of Salmo, with limited staff and resources. Another benefit is the Provincial transit operation subsidy provided when a transit system is operated by BC Transit. While BC Transit’s costs for providing service tend to be on the high-end, after the provincial subsidy is applied, then they are quite competitive. The Provinces operating subsidy depends on the type of transit offered. It ranges from 47% for conventional transit (large bus municipal fixed-routes) to 67% for custom transit (HandyDART service) and paratransit, which is Salmo’s current small bus regional transit service, would be subsidized at a level somewhere in between.

MEMBERSHIP-BASED INITIATIVES

The largest component of operating cost in a public transit system is the wage costs of operators. This is a drawback inherent in public transit systems as operator wages become a higher proportion of costs with smaller van or shuttle services. A possible alternative to the traditional transit solution is a car-share. Kootenay Carshare Cooperative was founded in Nelson in 2001 and allows the fixed costs of vehicle ownership to be allocated across a group of individuals and businesses.

A shared fleet option could be possible where a municipal fleet is added to the co-op to be used by co-op members when not required for municipal purposes. Larger vehicles, such as a passenger van, could be an asset for groups that are travelling together for joint purposes. The scheduling and arranging of trips and usage would occur by the members of the cooperative. While membership in a shared fleet would have limited costs to a municipality, it would not provide the same scale of public benefit as a traditional transit system.

Kootenay Carshare also offers Air Carshare, which is peer-to-peer carsharing. This is another program to consider in the Salmo area. It allows residents to rent their personal vehicles to other carshare members when they are not in use.

Volunteer driver programs are also administered in multiple jurisdictions. Typically, these services are targeted to a specific population group, such as seniors. These can allow individuals to use either private or municipally-owned vehicles to provide trip services and fill important public transport needs, such as critical medical trips in remote areas. Accessible shuttles may be provided for drivers to fill a greater range of possible customer needs. Alternatively, groups such as employees or students could also arrange a van pool for a work / school trip to a common location.

Another program to consider bolstering in Salmo and Area G is an online carpooling platform, which allows drivers with spare seats in their vehicles to connect with passengers who are looking for a ride. An example of this service is Poparide.

JURISDICTIONAL SCAN

Given our understanding of Salmo's context and key transit challenges, seven jurisdictions were reviewed based on:

- Similar rural or regional context to the Village of Salmo – Black Diamond, AB, and Sauda, Norway
- Recent implementation of on-demand transit – Powell River, BC, Cochrane, AB, Airdrie, AB, Innisfil, ON and Sauda, Norway
- Fixed route option, similar geography to Salmo – Black Diamond, AB
- Interesting or innovative transit funding sources – Powell River, BC and Selkirk, MB

This section begins with an overview and some key statistics about each jurisdiction, which is followed by a summary of key takeaways and considerations for the Village of Salmo. The following table is a summary of some key community characteristics, to compare to Salmo and Area G.

JURISDICTION	POP.	SERVICE TYPE	SERVICE AREA	TRANSIT FLEET SIZE	TYPICAL IN-SERVICE VEHICLES
Salmo & Area G, BC	2,760	n/a	400 km^2	n/a	n/a
Powell River, BC	13,000	On-demand	15 km^2	2	1
Cochrane, AB	34,500	On-demand	31 km^2	8	2 to 4
Airdrie, AB	68,000	On-demand	31 km^2	Unknown	Unknown
Sauda, Norway	4,700	On-demand	12 km^2	Unknown	Unknown
Innisfil, ON	37,000	On-demand Rideshare	262.7 km^2	Many	Varies
Black Diamond, AB	2,700	Fixed-route	45 km^2	1	1
Selkirk, MB	10,300	Fixed-route	15 km^2	2	1

POWELL RIVER, BC

Regional Context: Coastal City surrounded by undeveloped land, accessible by ferry to nearby islands

Population: 13,000 (2016)

Type of Service: Conventional; Hybrid (2021)

Service Area: ~15km^2 (for On-Demand Transit)

Service Hours:

All Days | 11:00 to 18:30

Target Market: Youth and Seniors; residents with mobility issues

Fare: $2.25 for the Zunga Bus (on-demand)

Fleet Size: 1 vehicle + 1 spare

Funding Sources: Fare revenue; Built in Canada Innovation Program

SUMMARY OF TRANSIT SYSTEM

Powell River has a local and regional transit system, both operated by BC Transit. The new on-demand pilot service, Zunga Bus, is operated by the City. It launched in in February 2021 and will continue until at least December 2021, with hopes to secure funding into 2022. The service was initiated by the municipality as complaints had been received from the public regarding the long transit travel time required to complete a trip because of mandatory transfers. After initial discussions with BC Transit the municipality decided to deliver the service on its own, to expedite the on-demand pilot. Spare Labs Inc. approached Powell River to pilot the on-demand service with a grant Spare Labs had received that covered the cost of the software and bus.

The on-demand service operates simultaneously with conventional transit. This pilot project includes one Zunga Bus which serves Westview, the urban centre of the region, as phase one. In later phases, the City plans to consider incorporating HandyDART service into the Zunga Bus service.

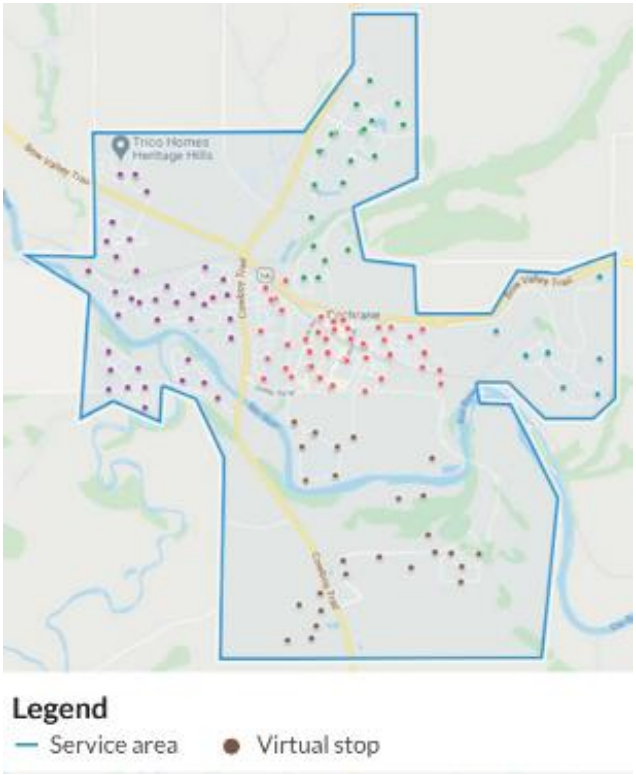
The Zunga Bus service creates routes in real-time based on passenger input. The software processes requests instantly to design the most efficient route possible for all passengers. Designated stops are utilized in higher density areas while door-to-door service is also available in residential areas within City boundaries.

The service is in still in the early implementation phase and, as a result, ridership is still building. Powell River has set a target of between 5-6 rides per hour. Powell River has received positive

public feedback to date and has had no issues with the software. After the completion of the pilot project, the on-demand technology will be evaluated and considered for future planning of transit.

Key lessons learned from the Powell River pilot were the need to budget appropriately for marketing to communicate how the service operates and educate the public on how to use it. In early discussions with BC Transit, it was indicated that there may be the opportunity to relocate BC Transit fixed route service hours to on-demand service hours as the service matures, and the viability has been confirmed.

COCHRANE, AB



Regional Context: Low-density community surrounded by rural land, 30 minutes outside of Calgary

Population: 34,500 (2021)

Type of Service: Fully On-Demand Transit (2019)

Service Area: 31.1 km^2

Service Hours:

Weekdays | 6:00 to 20:00

Weekends | 9:00 to 15:00

Target Market: Residents, youth and seniors

Fare: $2.50 one-way fare; additional fare types and pass options exist

Fleet Size: Eight 21-seat accessible buses with bicycle racks. Only 2 to 4 vehicles used in service

Funding Sources: Fare revenue, Provincial GreenTrip funding for fleet and infrastructure

SUMMARY OF TRANSIT SYSTEM

Cochrane is a growing town with no history of public transportation aside from transportation for commuters to and from Calgary for work purposes. Cochrane's five-year pilot project, Cochrane On-demand Local Transit (COLT) is one of the few fully on-demand transit systems, utilizing 145 unique stops within the City's boundaries. Service can be booked from minutes in advance to one week in advance. The service was funded through the provincial GreenTrip program with most of the funding being allocated towards setting up the service through the purchase of buses and construction of a transit hub.

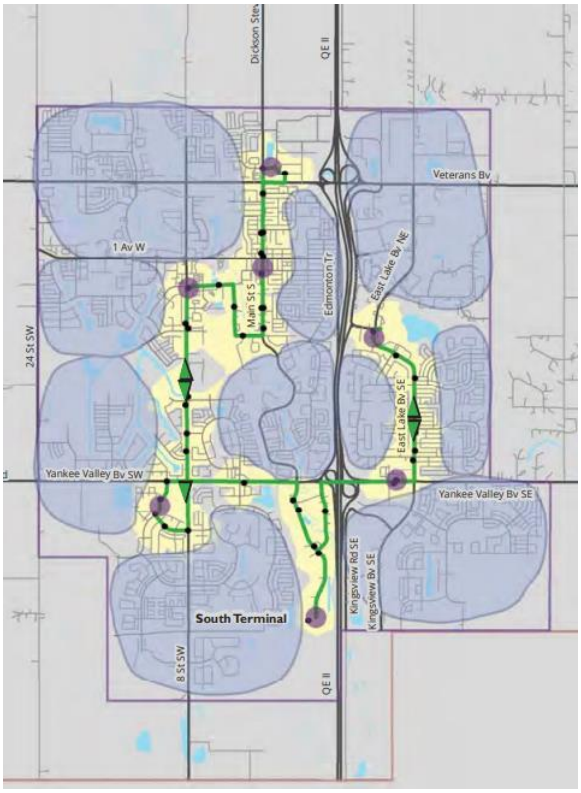
A free-to-use trial period was implemented from October 7 to December 31, 2019 and resulted in approximately 180 passengers per day. After the free-to-use period, ridership decreased slightly; however the system remained flexible and vehicles were added or reduced as needed.

The Town selected Southland/PW Transit using RideCo software because of the packaged software and operator services. It is a private operator and as a result the cost for labour is much lower (no union) and they have strong safety policies. The Town has had a good experience with. this provider.

The Town of Cochrane is planning to implement fixed routes by moving an on-demand vehicle to a fixed route during peak periods, based on data they have collected to date illustrating the most popular routes. As well, regional routes have been proposed to connect to Calgary and potentially to Banff.

It is notable that after one year of service, COLT came in under budget, with additional revenue of $39,990 beyond what was expected. A key factor to success indicated by the Town was the widespread communication and marketing that occurred over a period of one year in advance of the service initiation.

AIRDRIE, AB



Regional Context: City surrounded by rural land, 30 minutes outside of Calgary

Population: 68,000 (2018)

Type of Service: Hybrid (2017-2019)

Service Area: 33.1 km^2

Conventional Service Hours:

Weekdays | 5:00 to 23:11

Saturdays | 7:15 to 23:11

Sundays | 8:15 to 23:11

Dynamic Service Hours:

Same as Conventional, in order to transfer to fixed route service

Target Market: All residents, ParaTransit

Fare: $2.25 for on-demand or fixed-route local trip

Funding Sources: Fare revenue

SUMMARY OF TRANSIT SYSTEM

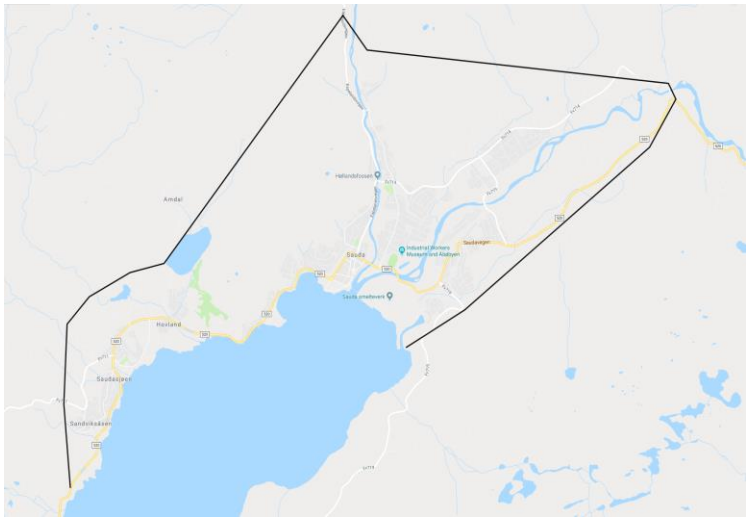
Airdrie implemented a dynamic transit system in 2017 as part of a larger network redesign. The dynamic transit was sourced from a local provider initially and was available to book from 5:00 am to midnight. The on-demand schedule aimed to allow commuters to connect to the fixed route transit, which began at 5:30 am. The dynamic transit system consisted of several on-demand zones where commuters could book rides to designated transfer points, where they could then access the fixed route service. Door-to-door service was incorporated for users with mobility challenges.

Airdrie terminated the dynamic transit system in late 2019 due to increasing costs. Initially operating costs were $7-8 per trip and escalated to $35 per trip. Before termination, ridership

decreased from 50 trips per day to around 7 trips per day, with paratransit users being the main customer. Ultimately, operating costs per hour were approximately $107, though fixed route regional transit service was a large revenue source and offset the costs of the dynamic system.

In discussions with Airdrie, they indicated that the challenges they experienced were likely a result of being early adopters of on-demand transit technology. At the time the service was initiated there were a limited number of service providers and limited rider experiences. Airdrie did indicate that there may be the opportunity to reintroduce on-demand transit in the future as more knowledge is gained on the program. A lesson learned was to test on-demand transit technology for both general operation and user experience.

SAUDA, NORWAY



Regional Context: Village in southwestern Norway

Population: 4,700 (2014)

Type of Service: bookable shuttle

Service Area: 11.9 km^2

Service Hours:

Weekdays | 9:00 to 14:00 and 16:30 to 20:00

Saturdays | 10:00 to 15:00

Additional service hours provided during school holidays, winter and summer holidays.

Target Market: All residents, focus on elderly and younger population

Fare: approximately $6 CAD per trip

Funding sources: N/A

SUMMARY OF TRANSIT SYSTEM

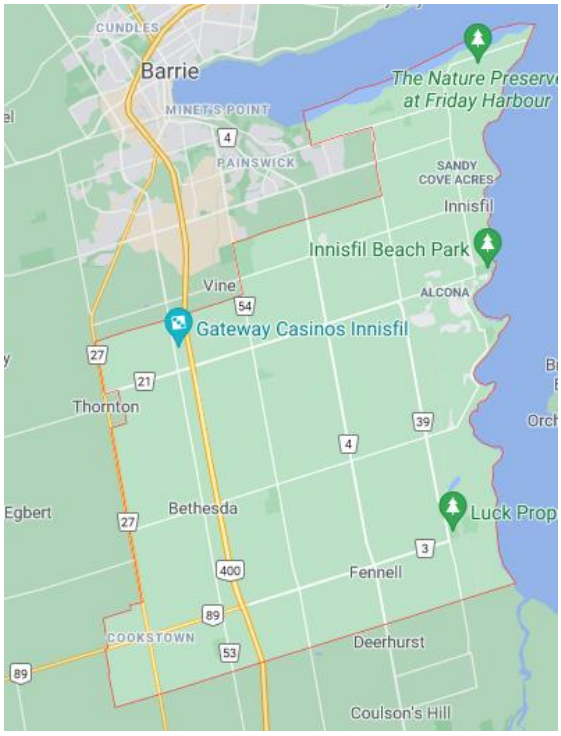
Sauda, Norway provides on-demand transit service for the Village of Sauda and surrounding area. The service was launched to test operating transit services in a cost-effective manner while providing quality services to residents.

A number of challenges exist in providing mobility services in Sauda. Efficient fixed route transportation services are challenging to operate due to low population densities in the surrounding communities and fixed routes having a 45 minute travel time?. An on-demand system can increase service efficiencies while providing basic transit service for specific trip use.

The added challenge for an aging population is implementing a technology-based solution which can result in issues with uptake due to access to technology and technology literacy. However, since launching, the service has experienced a 26% boost in ridership over the fixed route and experiences an average 3.5 boardings per vehicle hour. Average wait times are 7 minutes (as

compared to 1 hour with the former fixed-route service) and the service has a pooling ratio (i.e. number of trips that have two or more passengers) of 68%.

INNISFIL, ON



Regional Context: Low-density rural community near an urban centre, one hour from Toronto, ON

Population: 37,000 (2016)

Type of Service: Fully On-Demand (2017 - present)

Service Area: 262.7 km^2

Service Hours: 24/7

Target Market: All residents

Fare: varies; $4-$6 for predetermined origin-destination pairs; $4 off for locations not in the predetermined list

Fleet Size: Driver-owned vehicles

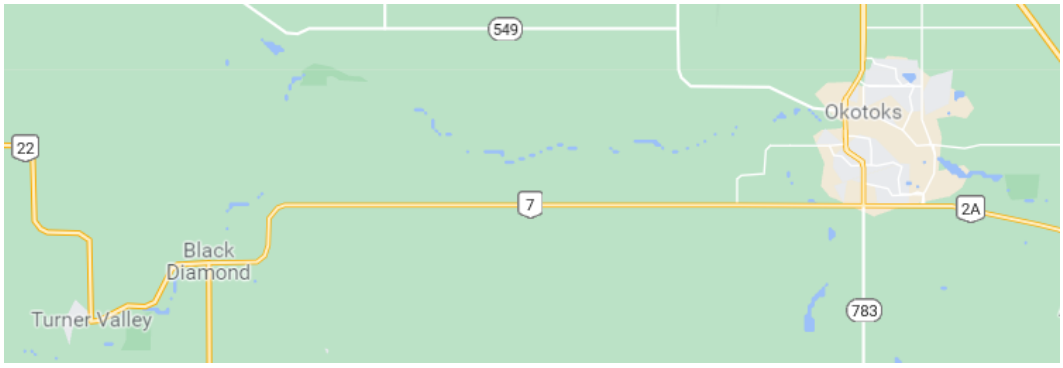
Funding Sources: Fare revenue

SUMMARY OF TRANSIT SYSTEM

After no history of public transit, Innisfil partnered with Uber in 2017 to implement a shared ride transit system. Innisfil Transit provided door-to-door rides, as well as transportation to and from fixed locations at a flat rate. This is the first ridesharing-transit partnership of its kind in Canada. Similar to uberPOOL, Innisfil Transit matches riders with other commuters travelling in the same direction. Flexible job opportunities have also been provided to residents as thousands of drivers have provided service to fellow residents through Innisfil Transit.

Users can travel to designated destinations with a flat rate while also having the option of travelling anywhere within Innisfil boundaries with a $4 discount off Uber's standard ride fare. Several programs have been implemented to ensure accessibility of transit for all residents. These include Fair Transit for low-income households and wheelchair accessible rides. Due to the program's success, Innisfil Transit has limited residents to 30 to 50 rides per month in order to stay within the Town's budget. It is notable that operating costs have decreased during the pandemic due to the decrease in passengers and the per-trip subsidy model.

BLACK DIAMOND, AB



Regional Context: Small rural community surrounded by two larger towns (Turner Valley and Okotoks), approximately 20 minutes travel time between Black Diamond and Okotoks

Population: 2,700 (2016)

Type of Service: Bookable shuttle

Service Area: 45 km^2

Service Hours:

Tuesdays and Thursdays | 9:00 to 4:00pm

Monday, Wednesday, Friday, and weekends available for Charter booking

Target Market: Travellers between Turner Valley, Black Diamond, and Okotoks

User Costs: $3 for one-way travel between Turner Valley and Black Diamond (or within the Towns), and $7 one way between Okotoks

Fleet Size: 1

Funding Sources: Fare revenue, annual sponsorship, charter bookings, federal and provincial grants.

SUMMARY OF TRANSIT SYSTEM

The Sheep River Shuttle is managed by the Town of Black Diamond and includes a bookable shuttle for use on Tuesdays and Thursdays for residents of Black Diamond within Black Diamond, Turner Valley, and Okotoks. The shuttle can be booked for charter services Monday, Wednesday, Friday, and on weekends. The shuttle was launched to provide a community transportation service connecting Black Diamond residents of all ages and abilities to shopping, services, and social outings and focuses on providing an affordable transportation service to residents with limited mobility.

SELKIRK, MB

Regional Context: Small town 22km northeast of Winnipeg.

Population: 10,300 (2016)

Type of Service: Fixed-route

Service Area: ~15 km^2

Service Hours: Weekdays | 6:00 to 18:00

Saturdays | 8:00 to 18:00

Target Market: All residents

Fare: $2

Fleet Size: One 22 passenger and one 18 passenger mini-buses

Funding Sources: advertising, fares and passes, charter income, sponsorships, provincial contribution

SUMMARY OF TRANSIT SYSTEM

The City of Selkirk's transit system is a fixed-route system, with a single 60-minute bus route which loops around the City. Selkirk Transit offers service between 6 a.m. and 6 p.m. on weekdays and 8 a.m. to 6 p.m. on Saturdays, as well as Charter service, which may be requested by phone, email or online, one business day in advance.

Selkirk Transit is operated by a non-profit organization called the Selkirk Transit Authority, contracted by the City. The City owns its two transit vehicles, which are a 22-passenger accessible bus and an 18 passenger accessible minibus, and all other capital.

The City tracks weekly passenger boardings at every stop. Their 2019 data shows just over 38,000 annual boardings across 70 transit stops. Some stops see), on average, fewer than six passengers per week (or one passenger per service day) while others like Selkirk Crossing, near the Walmart, see greater than 100 passengers per week, or about 18 passengers per day. Of the City's 70 transit stops, 34 show average use by more than six passengers per week.

Passenger data by time of day shows that most Selkirk Transit ridership occurs in the late morning to late afternoon, with a small peak in the early morning between 8 a.m. and 9 a.m. Selkirk's peak ridership hours are Noon to 5 p.m.

Selkirk Transit collects revenue from four main sources: fares and passes, sponsorships, charter service, and advertising. Advertising income is the most significant, followed by fares and passes, charter income, and sponsorships. Selkirk Transit's 2019 high-level budget breakdown was as follows:

- Total Expenses: $415,000
- Total Revenue: $140,000
- Net Annual Operating Cost: $275,000
    - Net Annual Operating Cost – City's Share: $144,000 (52%)
    - Net Annual Operating Cost – Province's Share: $131,000 (48%)

The City of Selkirk is now considering implementing on-demand transit service to expand coverage and enhance customer experience.

JURISDICTIONAL SCAN TAKEAWAYS

In our review of other jurisdictions, we noted some trends related to on-demand transit technology, micro transit or small fixed-route systems and funding for transit. The following points are key takeaways for the Village of Salmo:

- The success of on-demand transit systems is highly dependent on the local context and the goals for launching on-demand service. We found no examples of on-demand micro-transit being used to serve long distance regional trip patterns, akin to Salmo's target destinations. However, there are some trends or common elements between several on-demand transit services.
    - On-demand transit works well in lower-density but consistently populated areas, where transit demand is regular but dispersed (i.e. not concentrated in certain corridors or at key origins or destinations.)
    - Often a reduction in operating cost is cited as a goal for introducing on-demand transit, compared to operating under-performing fixed-routes. Reducing wait times and travel times is also a goal, compared to infrequent fixed-routes.
    - Most jurisdictions consider their on-demand transit service successful if it achieves between 3 and 6 passengers per hour. An on-demand micro-transit vehicle can likely accommodate as many as 8 to 10 passengers per hour before there are significant impacts to wait times and travel times.
    - As the on-demand transit service area and number of operating hours increase, so does the number of transit vehicles required to effectively serve the area. For example, Powell River serves an area of 15 square km with one vehicle, Cochrane serves 30 square km with two to four vehicles, and Innisfil serves an area of 260 square km relying on a ridesharing model with unlimited personal vehicles.
    - Access to technology may be a barrier to customers adopting on-demand transit service, and ubiquitous cellular data or wifi are required for spontaneous on-demand service to be successful.
    - To reduce barriers for customers, many jurisdictions cited the benefit of a comprehensive communication, education and marketing campaign prior to launch of on-demand transit service.
- In regional transit systems scheduled routes are the most common. The Sheep River Shuttle in Black Diamond is an example of a micro-transit system that follows this format. Black Diamond's population size is also most comparable to Salmo's.
- Fares for local transit services in smaller communities tend to be in the range of $2-$3, while fares for longer-distance or regional transit services can be higher. Fare structure must be carefully considered for transit system success, as pricing too high can deter potential riders, while pricing too low risks loss in revenue.
- Jurisdictions depend on several potential transit revenue sources, in addition to fares, including:
    - Advertising
    - Sponsorships
    - Chartering income
    - Federal and Provincial Grants

FUNDING MODEL OPPORTUNITIES

Regardless of which transit service alternative is prioritized, it is critical to ensure there is sufficient agency capacity to deliver a service reliably. The service model needs to be sustainable because once a community has a service in place, residents will come to rely on it for their regular needs.

Public transit requires investment from multiple levels of government to be successful. While there is potential for partial recovery from revenue streams such as fares, advertising and charter services, these are typically only a fraction of the total cost to operate the service, both in terms of operating staff and fleet resources. While on-demand technology has the potential to increase cost effectiveness in certain scenarios, the service-area geography and demographics are the governing factors that determine costs and whether on-demand transit is an appropriate tool.

The components of a funding model are discussed below in further detail.

REVENUE STREAMS

Municipal organizations contribute a significant portion of the operating cost of a transit service. According to the Canadian Urban Transit Association (CUTA) Factbook Statistics, the Municipal Operating Contribution per capita in 2019 was $38.63 for small transit systems (for Salmo, approximately $44,000 based on 2016 population statistics).

For a municipal organization contemplating direct operation or contracted operation of public transit services, it is important that community support is established for multiple years. Many third-party operators will not commence pilot service for less than 2 years as it is costly to arrange vehicles and support operations for a service that may be discontinued for a short period of time.

Municipal governments in British Columbia are typically limited in their ability to generate revenues other than through the annual budgeting process which relies on direct property taxes. There are examples of innovative funding mechanisms, such as dedicated fuel taxes or tolling; however, these are most suited to larger, more complex regional systems.

Generating revenue from employers would occur through business property taxes, which is not possible when a major employer is located outside a municipal boundary, like many of the major employers in the Salmo study area. Partnerships or collaboration between municipalities is an important way to ensure costs are shared appropriately across municipal boundaries.

FARE REVENUE

Fare revenue is an important source of cost recovery in public transit systems as it is the source of more than 90% of transit system revenue. According to CUTA, the following average statistics were reported in 2019 for systems that operate with a service area of less than 50,000 residents (Population Group 5). This includes nearby systems such as Nelson, North Okanagan Connector and Kootenay Boundary

- Regular Service Passenger Revenue / Total Trips (Average Fare) = $1.42
- Total Direct Operating Expenses / Total Trips = $4.93
- Revenue / cost ratio = 31%

With respect to fare revenue, the average revenues listed are for mature systems that have had multiple years of operation. It is typically observed during a pilot period that lower revenues are generated as ridership develops and users become more familiar with the system.

Numerous possible fare schemes have been used for public transit services to achieve the goals of equity and system access while recovering a portion of operation costs. Typically fare system elements include cash fare, pre-paid tickets, passes and discounted fares. The highest revenue is generated typically by on-board cash fares; however, there is additional complexity in safely handling and accounting cash contributions by a municipal operator. In some cases, the overhead costs for managing cash result in agencies choosing to only use prepaid fare products.

Prepaid tickets and passes generally provide discounts for more usage and sale can be arranged with local organizations or retail stores. Employee pass programs, often with a subsidized employer contribution, are a feature of most large transit fare structures. Discounted or free fares are in place in most transit agencies for both younger and older customers, those with disabilities, and veterans. Some agencies further choose to offer free transit service or simplified fares during a pilot period to develop ridership or to avoid the overhead and complexity of implementing both a service and fare system at the same time.

CHARTERING SERVICES

Charter services are also a source of revenue for many transit systems; however, this is a smaller portion of funding - less than 10% of total revenue in comparable systems. Charter services are possible when a transit vehicle is not in regular transit service and can be used for special purpose trips or events. Planning and billing third party agencies for charter services would be completed by the operating entity and are usually coordinated on a case-by-case basis. It would be important to charge appropriate rates that recover all of the operating overhead and capital investment by the operator. Typically, the operator offers charter services for volunteer organizations or service groups at a reduced cost, similar to the subsidized rates for regular public transit services.

Special events or festival services are a potentially important revenue source; however, these are very community specific. Large transit agencies, such as Edmonton Transit, provide profitable transit services for Park and Ride to large sporting events or music festivals with full charter rates being charged to the organizers. It is ideal when the timing of the event is during lower transit demand times, such that additional vehicles and operators are available, and a competitive rate can be negotiated between the operator and the event organizers. Special tourist-focused use of transit vehicles has also been attempted by multiple transit agencies; however, the results of these services are mixed. Typically, local entrepreneurs are better placed to arrange for tour services, possibly with charter operations. Services on novelty vehicles, such as historical buses or streetcars, have been operated successful by volunteers in many jurisdictions.

ADVERTISING

Advertising is an additional source of revenue for transit systems. Typically, the larger municipal systems will have sizable contracts with integrated marketing and advertising companies to cover the costs of advertising decals on vehicles and shelters and provide a net positive funding source for the municipal operator. In smaller communities, advertising arrangements are often less formalized and focused more on donor recognition and would have modest revenue potential.

Advertising Example from Sheep River Shuttle (http://www.town.blackdiamond.ab.ca/)

CAPITAL INVESTMENTS/TRANSIT FUNDING

GRANT FUNDING OPPORTUNITIES

As a core public service, transit services that are operated at the local level rely on grant funding from provincial and federal levels of government. There are several potential grant sources for both general transit and electric/zero emission vehicles (ZEV). Funding sources span all levels of government and non-governmental organizations. The sources below include both active and inactive funds that may be renewed in future years.

FEDERATION OF CANADIAN MUNICIPALITIES (FCM)

The Green Municipal Fund Capital Project: Transportation Networks and Commuting Options grant accepts ongoing applications from Canadian municipalities. This fund is for capital transportation projects to reduce the number of vehicles on the road, vehicle kilometres traveled, or travel time for people and goods. The funding is available for regular loans and high-ranking loans. Regular loans and grants receive low-interest on up to $5 million and a grant worth up to 15% of the loan that can cover up to 80% of eligible project costs. The high-ranking project loan is the same as regular loans with a loan limit up to $10 million. For example, for a project worth $500,000, the Village could apply for a low-interest loan of up to $400,000 (80% of the project cost) and a grant of $60,000 (15% of the loan amount).

The link to the application is: https://www.fcm.ca/en/funding/gmf/capital-project-transportation-networks-commuting-options.

The Green Municipal Fund Pilot Project: Transportation Networks and Commuting Options grant accepts ongoing applications from Canadian municipalities. This fund is for pilot projects with the

objective to reduce vehicles on the road, vehicle kilometres traveled, or travel time for people and goods. This fund also supports modal shift projects for public transit, walking, and cycling. The grant covers up to 50% of eligible costs to a maximum of $500,000. The link to the application is: https://fcm.ca/en/funding/gmf/pilot-project-transportation-networks-commuting-options.

Recent examples of transit-related operation projects funded through FCM are listed below. These projects were often first a feasibility study funded by FCM and then funding was obtained for a field test project for a new service. FCM does also fund feasibility studies through the Green Municipal Fund, which is an option should Salmo wish to pursue a more detailed feasibility analysis of public transit as an outcome of this study.

LOCATION AND TIME	GRANT AMOUNT	DESCRIPTION
Stony Plain, AB 2019	$500,000	Purchase of two buses to connect Stony Plain to Spruce Grove through a new transit service offering.
Ville de Gaspé, QC 2020	$490,015	Purchase of 10 electric vehicles and 9 charging stations to support the regional shared fleet program in Gaspésie–Îles-de-la-Madeleine (RÉGÎM).
Ville de Malartic, QC Paroisse de Saint-Anaclet-de-Lessard, QC Municipalité de Val-des-Monts, QC 2020	$95,300 $69,350 $71,600	Smart Public Transit and Electrified Transportation Project. Electrify the fleet of municipal vehicles and promote their sharing within the municipality and beyond outside normal working hours in a rural area.
Vaughn, ON 2020	$357,170	Pilot study to assess the feasibility of using a micro-transit system around the Rutherford Go Transit commuter station with an on-demand service with contracted vehicles supported by a software application customers would use to request trips online.
Bathurst, NB 2020	$179,500	One-year test of a two-route transit service with a fleet of three 30 to 40 passenger buses.

Ville de Plessisville, QC 2020	$350,000	Purchase of 10 electric vehicles and 13 charging stations for a pilot project to introduce a regional electric car-sharing system (SAUVéR) in six municipalities.

GOVERNMENT OF CANADA

The federal government provides grants and loans to municipalities to provide transportation funding including capital projects and transit-specific programs. The funds listed below include currently available funding and other sources that have closed applications for the year but may be available in future years.

The Rural Transit Solutions Fund is a two-stream fund for rural, remote, and Indigenous communities to implement transit to provide access to employment, school, and social activities. The first round of Planning Stream applications closed on October 7, 2021 and the Capital Stream will support projects form the Planning Stream. The Planning Stream provides up to $50,000 for planning tasks including public engagement, surveys, and assessments of routes. The Capital Stream provides up to $3 million for conventional transit and up to $5 million for zero-emission transit solutions. The link to the website to apply for funding is https://www.infrastructure.gc.ca/rural-trans-rural/index-eng.html.

The Investing in Canada Infrastructure Plan (ICIP) is an initiative that shares costs with the province and municipalities for capital and maintenance infrastructure projects. The application period has closed but may be open in future years. Applications for a transit system in Salmo may be submitted in the future under the Public Transit and Green categories. The cost share agreement for the ICIP is for the Canadian Government to fund 40% of municipal projects. For public transit, Canada will provide up to 40% for new public transit construction projects. For projects under the Rural and Northern Communities stream, Canada will invest up to 50% municipal and not-for-profit projects. Due to the cost share agreement, the municipality must apply to the province to apply to the ICIP.

ELECTRIFICATION OF TRANSIT / ZEV FUNDING

ZERO EMISSION TRANSIT FUND (GOVERNMENT OF CANADA)

The fund supports public transit plans for the electrification of 5000 zero emission busses as well as supporting infrastructure. The program is currently accepting applications and the link to apply is https://www.infrastructure.gc.ca/zero-emissions-trans-zero-emissions/index-eng.html.

ZERO EMISSION VEHICLE INFRASTRUCTURE PROGRAM (NATURAL RESOURCES CANADA)

This program is to support electric vehicle charging infrastructure for public-use and the private sector. This may be used to fund the charging infrastructure for a fleet of electric busses. The next round of submissions will be launched in December 2021 and due in March 2022. The link for more information and applications is https://www.nrcan.gc.ca/energy-efficiency/transportation-alternative-fuels/zero-emission-vehicle-infrastructure-program/21876

In pursuit of electric bus or vehicle initiatives, it may be possible to collaborate with the RDCK on the 100% Renewable Kootenays Project. There is no funding indicated through this project but partnered funding applications are often considered favourably. More information on the plan: https://westkootenayrenewableenergy.ca/the-big-moves/transportation/

STAKEHOLDER ENGAGEMENT

To better understand the potential demand for a transit service between Salmo and RDCK Area G and Nelson, Castlegar, Fruitvale and Trail, we consulted with 26 stakeholders from Salmo and the surrounding communities. Stakeholders were consulted from several sectors, including:

- Health care
- Industrial sector jobs
- Local and regional governments
- Social and support services
- RCMP
- Local businesses
- Chambers of commerce
- Regional airports
- Shared travel providers

A number of trends emerged through the consultation process. Generally, the lack of public transit options was seen as a hindrance to the livability of Salmo and Area G, especially for the most vulnerable residents including youth, seniors, people living with disabilities and lower-income earners. The issue of housing affordability came up in a number of stakeholder consultations. Given the increasing unaffordability of housing in Nelson, Salmo and RDCK Area G are experiencing an influx of new residents; housing prices in Salmo in 2020 increased an average of 20%, the highest increase (along with Slocan) in the RDCK. A reliable transit system would help to ensure Salmo's residents are connected to opportunities in the larger surrounding communities including higher education, employment, health care services and retail options.

Following are some of the key themes identified through the stakeholder consultations:

FIXED SCHEDULE BUS SERVICE

A catchphrase that emerged from a number of the stakeholder interviewed was, "reliable and consistent." Stakeholders felt that the only way that a bus service would work is if it becomes a reliable alternative for potential users, and is available when they need a bus service.

Most stakeholders agreed that the most viable fixed schedule bus service would run Monday – Friday, with service scheduled between 6:00 – 21:00, recognizing that some of these times would be much more in demand than others.

Some stakeholders did identify other times that would be of benefit. For shift workers (health care and industry), transportation is needed Monday - Sunday. For the RCMP, the most important time is Friday – Sunday in the evenings and early mornings. For retail-oriented stakeholders, the mid-day and later evening bus on weekends would be an asset.

Generally, the shared sentiment was if something was reliable it could build habits and feel dependable. Although it will take time to create transit as a new habit, there was the sense that, "if you build it, they will come."

ON-DEMAND SERVICE

Most stakeholders supported the idea of an on-demand transit service, but few saw it as a viable option for Salmo, especially when considering the distances between communities that are being considered. However, the lack of reliable cellular data was not identified as a concern in terms of the feasibility of implementing an on-demand service.

While the Creston Valley has an on-demand service managed by the RDCK, it requires booking at least a day in advance. The operating model includes a telephone operator to take bookings, in lieu of a self-organizing app. This on-demand system operates primarily as a handyDART system for older residents.

In some instances, an on-demand service was identified as ideal, such as for people needing a ride home late at night, a 'service' that the RCMP currently offers for people they have identified as not properly licensed or unable to drive. It was also considered ideal for people who lacked transportation but may have a need to attend a walk-in medical appointment or similar unplanned for activity. Although a volunteer driver program does exist, it is not able to meet all the demand for transportation.

HYBRID SERVICE DELIVERY

While stakeholders did not explore the technical feasibility of a hybrid service of fixed route and on-demand, a number of stakeholders did mention the desirability for both options. In particular, there was mention of the potential to operate an on-demand service during the down times of a fixed route service. These times could include mid-day, later evening and weekends.

There was also mention of using the transit bus as a charter service and that it could become a hospitality shuttle or a shuttle to the local ski hills.

POTENTIAL USER GROUPS

Stakeholders identified key user groups would be those who have no other transportation options such as students, seniors, people with disabilities and lower socio-economic residents. However, stakeholders did make mention of a number of people moving to Salmo may be one-car or no-car households and who had relied on transit where they had lived previously. The shifting demographics of Salmo and Area G were consistently mentioned as a reason to have a transit service sooner than later as the demand would undoubtedly be growing.

Industrial Employers interviewed had weak support for a commuter transit service. Their feedback included:

- Not enough workers to take advantage of the service
- Shift-workers whose shifts would not match transit schedules (i.e. weekends, evenings)
- Employees who needed flexibility in departure times, depending on variable work situations

Stakeholders who worked in the health care field felt it would be used by those in their profession who have consistent shifts (i.e. 7-3) at consistent locations (i.e. hospitals, labs, medical service centres). They felt it could also help attract and retain staff given the rising demand in the regional and throughout BC. The commuter between Kimberly and Cranbrook was cited as a good example of a transit service health workers used.

A consistent number of stakeholders from a range of professions – from local government to social service providers; chambers of commerce to health care professionals – felt a reliable and

consistent bus service would support overall economic development for Salmo and Area G, and throughout the region.

FUNDING

Most stakeholders did not feel it would be feasible for them to financially support a new bus service. The one exception was the possibility of a partnership with Interior Health Authority if a good business case could be made for how a new transit service would improve health services delivery. As well, Salmo Valley Youth and Community Centre indicated they could potentially help subsidize a bus service for youth.

For public-facing organizations, such as the Chambers of Commerce and the Library, there was interest in promoting a bus service to potential users. Other organizations who served a public that may benefit from a bus service were interested in the possibility of subsidizing a bus pass program for their staff, customers or clients. The Library also suggested they could offer a 'bus pass loan' program to Library users.

As mentioned in the Jurisdictional Scan, effective communications play an important role prior to launching a service and can be a key to success. Partnering with stakeholder organizations to promote the bus service could work to ensure its overall uptake and sustainability, and many said they would be proactive in promoting a service. The RCMP representative stated their organization could be involved in promotion through fundraising events.

Local government representatives who were consulted acknowledged the need for public funds from different levels of government to make transit effective and feasible. A representative form the RDCK stated that, in time and given clear support, the regional government could levy taxation to support a transit service if it is seen as working.

AMENITIES

Stakeholders identified a number of practical considerations for the bus service, both for the buses themselves and for the supporting infrastructure. These included:

- storage on bus (food hampers, work gear, wheelchair, stroller)
- accessible buses for people with mobility challenges
- safe, accessible and well-lit bus stops
- bike rack/ski rack (season change)

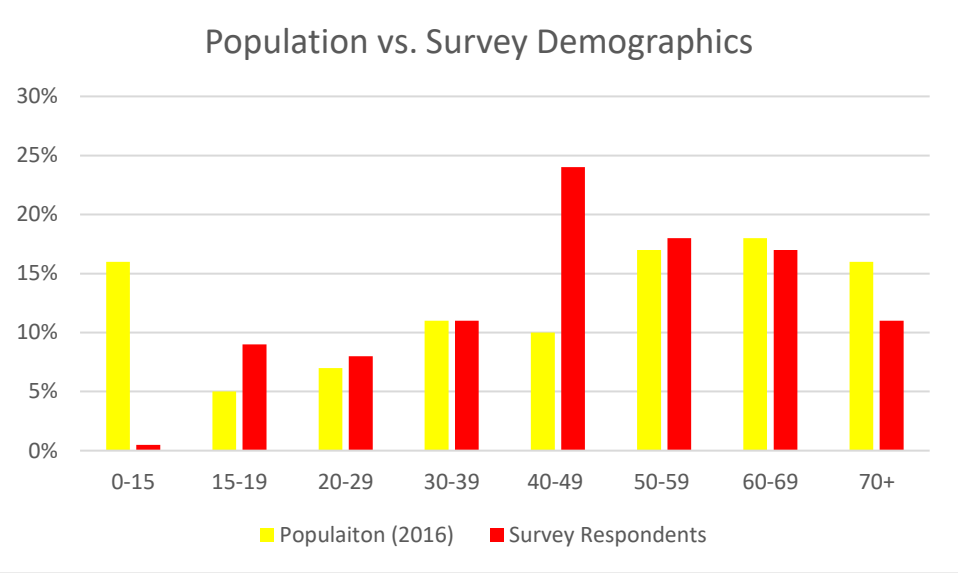
SUMMARY OF STAKEHOLDER CONSULTATION

Most stakeholders were supportive of the idea of a bus service between Salmo and Area G to the surrounding communities, with some being very enthusiastic about this opportunity. Feedback was that this service would help to create a more inclusive community for those who have fewer or no other transportation options such as youth, seniors, lower-income earners and people with disabilities.

Generally, the stakeholder feedback was to provide service Monday – Friday, with Saturday as also desirable if feasible. Ideally a fixed route bus service could build buy-in and ridership. There is a sense from stakeholders that, 'if you build it, they will come.' A two-year pilot may help show if this is true.

PUBLIC SURVEY

A public survey was launched on November 4th and closed on December 9th, 2021. A total of 180 people completed the survey, with 118 identifying as Salmo residents, or almost 10% of the total population (2016). This response rate provides an excellent basis to examine community priorities as 2% is a generally accepted rate of completion.



The high response rate of 40-49 year olds is generally understood to compensate for a low response rate form 0-15 year olds. The 40-49 age group tends to be the parents of the younger people who might use the bus service, but who generally don't complete surveys. The other age groups of survey respondents show a fairly close representation of the overall population.

The survey responses paralleled responses collected from the stakeholder consultation in terms of the potential schedule. Monday to Friday were the priority days, with Friday being the most popular day with 70% of respondents. Saturday was also indicated as a priority for 59% of respondents; Sunday had support from only 38% of respondents.

Most popular times of day were the morning (9:00 – 12:00) and late afternoon (15:00 – 18:00), although all the daytime options were popular. Seventy-six percent (76%) of survey respondents indicated they would use the bus service once a week or more.

The most popular reason to use the bus was for activities such as shopping, dining, and visiting friends (77%), followed by health care appointments (64%), travel to the airport (47%) and commuting (46%).

Nelson was the most popular destination with 61% of respondents indicating they would travel there often, followed by Trail (39%), Fruitvale (29%) and Castlegar (22%). Ymir was indicated as a popular destination in the 'Other' category. In the open comments section later in the survey, Nelson and Trail were identified as the most popular destinations.

When asked about on-demand transit, 44% responded it would be useful, while 54% said no/not sure/need more information. However, when asked if they could see the real time location of the transit vehicle, 65% indicated they would be more willing to ride. This is consistent with trends in

transportation planning, where real time information about wait times has become a useful tool for transit riders.

When asked whether they would consider giving up an automobile if there were a reliable bus service, 35% indicated ‘no’ while 49% indicated ‘yes’ or ‘maybe’. It is difficult to quantify the true number of residents who would give up an automobile if reliable transit service were available; however, this is an indicator of the potential for reduction in automobile use. It is also of note that whether the 49% of respondents give up their vehicle or not, their choice to use transit would yield a reduction in the number of vehicle trips. Whether the bus was an electric vehicle was not significantly important – with 33% more willing to ride and 60% neutral.

Finally, when asked how much they would be willing to pay for a one-way trip, the most popular response was $5 (48%) while 15% were interested in an affordable, annual membership (support for the membership model may have been more, but respondents could indicate only one answer for this question).

In summary, survey response was significant in terms of representing the population of Salmo, and to a lesser degree Area G, and was generally positive toward the opportunity of a new bus service.

TRANSIT OPTIONS

As mentioned previously, three public transit options for Salmo and Area G have been considered through this study: on-demand transit, fixed-route transit, and leveraging user-pay initiatives in the area. The options are being considered as a potential transit pilot project, ahead of the short- to mid-term roll out of enhanced BC Transit service for Salmo and Area G. Based on the public engagement completed through our study, the high-level transit destinations and service priorities seem to align with BC Transit's transit plan for the area.

Our stakeholder and public engagement process reflected each of the transit options in an attempt to understand preferences and potential around the different options. This section first reiterates some general system characteristics, based on the community feedback, which are inputs to developing transit options. Each option is described in this section, with an evaluation of the options to follow.

TRANSIT SYSTEM CHARACTERISTICS

TRIP PURPOSES

The primary reasons that Salmo and Area G residents would use a bus service are:

- Leisure activities such as shopping, restaurants and visiting friends (77%)
- Health care appointments (64%)
- Travel to or from an airport (47%)
- Commuting to or from work (46%)

The top four activities coincide with morning, midday or early evening times. Specific feedback on the time periods for transit service is discussed in the Service Span section below, but generally, there is alignment between the trip purposes above the most preferred service windows noted below.

PRIORITY DESTINATIONS

Nelson (61%), Trail (39%) and Fruitvale (29%) are the destinations where survey respondents would travel most often. Approximately half of the respondents reported that they would travel to Castlegar occasionally. Castlegar could be considered as part of system expansion, however we have not carried it forward as a priority destination for a transit pilot project.

SERVICE SPAN

Transit service span is the time period and days of week in which the transit service operates. Based on community feedback, there is strongest preference for service in the late afternoon and late morning. However, 50% or more respondents preferred service in the span of 6AM – 9PM, with most preferred service windows being 9:00 – 12:00 and 15:00 – 18:00. Preference for service on weekdays is greater than on weekends, but there is a relatively strong preference for Saturday service, compared to Sunday service. The following table summarizes the potential transit service hours that the village could target in the long term, and minimum pilot service hours to test a basic level of transit service on weekdays.

DAY OF WEEK	TARGET LONGER TERM SERVICE HOURS	MINIMUM PILOT PROJECT SERVICE HOURS
Monday – Friday	6:00 – 21:00	9:00 – 12:00, 15:00 – 18:00 *Note an earlier (6AM or 7AM) start would accommodate commute trips, if there is enough demand for commuting to the priority destinations.
Saturday	9:00 – 18:00	N/A

TRANSIT FARE

Approximately 67% of survey respondents would pay $5 or more for a one-way trip on a transit service between Salmo and surrounding municipalities, with the largest share (48%) of respondents being willing to pay a maximum of $5. As such, we have carried forward a $5 per one-way trip fare assumption for assessing fare revenue potential of a Salmo transit pilot.

OPERATING COSTS

Public transit services require a number of costs, including direct costs such as operator wages and fuel, as well as indirect costs such as insurance and technology systems. Municipalities that do not operate an in-house public transit services would contract with third parties that provide these types of services and would benefit from their experience in providing services and maintaining customer satisfaction. There are numerous experienced contract operators in British Columbia where the primary model for service delivery by BC Transit is contracted service. Based on the published rates of costs in the Canadian Urban Transit Association Factbook, a cost of between $100 to $145 per hour is anticipated, as it represents a similar cost for the service operated by Kootenay Boundary. For a pilot service span of 30 hours per week (6 hours per weekday; 9am – 12pm; 3pm – 6pm), the annual operating cost would be in the range of approximately $150,000 to $225,000.

If the service span were increased to 9 hours per weekday, filling in the middays, this would amount to 45 hours per week and cost between $235,000 and $340,000 annually.

If the same transit hours were provided by BC Transit through the West Kootenay Regional Transit System, we anticipate the service would be shared with the RDCK and that Salmo would be responsible for less than half of the annual operating cost. However, in this case, the annual operating cost would be at the higher end of the range ($225,000 for 30 hours per week). This considers both the provincial operating subsidy of between 47% and 67%, and some level of cost sharing with the RDCK.

FLEET

We have assumed that a pilot transit service would be operated with a single fleet vehicle, such as a cargo-style van, which could carry up to 15 passengers and be modified for wheelchair accessibility. We have assumed that the vehicle would be purchased new or lightly used through available grant funding sources.

RIDERSHIP

Of the 180 survey respondents, 165 (92%) reported that they would use a bus service for at least one purpose. This is very positive. However, it is difficult to estimate actual transit ridership based on a community survey because individuals' stated preferences do not always align with their actual behaviour. The survey responses have been used to craft the parameters of a transit service, and parameters have been aligned to the majority or strongest preferences. Given this, it is expected that a transit pilot, in addition to existing BC Transit service levels, would garner community support. Ridership estimates for the transit options are based on actual ridership seen on the existing West Kootenay Transit system, and discussed further in the Option Evaluation section.

OPTION A: FULLY ON-DEMAND TRANSIT PILOT

The idea of initiating a public transit pilot for Salmo and Area G residents was started with an on-demand transit system in mind, allowing for a mix of flexible pick-ups and drop-offs. Based on the survey results, the travel needs for the community are for long distance trips spread over a low-density service area. The result is that the ability of an online application to pool spontaneously scheduled trips would be limited or require an impractical wait time. Without trip pooling the result would be primarily single rider trips, essentially a publicly funded taxi service at a likely cost per trip of $40 or more.

Based on an average 30-minute travel time for a trip request and a single vehicle system, when a community member requests a trip, they will likely be waiting 30 minutes to an hour for the vehicle to arrive as it completes the round trip between two communities. If a trip is planned and someone requests and additional trip in the other direction, the customer would then wait for the driver to complete the other trip cycle first. However, based on the community feedback, customers would prefer a fixed schedule so they can arrange their affairs and minimize waiting time. Further, the survey found that customers are generally not expecting or requiring spontaneous, unplanned travel over the longer trip distances required in the region. For this reason we estimate that ridership would be lower on an on-demand service than on a fixed-route service.

To incorporate on-demand service into a transit system, technology is required. The technology typically used is a cloud-based service that includes a customer facing trip booking app and a driver-based app that provides routing, pick-up and drop-off instructions. On-demand transit technology vendors typically charge two types of fees for their service. The first is a lump sum system start-up fee, which can range from $10,000 to $30,000, the second is an ongoing subscription fee which is sometimes charged per vehicle per month, depending on the vendor, and could be expected to range between $5,000 to $20,000 per year for a small transit system. The on-demand technology fees would be significant in a small system pilot project such as Salmo's.

Fully on-demand transit works best in a small service area with consistent development such as a small or mid-sized city or town. When a service area becomes too large, serving long-distance trips to dispersed destinations, on-demand service cannot optimize pooling of rides and wait times and travel times would be higher than scheduled fixed-route service. Further, the study area for transit service for Salmo and Area G residents is vast and does not have consistent cellular data coverage. Of the community members who responded to the survey, 78% reported to have reliable wifi or cellular data, which is a considerable majority, but some community members would be excluded from accessing an on-demand transit service.

If an on-demand transit system were constrained such that the "on-demand" portion of the system is limited to flexible pick-ups and drop offs in select communities, then this option becomes very similar to a fixed-route transit pilot, where the flexible pick ups and drop offs can typically be coordinated by calling ahead and does not require expensive software. The reality for Salmo is that an on-demand transit service does not provide a significant benefit, when the top travel patterns requested by residents are to connect Salmo with Nelson, Trail and Fruitvale.

Given the above, we have focused on developing a fixed-schedule transit option to connect Salmo and Area G residents with Nelson, Trail and Fruitvale.

OPTION B: FIXED SCHEDULE TRANSIT PILOT

A fixed schedule transit service with some flexible routing in Salmo and at the destination end would allow for a scheduled trip multiple times per day between Salmo and nearby communities. Based on the results of the survey, the top three destinations considered for service are Nelson, Trail and Fruitvale. As a primary hub in Salmo, Main Street is the logical starting point for service with both good access to Highway 6, walk-up access for customers and ease of turnaround staging with the grid street network. This is also where the current bus stop is located. The following two pilot services are proposed:

Salmo to Nelson on Monday, Wednesday and Friday OR Saturday. Based on the survey responses, 104 people indicated that they would regularly use a service to Nelson and 51 people indicated they would use a service occasionally. Given that the existing BC Transit Health Route currently operates on Tuesday, Thursday and Friday, this pilot route could operate on Saturday, instead of Friday. However, the service times on the pilot would be adjusted to complement the existing Route 72 and amount to an enhanced transit service on Fridays. Based on the service span noted for a pilot service, a service operated on a 90-minute frequency would permit 2 morning trips and 2 afternoon trips between the communities with the following potential stops:

- Ymir
- Selkirk College
- Service along Baker Street
- Kootenay Lake Hospital

Salmo to Trail on Tuesday and Thursday. Based on the survey responses, 65 people indicated that they would regularly use a service to Trail and 71 people indicated they would use a service occasionally. Based on the service span noted for a pilot service, a service operated on a 120-minute frequency would permit 2 outbound morning trips and 1 inbound afternoon trip between the communities. These trips could either terminate at Fruitvale and have passengers transfer to BC Transit's Route 43, which connects Trail, Montrose and Fruitvale. Or the pilot service could connect from Salmo all the way to Trail, to provide Salmo residents with a more direct trip than the Route 43 offers. The following are potential stops for a service along Highway 3:

- Fruitvale
- Montrose
- Trail Commercial Area (including Walmart)
- Kootenay Boundary Regional Hospital

Additional service extensions are possible within area immediately surrounding Salmo, including South of the Salmo River, the Salmo Ski Hill, subject to further discussions and consultation with the community. Given the limited resources available for a pilot, it is recommended that service to

Nelson be advanced as the first priority. Service on alternating days would provide coverage to both communities and allow evaluation of the periods of greatest demand.

OPTION C: KOOTENAY CARSHARE SET-UP

Kootenay Carshare Cooperative was founded in Nelson in 2001 and allows the fixed costs of vehicle ownership to be allocated across a group of individuals and businesses. Members jointly own the vehicles and they pay only when they use a vehicle. Kootenay Carshare Co-op has established successful fleets in Nelson, Revelstoke, Rossland and Kaslo. Kaslo's fleet of four vehicles includes two electric cars, a small gasoline-fueled car and an older pickup truck. Kaslo's fleet is a comparable example for Salmo.

If the Village decides to pursue a Kootenay Carshare fleet, then first steps would involve discussions with the carshare executive to determine the Village's level of involvement. The Village could consider contributing the capital dollars to purchase the Salmo fleet vehicles, or if there are underutilized municipal fleet, they could be contributed to the co-op and be used by co-op members when not required for municipal purposes. If the Village were to consider the carshare as part of a public transportation solution or initiative, then larger vehicles, such as a passenger van, could be an asset for groups that are travelling together for joint purposes, such as commuting to work. The scheduling and arranging of trips and usage would occur by the members of the cooperative, rather than the Village.

Individual carshare members can sign up as either a full co-op member or casual member. Full co-op membership involves a $500 refundable membership fee, and $25 application fee plus an ongoing monthly membership fee of $6. Full membership includes preferred usage rates and voting rights in the co-op. Casual membership is the similar to above but without the $500 membership fee, and a slightly higher monthly membership fee of $10.

While helping establish the Kootenay Carshare in Salmo would have limited costs to a municipality, it would not provide the same scale of public benefit as a traditional transit system. Cost for individuals to use carshare vehicles would be greater than transit fares, but significantly lower than automobile ownership. As well, only people with the ability and license to drive a vehicle could benefit from the carshare program.

Kootenay Carshare also offers Air Carshare, which is peer-to-peer carsharing. This is another program to consider in the Salmo area. It allows residents to rent their personal vehicles to other carshare members when they are not in use.

In addition to carsharing services, the Village of Salmo may wish to promote local ridesharing platforms such as Kootenay Rideshare and Poparide, which are digital interfaces to facilitate carpooling; they connect people looking for rides to people offering rides, with a significant user base in the Kootenay region.

OPTION EVALUATION

Each option is evaluated based on who it likely serves and estimated costs to the Village. As the options are developed at a high level, costs are provided to help the Village consider its most appropriate next steps. A more detailed cost assessment would be required, pending future decisions about details of a Salmo transit pilot.

There are four categories of costs to consider in setting up a new transit system: start-up costs, annual administrative costs, annual operating costs and capital costs. For the purposes of this evaluation:

- start-up costs include software and any initial administration requirements;
- administrative costs are considered as ongoing administrative requirements for customer service and coordination of transit service;
- operating costs include vehicle driver(s), fuel, insurance and maintenance, and;
- capital costs include only the transit vehicle, with the assumption that storage of the vehicle will be available for little to no additional cost.

For the on-demand and fixed schedule pilots it is estimated that one driver would be sufficient and as noted above, driver wages are included in the operating cost estimate.

A simple ridership revenue assessment is also completed, to offset annual operating and administrative costs and provide the Village with a conservative estimate of potential transit use. Ridership is estimated at 5 passengers per hour (7,800 annual passengers) for a fixed schedule service and 3 passengers per hour (4,700 annual passengers) for an on-demand service. Ridership is expected to be lower for the on-demand option as it serves a smaller population and service would have limited pooling opportunity with long distance trips.

METRIC	ON-DEMAND PILOT	FIXED SCHEDULE PILOT	KOOTENAY CARSHARE SET-UP
Estimate of population served	Salmo residents travelling within Salmo and Ymir.	Salmo residents and Area G residents along Hwy 6 to Nelson and Hwy 3 to Fruitvale	Salmo and Area G residents with valid driver's licenses travelling anywhere
Who does it serve best?	Residents with access to reliable cellular data. Residents travelling within Salmo and Ymir.	Residents accessing amenities and healthcare services in Nelson, Trail and Fruitvale.	Residents with driver's licenses. Best for leisure activities, errands or appointments. Destinations are unconstrained.

METRIC	ON-DEMAND PILOT	FIXED SCHEDULE PILOT	KOOTENAY CARSHARE SET-UP
Who does it not serve?	Rural residents outside the coverage zone. Limited opportunity for regional trips.	Limited opportunity to travel to Castlegar. Limited opportunities for commuters or airport travellers.	Not ideal for commuting or airport travel, unless carpooling. Does not serve residents without valid driver's licenses.
Cost Estimate Total for 2 year Pilot	**$617,000**	**$562,000**	**Up to $60,000**
Start-up Costs	Software Setup Fee: $15,000 Service Planning: $20,000	Service Planning and Scheduling: $30,000	Nominal Village Staff time to coordinate carshare locations and setup
Administrative (Annual Costs)	*0.5 FTE Coordinator: $30,000*	*0.5 FTE Coordinator: $30,000*	*N/A*
Operation (Annual Costs)	*Operation Cost: $225,000*	*Operation Cost: $225,000*	*N/A*
	Annual Software Fee: $10,000		
Fare Revenue (Annual Revenue)	*$5 x 4,700 annual passengers = $24,000*	*$5 x 7,800 annual passengers = $39,000*	*N/A*
Subtotal Annual Costs: Admin + Operation - Revenue	$241,000	$216,000	N/A
Fleet Capital Cost*	$100,000	$100,000	Up to $60,000 if the Village contributes to fleet

*Fleet costs are very likely eligible to be covered, at least partially, by grant funding.

FUTURE CONSIDERATIONS

Through this study we learned that there is indeed interest from the Salmo community and stakeholders in bolstering public transportation options, with a priority on improving connections between Salmo and Nelson, and Salmo and Trail. There are several opportunities for the Village to pursue in this regard, however the solution that seems most feasible is to engage with the RDCK and BC Transit to move forward on BC Transit's proposed service changes for the West Kootenay Transit System. This leverages the existing transit system in the region and BC Transit's capacity to administer, plan, schedule and coordinate transit service. A critical constraint for Salmo is its lack of resources – both staff time and funding – to dedicate to its own custom public transit system.

We have identified several opportunities for the Village to consider, and organized them into an immediate to medium-term timeline, as follows.

Immediate Opportunities (0 to 4 months):

- Engage with Kootenay Carshare Co-op to determine the Village's interest in facilitating the introduction of a carshare fleet in Salmo.
- Engage with Kootenay Rideshare and Poparide about their services to residents of Salmo and Area G.
- Engage with and lobby BC Transit and the RDCK to enact the Salmo proposed service changes from the 2021 West Kootenay Transit Future Service Plan as soon as possible.
- Engage with Interior Health through BC Transit to understand the implications on the existing Interior Health funding if BC Transit service is increased between Salmo and Nelson and Salmo and Fruitvale.
    - If necessary, lobby to maintain a baseline level of funding from Interior Health for Salmo's transit service.

Short Term Opportunities (4 months to 2 years):

- Continue to engage and coordinate with the RDCK and BC Transit on proposed service changes for Salmo.
- Pending the outcome of discussions with BC Transit and the RDCK, the Village could pursue grant funding to conduct a two-year fixed schedule transit pilot project. Upon securing funding, an RFP would be required to hire a third-party transit operator.

Medium Term Opportunities (2 to 5 years):

- Continue to engage and coordinate with the RDCK and BC Transit on transit service connecting Salmo with the region.
- Monitor BC Transit's electrification progress and when the timing is appropriate, lobby for electric buses for Salmo transit service.
- Monitor BC Transit's roll-out of on-demand transit service in the West Kootenay Transit System and if appropriate, consider leveraging the technology to facilitate flexible pick-ups and drop-offs on Salmo's regional transit routes.