Fort St. John

Transit Service Review



FINAL – *May* 2013



Acknowledgements

BC Transit would like to thank those Fort St. John area community members who provided input into this review. In particular, the elected officials and staff of the City of Fort St. John, the transit staff of Diversified Transportation Ltd., the Fort St. John community groups and businesses, and all those residents and organizations who provided feedback at workshops using online surveys and in one-on-one interviews.

Table of Contents

Acknowledgements	2
1. Executive Summary	
1.1 Introduction	
1.2 Consultation	
1.3 Service Options	
1.4 Next Steps: Suggested Path to Staged Implementation	
1.5 Recommendations	
2. Introduction	
2.1 Service Review Process	
2.2 Guiding Principles	
3. Community Overview	
3.1 Demographics	
3.2 Land Use and Future Growth	
3.3 Transportation Options	
4. Current Transit System	
4.1 Introduction	
4.2 History	
4.3 Conventional Transit System	
4.3.1 Conventional Transit System Ridership	
4.3.2 Fort St. John Conventional Transit Market	
4.3.3 Onboard Passenger Count Results	
4.3.4 Conventional Transit System Fares	
4.4 Custom Transit	
4.4.2 Custom Transit Ridership	
4.4.3 Custom Transit Current Operating Conditions	
4.4.4 Custom Transit Fares	
4.5 Benchmarking for the Fort St. John Transit System	
4.6 Transit Infrastructure	
4.6.1 Fleet	
4.6.2 Fort St. John Transit Centre	
4.6.3 Bus Stops	
5. Consultation and Communication	
5.1 Summary of Key Themes from Phase One Consultation	
5.2 Conventional Transit Current Service and Market Conclusion	
5.3 Custom Transit Current Service and Market Conclusions	
5.4 Summary of Key Themes from Phase Two Consultation	
6. Proposed Service Change Options	
6.1 Conventional Transit Short-Term Service Change Options.	
6.2 Conventional Transit Medium-Term Service Change Option	
6.3 Conventional Transit Longer-Term Service Change Options6.4 Custom Transit Short-Term Service Change Options	
6.5 Custom Transit Medium-Term Service Change Options	
6.6 Custom Transit Longer-Term Service Change Options	
6.5 Community Transit Supportive Initiatives	
7. Conclusions	50
7.1 Implementation Considerations	
7.2 Monitoring Plan	
7.3 Recommendations	
Appendix A (Fare Review)	
Appendix B (Development Referral)	
Appendix C (Detailed Operational Test Review	62

1. Executive Summary

1.1 Introduction

The Fort St. John Transit Service Review is a comprehensive analysis of transit in the Fort St. John region. As specified in the Master Operating Agreement, BC Transit reviews the efficiency and effectiveness of individual systems in order to make recommendations for improving system performance. This Service Review is especially timely given the current growth that is taking place in Fort St. John and which is expected to continue in the future.

This study has been initiated by BC Transit in collaboration with the system's local transit partners, the City of Fort St. John and Diversified Transportation Ltd. (Pacific Western Transit) to review the transit system and identify opportunities for improvement to:

- 1. Service on the Northside (Route 1), with a focus on service to the new hospital and Northern Lights College:
- Custom Transit Service (handyDART): review capacity of existing service and pursue opportunities to address capacity related issues, increase customer access and improve service reliability;
- 3. Any potential new major developments and large scale subdivisions and assess feasibility of serving them with transit in the future;
- 4. Existing schedule and Rider's Guide: opportunities for improved schedule consistency and ease of use; and,
- 5. Increase the ridership and satisfaction of customers through marketing and community engagement strategies.

1.2 Consultation

A range of tools was used to maximize opportunities for public/stakeholder input within time and resource limitations. Engagement techniques included a project website, online/print surveys, on-board engagement, a key stakeholder workshop and one-on-one meetings.

The key themes that emerged from the phase one consultation are summarized in the table below. These themes fall into four categories – scheduling, routing, capital infrastructure, and other issues.

Scheduling Issues

- More weekend service requested, especially on Sundays and holidays, for conventional service
- More evening service on weekdays requested between 6:00pm and 9:00pm
- Improved service reliability (buses sometimes run late during the peak periods)
- More frequent service, particularly in the Southeast and the North

Routing Issues

- The routes are too circuitous, resulting in indirect travel and long travel times
- There is no direct service into Northern Lights College
- There is currently no service to the Fort St. John Airport

Capital Infrastructure Issues

- The bus stop at the new Hospital is too far away from the entrance
- Improved snow removal is required at bus stops
- More bus shelters needed
- Some bus stops are difficult to pull in and out of for conventional and handyDART buses, and to unload people using wheelchairs
- Improved information required at the bus stops

4

Other Issues

- More education and outreach is required on how to use transit and the benefits of transit
- Some customers using the handyDART could be using the conventional service, which is causing over-demand on the handyDART system
- Feedback that the current fares are too high
- No real-time information (i.e. Google Transit)
- There are not enough taxis in Fort St. John to meet demand when transit options are not available. There are also no wheelchair accessible taxis.

In March 2013, phase two of the consultation included the presentation of the Draft Service Plan options to the public at two open houses.

Location	Time	# of Attendees
Totem mall	Tuesday, March 26 10am – 2pm	15
Northern Lights College	Tuesday, March 26 3pm - 6pm	40
Online Survey	March 25 to April 26	4

In addition to the public consultation, the information presented at the Open Houses was made available on the BC Transit Future website for further feedback. The key themes that emerged from this public consultation were:

- The majority of people are supportive of the proposed changes to Route 1, Route 3 and Route 5:
- The priorities for service improvements are expanded evening service and more direct routes; and,
- A lot of respondents requested more transit shelters at bus stops.

As a result of the public consultation, the following **changes** were made to the Transit Service Review:

- An additional option for the Route 3 reconfiguration was proposed that routes via 108th
 Avenue, Alaska Road North to Alaska Highway as opposed to the current routing
 through Chances Gaming Casino (see Section 6 for further information); and
- An additional short-term service option was included that extends evening service on Fridays only.

1.3 Service Options

Based on the review of existing Fort St. John service and findings from analysis and public consultation, a set of short-term (within the next year) – contingent upon local approval and the completion of an Implementation Memorandum of Understanding – medium-term (2013 to 5 years from now) and longer-term (2013 to 10 years from now) service change proposals have been developed for the Fort St. John transit system. The proposals for Conventional Transit and Custom Transit include options to improve service, infrastructure and community transit support initiatives. The tables on the following pages summarize the options, as well as the advantages and disadvantages of each option. A more detailed summary of the options with estimated costs can be found in Section 6.

Conventional Service Change Options					
Service Changes	Advantages	Disadvantages			
Short Term (2013 to 2014)					
#1 Re-introduce service to Northern Lights College and optimize existing resources by reconfiguring Route 1, Route 3 and Route 5.	 Improved service to areas of higher demand Customers using the service to access Northern Lights College benefit from the increased accessibility 	 Potential for increased operating costs Some areas currently served by transit will have service discontinued Increased capital costs for potential new bus stops 			
#2 Adjust the schedules to better match school and work start times	 Customers benefit from service that better fits their needs Increased ridership from key demographics 	Potential for increased operating costs			
#3 Improve bus stop facilities at the new hospital	 Safer walking conditions and improved access to transit for customers at the hospital Address transit solutions for any future subdivision in the area 	 Increased capital costs Increased maintenance costs (snow removal, graffiti removal etc.) 			
#4 Introduce new bus stops in areas with potential demand	Attract additional ridership to meet potential new demands	 Increased capital costs Increased maintenance costs (snow removal, graffiti removal etc.) 			
#5 Remove snow along sidewalks, prioritizing those along transit routes, and at bus stops in a more timely fashion	Safer walking conditions and improved access to transit during the winter	Other areas that are currently high priority may be cleared later			
Medium Term (2013/14 to 5 y					
#6 Install more bus shelters #7 Improve service frequency on high-performing	 More comfortable waiting conditions for the customers, attract new riders Customers benefit from improved service 	 Funding required to purchase and install the bus shelters Increased operating costs Another vehicle may need to be purchased 			
#8a Extend evening service on weekdays and Saturdays	Customers could use the transit service for work, school, etc. in the evening	 to provide service Increased operating costs Another vehicle may need to be purchased to provide service 			
#8b Extend evening service on Friday only	Customers could use the transit service for work, school, etc. on Friday evening	 Increased operating costs Another vehicle may need to be purchased to provide service 			
#9 Introduce service on Sundays and holidays	 Customers could use the transit service for work, shopping, etc. on Sunday and holidays 	 Increased operating costs Another vehicle may need to be purchased to provide service 			
#10 Introduce expanded service on the northside and in the southeast	Improve service where demand is highestAttract additional ridership	 Increased operating costs Another vehicle will need to be purchased to provide service 			
#11 Explore service connecting downtown Fort St. John with the Airport	Customers could use the transit service to access the Airport and any other destinations in the area	 Increased operating costs Another vehicle will need to be purchased to provide service 			
Longer Term (2013/14 to 10 y	,				
#12 Expand regional transit in neighboring districts	Attract additional ridership to meet potential new demands	 Increased operating costs Another vehicle(s) will need to be purchased to provide service 			

Custom Transit Service Change Options

Service Changes	Advantages	Disadvantages
Short Term (2013 to 2014)		
#13 Encourage custom transit customers to use the conventional transit system where possible	Encourage new transit customers Reduce the demand on handyDART by encouraging some riders to use the conventional system.	
#14 Update the registered client list	 Increase ridership and revenue Improve communication with existing clients Potential for optimization of resources through improved scheduling 	
Medium Term (2013/14 to	5 years from now)	
#15 Consider Taxi Supplement options	Improved access to alternative modes of transportation	Depending on demand, may be more cost- effective to expand handyDART
Long Term (2013/14 to 10	years from now)	
#16 Expand local custom transit service	 Customers with physical and cognitive disabilities can more easily get to medical appointments and treatments, and access other amenities 	 Increased operating costs Another handyDART vehicle may need to be purchased to provide service

1.4 Next Steps: Suggested Path to Staged Implementation

The report recommends implementing the service changes options in a staged approach. This will allow the most critical needs and cost-effective options to be implemented first. As the population of Fort St. John continues to grow, there will be a larger tax base to support the transit system; therefore more resource-intensive improvements can be implemented both to service and infrastructure.

It is also recognized that service needs and/or local government capacity to fund transit improvements may change over time. Therefore, options for implementation which require expansion to service hours or vehicles will need to be confirmed on an annual basis for the subsequent year as part of the local budget approval process. All new fleet requests stemming from any service expansion will likely trigger a new bus order, therefore necessitating an 18-24 month lead time before expected delivery and introduction to revenue service.

Also, it is recognized that the implementation of any option requiring expansion is dependent on BC Transit's fiscal year budget, as well as the allocation of available provincial transit expansion funding between transit systems as determined through BC Transit's Transit Improvement Program (TIP).

Once local government has approved a service option or combination of options for implementation – and local and provincial funding has been approved, if required – an Implementation Agreement Memorandum of Understanding (MOU) will be developed for signature by the City and BC Transit. This MOU outlines the exact service changes to be developed for implementation and the roles and timeline for implementation.

1.5 Recommendations

It is recommended that the City of Fort St. John:

- Receive this report as information and provide feedback to City staff prior to finalization by BC Transit staff;
- Review the routing and schedule change proposals presented in Section 6: Short-Term Service Change Options;
- Receive the Fare Structure Review (Appendix A) as information.

2. Introduction

The Fort St. John Transit Service Review is a comprehensive analysis of transit in the Fort St. John region. As specified in the Master Operating Agreement, BC Transit reviews the efficiency and effectiveness of individual systems in order to make recommendations for improving system performance. This Service Review is especially timely given the current growth that is taking place in Fort St. John which is expected to continue in the future.

This study has been initiated by BC Transit in collaboration with local transit partners to review the transit system and identify opportunities for improvement to:

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- 3. Any potential new major developments and large scale subdivisions and assess feasibility of serving them with transit in the future;
- 4. Existing schedule and Rider's Guide: opportunities for improved schedule consistency and ease of use; and,
- 5. Increase the ridership and satisfaction of customers through marketing and community engagement strategies.

These objectives are being accomplished by:

- Building public awareness and support of transit services provided in Fort St. John;
- Gathering feedback on potential routing, scheduling, capital infrastructure, and other changes, as well as input on other elements of the existing transit system; and
- Analyzing, summarizing and reporting back on consultation outcomes to the City of Fort St. John and making recommendations to improve transit system efficiency and effectiveness for the consideration of local decision makers.

This project and requisite analysis took place between August 2012 and February 2013.

2.1 Service Review Process

The following steps were undertaken by BC Transit staff as part of the Fort St. John Transit Service Review:

- Traveled several times to Fort St. John to better understand the local transit dynamics, met with operations managers, transit staff, customers, municipal contacts and stakeholder groups, and conducted a review of the transit systems by riding the routes, examining bus stops, etc.;
- Researched current and future demographic and economic trends, reviewed planning documents to determine current and future land use and growth areas, and examined existing transportation options;
- Conducted a full review of the transit system, including both system and route-by-route overviews, and conducted an analysis of ridership, transit system and operational data, existing system infrastructure, and operational considerations;
- Organized and held consultation events and activities, including open houses (Spring 2013), stakeholder meetings, an on-board survey, a web survey and obtained and summarized feedback from these activities;
- Assessed infrastructure and vehicle assets to determine existing conditions and future needs; and
- Evaluated service and proposed detailed service change options, transit monitoring actions, and short, medium and longer term recommendations.

2.2 Guiding Principles

Transit systems are inherently complex and there are an infinite number of ways in which they can be improved or enhanced. To keep this review focused on what can be feasibly implemented as well as meet the critical needs of the community, the following guiding principles have been applied:

- Minimize inconveniences imposed on current customers;
- Place more emphasis on immediate needs;
- Place more emphasis on improvements that require minimal increase in operating and capital costs;
- Improve reliability and accessibility of the transit system; and
- Improve lines of communication with stakeholders and customers.

These principles have provided an important foundation in the development and evaluation of the service change options.

3. Community Overview

3.1 Demographics

The City of Fort St. John has a population of more than 19,000 people, comprised mostly of young families with children. The City, located in the heart of majestic Peace River country, is the largest regional service center in northeastern BC, servicing 60,000 people in the area. Since its beginning in 1794 as a trading post, Fort St. John has grown with opportunities such as the completion of the Alaska Highway in 1942 that sparked a population boom and the discovery of high-grade oil in 1951 that set the City's course as British Columbia's Oil and Gas capital.

Fort St. John is one of the youngest communities in BC, with an average age of 32 years, whereas the average in BC is 42 years.¹ From 2005-2012 the average yearly population growth was 2.8%. This young population has resulted in one of the highest birthrates in BC. According to the most recent forecast, by 2046, its population is expected to triple. Given current house and lot sizes, this may mean that the developed land area of the city could also triple.

It also has one of the faster growing senior populations in the province, as many aging residents are choosing to stay in Fort St. John to retire; the current senior population is approximately 2,000 (10% of the total population). Due to the aging of the baby boomer generation, the number of residents over the age of 60 is expected to quintuple by 2046.²

The economy in Fort St. John is based on the energy sector, specifically oil and gas extraction, which makes up 16% (over 2,100 jobs) of Fort St. John's total labour force with a significant portion of the retail, construction, food service and professional sectors (3,700 jobs) being indirectly linked to income generated from the oil and gas sector.³

In 2008 the reported median household income for Fort St. John was around \$78,000. This is \$15,000 more than the typical household income in BC.⁴ However, there is a significant disparity between well-paying energy sector jobs and many of the service and retail jobs: this has resulted in difficulty filling vacancies in these sectors.

3.2 Land Use and Future Growth

According to the Fort St. John Official Community Plan, approximately one-third of all the land in Fort St. John is used for housing. The composition of current housing in the city is 65% single family, 31% apartments and 4% other forms of housing (duplexes, co-ops etc.) with a median housing price of approximately \$285,000.

Over the next five years the city will need an average of 190 new units/year, 6-10 years out they will need 200 units/year and in 11-15 years out they will need 225 units/year based on current population projections. It is also anticipated that 3,000 – 4,000 new residential units will be

¹ Statistics Canada 2011

² http://www.fortstjohn.ca/files/Our Bright Future.pdf

³ Statistics Canada 2006

⁴ Fort St. John Official Community Plan, 2011

needed within the next 25 years. As a result of this rapid growth it is imperative that transportation analysis be included in all land-use decisions.

The management of land resources is key to the long-term viability of Fort St. John. Based on the Official Community Plan, its land use objective is to provide a housing mix of 50% single-family detached, 20% semi-detached, 20% multi-family dwellings and 10% alternative housing forms. The intent of the land use policy is to maintain a mixture of tenures, price point and housing types to foster development while providing adequate, affordable housing options for residents.

3.3 Transportation Options

Fort St. John is the transportation hub of the Peace River Region. The main highway, Highway 97 (Alaska Highway), runs through the city and then north to Fort Nelson, the Yukon, and Alaska. Within the city the streets are laid out in a grid pattern. The main streets are the north-south 100th Street and the east-west 100th Avenue. Greyhound Bus Lines, which has a bus stop in the city, operates a route along the highway, north to Whitehorse (via Fort Nelson) and south to Dawson Creek. In early 2013 the Passenger Transportation Board approved Greyhound Canada Transportation's application to cut several of its' routes through the Peace Region. The City is also served by the taxi companies Teco and Fort St. John Taxi, neither of which has a wheelchair accessible vehicle.

In 2006, most of the Fort St. John population drove to work (77%), while most of the remainder either walks or carpools (19%) or rides in a vehicle as a passenger (10%). Of the remaining 4%, 1% use public transit and 3% use other modes (bicycling, taxicab).⁵

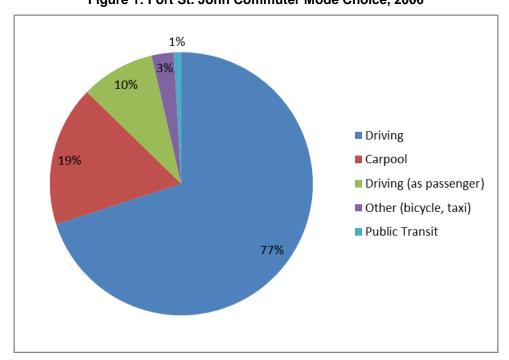


Figure 1: Fort St. John Commuter Mode Choice, 2006

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⁵ http://bcemissions.ca/go/city/Fort St. John/index.html

4. Current Transit System

4.1 Introduction

The Fort St. John Transit System is currently operated by Diversified Transportation Ltd., known locally as Pacific Western Transit. The system offers a mixture of conventional fixed-route, fixed-schedule service and custom, door-to-door service for persons with disabilities (handyDART). This section outlines the history, existing transit system routes, frequency, ridership, fleet, infrastructure, costs and revenues and benchmarks this against similar systems in Canada. Specifically, this section focuses on the routes identified for review within this report.

4.2 History

The Conventional transit system began operating with three buses in 1981, serving three routes. A number of service adjustments have been made over time to match changing and evolving economic conditions and passenger demands. The importance of the high school student market was identified early in the design of the transit system and the creation of two special routes in 2011 reflects the ongoing commitment to meet the demands of that market. In 2010/11 the transit exchange was relocated which resulted in a 30% increase in passengers carried: an all-time high of 131,800 passengers rode the buses in 2011/12.

The custom (handyDART)/paratransit system began operating in April 1998 with the use of one vehicle and eight service hours per weekday. As a result of population growth, passenger demand has increased significantly on the handyDART system. To meet ever increasing ridership, service hours have more than tripled with the most recent expansion occurring in October 2012 which constituted a 2,000 service or 33% increase. Monthly ridership has increased substantially from an average of 530 rides per month in 1999 to an average of 1,800 rides per month in 2011.

The paratransit portion of the system utilizes a handyDART vehicle to provide limited service to the residents in the nearby Peace River Regional District areas of Taylor and Charlie Lake. All residents are eligible to use the Taylor and Charlie Lake service, but the trips must be prebooked.

4.3 Conventional Transit System

The conventional transit system is comprised of five conventional routes. All routes begin and end at the downtown Cultural Centre, at the corner of 100th Avenue and 100th Street. The schedule is designed as a pulse network⁶ with the transit exchange located downtown to allow for simplified connections between services. Route 4 and Route 5 operate only when school is in session, when school is not in session they run as regular Route 2 and Route 3 trips.

⁶ A pulse network is a regularly scheduled transfer, usually happening at the same time, in which transit vehicles from a range of routes are scheduled to meet each other to allow for simple transfer.

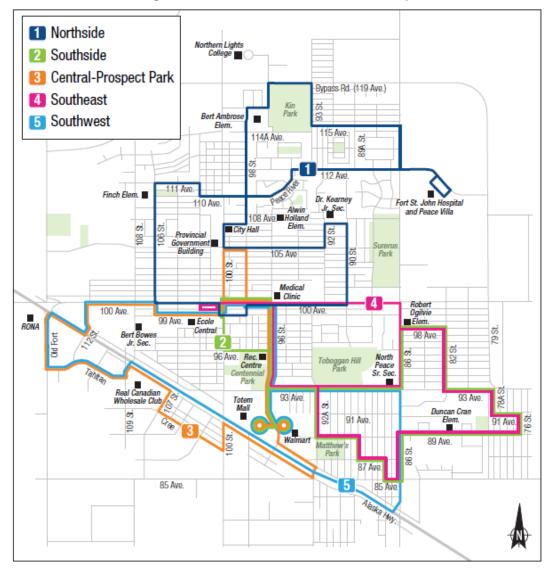


Figure 2: Fort St. John Current Transit Map

- Route 1 Northside this route covers the northeast and northwest quadrants. In addition to downtown and the shops along 100th Street, major destinations served by this route include the new Fort St. John Hospital, Northern Lights College, City Hall, Provincial Government building, Dr. Kearney Junior Secondary School, Alwin Holland Elementary School, Finch Elementary School and Bert Ambrose Elementary School;
- Route 2 Southside this route covers the southeast quadrant. In addition to downtown, major destinations served by this route are the Pomeroy Sports Centre, Totem Mall, North Peace Senior Secondary School, Robert Ogilvie Elementary School and Duncan Cran Elementary School;
- Route 3 Central-Prospect Park- this route covers the southwest quadrant. In addition
 to downtown, major destinations served by this route are the Pomeroy Sports Centre,
 Totem Mall, Bert Bowes Junior Secondary School, École Central and the Real Canadian
 Wholesale Club:
- Route 4 Southeast this route operates peak-only trips when school is in session and does a variation of Route 2;

• Route 5 Southwest – this route operates peak-only trips when school is in session and does a variation of Route 3.

Table 1: Fort St. John Transit Service Levels

	Route Description	Weekday	Saturday	Sunday/Holidays
Route 1	Northside	Every 30 min	Approx. 30-60 min	No service
Route 2	Southside	Every 30 min	Every 30 min	No service
Route 3	Central-Prospect Park	Every 30 min	Approx. 30-60 min	No service
Route 4	Southeast	1 morning trip	No service	No service
	Couriousi	1 afternoon trip		
Route 5	Southwest	1 morning trip	No service	No service
	Coddiwoot	1 afternoon trip		

4.3.1 Conventional Transit System Ridership

Ridership performance is outlined below and illustrates a decline in ridership from 2003 until 200. The sharp rise in ridership in 2010 is attributed to the transit exchange reconfiguration in 2009 from Northern Lights College to the downtown Cultural Centre and ridership has since leveled off and remained relatively steady.

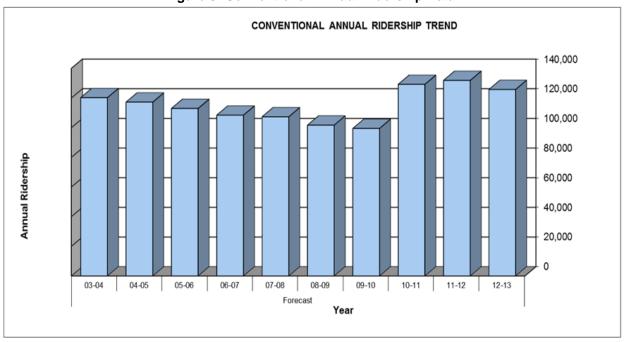


Figure 3: Conventional Annual Ridership Total

Figure 4 below demonstrates the fluctuations in ridership per month in 2011/12, with a predictable decrease in December-January and then again during the summer months due to seasonal holidays. This ridership pattern is typical in most comparable systems.

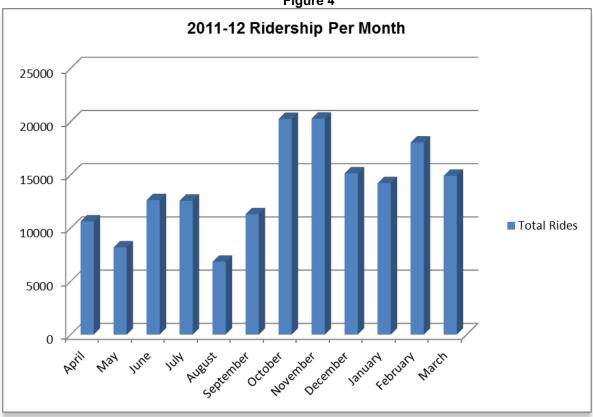


Figure 4

4.3.2 Fort St. John Conventional Transit Market

Analysis of the Fort St. John transit market is based on the onboard and online surveys carried out in fall 2012.

Highlights include:

- The majority of passengers completing the surveys were adults, followed by school and college students and seniors;
- The most popular destinations were the downtown core followed by Northern Lights College and Wal-Mart/Totem Mall;
- Most passengers use the bus for work (29%) and School/College (21%) (Figure 5);
- Most surveys were completed on Route 2 Southside (58%) and Route 1 Northside (29%) with only 8% on Route 3 Central-Prospect Park;
- The majority of riders (55%) transfer to another service at the downtown Cultural Centre;
- These riders are generally frequent transit riders with 81% using the bus 2-4 times per week or more;

- Ratings for different aspects of transit service were good, with the highest ratings for courtesy of drivers (97% very satisfied or satisfied), cleanliness of buses (76% very satisfied or satisfied) and closeness of stops to home (81% very satisfied or satisfied) (Figure 6); and
- Customers were least satisfied with convenience of routes and frequency of routes (Figure 6).

Figure 5: Conventional Transit Trip Purpose (Based on Survey Results)

15%
21%

School/College

Work

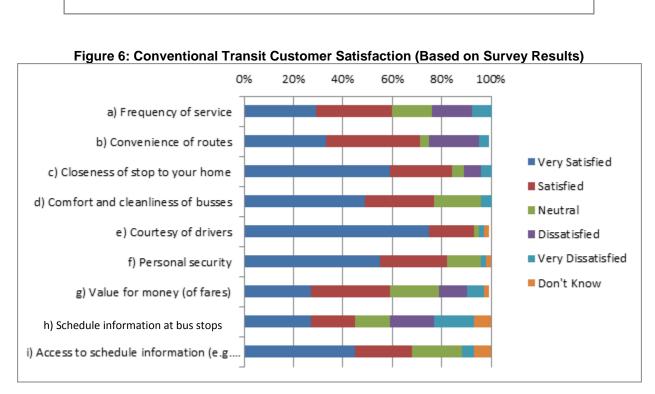
Other

Other errands

Shopping

Medical Dental

Social/Recreational



4.3.3 Onboard Passenger Count Results

On board Passenger Count Data was collected over a two-week period in October 2012. Counts were performed during service on both weekdays and Saturdays in order to provide information on rides per trip, total route ridership and ridership on specific route sections.

It should be noted that these results reflect ridership specific to a snapshot period of time. Ridership can vary due to different factors such as time of year, weather and overall economic conditions. As such, this data is used as an indicator of system performance and any analysis is complimented by a variety of other data and engagement input prior to developing service options.

The data indicated that the regular route with the highest ridership is Route 1 Northside with an average of 9 passengers per weekday trip. This was followed closely by the Route 2 Southside with an average of 7 passengers per weekday trip. Route 3 Central-Prospect Park had an average of 5 passengers per weekday trip.

The busiest times in a transit system, known as peak periods, were distinctly aligned with school start and finish times. The busiest stop locations in the system include:

- Northern Lights College (Route 1)
- Totem Mall (Route 2, 3 & 5)
- North Peace Senior Secondary (Route 2, 4 & 5)
- Finch Elementary (Route 1)
- Dr. Kearney Junior Secondary (Route 1)

4.3.4 Conventional Transit System Fares

Table 2: Fort St. John Conventional Fares

One-way Trip	Cash	10 Tickets	Monthly Pass
Adult	\$2.00	\$18.00	\$40.00
Senior	\$1.75	\$15.75	\$35.00
Student to Gr. 12	\$1.75	\$15.75	\$35.00
College Student	\$2.00	\$18.00	\$35.00
Child 4 years & under	No charge	-	-

Appendix A provides a more comprehensive review of the fare structure.

4.4 Custom Transit

18

At present, the custom transit system operates primarily as handyDART, a demand responsive, door-to-door service within the municipal boundaries of the City of Fort St. John. The objective of custom transit service is to provide eligible, registered customers who are unable to use the conventional system with access. Ridership growth is not typically a goal of custom transit systems; instead, efforts should be made to encourage the use of the 100% accessible low floor

conventional service, thereby maximizing the amount of handyDART trips available to those who are unable to utilize the conventional transit service.

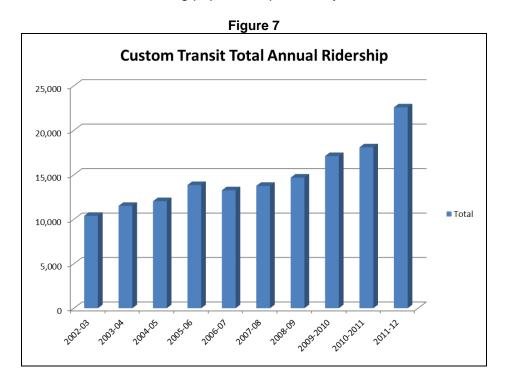
Accessible light duty buses are equipped with lifts to accommodate passengers with mobility difficulties. Passengers must first register for the service and pre-book their travel. The system provides both a regular subscription service (for instance, for people who travel regularly to medical or therapy appointments), as well as one-time trips for shopping, recreation or other purposes. Registration of eligible users is currently managed by the Fort St. John Association for Community Living. The service operates on weekdays between 7:45 a.m. – 5:00 p.m. and on Saturdays from 9:00 a.m. – 5:00 p.m. There is no service on Sunday or public holidays.

Limited paratransit service – which does not require registration and is open to all residents – is provided to the nearby Peace River Regional District areas of Taylor and Charlie Lake. This service is open to all residents; however trips must be pre-booked as service will not operate otherwise. This service operates from Monday-Friday with one return trip in the morning and one return trip in the afternoon.

4.4.2 Custom Transit Ridership

There are currently 680 registered clients on the handyDART system in Fort St. John. Of those, 506 (74.4%) are registered ambulatory users (i.e. handyDART eligible riders not using a wheelchair, or other mobility device) and 174 (25.6%) are registered wheelchair users (i.e. passengers using mobility devices such as a wheelchair or scooter).

Ridership on the custom transit system has been steadily increasing since 2002-03 (Figure 7), likely due to Fort St. John's increasing population, particularly with senior citizens.



Based on feedback from the operating company, many of the existing handyDART customers' transit needs – particularly those who are ambulatory – could potentially be fulfilled by the conventional transit system. Options to encourage handyDART customers to use the conventional system, particularly for ambulatory customers, are outlined in Section 6.

4.4.3 Custom Transit Current Operating Conditions

Feedback from the operating company outlined that handyDART service is gaining ridership due to the aging population. The other recent contributing factor is the relocation of the hospital away from the downtown core which means that customers who could previously walk to the hospital now rely on the handyDART. The most popular destinations for handyDART customers are the hospital, medical clinics in downtown, the Totem Mall and Wal-Mart. The handyDART system also looks after the many disabled students who cannot use School District 60's bus system.

The operating company encourages their customers to schedule their trips at least 24 hours in advance. However, many customers still try to schedule a trip on the same-day, which often leads to unmet trips (requested trips during regular service hours which could not be served due to vehicle being fully booked). In 2011/12 there were over 300 unmet trips.

4.4.4 Custom Transit Fares

Table 3: Fort St. John Custom Transit fares

One-way Trip	Cash
Within Fort St. John	\$2.00
To/from Taylor and Charlie Lake	\$4.00
Attendants	No charge

Appendix A provides a more comprehensive review of the fare structure.

4.5 Benchmarking for the Fort St. John Transit System

Transit system performance for conventional and custom transit was compared to similar transit systems within the province as outlined in the tables below. The similarity is based on a variety of criteria such as population, ridership and revenue hours for 2011/12 data.

Table 4 outlines that the conventional system has an annual ridership of approximately 132,000; it performs poorly in comparison to the average for other peer systems with 11.8 riders per hour and a cost recovery of 6.8%.

For the custom transit system, Table 5 outlines that there is an annual ridership of approximately 23,000; it performs extremely well in comparison to the average for other peer systems with 3.7 rides per hour and a cost recovery of 9.3%.

In summary, the conventional transit system is performing well below average in all areas, whereas the custom transit system is performing well above average in all areas. This demonstrates that there is likely too much reliance on the custom transit system and that there are opportunities for a certain segment of custom transit riders to use the conventional system

instead. Suggestions on how to encourage handyDART users to try the conventional system are explored in the service option proposals in Section 6.

Table 4: 2011/12 Conventional System Figures for Fort St. John and Peer Communities

rabio 4. 2011/12 Conventional Cyclem 1											
Transit System	Licensed Vehicles (1)	Total Passengers	Rank	Total Revenue (\$) (2)	Rank	Cost Recovery	Rank	Rides/ Hour	Rank	Operating Costs/Hour	Rank
Sunshine Coast	8	510,412	1	750,826	1	39.3%	1	26.9	2	\$85.83	2
Prince Rupert	5	353,828	2	415,913	2	34.5%	2	35.4	1	\$96.83	5
Nelson	5	257,172	3	321,865	3	22.1%	4	22.5	4	\$100.58	6
Port Alberni	5	314,706	4	315,461	4	17.6%	7	25.5	3	\$125.15	8
Kootenay Boundary	11	286,190	5	295,209	5	12.9%	8	22.0	6	\$125.63	9
Cranbrook	5	246,781	6	271,867	6	20.6%	5	20.4	7	\$86.24	3
Powell River	5	227,615	7	256,675	7	19.8%	6	19.2	8	\$93.60	4
Squamish	5	203,814	9	189,899	9	11.7%	10	19.1	9	\$127.22	10
Terrace Regional	3	185,475	8	206,449	8	24.8%	3	22.1	5	\$79.20	1
Kitimat	5	135,890	10	151,795	10	12.6%	9	14.9	11	\$104.03	7
Fort St. John	5	131,859	11	126,372	11	6.8%	12	11.8	12	\$142.65	11
Dawson Creek	4	122,253	12	125,625	12	9.9%	11	17.2	10	\$151.59	12

Table 5: 2011/12 Custom Transit System Figures for Fort St. John and Peer Communities

				<u> </u>	u. 00 .0						
Transit System	Licensed Vehicles (1)	Total Passengers	Rank	Total Revenue (\$) (2)	Rank	Cost Recovery	Rank	Rides/Hour	Rank	Operating Costs/Hour	Rank
Fort St. John	4	22,582	1	45,471	1	9.3%	1	3.7	1.0	\$61.51	3
Alberni - Clayoquot	4	18,972	2	37,444	2	7.3%	2	3.5	4.0	\$78.13	7
Cowichan Valley	4	11,651	3	25,110	3	5.0%	7	2.0	8.0	\$65.00	4
Sunshine Coast	4	8,149	4	16,463	5	5.0%	8	2.4	6.0	\$77.97	6
Terrace Regional	2	7,242	5	13,988	6	7.3%	3	3.6	3.0	\$76.68	5
Prince Rupert	1	6,778	6	7,289	9	5.1%	6	3.6	2.0	\$54.15	1
Cranbrook	3	6,679	7	18,177	4	6.9%	4	1.6	9.0	\$54.46	2
Kootenay Boundary	2	5,286	8	10,999	7	5.3%	5	2.1	7.0	\$84.24	8
Squamish	2	5,160	9	8,551	8	2.9%	9	2.5	5.0	\$115.65	9

[▲] Municipally run transit system. Information above only reflects those costs included in the Annual Operating Agreement.

⁽¹⁾ Includes in service and spare vehicles

⁽²⁾ Includes advertising revenue

The revenue hours invested per capita was also compared to similar transit systems within the province as outlined below in Table 6. Fort St. John's revenue hours per capita are at 0.59 hours/capita, which is below the average of 0.75 hours/capita. Given the community's relative compact size and growing population, this means that there may be room to increase the frequency or span of service in order to keep pace with community needs and make transit more marketable.

Table 6: 2011/12 Conventional Hours Per Capita

Table 6. 2011/12 Conventional Hours Fer Capita					
Conventional Transit System	Population	Annual Revenue Service Hours	Hours per capita		
Kitimat	8,400	9,033	1.08		
Powell River	13,900	12,332	0.89		
Kootenay Boundary	13,000	11,253	0.87		
Nelson	14,000	11,320	0.81		
Sunshine Coast	25,600	18,985	0.74		
Terrace Regional	11,500	8,368	0.73		
Prince Rupert	13,600	9,680	0.71		
Port Alberni	18,500	12,332	0.67		
Squamish	16,200	10,669	0.66		
Cranbrook	19,500	12,055	0.62		
Dawson Creek	11,600	7,091	0.61		
Fort St. John	19,000	11,138	0.59		
Average			0.75		

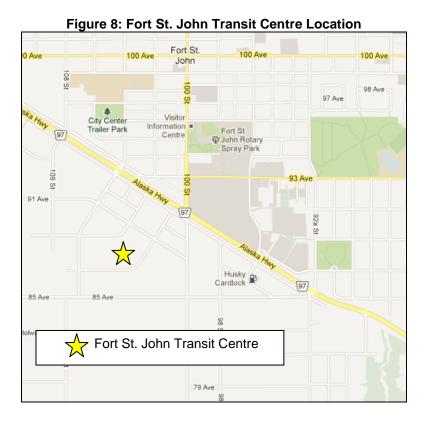
4.6 Transit Infrastructure

4.6.1 Fleet

The 100% wheelchair accessible transit fleet is currently comprised of 10 vehicles: five heavy duty Dennis Darts for the conventional service and three Ford *Polars* and two Chevy *ARBOC*'s for custom transit.

4.6.2 Fort St. John Transit Centre

The current transit centre is located at 10404 - 87th Avenue (in the industrial area). This property is currently at full capacity, and therefore any expansion which would require an additional vehicle will require a move to a new facility.



4.6.3 Bus Stops

There are currently 95 bus stops, 11 of which currently have bus shelters. The primary transit exchange is at the downtown Cultural Centre, at the corner of 100th Avenue and 100th Street. All services are designed to meet at this location to provide safe and convenient transfers.

5. Consultation and Communication

A range of tools was used to maximize opportunities for public/stakeholder input within time and resource limitations. Engagement techniques included:

- Fort St. John Project Website a dedicated web page has been established for the
 duration of the Service Review and can be found in the Transit Future section of the BC
 Transit website. This provides information on materials that will be developed
 throughout the Service Review, as well as updates on upcoming events, reports,
 presentations and for providing online surveys to solicit feedback during the two
 consultation phases.
- Online/Print Survey local residents, workers and visitors to Fort St. John were
 encouraged to complete an online survey including questions related to travel habits and
 feedback on the existing transit system.
- On-Board Engagement transit riders were encouraged to complete one on-board passenger survey in November 2012, including questions related to travel habits and feedback on the existing transit system.
- **Key Stakeholder Workshop** 33 organizations were invited to participate in a Key Stakeholder Workshop to provide feedback on existing user groups, destinations, future development and issues and opportunities with the existing transit service.
- One-on-One Meetings numerous one-on-one meetings were held with key
 community, education, government and business groups as well as transit drivers to
 garner feedback on user groups and issues and opportunities with the existing transit
 system and in order to raise awareness with their customers, members, staff and clients
 about the project and ability to provide feedback.
- **Open House Events –** Two open house events were held in March 2013 that presented the proposed service changes outlined in this report to the public.

The key stakeholders consulted during this review included the following:

Local Government Partners

- City of Fort St. John staff and Council
- District of Taylor staff
- Peace River Regional District staff

Transportation Providers

- Diversified Transportation Ltd.
- Fort St. John Airport

Educational Agencies

- Northern Lights College
- School District 60

Health Institutions

Northern Health

Community Organizations / Committees

- Save Our Seniors
- Women's Resource Centre
- Fort St. John Association for Community Living
- Friendship Centre
- Fort St. John Chamber of Commerce
- Northeast Aboriginal Business Centre
- North Peace Seniors Housing Society

Businesses and Commercial Developments

- Totem Mall
- Wal-Mart
- Chances Casino
- Pomeroy Lodging
- Lakeview Inn and Suites
- Quality Inn Northern Grand
- Super 8

Other

 Northern Environmental Action Team (NEAT)

The levels of participation and response for the workshop and surveys are summarized in the following table:

Consultation Method	Level of Participation / Response
Stakeholder Workshop	23 representatives from local organizations
Onboard survey	41 responses
Online survey (#1)	39 responses
Open Houses	55 attendees
Online survey (#2)	4 responses

5.1 Summary of Key Themes from Phase One Consultation

The key themes that emerged from the phase one consultation, which included onboard surveys, web surveys, stakeholder meetings, and interviews with passengers, are summarized in the table below. These themes fall into four categories – scheduling, routing, capital infrastructure, and other issues.

Scheduling Issues

- More weekend service requested, especially on Sundays and holidays, for conventional service
- More evening service on weekdays requested between 6:00pm and 9:00pm
- Improved service reliability (buses sometimes run late during the peak periods)
- More frequent service, particularly in the Southeast and the North

Routing Issues

- The routes are too circuitous, resulting in indirect travel and long travel times
- There is no direct service into Northern Lights College
- There is currently no service to the Fort St. John Airport

Capital Infrastructure Issues

- The bus stop at the new hospital is too far away from the entrance
- Improved snow removal is required at bus stops
- More bus shelters needed
- Some bus stops are difficult to pull in and out of for conventional and handyDART buses, and to unload people using wheelchairs
- Improved information required at the bus stops

Other Issues

- More education and outreach is required on how to use transit and the benefits of transit
- Some customers using the handyDART could be using the conventional service, which
 is causing over-demand on the handyDART system
- Feedback that the current fares are too high
- No real-time information (i.e. Google Transit)
- There are not enough taxis in Fort St. John to meet demand when transit options are not available. There are also no wheelchair accessible taxis.

5.2 Conventional Transit Current Service and Market Conclusions

Below is a summary of the key market conclusions for the conventional transit system:

- Student and commuter trips are the transit system's primary ridership source, therefore
 every effort should be made to ensure that this service is maintained and potentially
 improved in the future.
- Already well represented in current ridership and the on-board passenger survey, the College student market has significant ridership potential. Possible measures to increase ridership from this market include:
 - Rerouting transit service back to the entrance of Northern Lights College.
 - Adjusting transit schedules to meet with regular class start and finish times.
 - Exploring opportunities to introduce a U-Pass.
- While walking is a viable transportation alternative for some residents during the fair weather months, every effort should be made to enhance the convenience and frequency of the transit service to encourage potential ridership growth in the work commuter market. Possible measures to increase ridership from this market include:
 - Adjusting schedules to meet with regular work start and finish times.
 - Increasing AM and PM peak commuter service on all routes and extend service into the evenings.
- Seniors and persons with a disability are under served by the current conventional system and should be considered as potential growth markets. Possible measures to increase ridership from this market include:
 - Ensuring that the transit system's routes adequately service Senior's residences and medical facilities.

5.3 Custom Transit Current Service and Market Conclusions

Below is a summary of the key market conclusions for the custom transit system:

- Custom Transit ridership continues to show steady growth.
- There is currently an opportunity to encourage some existing handyDART riders to use the conventional system.
- There is currently an opportunity to promote service to include additional nonhandyDART eligible passengers on the regional trips from Charlie Lake and Taylor.
- Unmet trip requests have been gradually increasing to a current total of about 330 in 2011/12.

5.4 Summary of Key Themes from Phase Two Consultation

In March 2013, phase two of the consultation included the presentation of the Draft Service Plan options to the public at two open houses.

Location	Time	# of Attendees
Totem mall	Tuesday, March 26 10am - 2pm	15
Northern Lights College	Tuesday, March 26 3pm – 6pm	40

In addition to the public consultation, the information presented at the Open House was made available on the BC Transit Future website for further feedback. The key themes that emerged from this public consultation were:

- The majority of people are supportive of the proposed changes to Route 1, Route 3 and Route 5;
- The priorities for service improvements are expanded evening service and more direct routes; and,
- A lot of respondents requested more transit shelters at bus stops.

As a result of the public consultation, the following **changes** were made to the Transit Service Review:

- The proposed Route 3 reconfiguration **now routes** via 108th Avenue, Alaska Road North to Alaska Highway as opposed to the current routing through Chances Gaming Casino (see Section 6 for further information);
- An additional short-term service option was included that extends evening service on Friday only; and,
- An addition stop has been proposed to service the new commercial development proposed in the lot south of the Wal-Mart entrance (see section 6 for further information).

6. Proposed Service Change Options

In reviewing the Fort St. John Transit System and the feedback collected from the consultation activities, a set of short-term (2013/14, depending on the completion of an implementation Memorandum of Understanding), medium-term (2013 to 5 years from now) and longer-term (2013/14 to 10 years from now) service change options have been developed. The proposals for conventional transit and custom transit include options to improve service, infrastructure and community transit supportive initiatives. These options have been developed with the following assumptions / constraints in mind.

Short-Term Assumptions / Constraints (2013 – 2014)

- Some low-cost immediate actions can be taken
- There is no new funding from the City of Fort St. John
- The number of vehicles in the transit fleet will remain the same

Medium-Term Assumptions / Constraints (2013/14 to 5 years from now)

- The population of the City of Fort St. John will continue to grow
- There is additional funding from the City of Fort St. John
- There will be turnover of the transit vehicle fleet and there will be an opportunity to increase the number of vehicles in the transit fleet to provide more service

Longer-Term Assumptions / Constraints (2013/14 10 years from now)

- The population of Fort St. John will continue to grow and demand patterns will change
- There is additional funding from the City of Fort St. John
- There will be turnover of the transit vehicle fleet and there will be an opportunity to increase the number of vehicles in the transit fleet to provide more service

The service options presented here are also subject to:

- 1. The scope of work as defined by the Memorandum of Understanding (MOU). Any changes to the scope would result in the need to re-initiate a new MOU;
- 2. The prioritization of expansion funding requests and the subsequent confirmation of provincial funding;
- 3. Fleet availability where additional buses are determined to be required. All new vehicle requests will likely trigger a new bus order necessitating an 18-24 month lead time before expected delivery and introduction into revenue service;
- 4. Hours are only an estimate prior to actual scheduling being completed;
- 5. Any costs included are based on an estimated hourly cost and are intended to provide an understanding of the potential financial impacts of each option. The costs do not yet consider more accurately the impact on service hours and fleet requirements; and
- 6. All options are subject to additional operational feasibility testing.

The subsequent table summarizes the service changes options for Conventional Transit and Custom Transit, as well as the advantages and disadvantages of each option.

Conventional Service Change Options				
Service Changes	Advantages	Disadvantages		
Short Term (2013 to 2014)				
#1 Re-introduce service to Northern Lights College and optimize existing resources by reconfiguring Route 1, Route 3 and Route 5	 Improved service to areas of higher demand Customers using the service to access Northern Lights College benefit from the increased accessibility 	 Potential for increased operating costs Some areas currently served by transit will have service discontinued Increased capital costs for potential new bus stops 		
#2 Adjust the schedules to better match school and work start times	 Customer benefit from service that better fits their needs Increased ridership from key demographics 	Potential for increased operating costs		
#3 Improve bus stop facilities at the new hospital	 Safer walking conditions and improved access to transit for customers at the hospital Address transit solution for any future subdivision in the area 	 Increased capital costs Increased maintenance costs (snow removal, graffiti removal etc.) 		
#4 Introduce new bus stops in areas with potential demand	Attract additional ridership to meet potential new demands	 Increased capital costs Increased maintenance costs (snow removal, graffiti removal etc.) 		
#5 Remove snow along sidewalks, prioritizing those along transit routes, and at bus stops in a more timely fashion	Safer walking conditions and improved access to transit during the winter	Other areas that are currently high priority may be cleared later		
Medium Term (2013/14 to 5 y				
#6 Install more bus shelters #7 Improve service frequency on high-performing	More comfortable waiting conditions for the customers, attract new riders Customers benefit from improved service	 Funding required to purchase and install the bus shelters Increased operating costs Another vehicle may need to be purchased 		
#8a Extend evening service on weekdays and Saturdays	Customers could use the transit service for work, school, etc. in the evening	 to provide service Increased operating costs Another vehicle may need to be purchased to provide service 		
#8b Extend evening service on Fridays only	Customers could use the transit service for work, school, etc. on Friday evening	 Increased operating costs Another vehicle may need to be purchased to provide service 		
#9 Introduce service on Sundays and holidays	 Customers could use the transit service for work, shopping, etc. on Sunday and holidays 	 Increased operating costs Another vehicle may need to be purchased to provide service 		
#10 Introduce expanded service on the northside and in the southeast	Improve service where demand is highestAttract additional ridership	 Increased operating costs Another vehicle will need to be purchased to provide service 		
#11 Explore service connecting downtown Fort St. John with the Airport	Customers could use the transit service to access the Airport and any other destinations in the area	 Increased operating costs Another vehicle will need to be purchased to provide service 		
Longer Term (2013/14 to 10)				
#12 Expand regional transit in neighboring districts	Attract additional ridership to meet potential new demands	 Increased operating costs Another vehicle(s) will need to be purchased to provide service 		

Custom Transit Service Change Options

Service Changes	Advantages	Disadvantages	
Short Term (2013 to 2014)			
#13 Encourage custom transit customers to use the conventional transit system where possible	 Encourage new transit customers Reduce the demand on handyDART by encouraging some riders to use the conventional system Increase ridership and revenue 		
#14 Update the registered client list	Improve communication with existing clients Potential for optimization of resources through improved scheduling		
Medium Term (2013/14 to 5 years from now)			
#15 Consider Taxi Supplement options	 Improved access to alternative modes of transportation 	 Depending on demand, may be more cost- effective to expand handyDART 	
Longer Term (2013/14 to 10 years from now)			
#16 Expand local custom transit service	Customers with physical and cognitive disabilities can more easily get to medical appointments and treatments, and access other amenities	 Increased operating costs Another handyDART vehicle may need to be purchased to provide service 	

6.1 Conventional Transit Short-Term Service Change Options

#1. Reconfiguring Route 1 Northside.

In the summer of 2012, Route 1 Northside was rerouted away from the entrance of Northern Lights College (NLC) to allow for the extension of the route to access the new hospital. To compensate for the lost service to NLC, an improved bus stop was introduced at southbound 96th Street at 119th Avenue.

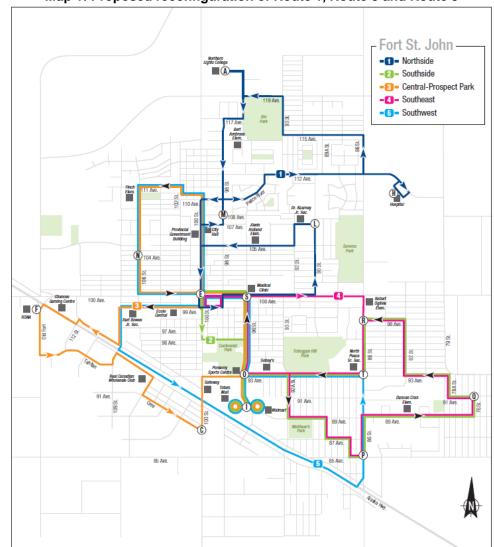
Since the change was made, students and faculty have expressed concerns over the reduced access to NLC. With the revised routing, students and faculty of NLC now have to walk approximately 500 meters to the new stop. Access to this new stop is particularly challenging during the winter months, especially for customers with mobility issues. Below is a photograph of the existing stop location with NLC in the background.



Photo 1: Current bus stop for Northern Lights College at 96th St and 119th Ave

There are currently approximately 600 full-time students at any given time at NLC and 40 full and part-time faculties. The primary users at NLC are international students, disabled students, single parents and students living in residence. NLC students are one of the strongest transit ridership demand sources in Fort St. John. Without access to a bus stop in closer proximity to the college, there has been a negative impact on ridership, with a corollary drop in revenue and therefore an increase to the local net share of transit costs.

BC Transit has worked with the stakeholders to find a solution to improve access to transit service at NLC. Based on ridership analysis, stakeholder feedback and operating conditions BC Transit recommends a reconfiguration of Route 1 and Route 3 to re-introduce service back to the entrance of Northern Lights College.



Map 1: Proposed reconfiguration of Route 1, Route 3 and Route 5

Table 7: Route lengths

Route	Existing Route Time	Proposed Route Time
Route 1 Northside	30 minutes	30 minutes
Route 3 Central-Prospect Park	30 minutes	30 minutes
Route 5 Southwest	30 minutes	30 minutes

Proposed Route Descriptions (changes in bold)⁷:

Route 1 Northside: Downtown Cultural Centre via 100th Street, 99th Avenue, 98th Street, 100th Avenue, 90th Street, 107th Avenue, 92nd Street, 105th Avenue, 100th Street, 107th Avenue, 98th Street, 110th Avenue, Peace River Road, 112th Avenue, Hospital, 112th Avenue, 86th Street, 115th Avenue, 93rd Street, 119th Avenue, **Northern Lights College,** 96th Street, 117th Avenue, 98th Street, 110th Avenue, **100th Street to Downtown Cultural Centre**.

⁷ See Appendix C for a detailed field test review of the proposed routings.

Route 3 Central-Prospect: Downtown Cultural Centre via 100th Street, 99th Avenue, 108th Street, Alaska Road North, 112th Street, Alaska Highway, Old Fort Road, Tahltan Road, 109th Avenue, Alaska Road South, 107th Street, Cree Road, 100th Street, 93rd Avenue, 96a Street, Totem Mall, Wal-Mart, 96a Street, 100th Avenue, 100th Street, 110th Avenue, 102nd Street, 111th Avenue, 106th Street, 100th Avenue, 100th Street to Downtown Cultural Centre.

Route 5 Southwest: Downtown Cultural Centre via 100th Street, 99th Avenue, 106th Street, 100th Avenue, 108th Street, Alaska Highway, 86th Street, 93rd Avenue, 96a Street, Totem Mall, Wal-Mart, 96a Street, 100th Avenue, 100th Street, 110th Avenue, 106th Street, 110th Avenue, 106th Street, 100th Avenue, 100th Street to Downtown Cultural Centre.

Based on ridership analysis, it was determined that Route 3 Central-Prospect Park had the lowest ridership in the system, particularly in the industrial region south of the Alaska Highway. This option would reconfigure some of these low-performing resources used on the Route 3 Central-Prospect Park to cover parts of the Route 1 Northside. Through the reconfiguration of these resources, Route 1 Northside would be able to resume serving Northern Lights College at the stop on the Campus. This reconfiguration would also introduce two-way transit service on sections of 100th Street.

Through consultation, it was also discovered there was a high-demand to introduce service along Alaska Road North where the McDonalds is located. Therefore, Route 3 is also being rerouted along this roadway. A new stop is proposed at Alaska Road North and 112th Street, which would facilitate access to the car dealership, hotel and the gaming centre.

As a result of the reconfiguration of Route 3, the peak-only Route 5 school service will need to be changed as well. The proposed reconfiguration of Route 5 would ensure the connections with the schools are still being met. This reconfiguration should also improve the connection for customers using the service to connect with the northwest part of the city. The trade-off is that the service to the southern industrial region is reduced during these trips.

The proposed reconfiguration of the transit service is assumed to be cost-neutral, with no change to the service hours, hours of operation or to the number of drivers and vehicles. However, there is potential for additional costs including new or revised bus stop locations.

Advantages:

- Service re-introduced to the entrance of Northern Lights College, meaning improved ability to continue to attract and build on ridership from this key destination
- Offers better service to key shopping, residential and businesses locations by introducing two-way service on 100th Street between 110th Avenue and 100th Avenue
- Optimization of existing resources

Disadvantages:

- Slight chance of minor ridership loss through the following changes to Route 3 Central-Prospect Park:
 - o Service discontinued on Alaska Rd between 100th Street and 93rd Street
 - Service discontinued on Alaska Rd North between 92a Street and 96a Street
 - Service discontinued on 98th Street between 105th Avenue and 100th Avenue
- Route 5 Southwest service would also have to be reconfigured in some capacity meaning a potential ridership loss

Below is a summary of the estimated impacts the change would have on costs. Note that because the reconfiguration will put more resources in higher demand areas, the revenue could potentially increase.

Initial High Level Estimate - Ad	dditional Annua	ıl Impacts	
Option 1: Re-align Route 1 and	d Route 3		
Service Hours:	-	Passenger Revenue:	\$7,100
Annual Ridership:	7,200	Total Cost:	\$0
Vehicles Required:	0	Net Local Share of Costs:	\$0
		Provincial Share of Costs:	\$0

#2. Adjusting the overall schedule to better match school and work start times. Based on comments from workshop attendees and survey respondents, one of the main deterrents to using public transportation is the inability to access specific work and school start times. This is particularly the case for employees at the Hospital, students at Northern Lights College and students at the Energetic Learning Campus at the Pomeroy Sports Centre.

Below is a summary of the key start/finish times for these locations. Based on this information, the schedules of the corresponding routes should be adjusted as efficiently as possible to accommodate the staff and students without compromising existing service.

Location	Regular Start Time	Regular Finish Time
Energetic Learning	8:40am	3:00pm
Campus		·
Hospital	7:00am	3:00pm
Northern Lights College	8:30am	4:00pm

Through discussion with School District 60, there are potential future service reductions planned for the school bus system in Fort St. John. Therefore, additional consultation between BC Transit, the City of Fort St. John and School District 60 is recommended to ensure the transit needs of the students are being met in the future. The proposal outlined below is based on starting transit service in the morning approximately 15 minutes earlier to accommodate the regular hospital regular start times.

Initial High Level Estimate – Additional Annual Impacts			
Option 2: Adjust the schedules to better match school and work start times			
Service Hours:	60	Passenger Revenue:	\$500
Annual Ridership:	500	Total Cost:	\$5,900
Vehicles Required:	0	Net Local Share of Costs:	\$2,700
		Provincial Share of Costs:	\$2,700

#3. Improving bus stop facilities at the new hospital.

The existing bus stop in front of the new Hospital is currently inadequate as it is a significant distance away from the main entrance of both the hospital and the Peace Villa residence. Access to this stop is particularly challenging during the winter months, especially for customers with mobility issues.



Introducing a bus stop at the entrance of the hospital will provide significantly improved access to transit for hospital visitors, patients and staff. Moreover, another stop on westbound 112th Avenue should also be introduced to accommodate any future development in the area. Figure 9 below provides a summary of where the new bus stops could be located.

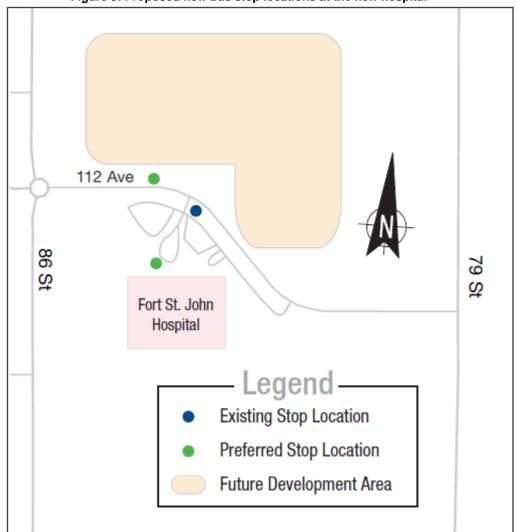


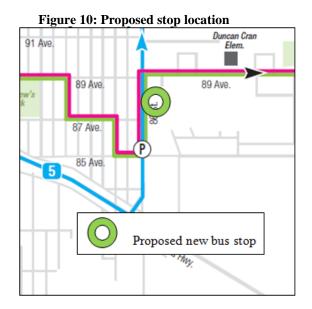
Figure 9: Proposed new bus stop locations at the new hospital

While the above option is preferred, if it is not feasible then the alternative would be to improve the existing bus stop location by introducing a shelter and improving pedestrian access to and from the main entrance.

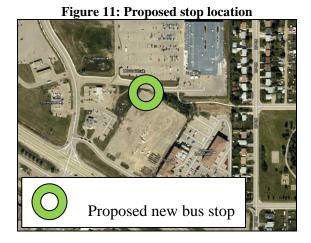
#4. Introducing new bus stops in areas of high-demand. Based on observations and customer feedback, there are a couple of locations where the introduction of a new bus stop would improve the service for existing customers and could potentially yield new customers.⁸

The locations are as follows:

Northbound 86th Street between 85th Avenue and 89th Avenue (Route 2, 4, 5). There is a substantial amount of high-density apartment complexes in the neighbourhood therefore the addition of a new stop could potentially attract new ridership.



 Eastbound Wal-Mart entrance (Route 2, 3, 5). There is a new commercial development planned for the lot south of the entrance that will include restaurants. Introducing a stop at this location will provide direct access for customers to the new development in addition to the existing facilities (Super 8, Pomeroy Inn & Suites, A&W Restaurant).



⁸ See Appendix C for a detailed list of proposed bus stops based on the field test of the proposed service adjustments.

#5. Removing snow along sidewalks, prioritizing those along transit routes, and at bus stops in a more timely fashion. This might require changes to the City's snow removal policy and practices. Areas of high priority could include the major destinations such as Totem Mall, the Hospital, Northern Lights College and the Secondary Schools etc.

In addition to the clearing of the public roads, private roads and parking lots where buses operate also need to have the snow regularly removed to provide safe and reliable operations and avoid any possible damage to the bus.



6.2 Conventional Transit Medium-Term Service Change Options

#6. Installing more bus shelters. One of the most common requests from existing customers was to install more bus shelters. Bus shelters encourage transit ridership by providing protection from the weather and improving safety. Installation of additional bus shelters could be accomplished with funding support from the Ministry of Transportation and Infrastructure and BC Transit. Priority candidate bus stops for bus shelters include the hospital, Wal-Mart and the Pomeroy Sports Centre (northbound stop).



Photo 4: An example of a new bus shelter

The cost to install a BC Transit supplied bus shelter, which accommodates wheelchairs, is about \$22,000. The municipal share of this cost would be approximately \$15,000.

#7. Improving service frequency on high-performing routes. Customers have requested more frequent service, particularly during the peak periods. Based on ridership analysis and customer feedback, the routes which warrant peak period service improvements are Route 1 Northside and Route 2 Southside. This also corresponds with future ridership demand growth as both these areas are currently undergoing significant development.

The proposal below is based on improving frequency on Route 1 Northside and Route 2 Southside to every 15 minutes from every 30 minutes during the weekday peak periods.

Initial High Level Estimate – Additional Annual Impacts				
Option 7: Improve service frequency on high-performing routes				
Service Hours:	1,770	Passenger Revenue:	\$14,200	
Annual Ridership:	14,300	Total Cost:	\$230,700	
Vehicles Required:	1	Net Local Share of Costs:	\$134,000	
		Provincial Share of Costs:	\$82,500	

#8. Extending evening service on weekdays and Saturdays. Existing customers have requested more service until 9:00pm. This service would be used by College students, evening shift workers, shoppers and customers destined for recreational/entertainment attractions within the city.

The proposal below is based on extending 60 minute service on Route 1 and Route 2 until 9:00pm on weekdays and Saturdays.

Initial High Level Estimate – Additional Annual Impacts Option 8a: Extend evening service on weekdays and Saturdays				
Service Hours:	910	Passenger Revenue:	\$5,400	
Annual Ridership:	5,500	Total Cost:	\$88,300	
Vehicles Required:	0	Net Local Share of Costs:	\$41,700	
		Provincial Share of Costs:	\$41,200	

^{*}An alternative to the above option is to extend evening service on Friday nights only at the onset and then eventually phase in additional late night service. The cost for Friday night service expansion only is outlined below:

Initial High Level Estimate – Additional Annual Impacts				
Option 8b: Extend evening service on Friday only				
Service Hours:	150	Passenger Revenue:	\$900	
Annual Ridership:	900	Total Cost:	\$14,600	
Vehicles Required:	0	Net Local Share of Costs:	\$6,900	
		Provincial Share of Costs:	\$6,800	

#9. Introducing Sunday and Holiday service. Currently, there is no conventional service on Sunday/holidays. Existing customers have requested the introduction of service on Sundays and statutory holidays so they can access churches, work, shopping and recreational activities.

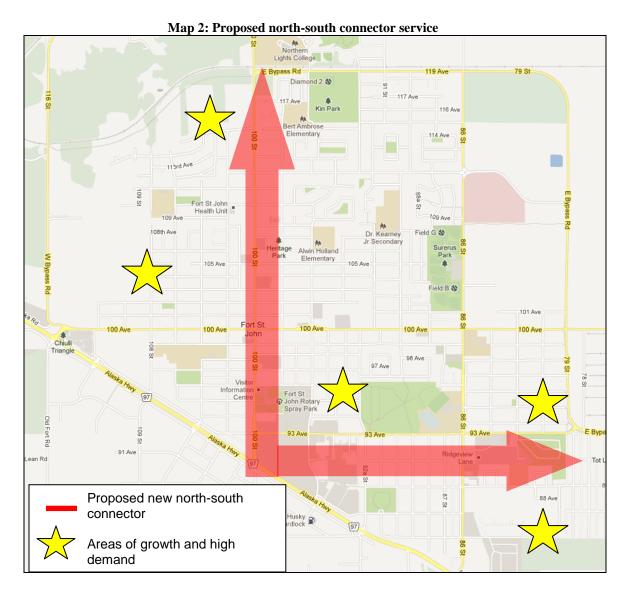
The proposal below is based on a basic level of service on Sundays and holidays from 10:00am to 6:00pm.

Initial High Level Estimate – Additional Annual Impacts				
Option 9: Introduce Sunday and Holiday Service				
Service Hours:	510	Passenger Revenue:	\$2,000	
Annual Ridership:	2,000	Total Cost:	\$49,500	
Vehicles Required:	0	Net Local Share of Costs:	\$24,400	
		Provincial Share of Costs:	\$23,100	

#10. Introducing expanded service on the Northside and the Southeast. One of the fastest growing areas of Fort St. John is on the Northside. Significant development is taking place which is attracting young families and senior citizens. The northside is also where key transit destinations are located including the hospital, medical facilities, Northern Lights College and the shopping district on 100th Street.

The southeast quadrant of Fort St. John is also growing rapidly and has the highest population density in the City. The southeast has key transit destinations including Totem Mall, Wal-Mart and North Peace Secondary School. Based on travel demands and origin-destination feedback, there is a lot of ridership movement between the north and the southeast quadrants.

Given that the existing routings on the Route 1 and Route 2 are long, one-way and circuitous, introducing an additional route and reconfiguring the existing service will vastly improve the transit system and accommodate the future growth in those areas. The map below is a high level design of how a new north-south connector route could look. If a north-south connector route is established, then the other local routes would need to be redesigned.



The proposal below is based on introducing a new route and reconfiguring the existing service during the same time periods that exist today. Therefore, this proposal would see the transit system expand from three routes to four routes.

Initial High Level Estimate – Additional Annual Impacts				
Option 10: Introduce expanded service on the northside and the southeast				
Service Hours:	3,600	Passenger Revenue:	\$35,600	
Annual Ridership:	36,000	Total Cost:	\$408,000	
Vehicles Required:	1	Net Local Share of Costs:	\$207,100	
		Provincial Share of Costs:	\$165,300	

#11. Exploring service connecting downtown with the Airport.

North Peace Regional Airport is a rapidly expanding site, both in terms of services for airline passengers as well as employment opportunities. In 2012 there were 144,000 passengers going through the airport which continues a trend of 7% increase year over year. Based on projections, the number of passengers is expected to increase by as many as 15,000 in 2013 as the airport adds new tenants and an additional carrier. During the winter season, there are approximately 135 people who work at the Airport and its' tenant businesses. These numbers grow in the summer to 185 workers when the Forestry Fire Crews are on site. In addition to the Airport, there is also significant land development taking place within proximity to the Airport (at 100th Avenue and Kirk Street) where several new employers are set to open in 2013.

Alternative transportation to and from the airport (and other destinations in proximity to the Airport) is currently a challenge. Most of the employment opportunities at the airport are entry level, and therefore the rate of pay is not sufficient to support a personal vehicle. The lack of public transportation affects the ability of these businesses to recruit and retain employees. For passengers, the transportation alternative includes either a taxi or one of the private hotel shuttles.

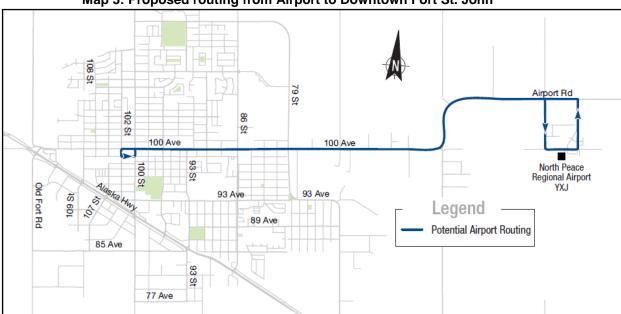
Given the proposed growth of the airport, and the existing transit challenges, it is not surprising that introducing regular transit service to the Airport was a frequent request from workshop attendees and survey respondents.

While providing a regular transit service to the airport seems like the logical solution, the reality is that it has operational challenges and is not cost-effective given the distance between the Airport and downtown. It is hard to serve airports with transit in general terms since transit buses cannot wait for late flights, less ability to shift schedules to meet changes to scheduled airline arrival and departure times, less ability for Airport staff schedules (very early start times and very late finish times) and less onboard capacity for luggage.

One way to balance the projected high cost per passenger for service to the airport would be to operate the service in partnership with a private contractor (as is essentially done now by separate hotels and other industries) by combining those competing and redundant service and vehicles in a single contract paid for jointly by hotel operators. The transit system could integrate with this service (through the ability to co-ordinate fares and/or stops served) and it may also be possible to include airport shuttle contact information in transit materials. This is essentially the approach used by Victoria Regional Transit System to coordinate with a privately operated bus that operates between Victoria International Airport and a nearby transit exchange. A similar approach was also used in the Abbotsford area.

Another option would be to create service to the airport on the Fort St. John transit system but request that all or a portion of service be paid through a Transit Partnership Agreement (TPA). The TPA enables other organizations to become a cost-sharing partner in transit service. For instance, that mechanism enables the Northern Health Authority and the Interior Health Authority to contribute towards transit serving the needs of patients commuting from rural communities to centralized health services. A similar mechanism recently enabled the University of the Fraser Valley to contribute towards the Central Fraser Valley Transit System being able to offer a higher level of service to the University than what would have otherwise been possible through local government funding alone.

If the City of Fort St. John and the airport authority are interested in exploring either of these options, they should contact BC Transit who can provide additional analysis and make recommendations for implementation. Given that any potential service to the airport would operate on Regional District Land, it is important they also be included in the discussion.



Map 3: Proposed routing from Airport to Downtown Fort St. John

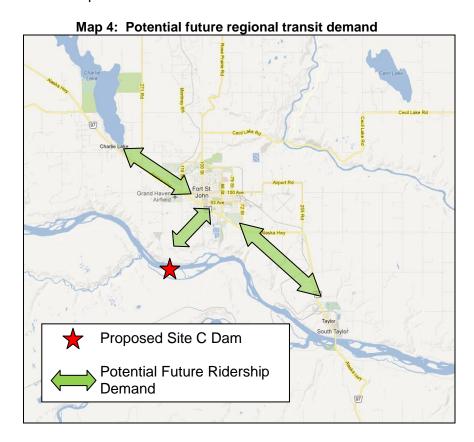
6.3 Conventional Transit Longer-Term Service Change Options

#12. Expanding Regional Transit to Neighboring Districts

With the current and future growth taking place in Fort St. John, it is expected that many new residents will choose to live outside the city boundaries of Fort St. John in neighbouring districts such as Taylor, Charlie Lake and Area C. The existing demand from these areas is currently low; however, with growth projections it is recommended that the City of Fort St. John and the Peace River Regional District review options for improved regional transportation in the future.

A particular project that may have a significant impact to the transit system is the proposed Site C Dam. The proposed location of the dam is a few kilometers south of Fort St. John, and if constructed the regional social and economic impacts would be significant. If constructed, the hydroelectric dam would provide approximately 5,500 person years of labor over a 7-year time frame, with 2,000 workers being employed during the peak year of construction. Approximately 45% of the workers will reside in the Fort St. John area.⁹

If it proceeds, the magnitude and temporary nature of the construction project will place a unique strain on the transportation in the area, but especially to Fort St. John. Therefore, it is imperative that the transit options be discussed in detail throughout the project development process. The map below shows the location of the proposed Site C Dam and potential future ridership demands.



⁹ Fort St. John and Area Comprehensive Development Plan, 2002

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6.4 Custom Transit Short-Term Service Change Options

#13. Encouraging Custom Transit customers to use the Conventional Transit System

Based on the analysis in Section 4, the ridership on the conventional system is relatively low, whereas the ridership on the handyDART system is high. Given the high demand for Custom Transit, Fort St. John and BC Transit should pursue opportunities to encourage existing handyDART users to migrate to the conventional system by providing education and outreach on how to use conventional transit service. Seniors and persons with a disability are under served by the current conventional system and should be considered as potential growth markets.

A suggestion would be to connect with local community agencies or seniors' groups to present options for transit travel training. There are many community groups in other locations that do this regularly in order to promote independence for their members.

Another option would be to encourage the operating company to provide a conventional bus for scheduled outreach sessions at seniors' centers. This is very helpful in increasing seniors' confidence in using conventional transit in that they have the opportunity to learn/practice taking their mobility aids (scooters, wheelchairs, walkers, etc.) on and off the bus at their own pace – without a bus full of people watching them. BC Transit also provides stickers for riders to put on their scooters to show that they have completed the "training" and that the mobility aid is bus-friendly.

BC Transit also produces a handout that summarizes the transit options and procedures for using the handyDART service. BC Transit is currently in the process of updating this document with information on the handyDART system as well as the conventional system.

By encouraging existing handyDART riders to use the conventional system the benefits would include reduced over-demand on the existing handyDART system, increased ridership on the conventional system and increased revenue.

#14. Updating the Registered Client List

Through discussion with the operating company it was determined that the handyDART registered client list has not been updated recently. Updating the client list would be beneficial as it would provide more up-to-date information on each client and their needs. This information will assist in the optimization of the current resources.

Additionally, BC Transit is currently in the process of proposing a pilot project to improve the handyDART registration process by making it a more interactive process in order to better assess each applicant's individual transit needs and abilities. This revised process could potentially encourage handyDART customers to use the conventional system. Once the pilot project has proceeded, BC Transit will share the results with City staff.

6.5 Custom Transit Medium-Term Service Change Options

#15. Introducing Taxi Supplement

Taxi Supplement uses a registered private taxi operator to provide transit services. These services may be stand-alone or may augment service provided by other transit vehicles.

In general, Taxi Supplement trips are dispatched to a taxi operator and are operated using the taxi company's private vehicle(s). Passengers using the service pay a standard transit fare (which covers a portion of costs), with the remaining portion paid by local transit funding partners. The cost of service may either be a metered amount (usually the case where taxidispatched trips are issued to complement regular transit service as needed) or on as a pertrip or per-hour amount (usually the case when scheduled trips are regularly operated by taxi).

A key benefit of Taxi Supplement service is that funding partners are not directly responsible for funding vehicle leases, insurance, and maintenance. It can also be a more economical way of delivering service since funding partners do not have to pay for driver "down time" between trips.

On the other hand, depending on the operator, Taxi Supplement programs can be harder to monitor and control in terms of customer service and integration within a transit system. The funding partners may have less control over the physical condition of vehicles used and whether or not they are accessible to people using wheelchairs and scooters. Also, at some point enough trips are carried that it is actually more feasible to pay a driver for a number of hours of work.

It is suggested that implementing a Taxi Supplement Program would be the most costeffective next step to provide more capacity for the handyDART system, particularly at times of the day when the handyDART vehicles are at their busiest. A preliminary budget amount of \$6,000 annually would cover approximately 500-600 trips per year.

6.6 Custom Transit Longer-Term Service Change Options

#16. Expanding Local Custom Transit Service

Generally, the proportion of a community's population that is age 65 or older is an indicator of potential demand for handyDART services in the future. Fort St. John has one of the fastest-growing senior populations as many aging residents are now choosing to retire in Fort St. John. The current senior population is approximately 2,000 (10% of the total population). According to long range forecasts, by 2046, the population is expected to triple. As a result of the aging of the baby boomer generation, the number of residents over the age is expected to quintuple by 2046. Therefore, meeting the transit needs of seniors in the future is going to be vital to success of the transit system.

While the current handyDART service level appears to meeting present demand after the expansion in fall 2012, the demographic trend noted above demonstrates that it is likely that the handyDART service will need to expand again at some point in the future.

When capacity becomes more constrained, the next logical step to expand the system after taxi supplement has been considered would be to either add an additional vehicle and driver at peak times or to extend the hours of operation to provide a longer service day.

The following estimate could cover either scenario. It shows the additional annual impacts associated with providing five more hours of handyDART service per day, five days per week.

Initial High Level Estimate - Additional Annual Impacts			
Option 16: Expand Local C	ustom Transit		
Service Hours:	1,260	Passenger Revenue:	\$22,800
Annual Ridership:	10,200	Total Cost:	\$72,100
Vehicles Required:	0	Net Local Share of Costs:	\$1,200
		Provincial Share of Costs:	\$48 100

6.5 Community Transit Supportive Initiatives

Given the growth of the City that is expected over the next several years, the City should continue to invest in programs to encourage the use of alternative forms of transportation like transit, walking and biking. With rising oil prices and increasing environmental concerns, it is vital that investments be made to attract residents to these alternatives. Some strategies include:

- Introduce employee transit incentive programs;
- Introduce a "Transit Day" where city and elected officials ride the buses and greet the customers:
- Consider different fare options to encourage ridership (Appendix A); and,
- Pursue the U-Pass program with Northern Lights College to encourage more students to use the transit system (Appendix A).

Additionally, understanding the interdependencies between land use patterns and transit productivity is critically important to a successful transit system. The combined location decisions and land use planning choices made by individuals, institutions, developers and municipalities directly influence the level of transit mobility they can expect. Therefore, it is important that all land-use decisions made in Fort St. John consider the impacts it will have to the transit system in the short and long term. BC Transit is committed to working with the City, as well as developers and the general public to support the alternative transportation methods in Fort St. John.

BC Transit currently has a development referral program with other municipalities that encourages discussion regarding the impact any proposed development might have on transit. Given the region's forecasted growth, it is recommended that the City participate more in this process to ensure that future developments are aligned with the transit goals of the region. Appendix B is an example of a Development Referral Response in Squamish. Referrals can be sent to development referrals@bctransit.com.

7. Conclusions

The evaluation results show that all of the proposed service changes have significant advantages. There are, however, disadvantages and challenges to implementing some of the changes. To overcome some of these challenges, enhance customer satisfaction and improve operational efficiencies, the following actions are recommended:

- Allocate more capital and operating funding to the transit system as the population of Fort St. John grows. This will allow another heavy duty (conventional) to be purchased to improve service reliability and the ability to respond more effectively to new service needs, bus shelters to be purchased, and the frequency, hours of service, and service reliability to be enhanced;
- Monitor the impact of any changes implemented (as described in the report) closely to see what the impact is on ridership and customer satisfaction;
- Conduct more regular service reviews in the future (e.g. every 5 years or when significant changes occur) so that changes in the population and transit needs of the customers can be accommodated in a more timely fashion; and,
- Fort St. John to actively participate in the Development Referral Program to ensure that future developments are aligned with the transit goals of the region.

7.1 Implementation Considerations

The report recommends implementing the service changes options in a staged approach. This will allow the most critical needs and cost-effective options to be implemented first. As the population of Fort St. John continues to grow, there will be a larger tax base to support the transit system; therefore more resource-intensive improvements can be implemented both to service and infrastructure.

It is also recognized that service needs and/or local government capacity to fund transit improvements may change over time. Therefore, options for implementation which require expansion to service hours or vehicles will need to be confirmed on an annual basis for the subsequent year as part of the local budget approval. All new fleet requests will likely trigger a new bus order necessitating 18-24 month lead time before expected delivery and introduction to revenue service.

Also, it is recognized that the implementation of any option requiring expansion is dependent on BC Transit's fiscal year budget, as well as the allocation of available provincial transit expansion funding between transit systems as determined through BC Transit's Transit Improvement Program (TIP).

Once local government has approved a service option or combination of options for implementation – and local and provincial funding has been approved, if required – an Implementation Agreement Memorandum of Understanding (MOU) will be developed for signature by the City and BC Transit. This MOU outlines the exact service changes to be developed for implementation and the roles and timeline for implementation.

7.2 Monitoring Plan

BC Transit and the Operating Company will continue to collect ridership and other data that requires on-going collection, and BC Transit will perform analysis of key performance indicators such as ridership, on-time performance, vehicle maintenance quality, safety and customer satisfaction.

7.3 Recommendations

It is recommended that the City of Fort St. John:

- Receive this report as information and provide feedback to City staff prior to finalization by BC Transit staff;
- Review the routing and schedule change proposals presented in Section 6: Short-Term Service Change Options;
- Receive the Fare Structure Review (Appendix A) as information.