

REGIONAL DISTRICT OF NANAIMO  
TRANSIT SELECT COMMITTEE  
AGENDA

Thursday, July 12, 2018

1:00 P.M.

RDN Board Chambers

Pages

1. CALL TO ORDER
2. APPROVAL OF THE AGENDA
3. ADOPTION OF MINUTES
  - 3.1 Transit Select Committee Meeting - May 24, 2018 2

That the minutes of the Transit Select Committee meeting held **May 24, 2018**, be adopted.
4. DELEGATIONS
5. CORRESPONDENCE
6. UNFINISHED BUSINESS
7. BC TRANSIT UPDATE
8. REPORTS
  - 8.1 DayPASS Fare Product Update 5

That the Board receive the DayPASS Fare Product Update for information.
  - 8.2 Fleet Update – Future Innovations 11

That the Board receive the Fleet Update – Future Innovations report for information.
9. BUSINESS ARISING FROM DELEGATIONS
10. NEW BUSINESS
11. ADJOURNMENT

**REGIONAL DISTRICT OF NANAIMO  
MINUTES OF THE TRANSIT SELECT COMMITTEE MEETING**

**Thursday, May 24, 2018  
1:00 P.M.  
RDN Board Chambers**

In Attendance:	Director T. Westbroek	Chair
	Director M. Young	Electoral Area C
	Director B. Rogers	Electoral Area E
	Director J. Stanhope	Electoral Area G
	Director B. Veenhof	Electoral Area H
	Director B. Colclough	District of Lantzville
	Director B. McKay	City of Nanaimo
	Director B. Bestwick	City of Nanaimo
	Director D. Brennan	City of Nanaimo
	Alternate	
	Director M. Beil	City of Parksville
Regrets:	Director A. McPherson	Electoral Area A
	Director J. Hong	City of Nanaimo
	Director B. Yoachim	City of Nanaimo
Also in Attendance:	P. Carlyle	Chief Administrative Officer
	D. Pearce	Director, Transportation & Emergency Services
	D. Marshall	Mgr. Transit Operations
	B. Miller	Superintendent
	E. Beauchamp	Superintendent, Transit Planning & Scheduling
	M. Moore	Senior Regional Transit Manager, BC Transit
	J. Wadsworth	Mgr. Transit Planner, BC Transit
	A. Freund	Transportation Planner, City of Nanaimo
	N. Hewitt	Recording Secretary
	K. Sihota	Recording Secretary

**CALL TO ORDER**

The Chair called the meeting to order and respectfully acknowledged the Coast Salish Nations on whose traditional territory the meeting took place.

**APPROVAL OF THE AGENDA**

It was moved and seconded that the agenda be approved.

CARRIED UNANIMOUSLY

**ADOPTION OF MINUTES**

**Transit Select Committee Meeting - March 22, 2018**

It was moved and seconded that the minutes of the Transit Select Committee meeting held March 22 2018, be adopted.

CARRIED UNANIMOUSLY

**DELEGATIONS**

**Gerald Nachtegaele, re Transit Service to South Wellington, Cassidy and the Nanaimo Airport**

Mr. Nachtegaele spoke in support of transit service to South Wellington, Cassidy and the Nanaimo Airport. Mr. Nachtegaele provided a petition with 642 signatures to the Committee.

**CORRESPONDENCE**

**Edward Lord, re Transit to Nanaimo Airport and Duke Point Ferry Terminal**

It was moved and seconded that the correspondence from Edward Lord, re Transit to Nanaimo Airport and Duke Point Ferry Terminal be received.

CARRIED UNANIMOUSLY

**REPORTS**

**2018 – 2019 Conventional and Custom Transit Annual Operating Agreement**

It was moved and seconded that the Board approve the 2018/19 Conventional and Custom Transit Annual Operating Agreement with BC Transit.

CARRIED UNANIMOUSLY

It was moved and seconded that BC Transit provide the Transit Select Committee with a report detailing what BC Transit management fees cover, and the actual hours utilized in each area of service.

CARRIED UNANIMOUSLY

**Route 40-VIU Express – Service Expansion**

It was moved and seconded that the Board approve the improvement of weekday service on Route #40 – VIU express utilizing the January 2019 5,000 Hour Annual Conventional Transit Expansion.

CARRIED UNANIMOUSLY

**\$1.00 Fare Analysis for Summer 2018**

It was moved and seconded that the \$1.00 Fare Analysis for Summer 2018 report be received for information.

CARRIED UNANIMOUSLY

**District of Lantzville Request for Free Transit for Minetown Day**

It was moved and seconded that the Board approve the District of Lantzville’s request for free transit services on the 11 Lantzville route for the Minetown Day event held on Saturday, September 8, 2018.

CARRIED UNANIMOUSLY

**Director Verbal Update**

D. Pearce provided a verbal update on Regional District of Nanaimo Transit.

**ADJOURNMENT**

It was moved and seconded that the meeting be adjourned.

TIME: 1:54 PM

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CHAIR

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**TO:** Transit Select Committee                      **MEETING:** July 12, 2018  
**FROM:** Darren Marshall  
            Manager, Transit Operations                      **FILE:** 8500 01 - DPFP  
**SUBJECT:** DayPASS Fare Product Update

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## RECOMMENDATION

That the Board receive the DayPASS Fare Product Update for information.

## SUMMARY

The introduction of the DayPASS-on-board program in the Regional District of Nanaimo Transit System is reviewed. An overview is provided as to how the program was implemented at the Regional District of Nanaimo Transit System.

## BACKGROUND

On June 27, 2017, Regular Board meeting, the following motion was approved:

*It was moved and seconded that the Board approve a Conventional and handyDART fare change as shown in Appendix 'A' Option 1, including the expanded 'Kids Ride Free' program, university monthly passes at \$50, and removal of the paper transfer system to be implemented on September 3, 2017.*

As part of this motion, the DayPASS-on-board program was introduced in the Regional of Nanaimo Transit System on September 3, 2017. There were two important factors when considering the DayPASS-on-board program:

1. The subjective nature of transfers and the subsequent abuse of them was regarded as the single greatest source of incidences of conflict between transit operators and customers
2. The abuse of transfers meant that there was unrealized revenue in the transit system, which could be collected through improved policies and practices

The DayPASS-on-Board program is similar to previous transfer programs. However, instead of being provided with a paper transfer, customers receive a dated paper DayPASS that allows for travel throughout the current calendar day when they pay twice the base fare (\$5.00) with cash or two (2) tickets.

Upon Board approval, BC Transit and RDN staff began the implementation process that included public consultation and education.

There was a marketing and communications plan initiated to inform the public of the changes to how they pay for and use of the new fare product. Further components of the marketing and communications plan can be seen in the attachment (DayPASS-on-Board Case Study).

There were two key outcomes to the implementation of the DayPASS reduced operator conflict and increased revenue. Fare-related conflicts have been reduced greatly, as opposed to an almost daily occurrence prior to the DayPASS implementation. Further, total revenue increased by four percent (4%) with cash revenue increasing by nine percent (9%) and monthly pass revenue by ten percent (10%); further details on page four in the attachment (DayPASS-on-Board Case Study).

## **ALTERNATIVES**

1. That the Board receive the DayPASS Fare Product Update for for information.
2. That the Board provide alternate direction.

## **FINANCIAL IMPLICATIONS**

With the implementation of the DayPASS program the RDN Transit System total revenue increased by four (4%) percent with cash revenue increasing by nine (9%) percent and monthly pass revenue by ten (10%) percent.

## **STRATEGIC PLAN IMPLICATIONS**

The fare review and current fare structure supports the Focus on Service and Organizational Excellence “*The RDN will deliver efficient, effective and economically viable services that meet the needs of the Regional District of Nanaimo*”.



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Darren Marshall  
[dmarshall@rdn.bc.ca](mailto:dmarshall@rdn.bc.ca)  
June 21, 2018

Reviewed by:

- D. Pearce, Director, Transportation and Emergency Services
- P. Carlyle, Chief Administrative Officer

Attachment

1. DayPASS-on-Board Case Study

## DayPASS-on-Board Case Study

### Purpose

This report will review the successful approval and introduction of the DayPASS-on-board program in the Regional District of Nanaimo Transit System. The purpose is to provide an outline for how this program may be implemented in other BC Transit regional systems. This case study was developed through both quantitative analysis and conversations with administrative and operations staff in the Regional District of Nanaimo and Victoria. To give a comprehensive understanding of the program, this report will outline:

- the logic behind the program's development and how the product is used
- the steps taken to prepare the program for approval by the local government
- the process through which the program was approved
- the steps taken to prepare for the program's implementation
- the program's roll out
- the outcomes of the program's introduction

### Policy Rationale and Product Overview

The DayPASS-on-board program was originally introduced in the Victoria Regional Transit System in April 2016 and was adopted in the Regional District of Nanaimo Transit System in September 2017. The pursuit of an alternative to the previously used transfer policy in both systems was the result of two important factors:

1. The subjective nature of transfers and the subsequent abuse of them was regarded as the single greatest source of incidences of conflict between transit operators and customers
2. The abuse of transfers meant that there was unrealized revenue in the transit system, which could be collected through improved policies and practices

As a result of these concerns, the DayPASS-on-board program was developed. In practice, the program is delivered similarly to previous transfer programs. However, instead of being provided with a paper transfer upon the payment of a fare, customers are now given a dated paper DayPASS that allows for travel throughout the calendar day when they pay twice the base fare with cash or tickets.



While each transit system has its own unique characteristics and circumstances that may affect expected outcomes, both of the systems utilizing this program have observed positive results in regards to the two factors outlined above. Further details on this will be provided in the Outcomes section of this report.

## Pre-Approval

The introduction of the DayPASS-on-board in the Regional District of Nanaimo Transit System was a result of extensive collaboration between staff of BC Transit and the Regional District of Nanaimo (RDN). As a first step, BC Transit presented its fare strategy and guidelines to the RDN Transit Select Committee to provide context to the rationale used in building the recommendations that they would be voting on in the following months. From there, BC Transit worked with RDN staff to identify the key themes to be addressed as a part of a full fare review. This included the challenges faced with enforcing the transfer policy and issues around age-based validation of fare products.

With concerns over the abuse of transfers and the potential for conflict with operators that resulted from their use, introducing the DayPASS-on-board was deemed to be necessary. As this product would change how customers purchased and used transit, public consultation was included as a part of the fare review process. This was done in both physical mail-in and online survey formats.

For the public consultation, three proposed fare structures that included the DayPASS-on-board were presented. After identifying their current transit use behaviours, survey respondents were asked to identify which of the three fare options they felt was most appropriate. Respondents were also able to provide any further feedback they wished to share, which was then considered and used in the development of the final fare structure recommendations.

## Approval

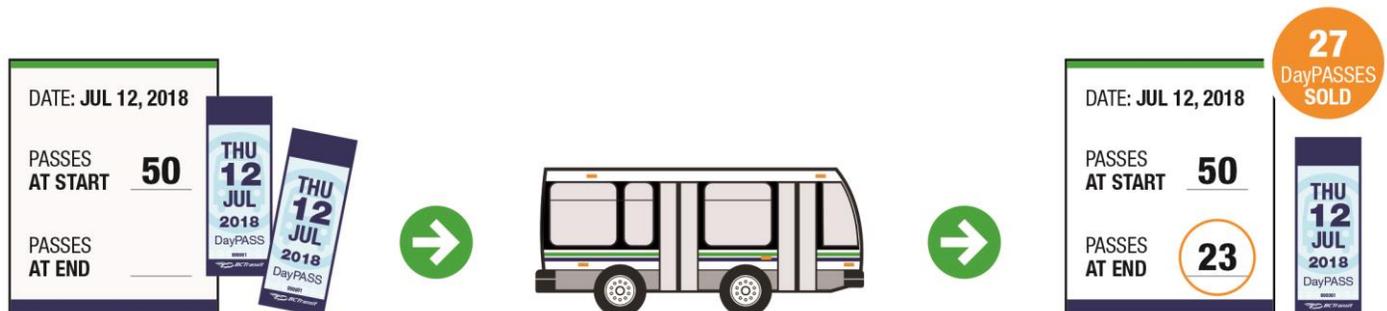
From the discussions between BC Transit and RDN staff and the results of the public consultation, three new fare structure options were put forward for approval. In the first step of the approval process, BC Transit presented the recommended options to the RDN Transit Select Committee. After requested revisions, the fare review was approved with the inclusion of the DayPASS-on-board program and forwarded to the regional district Board for final approval. At the next Board meeting, RDN staff presented the Transit Select Committee's recommendation, which was subsequently approved by the Board. Throughout this process, BC Transit provided support, information and resources to RDN staff and elected officials.

## Pre-Implementation

Once the DayPASS-on-board program was approved, BC Transit and RDN staff began preparing for its implementation by undertaking the following activities:

### Operations Process Development

To learn about how the DayPASS-on-board program is managed, RDN staff visited BC Transit's Victoria facilities to meet with operations, security and finance staff and observe how the program is handled there. RDN staff learned about the daily processes for distributing and reconciling the DayPASS-on-board product and about the measures taken to ensure a successful roll out of the program. From this meeting, RDN staff adapted the processes for product controlling, distribution and reconciliation to best suit their operational needs and requirements.



## Product Ordering

As with all fare products, BC Transit handled the ordering of the DayPASS-on-board product. Order quantities were established through setting a minimum number of required DayPASS pads of per bus in service per day, with a significant buffer to ensure that there were no issues relating to of running out of stock during the program roll out. After the program had been in place for several months and a expected daily demand was established, the quantity of products ordered was decreased to a reasonable daily rate.

An important consideration with ordering the products is that they require secure storage given that each DayPASS has a cash value on the day it is valid. If storage is a concern, products can be ordered in smaller quantities on a regular schedule throughout the year. For reference, in Nanaimo there are no storage constraints and a full year's worth of products are ordered at once, while in Victoria products are delivered on a bi-monthly basis.

## Operator Education

To inform operators of the changes to their working environment and to address any concerns, RDN staff held a meeting with operations staff a month prior to the program's implementation date. Operations staff were informed of the new policies and procedures regarding the distribution and collection of DayPASSes along with how and when they were to be provided to customers. To further mitigate the potential for conflict between operators and transit users, RDN staff implemented a strict inform, don't enforce policy for the DayPASS-on-board program, particularly during the program roll out. In this, operators were given the power to diffuse potential conflicts by informing customers with insufficient fares about the changes to the fare policies and then providing them with a DayPASS to use. This policy decision contributed to creating goodwill amongst transit users, sped up the adoption of the DayPASS-on-board, greatly decreasing the potential for conflict and was one of the major components that led to the successful introduction of the program.

## Public Education

In addition to the operations staff education, a full-scale marketing and communications plan was put in place to inform the public on the changes to how they were to pay for and use transit in the RDN. This action plan was led by BC Transit, utilizing the resources in its marketing and communication departments, and was done with regular collaboration with RDN staff. Among the components of the marketing and communications plan were the following:

- Media advisories to local news providers
- Print advertising in two local newspapers
- Radio advertising on three local radio channels
- Digital advertising through Facebook and Instagram
- Social media promotion through BC Transit, City of Nanaimo and Regional District on Nanaimo channels
- Informational rack cards distributed to key locations throughout transit system
- On-bus informational materials

The marketing and communications campaigns commenced two weeks prior to the roll out of the DayPASS-on-board program and carried through until two weeks after the program had been introduced. This was done to ensure that the majority of the transit-using public had been informed of the changes prior to boarding a bus for the first time after the program had been introduced.

## Implementation

As the new program was rolled out, additional measures were taken to ensure the smooth transition from the previous transfer-based system to the new DayPASS-on-board. This included having RDN staff located at high-volume transit stops and exchanges to answer any questions that customers had. There was also a concerted effort on behalf of both RDN and BC Transit staff to address any concerns that

came in through customer service channels. Both of these efforts in conjunction to the operator policy of informing, not enforcing the use of the new product during the roll out resulted in a largely issue-free introduction of the program in the Regional District of Nanaimo Transit System.

## **Outcomes**

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### Reduce Operator Conflict

Given the sensitive and unique nature of operator conflicts, it is difficult to provide quantitative analysis on the number occurrences as they pertain to the impacts of the DayPASS-on-board. However, through conversations with operations staff in both Nanaimo and Victoria there is observed to be overwhelming support for the DayPASS-on-board program as a result of the positive impacts it has had in terms of reducing the potential for conflict. In Nanaimo, staff report that fare-related conflicts have decreased to the point of being non-existent, while in Victoria operators shared that their fare-related conflicts went down from double-digits per day under the previous transfer system to none after the new product was introduced. Though the DayPASS-on-board product itself contributes greatly to the reduction of operator conflicts, the associated policies, such as informing and not enforcing, play a considerable role in successfully limiting the opportunities for conflict to occur.

### Increase Revenue

In addition to markedly reducing fare-related conflicts with operators, the DayPASS-on-board program has proved successful in capturing the revenue that was previously lost through the abuse of transfers. It is important to note that outcomes in this area are system-specific and vary based on two factors. First, the previous policies and practices around enforcing the use of transfers would dictate the degree of unrealized revenue within the system. Second, the fare structure and pricing of products would determine the trends observed in what product categories increase and by how much.

For this analysis, both the Nanaimo and Victoria Regional Transit Systems were used to provide a better context to the range of outcomes that may be observed in other systems. In the Regional District of Nanaimo Transit System, trends were observed between the first seven months of the program being active and the corresponding period from the prior year. For the Victoria Regional Transit System, analysis was performed on two full years of the program being operational.

In the Regional District of Nanaimo Transit System, total revenue increased four percent with cash revenue increasing by nine percent and monthly pass revenue by ten percent. With the Victoria Regional Transit System, total revenue increased by ten percent over two years, with cash increasing by 38 percent and monthly passes by 14 percent. As is highlighted by these numbers, there was a significantly larger amount of uncaptured revenue in the Victoria Regional Transit System as a result of the relative enforcement of its previous transfer policy. Additionally, while increases in cash revenue were expected, the degree to which monthly pass revenues increased was an unexpected positive benefit of the program. It is evident that through introducing the DayPASS-on-board, transit users are seeing an increased value in purchasing and using a monthly pass, which helps to further increase revenue security and predictability along with increasing ridership.



**Electric Buses**

BC Transit has initiated an electric bus trial program. The program consists of five phases; preparation, discovery, testing service, revenue service, and report. The learning objectives from the trial are current state of e-bus technology, range of bus and time required to charge the bus, required infrastructure, and operational implications.

The trial will be taking place in Victoria and will be completed by end of the year 2018. The electric bus that is being trialed is powered by a 324 kilowatt-hour battery and is able to travel approximately 120 – 250 kilometres on a single charge. The two types of charging methods for electric buses are on-route and off-route.

On-route charging details:

- Small amount of battery capacity
- Shorter range (40 - 60 kilometres)
- Energy supplied while in service via overhead pantographs or road embedded chargers
- Fast charge (5 - 10 minutes)

Pros	Cons
Open protocols	Expensive infrastructure
Battery investment	Complex route planning and city infrastructure
Bus weight	Electricity requirements on grid's peak loading times
	Bus range

Off-route charging details:

- Large amount of battery capacity
- Longer range (120 - 250 kilometres)
- Energy supplied while parked at depot
- Slow and fast charge options (2 - 8 hours)

Pros	Cons
Less complex fleet deployment	Closed protocols
Less complex charging infrastructure	Requires depot upgrades
Electricity requirements on grid's off-peak times	

The current notable challenges and considerations for electric bus technology are capital costs, range management, charging strategies, and transit operations. Electric buses have made great progress in the last few years, but are not yet commercially viable on a large scale due to:

- Upfront capital costs are prohibitive without special funding
- Industry preference for bus type and charging strategy has not been solidified
- Lack of North American industry charging standards
- Uncertainty surrounding performance and total cost of ownership
- Lack of parts continuity due to rapid technological advancements

The transition of fleet propulsion technology typically aligns with replacement timelines, which is approximately every 13 years. The RDN is in year three (3) of its current CNG investment cycle; therefore, the consideration of electric buses is approximately 10 years away and puts the RDN in a favorable position to transition to electric buses if the technology meets the standards.

As transit service expands, the size of the fleet will also need to increase. Therefore, other fleet propulsion technologies could be explored as transit service is increased.

### **3-Position Bike Racks**

BC Transit in conjunction with RDN Transit is conducting an evaluation on a 3-position bike rack to be used in the RDN Transit System. Currently the RDN utilizes a 2-position bike rack on the conventional fleet, which allows for two bicycles to be placed on the bus. The 3-position bike rack evaluation began in early 2018 and is scheduled to conclude in July 2018. The 3-position bike rack assessment process includes:

- Ensuring the bike rack does not contravene the BC Motor Act or the Canadian Motor Vehicle Safety Standard (CMVSS)
- Ensuring the bike rack does not impede the brightness of the front headlights
- Ensuring the bike rack does not adversely affect the turning radius of the bus

If the results of the BC Transit evaluation proves to be positive and there are no safety issues; RDN Transit could implement this new technology which will accommodate the increase of active transportation customers and enhance customer service.

### **ALTERNATIVES**

1. That the Board receive the Fleet Update – Future Innovations report for information.
2. That alternate direction be provided.

### **FINANCIAL IMPLICATIONS**

At the time of this report there are no financial implications. If the 3-position bike rack evaluation is successful and the RDN agrees to implement this technology, the expense of the new bike racks would be cost-shared with BC Transit through the Annual Operating Agreement.

## STRATEGIC PLAN IMPLICATIONS

The current fleet supports the Focus on Service and Organizational Excellence – “*The RDN will deliver efficient, effective and economically viable services that meet the needs of the Regional District of Nanaimo*”.



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Brandon Miller  
[bmiller@rdn.bc.ca](mailto:bmiller@rdn.bc.ca)  
June 20, 2018

Reviewed by:

- D. Marshall, Manager, Transit Operations
- D. Pearce, Director, Transportation & Emergency Services
- P. Carlyle, Chief Administrative Officer

Attachment:

1. Classification of Buses

**Attachment 1 - Classification of Buses**

Type	Length	Fuel Type	Seating Capacity	Ramp	Life Span
<p><b>High Capacity (Double-Decker)</b></p> 	40' or greater in length	Diesel and hybrid	Maximum 102 passengers (84 seated, 18 standees)	Low floor with ramp (minimum 2 wheelchair positions)	13 to 20-year lifespan
<p><b>Heavy Duty</b></p> 	40' in length	Diesel, CNG, and hybrid	Maximum 81 passengers (35 seated, 46 standees)	Low floor with ramp (minimum 2 wheelchair positions)	13 to 15-year lifespan
<p><b>Medium Duty</b></p> 	27.5', 30', and 35' in length	Diesel	Maximum 54 passengers (30 seated, 24 standees)	Low floor with ramp (2 wheelchair positions)	10-year lifespan
<p><b>Light Duty</b></p> 	30' or less in length	Diesel and gasoline	12-30 passengers (no standees)	3-6 wheelchair positions	7-year lifespan