



To: Public Works and Transportation Committee **Date:** October 26, 2001
From: Gordon Chan, P. Eng.
Director, Transportation **File:** 6480-03-03
Re: Update on Implementation of Richmond Area Transit Plan and # 98 B-Line

Staff Recommendation

1. That staff continue to work with TransLink to monitor and enhance the operating performance of the #98 B-Line service as well as to support further development and implementation of local transit service improvements as identified in the Richmond Area Transit Plan.
2. That, upon completion of the construction activities related to the Airport Connector project and full implementation of the #98 B-Line transit priority measures and further implementation of the Richmond Area Transit Plan, staff report back to Council with updates on the following issues:
 - a) The effectiveness of the full implementation of Automatic Vehicle Location technology and other transit priority measures in improving the travel time and reliability of the #98 B-Line service along the entire route;
 - b) The specific measures to be implemented to improve the travel time performance of the #98 B-Line within the City of Vancouver, particularly in the Marpole and South Granville areas;
 - c) The ridership response to the #98 B-Line service following the resolution of the initial operating problems identified in the attached report and further marketing efforts by TransLink to encourage use of the service;
 - d) The effectiveness of the #98 B-Line/local service integration strategies and the requirement for further enhancements;
 - e) The overall travel time for passengers from various parts of Richmond to downtown Vancouver relative to the conditions before the introduction of the #98 B-Line;
 - f) Identification of the priority of specific service improvements to be considered in TransLink's 2002 Program Plan and the road infrastructure and passenger amenities required to support such improvements; and
 - g) The ridership impacts of the recent 2001 service reductions to the Richmond late night services.

Gordon Chan, P. Eng.
Director, Transportation

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Staff Report

Origin

At the February 14, 2000 Regular Council meeting, Council approved the introduction of the #98 B-Line service between Richmond and Vancouver. On September 11, 2000, Council endorsed the Richmond Area Transit Plan, which outlines transit service improvements for the City over the 2000 to 2004 period. Among the recommendations of these reports, staff were directed to continue to work with TransLink on the implementation of the Richmond Area Transit Plan and the # 98 B-Line project. Staff also proposed that the ridership and performance of the transit service improvements, including the #98 B-Line, be monitored and that updates on the various services be provided to Council.

Analysis

1. Richmond Area Transit Plan

Staff and TransLink jointly developed the Richmond Area Transit Plan, the first of seven area transit plans developed by the agency in partnership with the GVRD member municipalities in 1999/2000. The five-year transit plan responds to input received from a significant public consultation program and identifies extensive improvements to current bus services and new services to be implemented in the 2000-2004 period. The various transit initiatives identified in the plan support the City's Official Community Plan (OCP) and City Centre Transportation Plan by significantly enhancing accessibility to local destinations and to other regional centres. The plan is also consistent with TransLink's Strategic Transportation Plan (STP) and GVRD's Liveable Region Strategic Plan, both of which seek to increase transportation choices and reduce reliance on the single occupant vehicle.

1.1 Service Improvements Implemented To Date

During the development of the plan and prior to its approval, a number of transit service improvements were implemented in 1999 and 2000 including:

- increase in frequency and operating hours of the #410 connecting Richmond City Centre, Cambie Road, the Hamilton area, and the 22nd Street SkyTrain station in New Westminster;
- increase in capacity for the #411 (now the #491) operating between No. 1 Road and Vancouver;
- new #480 summer service between Richmond and UBC; and
- new direct service from Richmond to Tsawwassen Ferry Terminal via the #404.

Following TransLink Board approval of the plan in September 2000, implementation of the recommended improvements began in December 2000 and to date include:

- initiation of the #98 B-Line service between Richmond City Centre and Vancouver;
- restructuring of all local services operating within the City to connect with the #98 B-Line;
- significant improvements to existing local services such as more frequent service, combining of routes to reduce transfers and extended service hours (e.g., the daytime frequencies of the #401 and the #403 improved to 20 minutes from 30 minutes and the #402 and the #410 were through-routed to connect West Richmond to Vancouver South and New Westminster respectively);
- provision of a high-frequency Airport Shuttle bus service between the Airport Station and the Main Terminal and other employment centres along the shuttle route;
- introduction of peak City Express routes direct from West Richmond to downtown Vancouver; and
- improved all-day direct service to/from UBC on the #480.

These service improvements represent:

- a net increase of 35,500 annual service hours over 1999 service levels;
- an increase of 30 % in regional service to and from downtown Vancouver;
- an increase of 20 % in local service within Richmond;
- a 14 % increase in service to the airport;
- a 400 % increase in service to and from UBC; and
- a net fleet addition of 31 vehicles during peak periods for Richmond services (37 % increase).

1.2 Future Service Improvements

Further service improvements identified in the plan, which are expected to be implemented in 2002 through 2004, subject to funding availability, include:

- new cross-town route along Williams Road between Steveston and Riverport;
- new peak period inter-suburban services between the City Centre and North Delta/Central Surrey, Metrotown in Burnaby, Ladner and Tsawwassen, and White Rock;
- improved service to Crestwood Industrial Park;
- cross-town community shuttle along Blundell Road between Seafair and the City Centre;
- community shuttle within the City Centre area; and
- community shuttle service in the Bridgeport industrial area.

Of the service improvements noted above, TransLink's STP identifies the Richmond-Surrey service as a priority and the agency has purchased the highway coaches for this service. Staff will continue to work closely with TransLink to monitor existing services and identify service improvement priorities.

1.3 Impact of the October 15, 2001 Transit Service Reductions

The TransLink Board approved in March 2001 a transit service reduction of \$5 million (a 4 % or 160,000 service hour cutback). The cutback took the form of frequency reductions, service elimination in low demand periods, removal of route duplication, and elimination of low ridership routes. The impact of the cutback on Richmond is limited to service elimination after 1:30 a.m. on the #401, #403 and #410 (a reduction of 1,200 service hours). The level of cutback in Richmond represents 0.75 % of the total service hours cut, as compared to the region-wide 4 % service reductions. The reasons for the low service impact on Richmond are:

- Feeder Services Required for #98 B-Line — the implementation of the #98 B-Line service necessitates the provision of adequate local services to support the service, most of which are productive services; and
- Richmond Area Transit Plan Rationalized Services — routes with low ridership were already rationalized during the Richmond Area Transit Plan development process.

2. #98 B-Line Service

The #98 B-Line service is an integral component of the City Centre Transportation Plan, which in turn supports the goals of the OCP to provide a more balanced transportation system for Richmond's downtown with a focus on transit-oriented and pedestrian-oriented modes. The sole reliance on car travel is not sustainable and will only damage the liveability of the City Centre. Moreover, the similar alignment, facilities and operation of the #98 B-Line serves as a precursor for the City's long planned for rapid transit system and allows for ready conversion in the future to the new service.

2.1 Characteristics of the Service

The #98 B-Line service is one the most advanced bus systems in North America. Offering a bus-based high capacity service, the #98 B-Line will use an automated vehicle location technology that will track the positions of buses and their adherence to schedules. Computerized signal systems will give buses running late some priority at traffic signals to help maintain service reliability. Digital signs at bus stations will provide real-time information to customers on bus arrivals. The 2-km median busway on No. 3 Road is the first of its kind in Canada and operates similar to many light rail lines. The median busway provides a unique transit priority measure by isolating buses from other vehicles, which can often be slower moving due to right turning vehicles at driveways and general traffic congestion. The service offers a frequency of over seven buses per hour each way and is projected to carry 22,000 passengers per day. Based on this forecast ridership, the #98 B-Line compares favourably with the Millennium SkyTrain line, which has a much higher capital and operating cost and a marginally higher ridership.

2.2 # 98 B-Line / Local Bus Integration Strategies

An Integration Plan was developed to maximize the quality of connections of # 98 B-Line with its local feeder services. The integration strategies were based on the following principles:

- emphasize service integration with the #98 B-Line by providing direct local routings for connections to the service in central Richmond, including high frequency of connecting local services and improved service coverage within the City Centre;
- combine, or through-route, services to provide the convenience of a direct cross-town service by reducing or eliminating transfers when travelling between key local destinations; and
- provide improved service between the City Centre and regional destinations as well as direct connections to Vancouver International Airport.

2.3 Current Operating Performance

Preliminary results suggest that the new #98 B-Line is well used. TransLink staff advise that ridership (based on fare revenues for services operating out of the Richmond Transit Centre) have risen 8 % since the end of the transit strike. TransLink staff estimate that bus ridership may be down by 15 % regionally. Notwithstanding the high ridership achieved in Richmond, concerns have been raised regarding travel times and poor schedule adherence for the # 98 B-Line. TransLink staff collected data on bus arrival times along the route for September 14 and October 15, 2001. For each observation, the travel time delay was recorded (difference between actual and scheduled arrival times). The results were summarized by station and are shown below. A negative number indicates that buses arrived late while a positive number denotes that buses arrived early.

Arrival at:	Direction	Average Travel Time Delay in Minutes	
		September 14, 2001	October 15, 2001
Richmond - Brighthouse Station (Anderson Road at No. 3 Road)	Northbound	- 1.9	- 0.2
Richmond - Airport Station Bay 1	Northbound	- 4.6	- 2.5
Vancouver - Granville St / 71 St	Northbound	- 7.8	- 4.9
Vancouver - Seymour St / Davie St	Northbound	- 3.5	+ 2.4
Vancouver - Waterfront Station	Northbound	- 3.6	+ 1.4
Richmond - Airport Station Bay 2	Southbound	- 5.8	- 0.3
Richmond - Richmond Exchange (Cook Road at No. 3 Road)	Southbound	- 6.1	- 3.4
Richmond - Anderson Rd Terminus	Southbound	- 8.3	- 0.4

The results indicate that travel time for the new service has significantly improved over the past month. On average, northbound buses arrived at the Waterfront Station slightly ahead of the scheduled 42-minute Richmond-Vancouver travel time. Within Richmond, southbound buses arriving at the Airport Station and Anderson Road terminus generally operated on time. Relatively longer time delays appear to be associated with buses arriving at stations after passing through Sea Island. These results suggest that a contributing factor to the time delays may be construction related to the Airport Connector Project.

To further investigate schedule adherence concerns, staff travelled on several # 98 B-Line buses on October 12, 2001. On each occasion, staff noted the bus arrival times at the stations in Richmond and compared the total elapsed time to the schedule. The results are comparable to those recorded by TransLink and indicate that travel times for the buses in Richmond are generally within the scheduled 14 to 16 minute running times (Airport Station to Anderson Road terminus).

2.4 Travel Time Issues

City staff recently met with representatives of TransLink to discuss this issue. TransLink are monitoring service levels and bus loads and implementing solutions to address operating problems. The agency is also hosting stakeholder meetings to assess operational issues and to seek input. The factors contributing to delays and poor schedule adherence, and the actions being undertaken to address these issues, are identified below.

Airport Connector Project

- Issue: lane closures and construction associated with the project create traffic bottlenecks and the bus on-ramp to the Moray Channel Bridge was not yet open.
- Resolution: the completion of the project should significantly improve running times for the service. In addition, the new bus on-ramp from Airport Station to the Moray Channel Bridge provides a direct and much shorter route to the bridge and is expected to reduce running time by 3-4 minutes.

General Traffic on No. 3 Road

- Issue: occasional minor delays are experienced on No. 3 Road (Anderson Road to Ackroyd Road), which are attributed to traffic entering/exiting driveways or making right turns at Westminster Highway.
- Resolution: City staff are reviewing the operation of traffic signals and other transit priority measures along No. 3 Road to improve the efficiency of the service.

Congestion and Lack of Enforcement on Granville Street and Downtown Vancouver

- Issue: Granville Street in Vancouver are congested due to motorists unlawfully using the HOV lane and illegally parking as well as disobeying turn restrictions. A lack of traffic signal co-ordination also has an adverse effect on schedule adherence. In addition, on-going construction and general traffic congestion in downtown Vancouver also contribute to travel time delays.
- Resolution: TransLink staff are meeting with Vancouver staff to resolve the traffic congestion issues and increase bylaw enforcement of parking and time-restricted turning movements.

Delayed Implementation of AVL Technology

- Issue: the incomplete installation of the Automatic Vehicle Locator (AVL) technology hinders the ability to co-ordinate traffic signals along the route.
- Resolution: TransLink advises that the AVL technology has not yet been fully implemented due to the transit strike that resulted in de-mobilizing of the AVL implementation team. The team is being reactivated and it is anticipated that the AVL system will be operational by November 2001. The AVL will provide real time bus arrival information to minimize passenger wait times. The AVL information will also be used to adjust traffic signals along the route to reduce travel time delays.

2.5 No. 3 Road Accident History (Pre and Post # 98 B-Line)

Traffic accident statistics at intersections along No. 3 Road were compiled to determine if accident rates have changed since the implementation of the new service in August 2001. The table below summarizes the reported accidents at seven intersections on No. 3 Road for August and September over the past four years (1998-2001).

No. 3 Road at:	Pre #98 B-Line			Post #98 B-Line
	Aug-Sep 1998	Aug-Sep 1999	Aug-Sep 2000	Aug-Sep 2001
Westminster Hwy	4	1	3	2
Ackroyd Rd	0	2	0	0
Lansdowne Rd	2	2	2	0
Alderbridge Way	3	2	4	1
Leslie Rd	1	0	1	2
Cambie Rd	4	0	2	1
Capstan Way	0	0	1	0
2-Month Total	14	7	13	6

The results indicate that an average of 11 to 12 accidents were recorded during August and September over the 1998 to 2000 period. The post #98 B-Line accident rate is significantly below the pre-service average. In addition, of the six accidents recorded in 2001, four occurred in August and two in September, which suggests that motorists may be becoming more familiar with the traffic pattern changes on No. 3 Road.

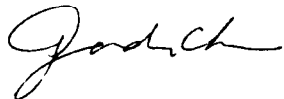
Financial Impact

None to the City.

Conclusion

The implementation of the first phase of the Richmond Area Transit Plan beginning in December 2000 has significantly improved transit service between the city and Vancouver and within the city. Future improvements, pending funding availability, will focus on enhancing regional connections (eg. to Burnaby and Surrey) as well as improving local cross-town services. Staff regularly meet with TransLink staff to review transit issues and identify route and transit infrastructure priorities.

The #98 B-Line service is currently operating at an interim level due to the on-going construction and lane closures associated with the Airport Connector Project and the delayed installation of AVL technology. Construction activities in downtown Vancouver and the parking and turning restriction violations along Granville Street have also contributed to service delays. TransLink staff are working closely with YVR and municipal staff to address these issues. The full implementation of this new service, with all of the special features operating, is expected to be achieved by December, 2001.



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