CITY OF **VANCOUVER**

ADMINISTRATIVE REPORT

Report Date:	May 31, 2007
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Meeting Date:	July 24, 2007

TO: Standing Committee on Transportation and Traffic

FROM: General Manager of Engineering Services

SUBJECT: Bus Lanes on Broadway - Progress Report

RECOMMENDATION

THAT Council receive this report for information.

COUNCIL POLICY

The Vancouver Transportation Plan, adopted May 1997, calls for increased transit usage and provides:

> Transit will be given greater priority to meet the needs of increasing demand for transportation across the City, especially in peak times and for journeys to and within the Downtown. In the future, if required, this may include designating some lanes on some primary arterials for transit only, for all or parts of the day.

In July 2002, Council adopted the Downtown Transportation Plan to improve downtown accessibility and liveability by creating a balanced transportation system.

In June 2005, Council adopted the Vancouver UBC Area Transit Plan to improve transit service within Vancouver and to and from UBC.

PURPOSE

The purpose of this report is to update Council on the performance of the bus lanes on the Broadway corridor.

BACKGROUND

The 99 B-Line provides a highly popular express bus service on Broadway between SkyTrain at Commercial Drive and the University of British Columbia (UBC) bus loop. Broadway is one of the busiest traffic and transit corridors in the Greater Vancouver region, carrying well over 60,000 transit passengers a day.

On June 29, 2005 Council approved the installation of transit priority measures on the Broadway corridor subject to funding and cost sharing approval. Items included:

1. Installation of bus lanes;
2. Installation of transit signal priority;
3. Introduction of operational improvement measures for Broadway Corridor including all-door loading, improved fare boxes & smart-cards and new scheduling practices;
4. Before and after monitoring for each component to evaluate effectiveness; and
5. Stakeholder consultation prior to implementation.

On June 15, 2006, over 7800 letters describing the proposed bus lanes were delivered to residents and business along the Broadway corridor. Staff received 20 responses to this mail out. Three responses were not supportive. Most respondents were seeking clarity on the implementation of the bus lanes.

On October 19, 2006 Council approved the installation of bus lanes on Broadway and directed staff to monitor the performance of the bus lanes on Broadway and report the results to Council in the coming year.

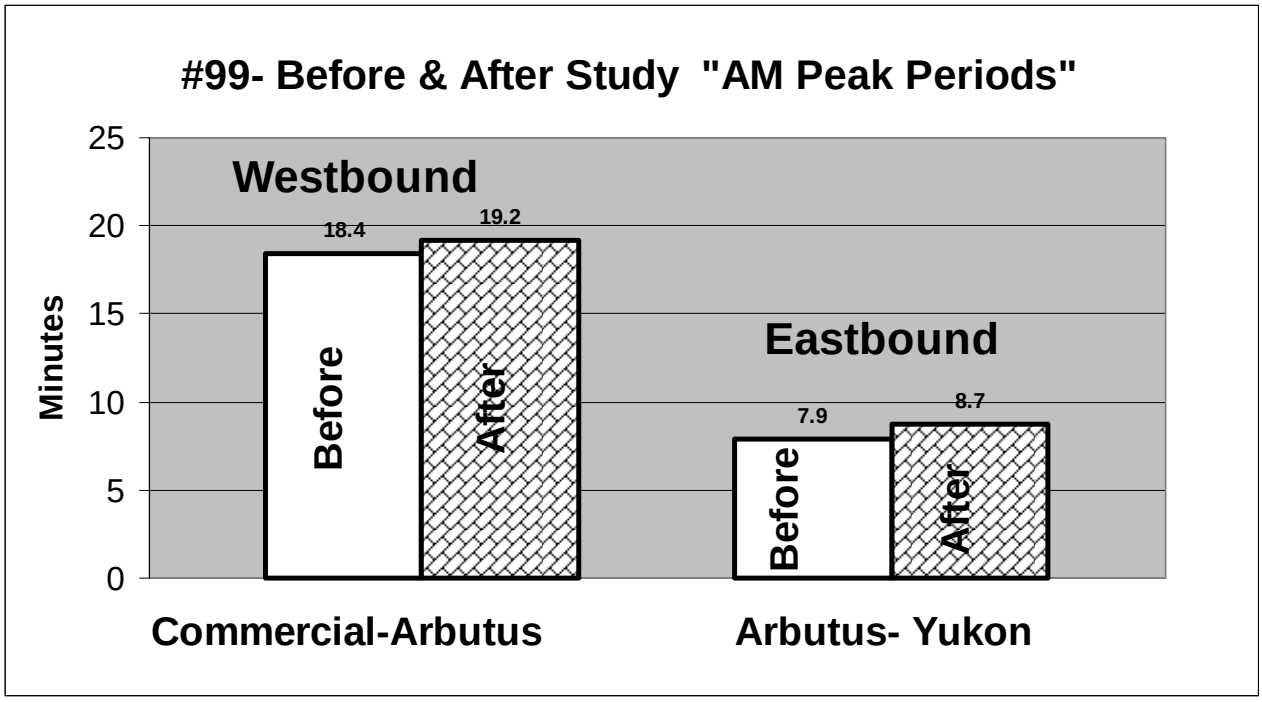
The implementation of bus lanes was completed in October. The bus lanes are located in the curb lane where parking is restricted during peak hours generally between Arbutus Street and Commercial Drive. There was no change to on-street parking regulations as a result of bus lanes. The installation cost for the signs and painting was $207,000. TransLink had been involved in the bus lane design and funded the entire cost.

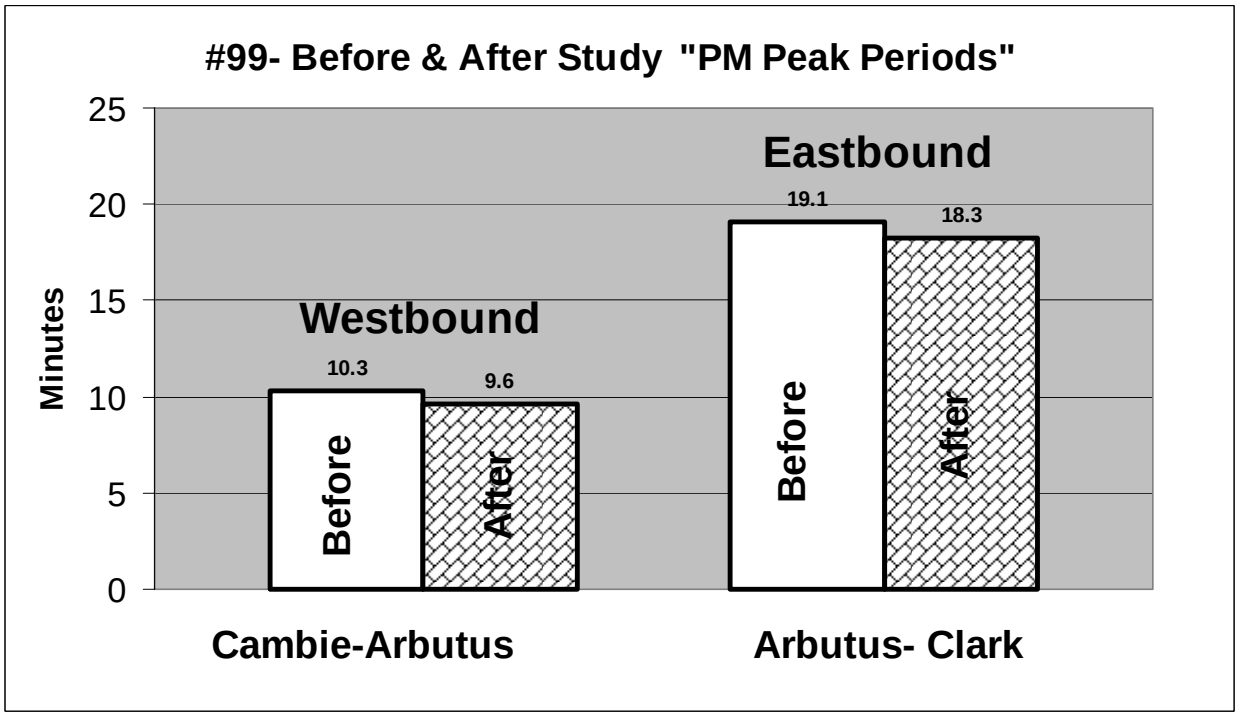
DISCUSSION

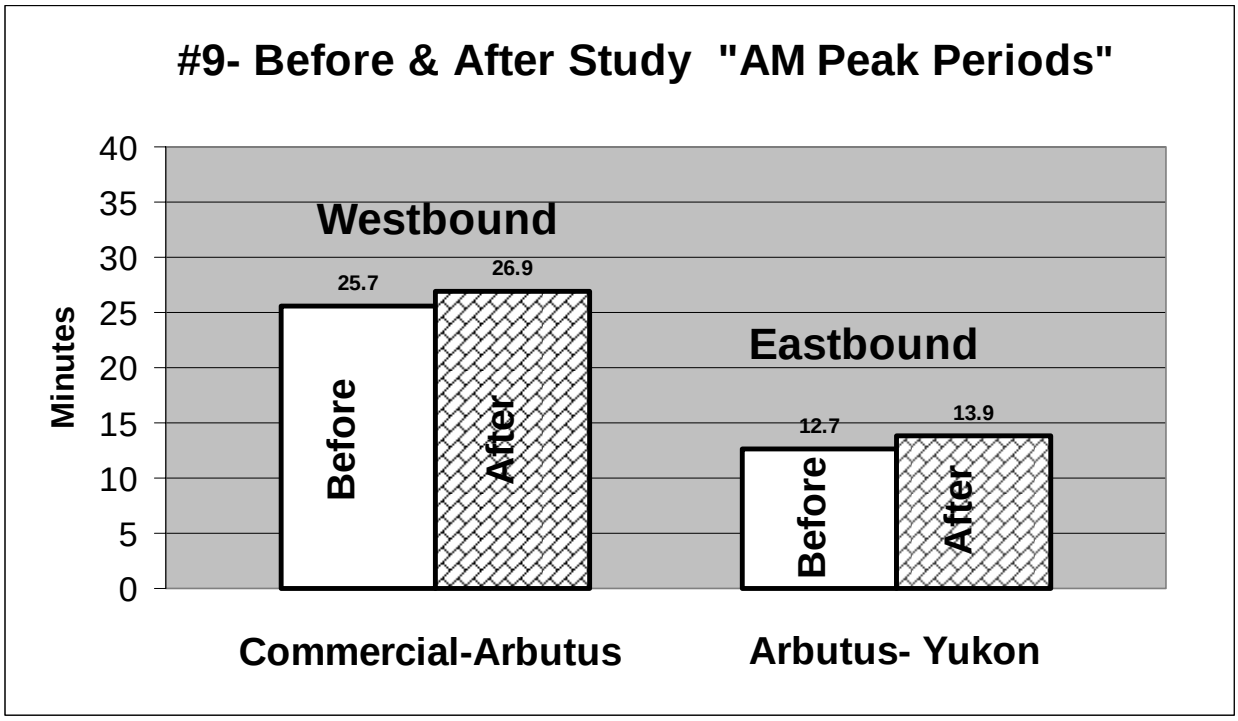
In 2004 TransLink commissioned the *#99 B-Line Transit Priority Study* (IBI Group in association with Ward Consulting Group) to assess the potential benefits of the transit priority measures proposed for Broadway. This study examined continuous bus lanes on Broadway and concluded that bus lanes would have little or no impact on bus travel times on the corridor. The report recommended that limited bus lanes be implemented at the approaches to the major intersections. TransLink and city staff recommended continuous bus lanes rather than limited bus lanes to reduce driver confusion, and to confirm the study results.

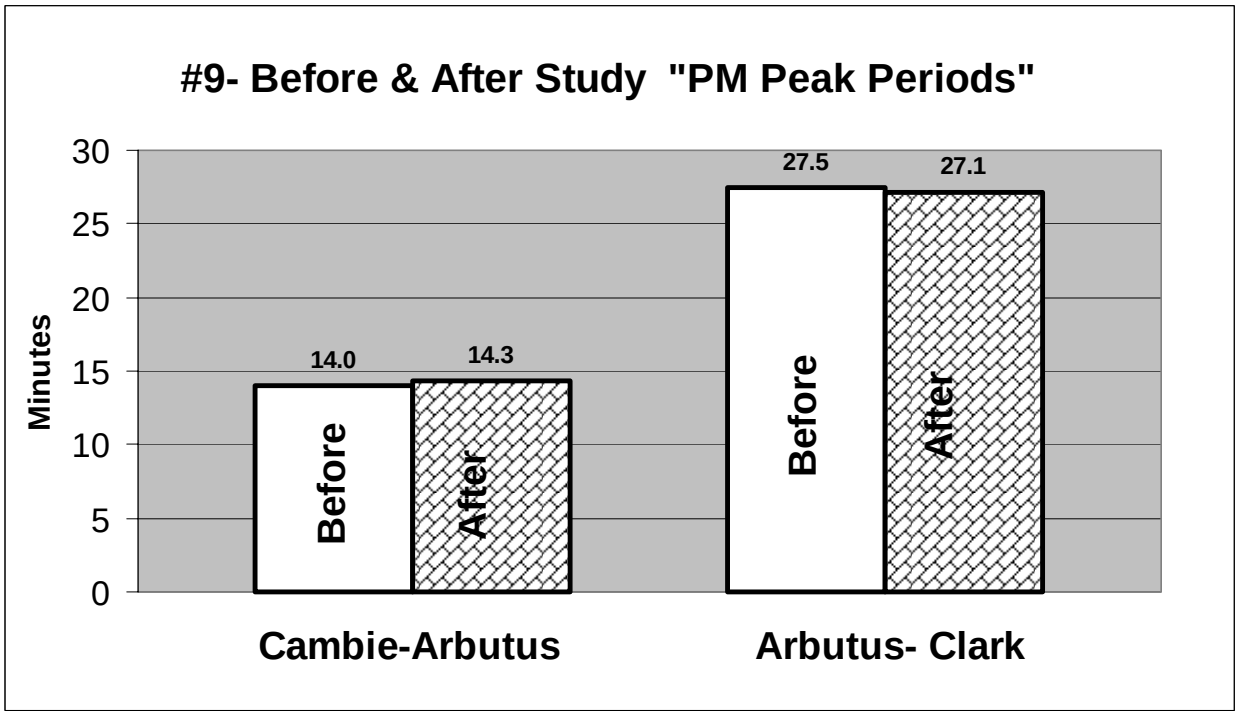
The key performance indicator for monitoring the effectiveness of the bus lanes is bus travel time. Staff measured bus travel times before and after the installation of bus lanes. Five timing locations were chosen along the bus lanes. One person at each timing location recorded the bus number and the time that bus left the bus stop. The total bus travel time was calculated using this data. Data was collected over three consecutive days in April, before installing bus lanes, and again in November, after the bus lanes were operational. Travel time was measured for both the #99 B-Line express bus and the #9 local bus.

The following charts show the comparison of transit travel times before and after installing bus lanes for both westbound and eastbound buses during am and pm peak hours.






#9- Before & After Study "AM Peak Periods"
Minutes
40
35
30
25
20
15
10
5
0
Westbound
25.7
26.9
Before
After
Eastbound
12.7
13.9
Before
After
Commercial-Arbutus
Arbutus- Yukon


#9- Before & After Study "PM Peak Periods"
Minutes
30
25
20
15
10
5
0
14.0
14.3
Before
After
27.5
27.1
Before
After
Cambie-Arbutus
Arbutus- Clark

During both peak periods the change in bus travel time is small and is within the margin of error of the study. The bus lanes appear to have had little or no effect on bus travel times.

The primary reason the bus lanes do not result in any significant travel time savings is due to the high volume of right turn vehicles and the high pedestrian volumes along Broadway. Before the bus lanes were constructed, up to 50% of vehicles using the curb lane were turning right at the next intersection. In busy pedestrian areas vehicles wanting to turn right are delayed as drivers must wait for pedestrians to clear the crosswalk before completing the turn. Therefore right turning vehicles frequently block the bus lane. Note that the through traffic that previously used the curb lane caused only minor delay to buses, if any. Staff observe that, in general, on streets with very frequent bus service, such as Broadway, the curb lane essentially functions as a bus lane with or without the bus lane designation.

Public Response to the Broadway Bus Lanes

Very little feedback has been received. However, bus drivers are very supportive of the bus lanes. The operations managers of the Vancouver Transit Centre have expressed appreciation for the bus lanes on Broadway and note the bus lanes have been acting as a queue jumper lane at the approaches to Canada Line construction at Cambie Street. Note that the construction on Cambie Street at Broadway has been creating traffic queues that are not typical for this intersection. Staff received one e-mail from a motorist expressing frustration that buses don't stay in the bus lanes.

Other Benefits of Bus Lanes

It is important to note that there are other benefits to bus lanes. Bus lanes can raise the profile of transit on a corridor and can be a symbol of transit priority. In some locations, bus lanes used as a queue jumper for bridge access, such as the Georgia Street approach to the Lions Gate Bridge, can be very effective at providing travel time savings for transit.

Future Bus Lanes

At this time staff do not recommend removal of the Broadway bus lanes. Staff note that the 2004 technical study was a good predictor of the bus lane performance on Broadway. Given these results, any new requests for bus lanes on similar streets throughout the City will be objectively reviewed. Staff will continue to work with TransLink to pilot and evaluate the effectiveness of the other transit priority measures, including all-door loading and transit signal priority. TransLink staff have reviewed this report and concur with its content.

CONCLUSION

The Broadway bus lanes have provided staff with the opportunity to test bus lanes in the urban environment. Although the bus lanes appear to have little or no effect on travel times, staff do not recommend that they be removed. Any new bus lanes on similar streets throughout the City will be carefully considered. Staff will continue to work with TransLink to pilot and evaluate the effectiveness of the other transit priority measures, including all-door loading and transit signal priority.

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