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CC: "City Manager's Correspondence Group - DL"
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Date: 1/28/2019 4:43:47 PM

Subject: Memo - 41st Ave B-Line Bus Route

Attachments: ENG - TPL - Memo to Mayor and Council - 41st Avenue B-Line Update - Jan.....pdf

Dear Mayor and Council,

Please see attached a memo and accompanying appendices from Jerry Dobrovolny regarding the 41st Avenue B-Line bus route. A short summary of the memo is as follows:

- The City is working with TransLink to implement a new B-Line bus from Joyce-Collingwood to UBC for Fall 2019. The new B-Line will have much higher frequencies and longer operating hours than the current 43 Bus Route, making transit much more convenient and attractive. The bus stops will also include more passenger amenities, including real-time arrival bus information.
- To ensure buses are reliable and transit travel times are improved on 41st Avenue, we are working with TransLink to make street changes to 41st Avenue, the details of which are described in the memo.
- The first phase of public engagement for this project, which focused on the B-Line route and stop locations and related changes to the local Bus Routes 41 and 49, took place last year and was led by TransLink. The broader public response, representing mainly transit users, has been very positive.
- The second phase of consultation, which the City is leading, is focused on engaging with communities along the route regarding specific transit priority measures. We are reaching out to key stakeholder groups such as BIAs, schools, and community centres along the route.
- As there are proposed plans to make significant changes to the West Boulevard and East Boulevard intersections at 41st Avenue, the City is planning to host a public open house on February 9, 2019, from 12:00 to 5:00 pm at Point Grey Secondary School.
- Recognizing that the planned changes in the Joyce-Collingwood neighbourhood may impact the businesses along Joyce Avenue, an information session is also being planned for this neighbourhood in early April.

If you require any further information, please contact Jerry Dobrovolny, GM of Engineering Services at jerry.dobrovolny@vancouver.ca or 604.873.7331.

Best,
Sadhu

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MEMORANDUM

January 25, 2019

TO: Mayor and Council

CC: Sadhu Johnston, City Manager
Paul Mochrie, Deputy City Manager
Lynda Graves, Administration Services Manager, City Manager's Office
Rena Kendall-Craden, Civic Engagement and Communications Director
Katrina Leckovic, City Clerk
Neil Monckton, Chief of Staff, Mayor's Office
Alvin Singh, Communications Director, Mayor's Office
Anita Zaenker, Chief of Staff, Mayor's Office
Lon LaClaire, Director of Transportation

FROM: Jerry Dobrovolsky, General Manager, Engineering Services

SUBJECT: Project Update on 41st Avenue B-Line Bus Service

The purpose of this memo is to provide an overview of the current status of the 41st Avenue B-Line project, report on the results of the initial spring 2018 consultation, introduce the associated transit priority measures being planned for implementation by opening day in fall 2019, and provide a summary of the current and upcoming consultation efforts.

Background

As part of the Mayors' 10-Year Investment Plan, TransLink is working with the City of Vancouver and other municipalities to introduce three new "B-Line or better" services within the region (see Appendix A). One of these three B-Lines will operate along the 41st Avenue corridor, which was first identified in 1997 and acknowledged as a priority in the City's Transportation 2040 Plan. It will operate between the University of British Columbia (UBC) and Joyce-Collingwood Station, and is scheduled to open in fall 2019.

The 41st Avenue corridor is a key east-west route for general vehicles, transit, and trucks. It is part of the Major Road Network, the Frequent Transit Network and is a truck route. It is served by the following two bus routes connecting UBC with Joyce-Collingwood Station:

- Bus Route 41, which provides local-stopping service with high frequency (up to every five minutes) seven days a week, and has the second highest bus ridership in the region (with over 26,500 daily passenger boardings) after the 99 B-Line.
- Bus Route 43, which provides limited-stop service during weekdays only (and carries 6,400 passengers daily), with service ending after approximately 8:00 pm.

As shown in Appendix B, the proposed service changes include replacing Bus Route 43 with the new B-Line bus service and modifying the existing Bus Routes 41 and 49 as a result of the introduction of the new B-Line. The new B-Line will feature the following elements:

- **Improved travel time and reliability:** stops are spaced approximately 1 km apart, high-capacity articulated buses are used, there is all-door bus boarding, and street improvements are made to reduce travel time and improve reliability.
- **Frequent service:** bus service is every 3-6 minutes in peak times and every 8-10 minutes at other times.
- **Available all day:** service hours are between 6:00 am – 1:00 am.
- **Distinct brand and amenities:** buses and stops have a different look, stops have digital signage showing arrival times of the next bus, and route information is available inside buses.

In addition to connecting many key destinations, this corridor will provide a reliable alternative to the 99 B-Line while the Broadway Subway is under construction.

Public Feedback on Proposed Stops and Service Changes

The first phase of public engagement for this project took place last year and was led by TransLink. It focused on the proposed B-Line route and stop locations, support for B-Line travel time and reliability measures in general (from a user's viewpoint), and related changes to local Bus Routes 41 and 49. The engagement included five pop-up information sessions at key destinations along the route (including three in Vancouver). These were organised by TransLink, and City staff were in attendance. City staff partnered with TransLink to give presentations to various stakeholder groups, including the Kerrisdale Business Improvement Association (BIA); staff also presented at various Council Committees.

The broader public response, representing mainly transit users, has been very positive. There were nearly 2,370 survey responses (via TransLink's website), and over 90% of respondents supported the proposed B-Line stops; 80% supported street changes to reduce transit travel times and improve reliability; and 73% supported changes to the local routes. These results enabled TransLink to proceed with the service plan as proposed, with the exception of two changes as a result of the consultation process:

- Rupert Street, the most commonly requested additional bus stop, has been added to the proposed route. It is a stop that is currently being served by Bus Route 43, but has lower bus boardings and alightings than the other proposed B-Line stops.
- There were requests to increase the frequency of Bus Route 41 from the current proposed frequency of 15 minutes during peak periods. TransLink is therefore considering increasing the peak period frequency to 10-12 minutes, assuming transit priority measures yield service hour savings.

Current Transit Performance and Corridor Conditions

Bus Routes 41 and 43 often experience crowding, congestion, and signal delay, which results in significant variation in travel times and poor reliability. In addition, significant future growth is anticipated at various points along the corridor. Appendix C provides a graphic illustration and a more detailed summary of current conditions.

With the increased frequency, the B-Line bus service would increase capacity by 33% throughout the day, thereby reducing crowding. To ensure the new B-Line service is successful, street changes are also being considered to reduce transit travel time and improve reliability.

Types of Transit Priority Measures Planned for the Corridor

There are a number of measures that can give transit more priority, including dedicated bus priority lanes, queue jump lanes, transit signal priority, and bus bulges. Of these measures, bus priority lanes, which can be full time or peak period only, provide the highest level of bus priority and can significantly improve bus travel time, reliability, and passenger service quality. A bus priority lane with frequent service also provides more people-carrying capacity than a general purpose traffic lane.

The City is planning for a bus lane in both directions for approximately 6 km of this corridor and an eastbound bus lane for approximately 3 km, which together make up about three-quarters of the corridor. Where bus priority lanes are provided, they are replacing parking lanes from at least 7:00 am – 7:00 pm. This is the time period during which transit services experience the most delay and carry the most passengers. Twenty-four hour bus priority lanes are planned near rapid transit stations, which allows them to be painted red for improved legibility and increased likelihood of compliance. The current parking demand along most of the 41st Avenue corridor can generally be accommodated on intersecting side streets or nearby off-street parking facilities.

Another transit priority measure is queue jump lanes, which can be shared with right-turning vehicles and allow buses to enter an intersection ahead of other traffic flow. When applied carefully, queue jump lanes can reduce delay considerably and improve reliability. The City is planning to institute a queue jump lane for eastbound buses at the Kingsway and Joyce intersection.

Bus bulges are another transit priority measure that can be implemented at bus stops. They allow buses to avoid having to pull in and out of traffic. The widened sidewalk also creates larger passenger queuing areas, and provides opportunities to install a bus shelter and/or other amenities such as outdoor café seating, public bike share stations, and bike racks.

Other changes that can be made at intersections include improved signal timing/coordination and turning bays to improve overall traffic flow. Relocating bus stops from near sides to the far sides of intersections can also reduce the chances that buses are caught behind right-turning vehicles. Where bus stops are currently being used by both the local and B-Line buses, if there is space, they can be separated out to provide more queuing space for passengers, avoid bus

bunching, and permit buses to depart independently of each other. All four types of changes are being planned along the corridor where practical.

Appendix D provides a graphic illustration and a more detailed summary of the transit priority measures that are being planned for the launch, or shortly thereafter in 2020, of the B-Line. Additional measures will be considered in the coming years to further improve transit services.

Kerrisdale is an important commercial area with a special character and a point of significant congestion along the corridor due to narrower road widths and a high level of vehicle and pedestrian activity. As such, staff are working with local businesses and residents to determine short- and long-term measures to improve traffic flow, access, and overall operations in the area, as well as provide some transit priority. It is also important to note that Kerrisdale is one of the nodes of the Arbutus Greenway, therefore staff will ensure that vehicle and transit improvements are coordinated with and support the design vision of the greenway. One significant measure being consulted on in Kerrisdale are changes to the way the intersections at East and West Boulevard operate. In conjunction with relocating the bus stops, there are other changes being considered that should make both transit and general purpose travel times through this area more reliable. These changes are described in further detail in Appendix D.

Current and Upcoming Consultation Activities

The second phase of consultation is focused on engaging with communities along the route regarding specific transit priority measures. This is being led by the City with TransLink's support. As such, City staff have started reaching out to key stakeholder groups such as the Kerrisdale community, Collingwood Neighbourhood House on Joyce Avenue, BIAs, and elementary and high schools located close to, or along, the route.

Within Kerrisdale Village, there are proposed plans to make significant changes to the West Boulevard and East Boulevard intersections at 41st Avenue in order to improve the reliability and travel times of transit and general purpose traffic along the corridor. As a result of this, the City is planning to host a public open house on February 9, 2019 from noon to 5:00 pm at Point Grey Secondary School. The changes described in Appendix D will be shared at the open house for the public to review and comment on.

Also, recognizing that the planned changes in the Joyce-Collingwood neighbourhood may impact the businesses along Joyce Avenue, an information session is being planned for early April. The purpose of this session will be to explain the changes to businesses and local residents in the area and to provide them with opportunities to ask questions of the project team. Further work will also be done to communicate with impacted households along the corridor, and the public, through neighbourhood-specific notification letters, a dedicated project email, and the City's website.

TransLink will also be launching a media campaign in the spring to advertise and bring attention to the project. This will coincide with a City-led social media push.

Next Steps

In the coming months, staff will be confirming the street changes along 41st Avenue and developing the related detailed designs. Staff will also report back to Council on the outcome of the public engagement session(s).

If you have any questions, please do not hesitate to contact me.

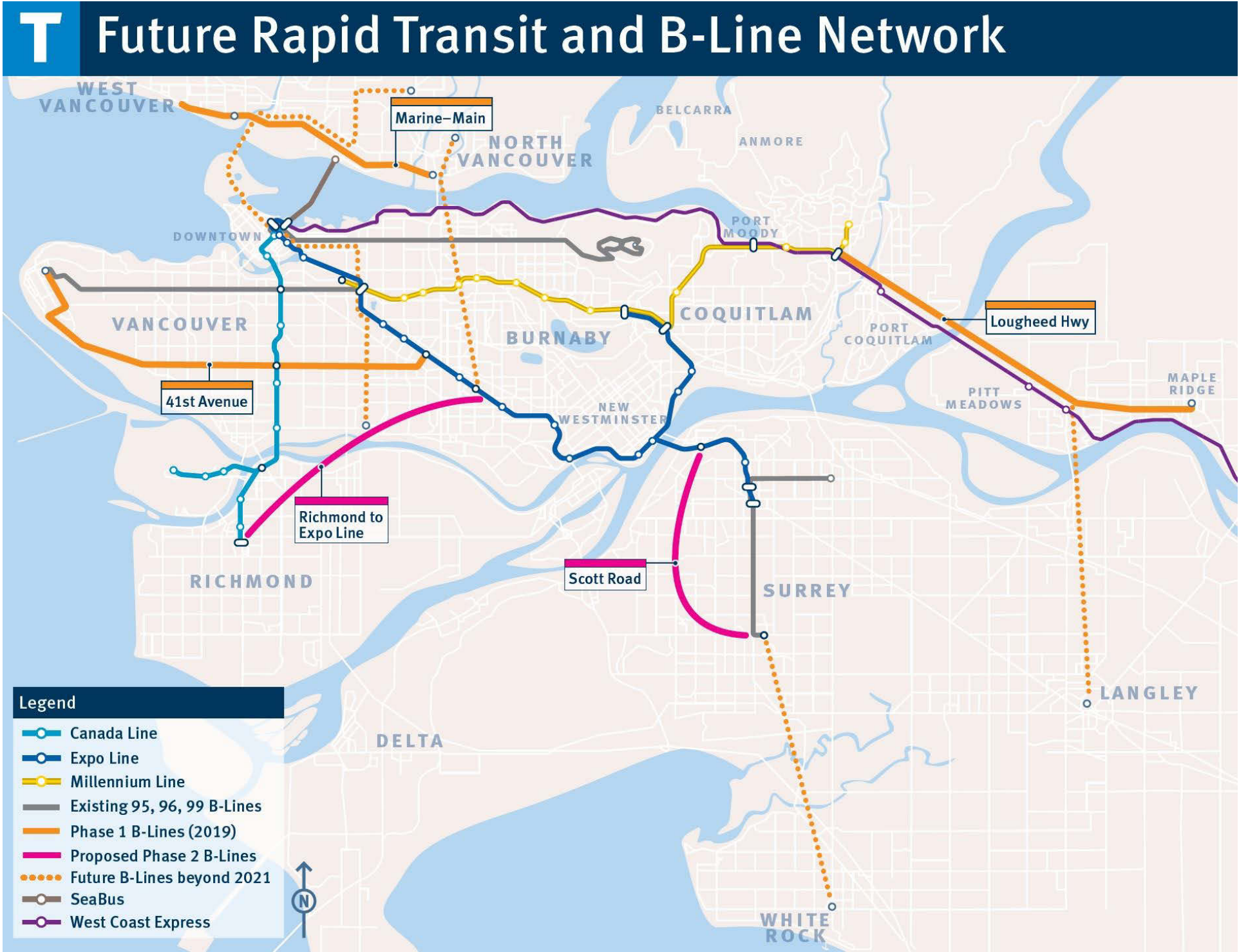
Sincerely,

A handwritten signature in blue ink, appearing to read 'J. Dobrovolny', with a stylized flourish at the end.

Jerry W. Dobrovolny, P.Eng., MBA
General Manager, Engineering Services

604.873.7331 | jerry.dobrovolny@vancouver.ca

Appendix A: Rapid Transit and Future B-Line Network (January 2019)



Appendix B: 41st Ave B-Line Proposed Concept (August 2018)



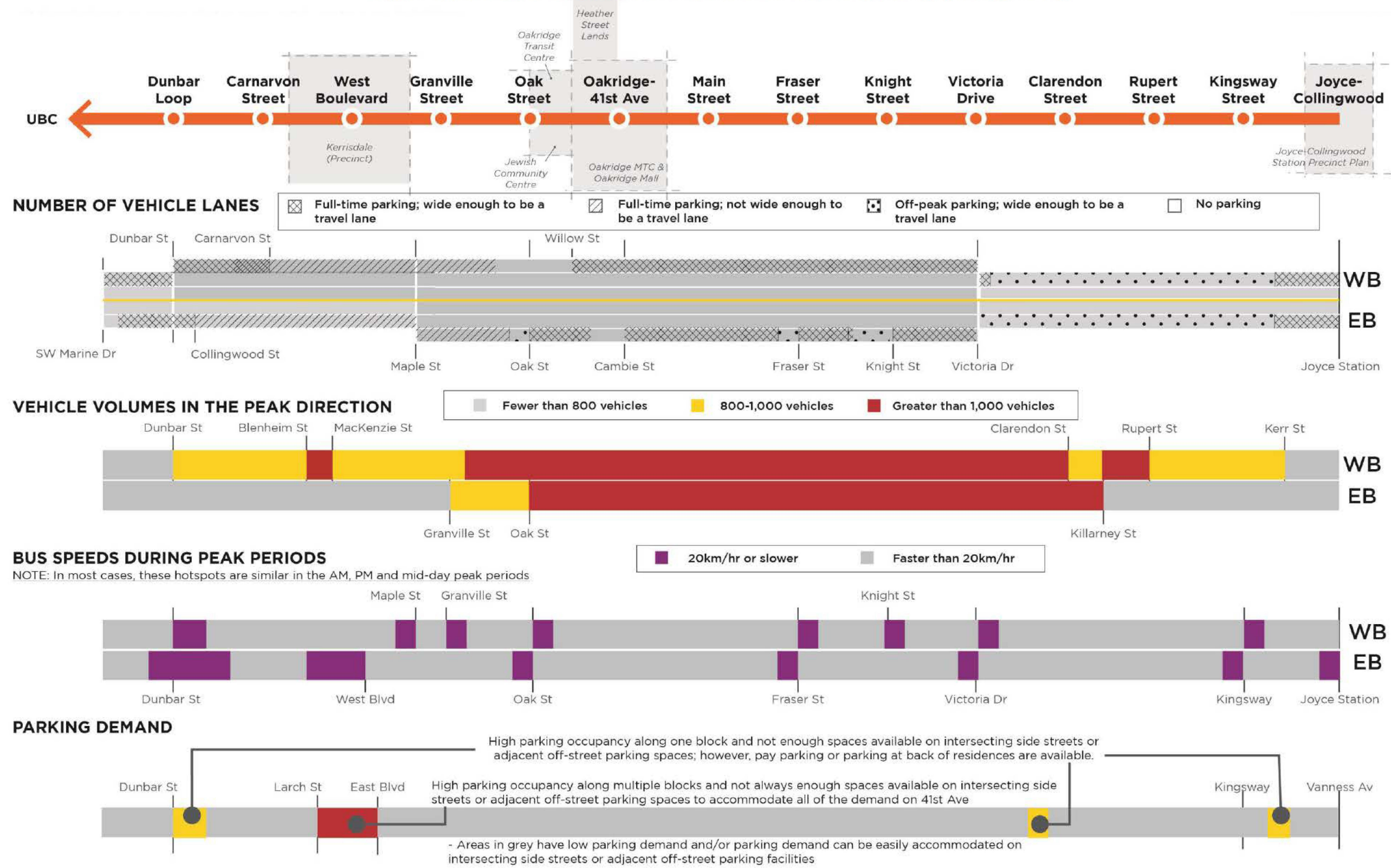
Frequency: Peak: 3-6 min | Midday/Evening/Weekend: 8 min | Night: 15 min
Hours of Operation: 6 a.m. to 1 a.m.

Planned changes to local service

Route 43	<ul style="list-style-type: none">Discontinue and replaced with new B-Line
Route 41	<ul style="list-style-type: none">Truncate route from Crown St to Joyce StationOperate with trolleybusesReduce frequency to 15 min during the day, 30 min at night*
Route 49	<ul style="list-style-type: none">Adjust route to serve Wesbrook VillageProvide additional late-night and early morning service on weekdays

*Frequency on Route 41 may be improved during peak periods, contingent on travel time savings achieved from bus speed and reliability measures

Appendix C: Current Conditions on 41st Avenue Corridor (January 2019)



Appendix C (Continued)

Current Conditions on 41st Avenue Corridor

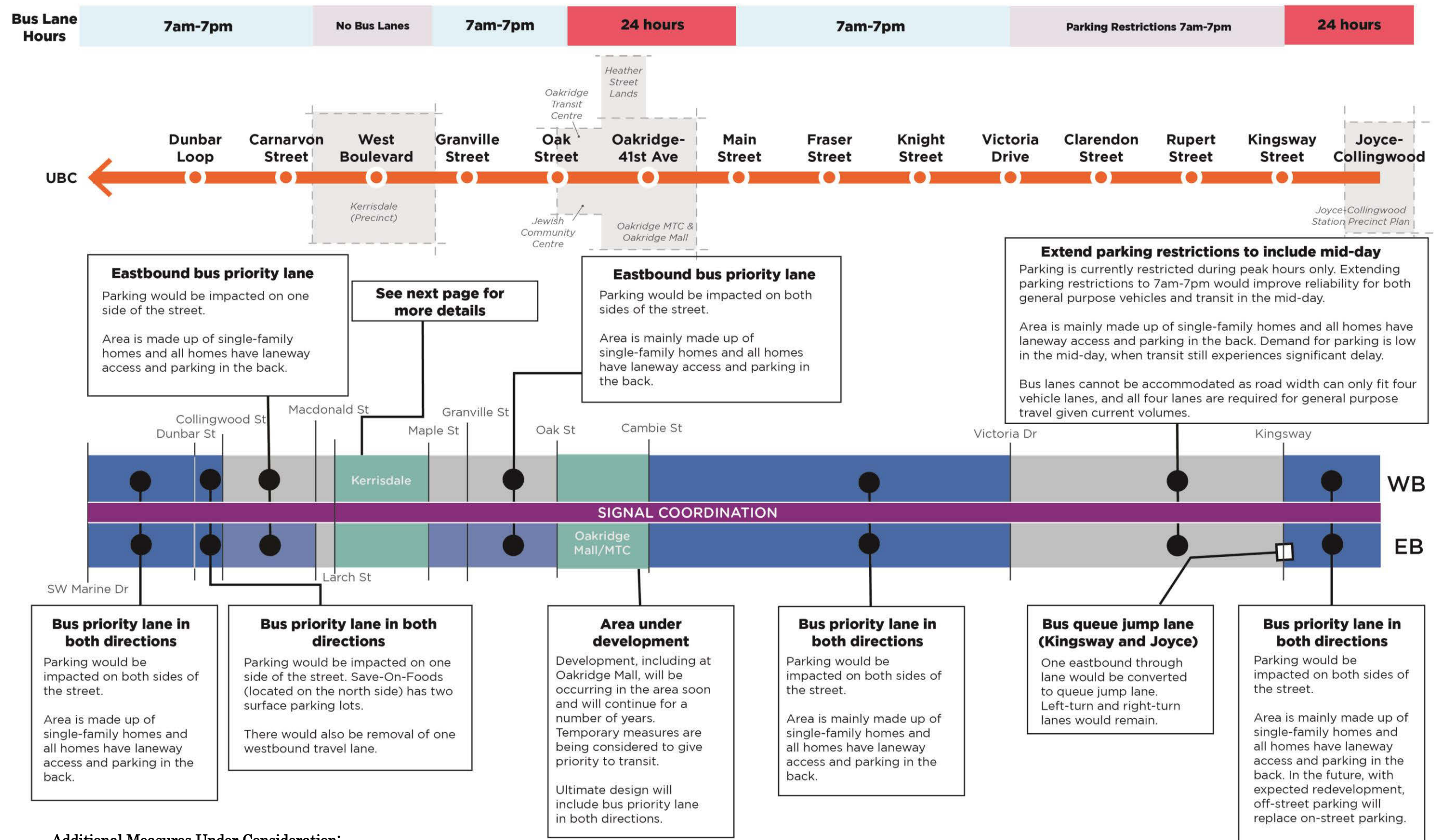
- **Vehicle Volumes:** Vehicle volumes are generally higher between Oak St. and Rupert St.
- **Transit Travel Time and Reliability:** Bus Routes 41 and 43 often experience crowding, congestion, and signal delay, resulting in significant variation in travel times and poor reliability. Bunching also occurs throughout the corridor, particularly around key destinations such as commercial retail areas. In addition, transit travel time can vary significantly. For example, it can take anywhere between 5 minutes to more than 20 minutes to travel from Main St. to East Boulevard in the AM peak period.
- **Transit Trips:** Buses move a large proportion of the trips taken along this corridor, particularly in the peak direction and west of Granville St, where 45% to 70% of all people traveling on 41st Avenue are in buses.
- **Parking Supply and Demand:** One method of improving transit reliability and reducing travel times is providing transit priority by converting parking lanes to bus priority lanes (either part-time or full-time). Based on the City's parking survey data, the on-street parking demand for most of the corridor is relatively low and the demand can generally be accommodated on intersecting side streets or adjacent off-street parking lots. Areas where on-street parking demand is higher and may not always be easily accommodated nearby include the following:
 - South side of Dunbar commercial area;
 - North and south sides of Kerrisdale commercial area;
 - North side of the half block between Commercial St. and the lane east of it, where there is a rental apartment complex that includes a secure underground parking garage for residents for a monthly fee;
 - One block on the west side of Joyce St., between Church St. and Euclid Avenue, where it is mainly residential parking in front of single-family homes and off-street parking is available in the back of residences. It is also in an area that is currently being rezoned, and on-street parking will be replaced by off-street parking once the properties have been redeveloped.

At this time, we have positive support for transit priority measures and large segments of the corridor with low parking usage. Thus the recommendation is to move towards bus lanes, subject to further communication with the public in the coming months.

- **Expected Growth:** There are a number of sites planned for redevelopment, both along and within close proximity to the 41st Avenue corridor. Much of the development is associated with the Cambie Corridor, Oakridge Municipal Town Centre, and the Joyce-Collingwood Station Precinct Plan. These developments will significantly increase population density and pressures on the existing road network, and might require new signals to be installed, which have the potential to increase travel times for transit vehicles along 41st Avenue. Thus signal coordination is required to minimize the impacts on transit.

Appendix D: Transit Priority Measures Planned for Fall 2019 and 2020

Note: measures are subject to further communication with the public and engagement with key stakeholders)



Appendix D (Continued)

Proposed Changes for Kerrisdale

Proposed Changes	Impact
Introduce an eastbound left-turn bay at West Boulevard (and lengthen existing westbound left-turn bay).	This gives eastbound left-turning vehicles a dedicated left-turn bay at W. Blvd., which will improve traffic flow and reduce rat-running through nearby local streets. It should also reduce chances for conflicts with pedestrians.
Relocate eastbound bus stop to far side of East Boulevard and westbound bus stop to near side of East Boulevard.	<p>Relocating the bus stops avoids the buses getting stuck behind right-turning vehicles and vice versa (avoids through/right vehicles getting stuck behind stopped buses), which often are delayed waiting for crossing pedestrians.</p> <p>The new locations also provide more street space for waiting transit passengers, as well as pedestrians walking by.</p>
<p>At East Boulevard:</p> <ul style="list-style-type: none"> • North of 41st Avenue – restrict vehicle movement to right-in only from 41st Avenue to East Boulevard (south-bound travel to south of 41st Avenue as well as right and left-turns onto 41st Avenue would be restricted). • South of 41st Avenue - restrict vehicle movement to right-in/right-out only (northbound travel to north of 41st Avenue, as well as left turns onto 41st Avenue, would be restricted). • Remove the signal at East Boulevard and associated north-south pedestrian crossings and provide a centralized greenway crossing. 	<p>These adjustments will simplify the intersection and lead to fewer vehicle movements, some of which are difficult in the existing condition. Vehicles will also be less likely to get trapped within the small queue space between West and East Boulevard. They will also prevent southbound vehicles on East Boulevard, north of 41st Avenue, from conflicting with westbound vehicles on 41st Avenue.</p> <p>In addition, these changes will increase the flow and reliability of all vehicular traffic travelling east and west along 41st Avenue.</p> <p>For people walking and cycling, these adjustments will make the crossing of the greenway safer, reduce the east-west pedestrian crossing distance at East Boulevard, and reduce the chances of conflict at the crosswalks with vehicles turning left. However, pedestrians walking to/from the major origins/destinations east of East Boulevard will need to walk further to cross 41st Avenue.</p> <p>In addition, these changes will add more public space on the greenway.</p>
Turn Maple St into a fully signalized intersection.	Upgrading to a fully signalized intersection will improve vehicle access to businesses south of 41 st Avenue.
Convert east bound curb lane between West Boulevard and the east bound bus stop to a transit lane.	To help buses travel through the area more reliably.
Explore opportunities to fix and repair crosswalks at the West Boulevard and Yew intersections.	Repaired crosswalks will reduce tripping hazards for pedestrians, particularly those with mobility devices and strollers.