

**TO:** TRANSPORTATION COMMITTEE (TC)  
**FROM:** GENERAL MANAGER ENGINEERING  
**SUBJECT:** **BUS SPEED AND RELIABILITY PROGRAM – CANADA WAY CORRIDOR STUDY**  
**PURPOSE:** To present an overview of the Bus Speed and Reliability Program (TransLink) - Canada Way Corridor Study

## **RECOMMENDATION**

**THAT** the report titled “Bus Speed and Reliability Program – Canada Way Corridor Study” dated November 21, 2024, be received for information.

## **1.0 POLICY SECTION**

The Canada Way Corridor Study (the Study) aims to enhance bus efficiency and reliability while optimizing the overall traffic operations along Canada Way. The project supports the City’s Corporate Strategic Plan and goals for a safe, connected, healthy, and dynamic community, and it is also aligned with Council-adopted policies within Burnaby’s Transportation Plan and the City’s Climate Action Framework that support a sustainable, safe, and accessible transportation system.

## **2.0 BACKGROUND**

The Bus Speed and Reliability (BSR) program is an initiative by TransLink to improve bus efficiency and reliability through technical studies and capital projects. Through the BSR program, TransLink works in collaboration with municipalities in developing and implementing mitigation measures to improve transit performance.

Canada Way is one of the key bus routes in Burnaby as it provides connectivity to local destinations. The corridor also serves as a major arterial, carrying significant traffic volumes with regional demands through Burnaby. The Study was initiated as part of the BSR program to assess and identify improvement opportunities to enhance multi-modal operations, including buses and vehicles along Canada Way, between Willingdon Avenue and Edmonds Street (refer to **Attachment 1**).

## **3.0 GENERAL INFORMATION**

Based on the feedback from TransLink bus operators and data, transit delays are primarily attributed to: (i) buses in pull-out bays waiting for gaps in the traffic flows to merge back into travel lane, and (ii) delays through intersections.

### 3.1 Methodology

Three options were evaluated in the Study, including:

- **Option 1: Maintain Existing Bus Pull-Out Bays**  
This option would maintain existing bus pull-out bays to continue accommodating buses in them. Similar to existing conditions, delays at bus stops would not be improved as buses would need to wait for gaps in the traffic flows before merging back to the travel lane. This option would also maintain existing traffic signal hardware and operations and buses would not be prioritized at intersections.
  
- **Option 2: Remove Existing Bus Pull-Out Bays**  
This option would decommission or remove existing bus pull-out bays to accommodate buses stopping in the travel lane during loading/unloading activities for passengers. This option would allow buses to continue to stay in the travel lane without pulling out to the side for passengers to board or alight.
  
- **Option 3: Provide Transit Signal Priority (TSP) Measures**  
This option would upgrade existing traffic signals near bus stops with TSP, consisting of enhanced traffic signal hardware and new cameras. The purpose of the TSP is to enable the detection of buses in the bus pull-out bays and activate corresponding traffic signal timings to create gaps in the traffic flows for buses to merge back into the travel lane with minimal delays. TSP would also enable the detection of buses approaching an intersection and adjust the traffic signal timings to improve bus priority as well as optimizing the overall traffic operations for all road users.

### 3.2 Option Evaluation

The evaluation framework focused on improving bus speed and reliability, while optimizing the overall traffic operations and safety for all road users. The following performance metrics were used:

- Bus travel time;
- General traffic travel time;
- Intersection traffic performance (such as delays and length of queues for each intersection approach and overall intersection); and
- Traffic operations and safety.

The Study results indicated that Option 1 is not recommended as existing transit delays would not be improved at both bus pull-out bays and at intersections.

For Option 2, the Study results indicated that there would be marginal improvements to transit delays; that is, delays would be reduced at bus stops as buses continue to stay in the travel lane to load/unload passengers. However, transit delays at intersections would not be mitigated. Option 2 would have the greatest impact on other road users as vehicles would need to wait behind stopped buses during

frequent loading/unloading passenger activities. From a safety perspective, Option 2 could result in vehicles behind stopped buses changing traffic lanes and potentially conflicting with the vehicles in the adjacent lane.

The Study results indicated that Option 3 (TSP) is generally the preferred option as this would reduce transit delays at both bus stops and at intersections. Specifically, at bus stops, gaps would be created in the traffic flows for buses to merge back into the travel lane with minimal delays. At intersections, buses would be detected before entering an intersection and traffic signal timings would be adjusted to improve bus priority. The provision of TSP would also allow the optimization of the overall traffic operations at the intersection. In addition, TSP could also be used to detect active modes of transportation (pedestrians and cyclists) of which their movements through the intersections could also be prioritized.

**3.3 Recommendation and Next Steps**

With Option 3, the Study identified the following locations for improvement opportunities:

- Canada Way at Willingdon Avenue
- Canada Way at Deer Lake Parkway
- Canada Way at Burris Street

Working with TransLink, the City will be submitting funding applications for the detailed design and implementation of Option 3 through the TransLink BSR Program.

**4.0 COMMUNICATION AND COMMUNITY ENGAGEMENT**

Upon project implementation based on TransLink funding resources, data collection and public and stakeholders feedback will be assessed for any technical adjustments, as needed.

**5.0 FINANCIAL CONSIDERATIONS**

As part of the BSR program, the project implementation and costs are based on 100% funding contribution from TransLink.

Respectfully submitted,

May Phang, P.Eng., General Manager Engineering

**ATTACHMENTS**

Attachment 1 – Canada Way Corridor Study Area Map

Attachment 2- Bus Speed and Reliability Program- Canada Way Corridor Study Overview Presentation

**REPORT CONTRIBUTORS**

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