

**SUBJECT: TRANSIT PRIORITY PLANNING**

The purpose of this report is to provide an update to the Victoria Regional Transit Commission (VRTC) on Transit Priority planning and requirements within the Capital Region and to present the selected corridors, workplan and associated budget for **APPROVAL**.

**BACKGROUND:**

Transit priority is best suited to corridors characterized by high volume transit use and significant travel delay. In these corridors, small improvements to transit travel time can provide significant benefit to passengers (leading to higher ridership and revenue) and to transit costs (by reducing the time, and therefore the number of buses needed to provide a specified frequency).

Transit priority covers a range of measures from traffic signal related actions (coordinated timing, advance turn signals, Transit Signal Priority, signal gates) to road management strategies (bus stop placement, parking bans, peak hour management strategies, bus-only lane designation) to construction of physical features such as queue jump lanes, extended bus stops, and new transit-only rights-of-way.

Based on the information presented February 29<sup>th</sup>, 2012, BC Transit received direction from the VRTC to engage Municipal staff to identify and develop a plan to improve transit priority on main corridors within the region. The first step of this process has developed a priority list of corridors has identified the top five corridors recommended for further analysis and action.

**DISCUSSION:**

Transit priority is a term used to refer to a variety of physical and operational improvements designed to give transit vehicles and their passenger's priority over general vehicle traffic. Transit priority elements can be:

- Regulatory, such as "Yield to the Bus" regulations and signage
- Operational, such as retiming traffic signals to respect the higher number of passengers on transit vehicles compared to private vehicles and transit signal priority measures
- Physical, such as exclusive transit ways, intersection queue jumpers and bus bulges,

BC Transit and local partners will examine opportunities at key locations along the transit network for priority measures that reduce delays to bus services, such as transit signal priority and queue jumpers at intersections where delays and congestion exist today or are anticipated to degrade in the future. Although many of these treatments may impact automobile traffic, they are key to supporting long-term transit ridership by prioritizing movement of people over vehicles.

Based on Transit Future Plan vision of network development, there are a number of corridors where transit priority may be considered. An assessment of the traffic volume and level of service, transit passenger and vehicle volumes was conducted to prioritize these corridors.

These corridors are summarized in the following table.

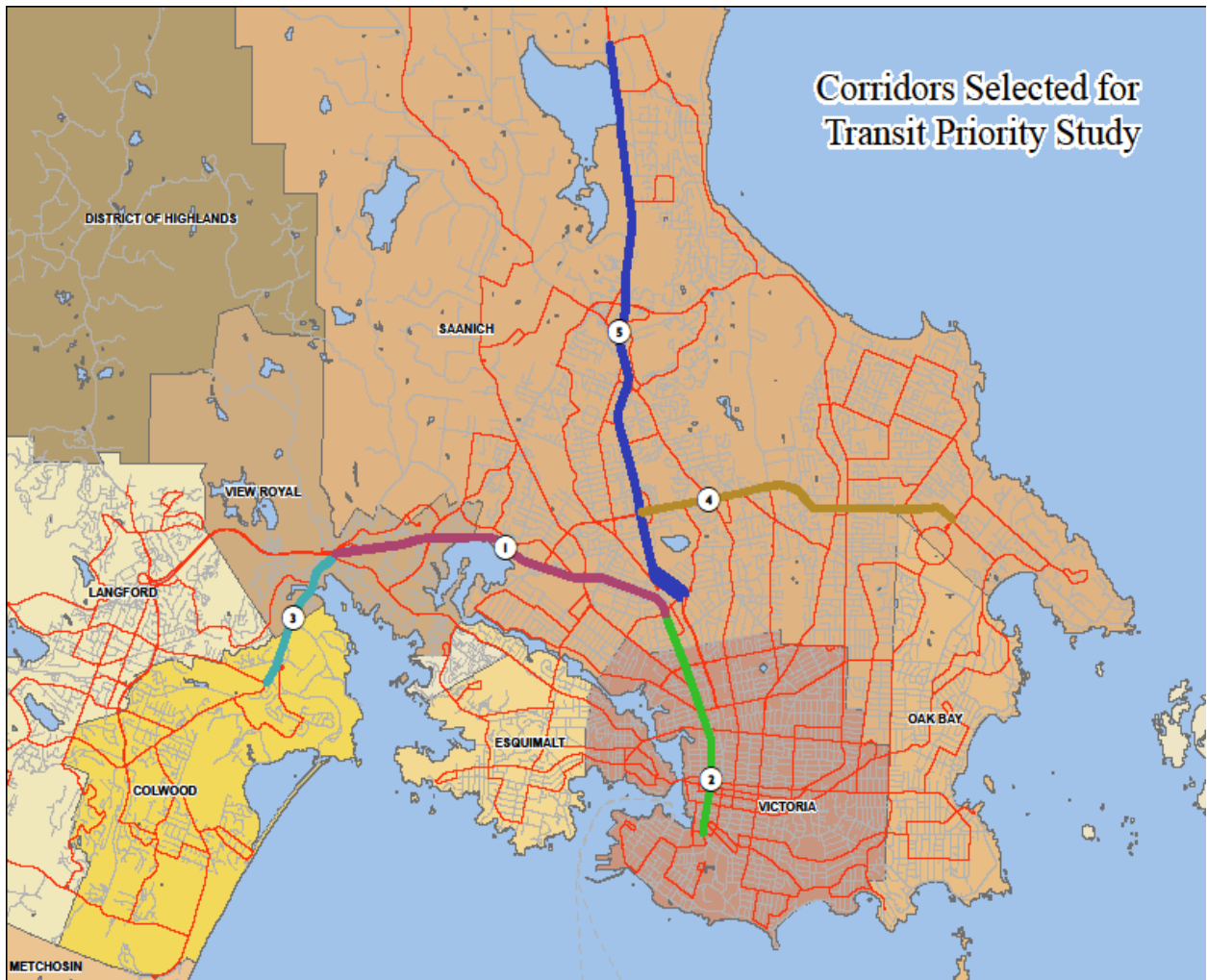
Priority	Description	Traffic Congestion		Ridership Passenger per day	Buses per day
		Level of Service	Traffic Flow Volume		
1	Highway 1	D-F+	High	4,000-6,000	100-135
2	Douglas St				
	Hillside Ave to Saanich Rd	D-F	Medium	6,000-10,000	135-200
	Belleville St to Hillside Ave	A-C	Medium	17,000-23,000	500-900
3	Island Highway	A-F	High	4,000-6,000	135-200
4	McKenzie Ave	A-E	High	4,000-6,000	100-135
5	Highway 17	A-F	High	2,000-6,000	135-200
6	Quadra	A-F	Medium	4,000-6,000	100-135
7	Downtown Couplets	A-C	Medium	2,000-10,000	330-530
8	Shelbourne	A-E	Medium	4,000-6,000	100-200
9	Hillside	A-D	High	2,000-4,000	60-100

**Level of Service**

A – C	D	E	F/F+
Free Flow	High Density	Near Capacity	Breakdown

Using statistical data derived both from BC Transit and Municipal sources and discussion with municipal partners, the top five priority corridors in order of anticipated benefit are:

1. Highway 1 between Uptown and the Colwood exit
2. Douglas Street from Bellville Street to Saanich Road
3. Island Highway – Highway 1 to Goldstream Ave
4. McKenzie Avenue - Highway 17 and Borden
5. Highway #17 – between Saanich Road and Ravine, and Haliburton and Sayward.



## WORKPLAN

A variety of transit priority options need to be examined by transportation engineers who have experience with implementing transit priority and traffic management operations. Cooperative effort with the municipal and provincial agencies responsible for these corridors is also a necessity in order to ensure that any solution is viable and can be implemented.

A work program has been developed to carry out the traffic and transit operations analysis, evaluate alternative routes and transit priority measures and develop the recommended transit priority improvements. The work program comprises of the following tasks;

1. Project Initiation and Scope Finalization – To confirm scope and alternatives to be considered and proposed work program. Establishment of a multi-disciplinary project team with representation including MoTI and municipal staff.
2. Assemble and Review Background Material – Traffic information, transit information and data, municipal/MoTI planning criteria.
3. Corridor Review and Problems Definition Report – To identify auto and transit operational problems along the corridor.
4. Corridor Improvement Options – To identify alternative improvements to be evaluated including:

- a. Corridor Optimized Signal Timing Plans
  - b. Transit Operations Analysis and Benefits
  - c. Signal Coordination Strategies
  - d. Geometric Design Changes
5. Develop Capital and Operating Cost Estimates – To define annualized capital and operating costs of transit operations for each alternative.
  6. Prepare Transit Priority Report – To summarize the transit priority improvements and recommend a course of action.

## BUDGET & TIMELINE

An initial budget estimates has been developed for this work based on the top five high-priority corridors. It is estimated that the studies could be completed within 10 months with implementation of recommended strategies being commencing thereafter. The budget below does not include costs for implementation.

Priority	Location	Timetable	
		Start	Complete
1	Highway 1	Jun-12	Oct-12
2	Douglas St	Jun-12	Oct-12
3	Island Highway	Oct-12	Mar-13
4	McKenzie Ave	Oct-12	Mar-13
5	Highway 17	Oct-12	Mar-13
Budget Estimate		Commission	Provincial
		68.3%	31.7%
		\$ 170,750	\$ 79,250
		Total	\$250,000

## RECOMMENDATIONS

To advance transit priority initiatives in the region the following actions are recommended by the VRTC:

1. Approval to proceed with selected top five priorities/corridors as the scope of this project.
2. Approval of the commission share of the budget as outlined above of to be funded from the VRTC Transit Fund.
3. Forward this report to MoTI and impacted municipalities seeking their support and partnership in the development of these studies with BC Transit.

Respectfully,



Manuel Achadinha  
President and Chief Executive Officer