



City of Richmond

Report to Committee

To Planning - Dec 4, 2007

To: Planning Committee  
 From: Victor Wei, P. Eng.  
 Director, Transportation  
 Re: STEVESTON HIGHWAY-NO. 5 ROAD AREA TRANSPORTATION IMPROVEMENT PLAN

Date: November 16, 2007  
 File: 10-6500-01/2007-Vol 01

Staff Recommendation

That the British Columbia Ministry of Transportation and TransLink be forwarded a copy of the attached report titled *Steveston Highway-No. 5 Road Area Transportation Improvement Plan* (dated November 16, 2007) and requested to include the future improvements for the Highway 99 corridor, including the George Massey Tunnel, Blundell Interchange, and Steveston Interchange, in their respective transportation improvement plans for the region and as part of TransLink's 2040 Transportation Strategy.

Victor Wei, P. Eng.  
 Director, Transportation  
 (4131)

Att. 2

FOR ORIGINATING DEPARTMENT USE ONLY			
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER	
Development Applications.....	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		
Policy Planning .....	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		
REVIEWED BY TAG	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	REVIEWED BY CAO	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

## Staff Report

### Origin

At the September 5, 2007 Public Hearing, the following resolution was referred to staff by Council:

*“That staff prepare strategies to alleviate the line ups and traffic congestion at the Steveston Highway & No. 5 Road interchange, taking into consideration the feasibility of implementing restrictions for access to the Massey tunnel via No. 6 Road and Sidaway Road during peak rush hour traffic times, and forward these strategies to Council and the Ministry of Transportation for review and comment.”*

This report summarizes the City’s implementation strategy to address the existing traffic congestion in the vicinity of the north end of the George Massey Tunnel including various proposed and planned transportation initiatives in the area of Steveston Highway and No. 5 Road.

At the same Public Hearing, the following referral motion was also made by Council:

*“That staff review the area plans in the vicinity of No. 5 Road and Steveston Highway (Shellmont Area - Ironwood Sub-Area Plan), including the Riverport Entertainment Precinct, and provide an analysis of the current area plan and whether there is a need for any revisions to the plan.”*

This part of the referral will be addressed in a separate report early in 2008.

### Analysis

#### 1. Traffic Issues Caused by Tunnel Congestion

George Massey Tunnel, under the jurisdiction of BC Ministry of Transportation (MoT), is an aged structure with limited traffic capacity and sub-standard geometry at both tunnel approaches. These functional deficiencies are causing traffic operational and safety concerns at both ends of the crossing, especially for the nearby residential neighbourhoods and industrial parks in Richmond. In particular, the congestion caused by the tunnel has an impact on the operations of the No. 5 Road-Steveston Highway intersection, which has been identified by ICBC as one of the locations in Richmond with the highest number of accidents. Other key traffic issues most commonly observed in the area include:

- commuter traffic shortcutting through the Shellmont residential area, Sidaway Road, and No. 6 Road;
- traffic backups from the southbound on-ramp at the Steveston Highway interchange throughout the area impeding local circulation; and
- the lack of safe cycling access crossing Highway 99.

## 2. Tunnel Improvement Plan

The expansion of the George Massey Tunnel and related Highway 99 corridor improvements have been studied for many years. As noted in the April 3, 2006 report to Council titled: *Review of Freedom to Move and Gateway Program Documents – Implications on Highway 99-Blundell Road Interchange and George Massey Tunnel Improvement Plans*, past recommendations for capacity improvement at the tunnel have been acknowledged since 1989. More recently, MoT has indicated that improvements to the tunnel is in its longer term plans after the implementation of the recently announced Gateway projects, which are expected to be completed by 2013.

At this time, it has not been determined as to whether the Massey crossing improvements would be implemented as a new tunnel or a new bridge. Regardless, it is imperative that the future improvements to this crossing be properly implemented with appropriate transportation demand management (TDM) measures such as the designation of added capacity for use by goods movement, transit, cyclists, and high-occupancy vehicles. Otherwise, any expansion of the crossing capacity could very well encourage further urban sprawl south of the tunnel resulting in a significant increase of commuter traffic travelling through Richmond on Highway 99 and other local roads, which would be contrary to the objective of regional sustainable growth.

It is certain that the Massey crossing will continue to be a major bottleneck for the movements of trucks, transit, and cyclists until the crossing improvements are made in the longer term. While the provincial focus at present is on implementing the elements of the Gateway Program, it is essential that the focus be shifted to the Massey crossing immediately upon completion of the planning work for Gateway Program (2010/2011) in light of the fact that the much needed crossing improvements have previously been identified in the following:

- Pacific Gateway Strategy Action Plan;
- Richmond City Council's past resolutions as a priority improvement;
- past UBCM briefings with MoT;
- provincial public acknowledgements; and
- recommendations from past transportation studies.

Over the coming months, it is expected that the Massey crossing improvement would be raised by various stakeholders as a high priority initiative for MoT and TransLink to consider for further pursuance. In addition, it is staff's understanding that the Lower Mainland Chamber of Commerce may also consider its support for the tunnel crossing as a high priority north-south corridor improvement project. The Corporation of Delta has also previously expressed support to George Massey Tunnel improvements.

It is therefore recommended that MoT and TransLink be formally requested by the City to include the future improvements for the Highway 99 corridor, including George Massey Tunnel, Blundell interchange, and Steveston interchange, in their respective transportation improvement plans for the region and as part of TransLink's *2040 Transportation Strategy* which is currently being prepared.

## 3. Area Transportation Improvements

Until the Massey crossing is improved, there is little the City can implement locally to significantly alleviate the tunnel traffic congestion predicament in the affected area.

Nevertheless, over the past several years, staff have been developing and implementing various transportation improvement strategies to mitigate traffic congestion and enhance pedestrian circulation in the area. As a result, a number of improvements (**Attachment 1 and 2**) have been identified within the study area, bounded by:

- Shell Road to the west;
- No. 6 Road to the east;
- Rice Mill Road to the south; and
- Williams Road to the north.

The actual timing of these improvements are dependent on MoT priorities, development activities, and/or the City's capital funding availability for roads. These improvements are generally described as follows:

#### *Twinning of Steveston Highway Overpass*

In June 2006, a preliminary design study titled *Richmond Sub-Area Transportation Study - Stage 2* was completed with the recommendation to twin the Steveston Highway overpass. It is expected that the twinning of this overpass and the associated widening of Steveston Highway east of Highway 99 would be triggered by either provincial initiatives or new major developments in the vicinity. The City would also play a key role in securing developers' contribution towards the overpass improvements through development requirements.

#### *Blundell Road Widening*

Based on the above 2006 study, it was also recommended that Blundell Road be extended from No. 6 Road to No. 7 Road, and that the section between No. 4 Road and No. 6 Road be widened to four lanes in conjunction with the introduction of the new full Blundell Interchange at Highway 99. As per Council resolution of February 26, 2007, these improvements are expected to be implemented as part of the longer term strategy for improving the Highway 99 north-south corridor and the tunnel.

#### *Neighbourhood Traffic Improvements*

##### Shellmont Area

Over the past years, residents in the Shellmont area have expressed traffic safety concerns in their neighbourhood resulting from rat-running traffic avoiding the tunnel congestion. Staff investigated the issues and presented a number of recommendations, which were subsequently approved by Council on December 4, 2006. Some of the key recommendations included the installation of:

- five pairs of speed humps;
- 20 km/h speed limit signs at all entrances to local lanes; and
- "No Parking Anytime in Lane" signs at all entrances to local lanes.

The above recommended improvements have since been implemented.

### Sidaway Road/No. 6 Road

Concerns have also been raised about tunnel-bound traffic cutting through Sidaway Road and No. 6 Road. To address these concerns, the intersection of No. 6 Road and Triangle Road is planned as part of the City's road capital program to be re-aligned so that No. 6 Road north of Triangle Road would be converted as a "stub" leg of a re-configured "T" intersection. The new intersection configuration would allow for an improved Triangle Road-No.6 Road movement serving the industrial area to the east while discouraging north-south through traffic along No. 6 Road at this location.

As for Sidaway Road, staff are monitoring the traffic safety conditions on this roadway to determine if there is a need for any traffic calming measures such as speed humps to deter through and speeding traffic.

The closing of either Sidaway Road or No. 6 Road to prevent tunnel traffic from using them is not recommended at this time as such a measure would have severe impacts on local access and other parallel roadways given the magnitude of tunnel traffic that would be affected. If deemed necessary, an area-wide study and public consultation would need to be conducted before this option is considered further.

### Intersection Improvements

The No. 5 Road and Steveston Highway intersection is a key intersection with significant traffic congestion concerns. Due to the daily tunnel traffic back-ups, this intersection is presently not able to operate in an efficient manner especially in the afternoon peak hours. However, staff have continued to implement operational and geometric enhancements such as the recently improved northbound right-turn lane to ease local traffic circulation and business access. Further improvements such as westbound to southbound dual left-turn lanes to accommodate the growing industrial traffic are expected to be implemented within the next five years.

### Transit Improvements

At present, the area is reasonably well-served by the following transit routes:

- # 403 – regular service connecting Richmond City Centre with Riverport via Steveston Highway;
- # 401 – evening and weekend service connecting Steveston-Richmond City Centre with Riverport; and
- #C 93 – community shuttle service connecting Steveston with Riverport via Williams Road

Although TransLink does not have any immediate plans to enhance the above existing transit services for the area, staff and CMBC are jointly monitoring transit passengers' feedback and ridership demand in this area to determine the need for further service enhancements. It is also expected that the need for further local service improvements will be re-assessed as part of the Richmond Area Transit Plan in 2008.

### Cycling Improvements

There are two cycling improvements being planned for implementation in the study area which comprise of:

- design and construction of the Rice Mill Road bicycle lane along the north side; and
- bicycle/pedestrian path connecting Featherstone Way with Steveston Highway.

Both of these improvements are part of the requirements for current active developments and the actual timing of implementation is dependent upon finalization of the respective development applications. Furthermore, it is also planned that designated bicycle lanes would be part of the design criteria for the Steveston Highway overpass twinning to improve the east-west cycling connection across Highway 99.

### Pedestrian Improvements

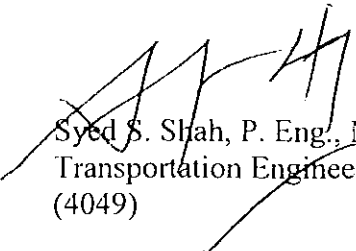
A number of pedestrian improvements, such as the upgrading of sidewalks and the provision of new special crosswalks are planned for implementation within the next two years as part of developments requirements in the area. In addition, the City has also recently implemented crosswalk improvements on No. 5 Road and Coppersmith Place south of Steveston Highway to encourage and ensure safe walking trips within the area.

### **Financial Impact**

There is no financial impact at this time. The improvements listed in Attachment 1 necessitating City funding, including those involving MoT, will be addressed through the City's annual capital program approval process as the timing of project implementation approaches. Other improvements would be implemented as part of development requirements.

### **Conclusion**

While the City and the community face challenges in coping with the daily traffic congestion near the north end of the Massey Tunnel, there are no local initiatives that the City can implement solely on its own to effectively address them. As such, staff are currently working with a number of external partners and stakeholders, including MoT, TransLink, Greater Vancouver Gateway Council, Fraser River Port Authority, and Richmond Chamber of Commerce to bring a high priority focus in pursuing the timely improvements to the Highway 99 corridor and the tunnel. At the same time, staff are also planning and implementing a number of local traffic improvements, such as pedestrian improvements, geometric improvements to the Steveston Highway/No. 5 Road intersection, and other local roadway improvements to encourage walking/transit/cycling trips and mitigate the on-going traffic congestion as much as possible.



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Steveston Interchange Area Planned, Proposed and New Transportation Improvements

Type / Location	General Description	Extent of Improvement	Estimated Timing	Driver
Tunnel				
George Massey	Replacement with new tunnel or bridge and transportation demand management measures	Crossing structure and associated approaches	5 - 10 years	MoT
Interchanges				
Steveston	Steveston overpass expansion to 5 lanes	Overpass and ramps	< 5 years	MoT, Development
Blundell	Construction of new interchange on Hwy 99	No. 5 Road to Sidaway	5 - 10 years	MoT
Roads				
Blundell	Widening of Blundell Road to four lanes	Between No. 4 Road and No. 6 Road	5 - 10 years	MoT, City
Steveston Hwy	5-lane cross-section with left-turn bay or landscaped median	Between Highway 99 Interchange and No. 6 Road	< 5 years	City, Development
No.6 Road	4-lane cross-section and raised median	Between Steveston Highway and Triangle Road	< 5 years	City, Development
No.6 Road, Sidaway Road	Traffic calming measures e.g. speed humps	Between Westminster Highway and Triangle Road	To be determined	City
Shellmont Area local roads	Traffic calming measures e.g. speed humps, 20km/h speed limit signs, no parking at anytime in lane, advance warning signs for 'blind corners', foliage trimming etc.	Shellmont sub-area	Completed	City
Intersections				
No.6 Road / Triangle Road	Re-alignment of No. 6 Road and Triangle Road intersection	South leg (No. 6 Road) and east leg (Triangle Road)	< 5 years	City, Development
No.5 Road / Steveston Highway	Westbound to Southbound dual left turn lanes	East leg	< 5 years	Development
No.5 Road / Steveston Highway	Northbound right turn lane	South leg	Completed	Development
No.5 Road / Steveston Highway	Southbound to Eastbound left turn lane	North leg	< 5 years	Development
No.5 Road / Steveston Highway	Westbound to northbound right turning lane	East leg	< 5 years	Development
Transit				
Steveston Hwy	Bus shelter/benches	For westbound bus services (between No. 6 Road and Hwy 99)	< 5 years	Development
Area Service Improvements	Improved routing and frequency	Within study area	< 5 years	TransLink, City

Steveston Interchange Area Planned, Proposed and New Transportation Improvements

Type / Location	General Description	Extent of Improvement	Estimated Timing	Driver
<b>Cycling</b>				
Rice Mill Road	Bike lane	No. 5 Road to Model Airplane Park	< 2 years	Development
Featherstone Way	4m wide bike/pedestrian Path	Featherstone Way to Steveston Hwy	< 2 years	Development
<b>Pedestrian</b>				
No. 5 Road / Seacliff Road	Special crosswalk	Intersection	Completed	Development
Steveston Hwy / Seaward Gate	Pedestrian signal	Intersection	Completed	Development
Steveston Hwy	2m concrete sidewalk and 1.5m grass boulevard	Between Highway 99 Interchange and No. 6 Road (north side)	< 2 years	Development
No.6 Road	2m concrete sidewalk and 1.5m grass boulevard	Between Triangle Road and Steveston Hwy (west side)	< 2 years	Development
No.6 Road	Special crosswalk	At main entrance of theatre driveway on No. 6 Road	< 5 years	Development
No.5 Road	Special crosswalk	Across Ironwood Mall	Completed	Development
Coppersmith Place	Special crosswalk	Across Ironwood Mall	Completed	Development
Steveston Hwy	1.5m concrete sidewalk and 1.5m grass boulevard	North side of 11000 block	< 2 years	Development
Williams Road	1.5m concrete sidewalk and 1.5m grass boulevard	South side of 11000 block	< 2 years	Development
Williams Road	1.5m concrete sidewalk and 1.5m grass boulevard	North side of 11000 block	< 2 years	Development
Rice Mill Road	1.5m concrete sidewalk and 1.5m grass boulevard	No. 5 Road to Model Airplane Park	< 2 years	Development



Steveston Interchange Area - Planned, Proposed and New Improvements

