



To: Public Works and Transportation Committee **Date:** April 3, 2006
From: Victor Wei, P. Eng. **File:** 10-6460-01/2006-Vol 01
Acting Director, Transportation
Re: **Review of *Freedom to Move* and *Gateway Program* Documents - Implications on Highway 99-Blundell Road Interchange and George Massey Tunnel Improvement Plans**

Staff Recommendation

That the attached report titled *Review of Freedom to Move and Gateway Program Documents - Implications on Highway 99-Blundell Road Interchange and George Massey Tunnel Improvement Plans* (dated April 3, 2006) be received for information.

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

Att. 3

FOR ORIGINATING DIVISION USE ONLY					
ROUTED TO:		CONCURRENCE		CONCURRENCE OF GENERAL MANAGER	
Engineering	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 February 21, 2006 Planning Committee meeting, staff were also directed to:

“...review the “Freedom to Move” report and the recent Gateway Program, and report to Committee on Richmond’s needs and timeline.”

At the above meeting, the Committee discussed the need and timing for the twinning of the George Massey Tunnel as well as the proposed Blundell Road-Highway 99 Interchange. The purpose of this report is to respond to the above referral and identify the implications of these documents on the current efforts in completing the Blundell Road Interchange study which is currently near completion.

Finding of Facts

Improvements to the Highway 99 corridor including the need for twinning of the George Massey Tunnel have been noted in a number of past documents and plans as indicated below. Also, the proposed Blundell Road Interchange and the associated extension of the Blundell Road to the east have long been identified as necessary infrastructure improvements to serve the southeast Richmond area. The following sections briefly summarizes the recommendations from these documents as they pertain to the Highway 99 improvements in Richmond.

For reference, Attachment 1 illustrates the current proposed Blundell Road-Nelson Road corridor by the City, including the Blundell Road Interchange and the area of east Richmond which it would serve.

1. *Freedom to Move*

In 1989, the Greater Vancouver Transportation Task Force - including the B.C. Ministry of Transportation and Highways, B.C. Transit and the Greater Vancouver Regional District, was formed to develop the *Freedom to Move* document with the objective: “To prepare an integrated transportation strategy for the Greater Vancouver Region which will encourage orderly economic development at the lowest possible cost to taxpayers and system users in a manner consistent with the maintenance of livability and environmental quality.” Phase I of this *Freedom to Move* study deals with urban transportation issues.

The study recommended the following:

- “widen Highway 99 between the tunnel and the Richmond Freeway” (now called the East-West Connector); and
- “widen the George Massey Tunnel to six lanes by constructing a new two-lane tube” by year 2001.

Furthermore, the results of the project evaluation process carried out as part of this document indicated that:

- “the addition of a third tube to the George Massey Tunnel results in a high benefit/cost ratio”; and
- “before the end of 1996 an additional tube in the George Massey Tunnel will be required”.

Of note, the timing of widening of the Tunnel project was recommended ahead of widening or twinning the Port Mann Bridge, which is part of the current Gateway Program.

As input into developing the document, improvements identified then by Richmond included a new interchange at Highway 99-Blundell Road as well as the widening of Steveston Highway and overpass for additional capacity. A new Highway 99 interchange at Blundell Road was identified as one of the study’s recommended road network improvements by year 2001.

2. *Gateway Program*

The Gateway Programme, Traffic and Revenue Forecasts (September 2004) document is a traffic and revenue forecast study prepared for the Ministry as input to planning for a number of potential road infrastructure projects. This study states that:

“the new bore next to the existing George Massey (Deas) Tunnel, and widening of a length of the existing highway to both the north and south of the crossing ... is still in the early stages of development for possible future long term implementation and the project proposed should simply be taken as being indicative of the sort of improvement that could be made”.

This is the report, by the British consultants Steer Davies Gleave, that was quoted in the Vancouver Sun. In response to the newspaper article, the Richmond Chamber of Commerce welcomed the news and reiterated their support for improvements to the capacity at the Massey Tunnel (February 2006).

The Gateway Program - Improving Roads and Bridges for people, goods and transit throughout Greater Vancouver, Program Definition Report (January 31, 2006) focuses on addressing congestion in three priority corridors that fall under the Province’s Gateway Program:

- along the south shore of the Fraser River (South Fraser Perimeter Road),
- along the north shore of the Fraser River (North Fraser Perimeter Road), and
- the Highway 1 corridor from Vancouver to Langley.

In developing the program, consideration has been given to a number of strategic alternatives including the George Massey Tunnel Expansion in conjunction with the South Fraser Perimeter Road. The report indicates that:

- “upgrades to the George Massey Tunnel remain part of the Ministry of Transportation’s longer term plans” with the qualification that
- “widening of the Port Mann Bridge and development of the South Fraser Perimeter Road would provide greater overall benefit to the region”.

On January 31, 2006, the Premier launched the \$3 billion *Gateway Program* at the BC Chamber of Commerce Transportation Summit in Vancouver. The Program includes the twinning of Port Mann Bridge but not the George Massey Tunnel.

3. Other Related Documents

In addition to the above-mentioned reports, potential plans for improving the George Massey Tunnel, Highway 99, and Blundell Road Interchange were also noted in the following documents:

- *Transport 2021 Report* (1993), a joint project by the Ministry and the Greater Vancouver Regional District, identified the long term transportation improvements for the region. This document was also used as a basis to develop the Livable Region Strategic Plan (LRSP). The document states that the “Ministry of Transportation and Highways has identified several long term corridor options for investigation” including “additional capacity over both the South Arm and North Arm of the Fraser River”. It was also noted that “In addition, the Ministry has made other observations relating to more detailed planning on the Massey Tunnel where the counter-flow lane may prove operationally unsatisfactory over an extended period and may require new solutions.”
- *Highway 99 Blundell Interchange, Conceptual Design Report* (March 31, 1994) and *Southbound Off-Ramp at Highway 99/Blundell Road, Preliminary Design Report* (April 1, 1994) are reports prepared for the Ministry specifically to develop designs for the Blundell Road Interchange. The recommended configuration shows a loop in the southeast quadrant only for the eastbound to northbound traffic. At the time of this study, the Fraserport industrial area was not identified as a key activity centre and therefore was not considered when developing design options.
- *City of Richmond Official Community Plan (OCP)* (original adoption: March 15, 1999). Blundell Road (between No. 6 Road and Nelson Road) and Nelson Road (between Westminster Highway and Blundell Road) are identified as a continuous major transportation link connecting Highway 91 with Highway 99, also referred to as the Blundell/Nelson Corridor illustrated in Attachment 1.
- *Fraser-Richmond Servicing Report* (May 2001). This report was conducted on behalf of the Fraser River Port Authority to identify those services that would be required for the ultimate development of the Fraser-Richmond terminal site, as permitted by the OCP, and to assess construction phasing of these services. Attachment 2 shows the most recent phasing plan (dated February 8, 2006) for the 700 acre Fraser River Port Authority (FRPA) lands as well as the Kingswood Industrial Park (90 acres) immediately to the east. These lands are also referred to collectively as the Fraserport area. The Fraser River Port Authority has indicated to staff that the development of Area A as a future deep sea shipping terminal is highly contingent on a direct connection to Highway 99 via Blundell Road and the interchange.
- Greater Vancouver Gateway Council (GVGC) – In a May 15, 2003 letter to the City, the GVGC agreed to include the Blundell Road/Nelson Road Corridor in their Major Commercial Transportation System.

4. Proposed Inclusion of Blundell Road in Major Road Network

One of staff's objectives is to include the Blundell-Nelson Corridor as part of the regional Major Road Network (MRN) which would give the City access to 50/50 cost-sharing under TransLink's Minor Capital Funding Program. In June 2002, an application was made to TransLink to have this corridor admitted to the MRN, and in March 2003 staff made a presentation to the Major Roads and Transit Advisory Committee (MRTAC) Working Group.

The outcome of these discussions, however, was that although TransLink agreed to recognize the Fraserport area as a key activity centre, the inclusion of the Blundell-Nelson corridor into the MRN could not be supported until there is Provincial commitment to the construction of the Blundell Road interchange.

Analysis

As noted in the 1989 *Freedom to Move* document, the expansion of the George Massey Tunnel was recommended for implementation by 2001. In that regard, the much needed improvements at this crossing can be considered as long overdue while it was mentioned in *Gateway Program* consultant study only as a possible longer term improvement.

Similarly, the provision of a new Highway 99 interchange at Blundell Road and the associated road improvements were also recommended in many past official planning documents, and the City's current efforts in pursuing the implementation of this interchange are entirely consistent with the findings of these previous studies.

The following sections provide brief discussions on the implications of *Freedom to Move*, *Gateway Program*, and other planning documents mentioned in the previous section on the needs and timing of the possible future improvements at the Blundell Road Interchange and George Massey Tunnel.

1. Blundell Road Interchange

In the past, the City has expressed concerns on potential bisecting of the farmlands in the east Richmond area due to the construction of new freeways. In particular, any new north-south freeway, such as the previously proposed No. 8 Road freeway, would have severe impacts on the farmlands. As such, since the late 1980's the City expressed strong opposition to the No. 8 Road freeway concept and never supported such options due to further segregation of farmlands. Based on the current Richmond Official Community Plan (OCP), any new road corridors to the highway system other than those already recognized in the OCP would therefore not be supported or require further extensive debate, public consultation and amendment to the OCP.

Consistent with the recommendations of past planning documents, over the last 15 years, the City has been pursuing the addition of a full interchange at Highway 99-Blundell Road in order to improve goods movements in and out of the industrial areas within southeast Richmond and relieve the traffic congestion at the aging Steveston Highway Interchange. More recently, the City has proceeded with the widening of Westminster Highway to the east to improve regional access to the Highway 91-Hamilton Interchange with a view to also pursuing the implementation

of the Blundell Road interchange to the west to achieve reliable road access to the Fraserport industrial area from both directions.

In light of the recent fast growing industrial activities in the Fraser River Port lands, a Phase 1 planning study of a new Blundell Road Interchange and widening of the Steveston Highway was carried out in August, 2002 jointly by the BC Ministry of Transportation (MoT), TransLink and the City. In October 2004, a Phase 2 preliminary design study of the proposed Blundell Road Interchange commenced as a follow-up to the August 2002 planning study. This latter study, titled *Richmond Sub-Area Transportation Study - Stage 2*, is again jointly funded by the same three parties. The scope of this study includes:

- i) bringing closure to outstanding planning and operational issues identified in the previous study, *Richmond Sub-Area Transportation Study* (IBI Group, August 2002); and
- ii) developing a preliminary design and cost estimate for a new Blundell Road Interchange and the associated works in improving the existing Steveston Highway Interchange.

This study, which is now near completion, confirmed the recommendations made in the 2002 study and echoed the earlier recommendations outlined in the various past documents, including *Freedom to Move*, noted in the Finding of Facts section. Key draft preliminary findings of the current study are as follows:

- a recommended full Blundell Road interchange (Attachment 3) to accommodate the truck traffic from the Fraserport area in the mid-term (i.e. within 5 to 10 years);
- preliminary cost estimates are in the range of \$32 M to \$37 M for the Blundell Road Interchange (including land costs) and approximately \$5 M to \$6 M for the Steveston Highway Interchange widening (not including land costs);
- possible provision for ramp control for eastbound to southbound movement during extreme congestion periods caused by the tunnel;
- existing HOV lanes to be retained;
- a possible funding strategy involving potential funding partners such as the Province of BC, TransLink, Fraserport, area developers, the Federal government, and the City; and
- there may be potential negative impacts related to additional on and off-ramp traffic weaving among through traffic along Highway 99 (including HOV) due to the close proximity of the Blundell Road Interchange to the existing ones at Steveston Highway and Westminster Highway.

In order to resolve the above last issue on weaving traffic, staff are currently working with the Ministry and TransLink on developing the appropriate mitigation measures. In the scenario where no workable solutions could be found, suggestions had also been made that alternative locations could be considered to provide a road connection from the Fraserport area to the highway system via Highway 91 as opposed to Highway 99. The concept of connecting to Highway 91, however, would likely have significant negative impacts of bisecting farmlands as discussed earlier and it would not be consistent with the OCP. Should this concept be

contemplated as the only workable alternative to the Blundell Interchange, there needs to be a thorough assessment by staff and subsequent reporting out to Council for further consideration. It is expected that over the next several weeks, staff will obtain greater clarity from the Ministry on this issue and provide further details on the study recommendation to Council once the study is completed at the end of April, 2006, including strategies to mitigate any outstanding technical concerns.

2. Implications on Future George Massey Tunnel Crossing Improvements

Similar to the Blundell Road Interchange, the expansion of George Massey Tunnel and its related Highway 99 corridor improvements have been studied for many years dating back at least 17 years to 1989 when the *Freedom To Move* document was released. Recently as part of the *Gateway Program*, the Ministry has indicated that improvements to the tunnel is in their longer term plans which would likely be considered after the implementation of the Gateway projects sometime by 2013.

At present, the existing tunnel structure is aging with limited traffic capacity and the sub-standard geometry at both tunnel approaches are causing traffic operational and safety concerns. For example, the extreme congestion caused by the tunnel has an impact on the operations of the No. 5 Road-Steveston Highway intersection at the Richmond's end which has been identified by ICBC as one of the locations in Richmond with the highest frequency of accidents.

In light of the Ministry's increasing recognition on the need to improve this crossing in the long term to address existing deficiencies and meet future demand for goods movement, it is expected that this improvement would likely soon be included in future road improvement plan by the Province. Pursuit of increasing the capacity of this crossing, however, should be done such that urban sprawl is not encouraged and consideration is given to effective transportation demand management (TDM) measures such as tolling, high-occupancy vehicle (HOV) priority measures and commercial vehicle priority lanes. Other affected jurisdictions, including TransLink, the Corporation of Delta and City of Richmond, should also be participating partners in any future planning and technical work.

3. Next Steps

The following summarizes the expected key tasks to be undertaken and their approximate timing on the planning of the Blundell Road Interchange and the George Massey Tunnel:

- Over the next several weeks, staff will continue to work with the Ministry of Transportation (MoT) and TransLink to resolve the technical issue related to additional weaving traffic along Highway 99 due to the proposed Blundell Road Interchange. The outcome of this work may lead to mitigation measures at the new ramps or examination of alternative locations for highway connections.
- Staff expect to present a report on the key findings and recommendations of the current preliminary design study *Richmond Sub-Area Transportation Study - Stage 2* on the Blundell Road Interchange and associated works on improving the existing Steveston Highway Interchange in May 2006 upon completion of the study at the end of April.

- Over the coming months, staff will continue to work with the MoT to develop a long term plan for the improvements at the George Massey Tunnel to meet the needs of regional goods movement with consultation with the various affected jurisdictions including TransLink and the City of Delta.
- The City will continue to proceed with the Westminster Highway widening project from McMillan Way to Hamilton Interchange in phase 1 with a target completion date by the end of 2006.
- As development in the area continues, Nelson Road and the remaining section of Westminster Highway to McMillan Road are planned to be widened ultimately to four lanes likely within the next 5-7 years.

Financial Impact


None at this time. The current preliminary design study *Richmond Sub-Area Transportation Study - Stage 2* on the Blundell Road Interchange is being cost-shared between the Ministry, TransLink and the City. The funding source for the City's share has been previously approved as part of the 2004 Operating Budget.

Conclusion

With respect to the February 21, 2006 referral on the George Massey Tunnel, staff have reviewed the *Freedom to Move* (1989), the *Gateway Program* (2005), and other past released planning documents pertaining to the improvements along Highway 99 in Richmond. Both documents acknowledged the need for improving the George Massey Tunnel and the Blundell Road Interchange while the proposed timing of implementing such improvements varied among these documents. In fact, the earlier documents suggested that both improvements should be implemented several years ago.

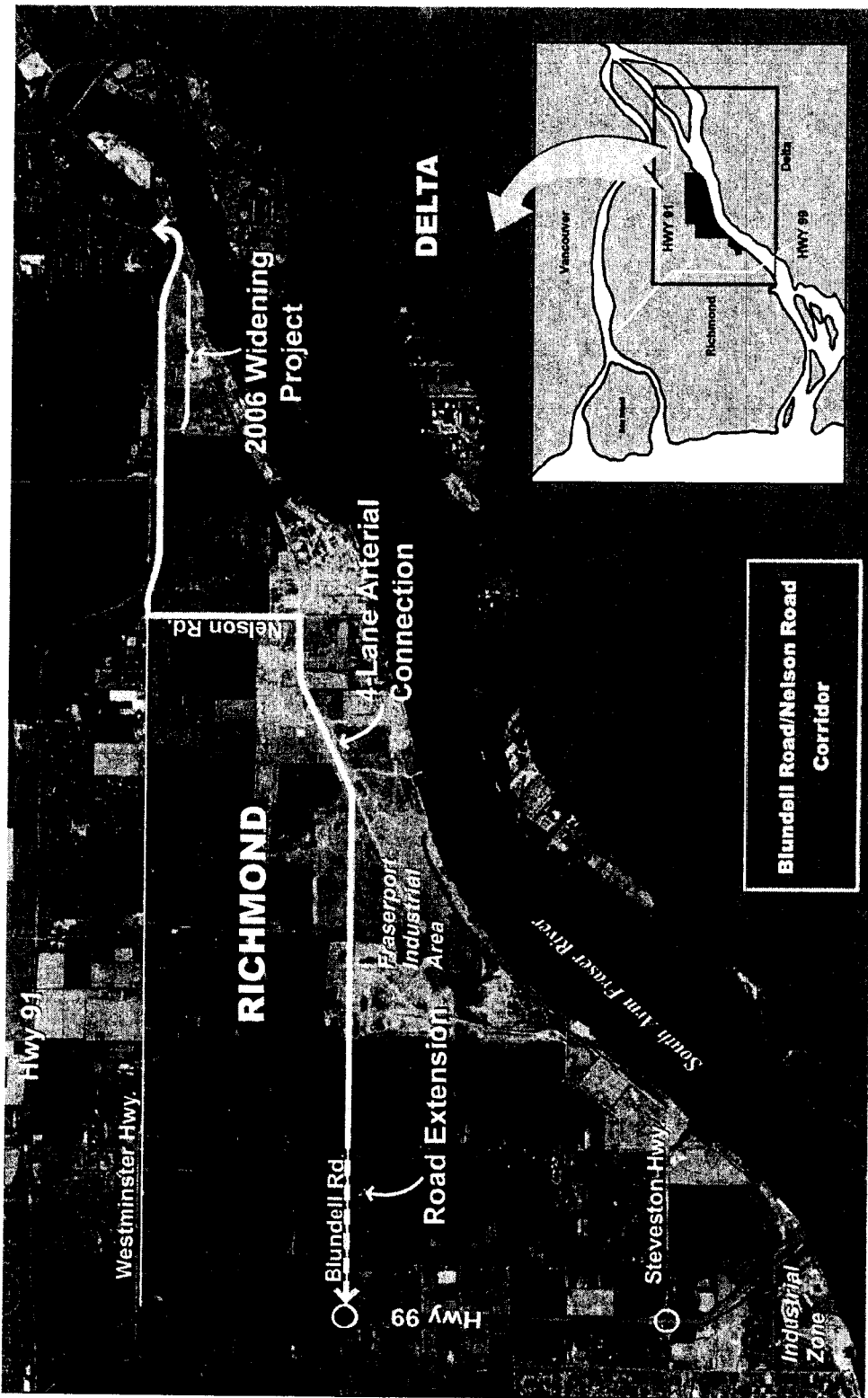
Regardless, the City continues to pursue the implementation of the Blundell Road Interchange and associated improvements to the existing Steveston Highway Interchange through the current joint study with the Ministry of Transportation and TransLink with a view to implementing the new Blundell Road Interchange and improving the Steveston Highway Interchange within the next 5-7 years. The final report on the study is expected to be completed at the end of April, 2006, at which time staff will provide a more detailed report to Council on this initiative.

Staff will also continue to work with the Ministry to develop a long term plan for improving the George Massey Tunnel to provide greater capacity for goods movement in light of the anticipated surge of cargo volumes to be ground transported in and out of this area. The implementation timing of the crossing improvements is likely to be beyond the next 10 years.


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DC:dc

Blundell Road/Nelson Road Corridor, East Richmond Area



Proposed Blundell Road Interchange configuration

