



City of Richmond

Report to Committee

To: Public Works and Transportation Committee *to Public Works & Transportation - June 23, 2004* Date: June 7, 2004
From: Victor Wei, P. Eng. File: 10-6500-01/2004-Vol 01
Acting Director, Transportation
Re: **SUSTAINABLE REGION SHOWCASE FOR GREATER VANCOUVER**

Staff Recommendation

That a letter from the City be forwarded to the Chair of Board of Directors of the Greater Vancouver Transportation Authority (GVTA) to request that Richmond be considered as a candidate municipality to participate in the following proposed initiatives under the Sustainable Region Showcase, as described in the attached report:

1. the Hybrid Bus Demonstration Project; and
2. the Goods Movement Strategy.

Victor Wei, P. Eng.
Acting Director, Transportation
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CONCURRENCE OF GENERAL MANAGER		
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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

The Urban Transportation Showcase Program is a five-year \$40 million federal government program created to demonstrate, evaluate and promote effective strategies to reduce greenhouse gas (GHG) emissions from urban transportation. Through the program, Transport Canada intends to work in partnership with provinces and municipalities to establish a number of transportation “showcases” in selected cities across Canada for demonstrating and evaluating a range of urban transportation strategies within a broad planning framework.

In December 2003, Transport Canada selected the Greater Vancouver Regional District (GVRD) and the Greater Vancouver Transportation Authority (GVTA)’s *Sustainable Region Showcase* submission. The *Sustainable Region Showcase*, with a March 2007 completion date, is a \$35 million initiative with \$10 million in federal funding and the remainder from GVTA, GVRD and other partners. This report briefly describes the initiatives in the *Sustainable Region Showcase* and the opportunities for the City of Richmond to participate in two initiatives in addition to one already approved.

Analysis

Sustainable Region Showcase is an initiative that makes the vital connection between transportation, land use, air quality and GHG emissions. It recognizes that progress toward sustainable transportation requires the effective combination of a number of mutually reinforcing policies and actions in transportation supply/demand, land use and travel behavior. Projects aimed at increasing transit priority, goods movement efficiency, improving pedestrian safety and amenity, experimenting with household-based trip reduction strategies, piloting technological improvements such as hybrid buses, providing cycle facilities and encouraging transit oriented development. The details of the six projects are:

Sustainable Region Showcase Package – Completion by March 2007	
Project	Description
Main Street Corridor Transit and Pedestrian Priority	Comprehensive transit priority measures and transit passenger amenity improvements on one of the highest volume local bus routes in the region.
Hybrid Bus Demonstration (potential Richmond project)	Testing the viability of low emission, low noise diesel/electric buses in Greater Vancouver
Central Valley Greenway	A predominantly traffic-separated 22 km bicycle and pedestrian pathway through three municipalities (New Westminster, Burnaby and Vancouver) in the centre of the Greater Vancouver Region.
Transit Villages	Increasing transit-oriented development, improving the physical environment and enhancing foot, bike accessibility in SkyTrain stations areas.
Goods Movement (potential Richmond project)	Undertake detailed studies and analysis to examine opportunities for improving the efficiency of goods movement in the region, while reducing greenhouse gas emissions.
Travel Smart (approved Richmond project)	Residence-based travel marketing program targeting households willing to try alternatives modes.

Richmond Participation

The Showcase projects are designed to focus collective energies on achieving progress in critical areas of regional land use, transport supply and transport demand management where progress to date has been slow. The City of Richmond is one of several municipalities participating in the Travel Smart initiative within the current program, as endorsed by Council on March 24, 2003. The program design will be developed in 2004 with an implementation date of 2005. The City of Richmond's City Centre is the target of the Travel Smart initiative.

In addition to the Travel Smart initiative, staff propose that GVTA be requested to consider Richmond's participation in the Hybrid Diesel-Electric Buses and Goods Movement initiatives under the *Sustainable Region Showcase*. These initiatives are briefly discussed below.

Hybrid Diesel-Electric Buses Initiative

While transit buses are not a significant source of GHG or local air pollution, they are perceived to be a problem in many local areas. Noise, exhaust fumes and the large size of the buses are prominent concerns. The GVTA is already introducing smaller community shuttle buses, and is in the process of replacing its zero emission trolley buses with new, modern buses. Other technologies potentially offer emission and noise benefits approaching trolleys at a lower cost, and to that end the *Sustainable Region Showcase* proposes running a controlled trial of Hybrid Diesel Electric Buses. Hybrid drive systems have shown the capability of reducing fuel consumption (and hence emissions) by 50% and have noise levels approaching that of an electric trolley bus. This new technology is rapidly approaching commercialization, but so far Canadian transit operators have ordered none and have little experience with their revenue operation.

GVTA is proposing to retrofit two existing bus shells with hybrid power technology developed by Allison Transmission. The hybrid bus uses a relatively small diesel, gasoline or compressed natural gas (CNG) engine to power an electric generator that provides a constant electric current to the vehicle's batteries. In addition to improved fuel economy, reduced emissions and more efficient braking, hybrids exhibit smoother and quicker acceleration, and a quieter ride. As the technology continues to mature, further improvements to emissions and fuel economy are expected. Benefits are also expected in the reduction of maintenance costs.

The demonstration project will be set up to allow the collection of as much data as possible within a short timeframe. The length of the demonstration, anticipated to start in 2005, will be a minimum of nine months, and may be extended to ensure that the test period includes winter months. The hybrid bus will be tested primarily on routes that would realize the most benefit from a low emission, low noise vehicle. These routes will primarily be in denser parts of the region, which will enable the vehicles to be tested on routes with long service hours, high levels of ridership and challenging conditions (e.g., topography and operating environment).

The City of Richmond offers many routes that would meet the objectives of the hybrid bus demonstration project. It is recommended that the City of Richmond request that the GVTA consider transit routes in Richmond for the Hybrid Bus Demonstration Project.

Goods Movement Initiative

The Goods Movement project is developmental planning/policy based and will comprise of a comprehensive study of freight and goods movement in the Vancouver region, with an emphasis on current and emerging approaches that can increase the efficiency of the movement of goods and reduce GHG emissions from the goods movement sources. This project is anticipated to be completed by the end of 2004 and will have the following key components.

- Surveys and interview with major goods movement stakeholders to provide a better understanding of the goods movement logistics in the Vancouver region. It is proposed that input be solicited from major terminal and gateway facilities, major shippers, GVRD municipalities, etc.
- Improve and refine the truck transport model developed by the 1999 Lower Mainland Truck Freight Study and incorporate this information into the regional transportation model. The improved truck model will be used as a tool for evaluating the effectiveness of various alternative strategies for improving freight and goods movement in the region.
- Research and inventory best practices regarding current and emerging approaches to urban goods movement being used or proposed in other cities and evaluation their potential application to Greater Vancouver.
- Develop alternative goods movement policy scenarios and test their effectiveness in improvement goods movement efficiency and reducing GHGs.
- Develop a recommended policy framework for a comprehensive goods movement strategy for Greater Vancouver, which will provide recommended policy directions and actions to improve the effectiveness and efficiency.

The industrial lands in southeast Richmond, comprising of Fraser River Port Authority, Ecowaste Industries, Kingswood Industrial Park, Straits Land Ltd., Con-Force and La Farge Cement, provide a unique economic development opportunity in our region. It offers waterfront access, newly completed state-of-the-art retail access and central location within the region's road network. This 452 hectare site provides one of the few remaining opportunities in Greater Vancouver for large parcel industrial development, an essential element in retaining and enhancing regional and provincial economic health.

The City of Richmond has proposed extending Blundell Road and linking it with a new provincial interchange along Highway 99 to provide the transportation connections that will allow these industrial lands to reach their full economic potential. In order to proceed with the proposed extension and interchange, the City of Richmond is working with the Ministry of Transportation and TransLink staff to carry out further technical work to address any outstanding highway operational issues. This technical work is similar to the proposed technical work in the Goods Movement project and it would be beneficial to take advantage of this opportunity. In that regard, it is recommended that the City of Richmond request that the GVTA consider the Fraserport industrial lands in southeast Richmond for the proposed Goods Movements Efficiency and GHG Study.

Financial Impact

Funding for the *Sustainable Region Showcase* projects has been secured from GVRD, GVTA and Transport Canada. However, due to a 12% reduction in funding from Transport Canada, municipalities may be asked for contributions for the Travel Smart. Details of this funding contribution are undetermined at this time, but it is expected to be under \$5,000 which can be absorbed within existing departmental budget. A funding requirement of over \$5,000 will be reported to Council for approval. In addition, there are expectation for municipalities to contribute in-kind staff resources and support, which will be accommodated within existing departmental work programs.

Conclusion

There are no "silver bullet" measures that can solve the urban transportation or greenhouse gas challenge. Effective strategies require a comprehensive range of mutually reinforcing actions and measures. The *Sustainable Region Showcase* provides a combination of measures that will help the region onto a path of decreasing GHG emissions. The City of Richmond's participation in the *Sustainable Region Showcase* will demonstrate our commitment to reducing GHG emissions and provide leadership to the many ways our community can participate and achieve global benefits.



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