Why is rapid transit needed in the Broadway corridor to UBC?

The buses on the Broadway corridor between Commercial Drive and the University of B.C. (UBC) carry more than 100,000 daily trips; Central Broadway and UBC are among the top transit destinations in the region. Demand is strong and growing, resulting in crowded buses, waiting passengers being left behind and unpredictable journey times that impact quality of service for customers. With buses arriving every two to three minutes during peak times, conventional buses are already working near capacity. A new solution is needed.

The Broadway corridor has been identified for rapid transit expansion since the early ‘90s, and was recently confirmed a priority in the 2008 Provincial Transit Plan and Transport 2040, TransLink’s long-term transportation strategy. The UBC Line will address growing demand, help reduce greenhouse gases, support community and economic growth, and contribute to a sustainable transportation system for the region.

What is the UBC Line Rapid Transit Study?

Scheduled to be completed in 2011, the UBC Line Rapid Transit Study is a multi-phase technical study of the rapid transit service options along the Broadway corridor from Commercial Drive west to UBC. Jointly funded by TransLink and the Province of B.C., the study will identify and evaluate the rapid transit technology and alignment alternatives, and determine the preferred alternative through rigorous evaluation. TransLink and the Province are working in partnership with the City of Vancouver, UBC, University Endowment Lands (UEL) and Metro Vancouver. A comprehensive and open process with stakeholders and the public will help determine the best rapid transit solution for local communities, UBC and the region.

Rapid transit on the Broadway corridor has been addressed in several other studies. Why is a new study being done now?

The Broadway corridor has been identified for rapid transit expansion since the early ‘90s. Although previous plans have identified the corridor as a priority for expansion, the most recent study looking in detail at rapid transit on the Broadway corridor was undertaken in 1999. There have been significant changes in the corridor and at UBC since then and travel demand has changed and grown, particularly with the introduction of U-Pass and the opening of the Canada Line. Past work will contribute to the current technical study.
TransLink’s current 10-year financial plan does not include budget for rapid transit expansion. Why is TransLink doing the study now?

Planning and designing rapid transit takes many years. We need to begin planning now in order to ensure that we have identified the best rapid transit solution and are prepared for implementation when funding is available. The work underway through this study will determine the level of investment required to meet transportation needs on this corridor. The outcomes of the study will allow for land use and development planning to account for future rapid transit expansion on the corridor.

How will the investment needs for the UBC Line be balanced with rapid transit investment in other areas of the region, such as the Evergreen Line and Surrey?

The UBC Line study is one of several rapid transit studies underway both at the corridor level and the network level to define future rapid transit expansion. Other studies include an analysis of rapid transit alternatives in Surrey and an assessment of the upgrade requirements to meet long-term capacity needs on the Expo Line. At the conclusion of this study, decisions about further development of the UBC Line will be made in the context of these other regional rapid transit priorities.

The Evergreen Line is the region’s top priority for implementation once funding is available.

What are the terms of reference for the UBC Line Rapid Transit Study?

Transportation consultant Steer Davies Gleave has been contracted to undertake a multiple account evaluation of a range of rapid transit technologies and alignments for rapid transit on the Broadway corridor between Commercial Drive and UBC. Three main technologies are being considered: bus rapid transit, light rail transit, rail rapid transit, or some combination of these technologies. The study will also look at improvements that could be made to conventional bus service on the Broadway corridor and parallel corridors to meet transit demand in the study area.

The terms of reference for this study are outlined in the Request for Proposals, available online at www.translink.ca/ubcline.

RAPID TRANSIT TECHNOLOGY OPTIONS

What rapid transit technologies are being considered for the UBC Line?

The rapid transit technologies being considered for the UBC Line are bus rapid transit, light rail transit and rail rapid transit—or some combination of these technologies.

Bus rapid transit (BRT) systems use rubber-tire, low-floor articulated buses that can run on diesel, compressed natural gas or electricity. Operating on the street, in dedicated lanes separated from traffic and along major routes, BRT systems use signal priority at intersections to improve journey times.
A BRT system in a corridor similar to Broadway can typically move 2,000 to 3,000 people each hour in each direction although in other contexts significantly more capacity can be achieved.

**Light rail transit (LRT)** is a driver-operated, electrically-powered system, which operates on a dedicated right of way separated from traffic. LRT can be elevated, in a tunnel, or at street level with tracks embedded in the street. Variants of LRT include diesel light rail and tram-train. The system can typically move 6,000 to 10,000 people each hour in each direction.

**Rail rapid transit (RRT)** systems operate completely separated from traffic. RRT systems are high capacity rail services that come in a variety of types. For example, the region’s SkyTrain and Canada Line systems are automated, driverless systems powered by electricity, while Toronto and New York subways and London Underground systems typically use drivers. Depending on the type of system, RRT can typically move 10,000 to 25,000 people each hour in each direction.

For more information about the key features of each of these technologies, see the Technology Overview fact sheets online.

**What is the difference between the Olympic Line, Vancouver’s 2010 Streetcar, and an LRT line?**

The Olympic Line, linking the Olympic Village Canada Line station to Granville Island, was a demonstration streetcar service provided by the City of Vancouver and Bombardier during the 2010 Winter Games in Vancouver.

The Olympic Line vehicle shares some similar features with an LRT vehicle, one of the rapid transit technologies being considered in the UBC Line Rapid Transit Study. The Olympic Line vehicles conveyed the experience of riding a modern streetcar or LRT line. These low-floor, modern and fully accessible vehicles are much like the LRT vehicles. However, there are some important features that distinguish the Olympic Line from an LRT line.

- **Stops:** The Olympic Line connected two stops at 1.8 kilometres (km) apart, with no intermediary stops. Streetcars typically have stops every 250 to 500 metres (m), whereas an LRT system typically has stops between 800 m and 1.5 km apart.
- **Vehicles:** At 2.4 m wide and 32 m long, the Olympic Line vehicles were shorter and narrower than typical LRT vehicles, which are up to 2.7 m wide and range from 30 m to 70 m long. These vehicles can provide higher capacity than the Olympic Line.
- **Right of way:** The Olympic Line operated in a former rail right of way and with the exception of a single at-grade crossing, was completely segregated from other traffic. Streetcars and LRT vehicles can also operate in a separate right-of-way, in-street, as well as on an elevated guideway or underground.
- **Track design:** The Olympic Line operated on a single track with single passing track. Streetcars and LRT systems typically operate on double track to allow for higher frequency service. Track designs vary and can be specified to address context sensitive needs, with some designs better suited to urban environments than others.

**Can you add more buses to meet the demand on the Broadway corridor rather than introducing rapid transit?**

With buses arriving every two to three minutes during the peak period, the current express bus service is reaching the limits of the capacity that can be provided by conventional buses. With demand expected to grow, a higher capacity service is needed. The study will identify what measures
could be taken to improve bus service without investing in rapid transit, such as more frequent service, additional routes or transit priority at signals. This ‘best bus’ scenario will be the base case against which all other rapid transit options will be compared, and it will demonstrate what part of future demand can be met through improvements to the existing bus service.

**EVALUATING THE OPTIONS**

How are you evaluating the options for the UBC Line?

The alternatives for the UBC Line are being evaluated using a Multiple Account Evaluation (MAE) approach, which is used globally to evaluate potential transportation investments. An MAE provides a comprehensive analysis of a wide range of factors to understand impacts, costs and benefits for the alternatives being considered. Alternatives are evaluated from a number of different perspectives or “accounts”. For the UBC Line study the accounts being used are based on global best practice and past local and provincial experience. The accounts identified include: economic, environmental, financial, social and community, transportation, urban development and deliverability considerations.

A high level screening is undertaken to arrive at a shortlist of alternatives. Once a shortlist is identified, evaluation occurs at a much greater level of detail. The impacts of each alternative are assessed within each of these categories or accounts in order to support a decision on the preferred alternative.

When will potential impacts of construction and operation be addressed?

We are in the early stages of the planning study. The technology, route and alignment have not yet been determined, and the funding and implementation schedules have not yet been developed. Relative impacts of various alternatives will be considered as part of the planning evaluation. At this early planning stage, the study aims to understand the scale of construction and in-service impacts between options to assess their relative impacts and to inform the choice of a preferred alternative. Once a preferred alternative is selected, TransLink will work with local business groups and other stakeholders to manage impacts and develop strategies to mitigate impacts and maximize the benefits of the line.

Have decisions about the technology and route already been made?

The technology, route and alignment have not yet been determined for the UBC Line. We are in the early stages of planning. TransLink and the Province are working with the City of Vancouver, Metro Vancouver, UBC and UEL on the rapid transit study. Thorough technical analysis and stakeholder and public consultation are necessary to identify the best rapid transit solution for the Broadway corridor, local communities and the region.

Will TransLink consider phasing or sequencing implementation of the UBC Line, so certain segments can be implemented first?

There is substantial demand for improved service throughout the corridor to UBC and the objective of the study is to address the needs of the entire corridor. There is opportunity to use multiple technologies to meet this demand. The study will consider the potential for a combination of technologies to meet demand, as well as potential phasing to meet growing demand.
How does the UBC Line project relate to UBC’s planning process for a new bus loop and improved transportation on campus?

UBC’s Campus and Community Planning is undertaking consultation to plan for a new bus loop and improved transportation on campus. Plans are scheduled to be developed by spring 2011. This UBC-led project and consultation focuses on the transportation needs of UBC and is distinct from the UBC Line study, which addresses technology and alignment alternatives for the entire Broadway corridor between Commercial and UBC. However, TransLink and UBC will continue to work as partners to ensure coordination between these two initiatives.

LAND USE

What is TransLink’s role with respect to real estate development and will this have an impact on the development of rapid transit in the Broadway corridor?

TransLink’s legislation allows it to acquire land for transportation purposes and to work with developers and municipalities to redevelop surplus land it owns. TransLink also supports transit-oriented development as a key component of sustainable communities and an effective transportation system. Authority for land use decisions in the Broadway corridor, however, rests with the City of Vancouver, and TransLink’s real estate developments, like those of everyone else, must be consistent with municipal zoning laws and be approved by the city.

Will you consider different population and employment scenarios as part of this study?

Future population and employment forecasts were developed by Metro Vancouver in partnership with the municipalities, which will help to determine what the future travel demand will be on the corridor. As part of the study, we will test different scenarios to understand how more or less population and employment growth in particular areas would affect future travel demand.

JOIN THE DISCUSSION!

How can the public join the discussion about future rapid transit service in the Broadway corridor and at UBC?

The public can join the conversation in two ways:

Attend one of the following community consultation workshops:

- April 22 – UBC Student Union Building Party Room, 2nd level
- May 4 – St James Community Square, 3214 West 10th Avenue, Vancouver
- May 6 – West Point Grey United Church, 4595 West 8th Avenue, Vancouver
- May 11 – Great Northern Way Campus, The Hanger, 122-577 Great Northern Way, Vancouver
- May 13 - Vancouver Masonic Centre, 1495 West 8th Street, Vancouver

Each workshop is from 6 p.m. – 9 p.m., and begins with an open house followed by the workshop at 6:45 p.m.

Join the discussion online at bepartoftheplan.ca
**Will information about the study and public meetings be accessible?**

Yes. TransLink and the partners in the study will endeavour to make the information widely available and accessible online, through local newspapers, and at information displays in communities along the corridor and at UBC. The partners will also provide notice of public meetings at City Hall, and at select libraries and community centres along the corridor.

**What stakeholder groups have been consulted?**

A list of the stakeholder groups who have been consulted is available on TransLink’s website. These stakeholders are helping us better understand the local context, learn more about the local transportation challenges and opportunities, and achieve greater insight about what needs to be considered in planning for rapid transit.

The outcomes of these discussions will create the foundation and direction for greater public involvement, and stakeholders as well as individual members of the public will have equal opportunity to provide input on the rapid transit solutions.

**How is stakeholder and public feedback being considered?**

The consultation program is designed to be an open and transparent process, and ensure that everyone has an equal opportunity for their voices to be heard. Throughout the study process, stakeholders and the public will have the opportunity to provide their insights, experiences and feedback, and these will be considered in planning rapid transit for the Broadway corridor.

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**SUMMER 2009 – SPRING 2010**

**PHASE 1**
Identify shortlist alternatives

**SPRING 2010 – EARLY 2011**

**PHASE 2**
Design development of the alternatives
Evaluate the alternatives

**TO BE DETERMINED**

**PHASE 3**
Design of the preferred alternative, phasing and timeline for implementation

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**Stakeholder consultation**

**Public consultation**

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**For Information**

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