

LATE DISTRIBUTION FOR COUNCIL - MAY 14, 2002

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Greater Vancouver
Transportation Authority

CHAIR
Doug McCallum

May 13, 2002

DIRECTORS
Tom Blom
Malcolm Brodie
Doug Drummond
Marlene Grinnell

City of Vancouver
453 West 12th Avenue
Vancouver, BC V5Y 1V4

Attention: City Clerk

Al Hogarth
Marvin Hunt
Jon Kingsbury
Don MacLean
Gordon Price
George Pull
Barbara Sharp

Please be advised that the attached report entitled "Status of the Granville Mall" was considered and the following Resolution was passed at the Regular Meeting of the Greater Vancouver Transportation Authority Board of Directors held May 13, 2002:

It was MOVED and SECONDED

That the Board endorse the City of Vancouver staff recommendations as outlined in Attachment 1 and as reproduced below:

- A. *THAT Granville Street, between Smithe and Hastings, be kept as a transit, pedestrian and service vehicle only mall to ensure that effective transit service and generous sidewalk space are maintained.*
- B. *THAT a commercial streetscape/entertainment district/greenway design scheme be developed for Granville Street, in consultation with land owners and commercial stakeholders, between Drake and Cordova, at a cost of \$60,000 to be funded from 2001 Streets Basic Capital Budget - Greenways (CA2EA2H, order number 30003084), and that TransLink be requested to share in this cost.*
- C. *THAT options for the management of Granville Mall be reviewed in consultation with stakeholders, and specifically in partnership with the Downtown Vancouver Business Improvement Association, to better promote and manage the on-street activities and assets along the mall, with a report back to Council before the end of 2002.*

CEO
Pat Jacobsen

CARRIED

Yours truly,

A handwritten signature in black ink, appearing to be "Gigi Chen-Kuo".

Gigi Chen-Kuo
Corporate Counsel and Secretary



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Pat Jacobsen

To: GVTA Board of Directors
From: Clive Rock, Manager, Strategic Planning
Date: May 2, 2002
Subject: **Status of the Granville Mall**

Greater Vancouver
 Transportation Authority

Staff Recommendation:

That the Board endorse the City of Vancouver staff recommendations as outlined in Attachment 1 and as reproduced below:

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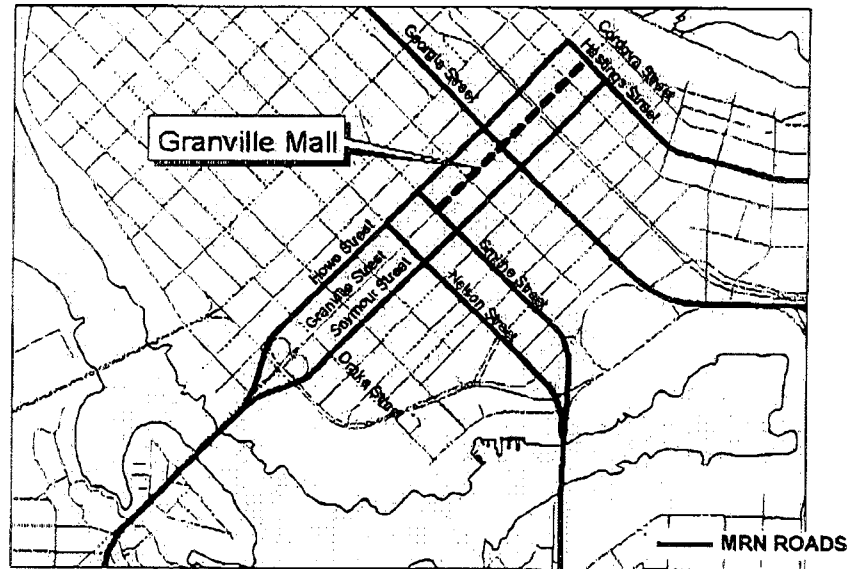
PURPOSE

To advise the Board of the status of the Granville Mall and the potential impacts of any decision to change this critical transit priority measure.

CONTEXT

The Granville Mall is primarily a pedestrian, transit and service vehicle mall on Granville Street between Smithe and Hastings Streets in Downtown Vancouver (Figure 1). Bicycles and taxis are also permitted to use the Mall; however, private vehicles are prohibited. Granville Mall is designated as a transit, pedestrian and service vehicle-only street by a City by-law.

Figure 1 – Granville Mall's Location in Downtown Vancouver



Both Granville Street south of False Creek and the Granville Street Bridge are part of the Major Road Network. However, Granville Street between Drake and Cordova (which includes the Mall) is part of the City of Vancouver's municipal street system. Seymour and Howe Streets are part of the MRN and work as one-way couplet distributing general purpose, service vehicles and regional transit (e.g. Express and 98 B-Line buses) into and out of the downtown.

Background

In 1997, Vancouver City Council was requested by some downtown business interests (led by the Downtown Vancouver Business Improvement Association) to open the Granville Mall to general-purpose traffic. At that time, Council heard from a number of interests both for and against allowing general auto traffic on the Mall. BC Transit (the GVTA's predecessor agency) spoke in favour of improving the Mall, but retaining its pedestrian and transit priority.

At the time, Vancouver Council had just approved its Vancouver Transportation Plan, which included provision for the development of a more detailed Plan for the Downtown, and decided to refer the issue for consideration in the Downtown Transportation Plan (DTP).

The GVTA was requested by Vancouver City staff working on the DTP in November 2001 to participate in a City-led process to address the issue of auto traffic on the Mall with a group of downtown business interests. Two meetings were held in December 2001, which were attended by GVTA planning staff. There was consensus at these meetings that the Mall's physical appearance and infrastructure suffered neglect and lack

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of maintenance; however, there was a general lack of consensus between stakeholders on the causes of Granville Mall's issues and whether introducing auto traffic would help. It is important to note that there were a range of opinions expressed by the business community: some interests favoured the introduction of auto traffic; some Mall retailers opposed the introduction of traffic; and one developer expressed indifference to the introduction of traffic, but concern over sidewalk quality, physical appearance and pedestrian amenity.

No agreement was reached on feasibility of the introduction of auto traffic on the Mall; however, GVTA staff continued to work with the stakeholder group. GVTA staff attended two more meetings in January, acting as a resource to the group on evaluating the impact of some of their proposals.

As part of the process of evaluating the impacts of introducing traffic on the Mall, the GVTA co-funded a study (mainly consisting of computer traffic modelling) to evaluate the transportation impact of various 'transit-only' and 'transit with automobiles' configurations of the Mall. The results confirmed previous GVTA analysis that concluded that the introduction of general purpose traffic on the Mall would have significant negative impacts on transit operations and costs, and on pedestrian access and transit passenger amenity on the Mall.

Based on this process, City of Vancouver staff forwarded the three recommendations regarding the status of the Granville Mall found in the April 15th report to the City's Transportation and Traffic Committee (Attachment 1 - "Granville Street (and Granville Mall) between Drake and Cordova").

GVTA staff attended two City of Vancouver meetings in April at which they advised Council's Transportation and Traffic Committee of the value of the Mall to the region's transportation system. Staff also communicated the GVTA's willingness to share in the cost of the proposed design study and in the financial consequences of resultant changes that enhance it as a transit, pedestrian and service vehicle priority corridor.

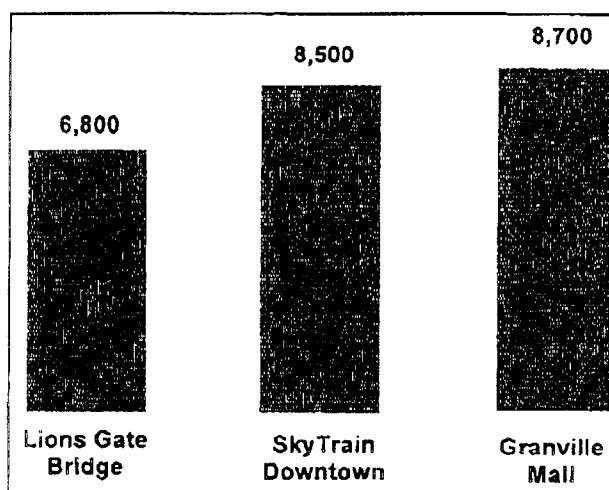
DISCUSSION

Importance of the Mall

a) Critical for Local and Regional Transit

The Granville Mall serves a vital function in the regional transportation network. Ten bus routes representing over 1,900 bus trips pass through the Granville Mall every weekday, making the Mall the highest volume street for bus traffic in the region. Granville Street downtown also has the highest bus passenger activity of any street in the City with over 8,700 passengers using the 10 bus routes in the peak hour. To provide some perspective on the scale of this passenger movement, Figure 2 shows that these volumes are higher than the passenger throughput of either the Lions Gate Bridge or the SkyTrain downtown.

Figure 2 – Peak Hour Passengers on Lions Gate, SkyTrain Downtown and Granville Mall



Approximately 95% of the service on the Mall is provided by trolley buses. These buses are aging and are due to be replaced. The GVTA board has made a significant commitment to the renewal of the trolley fleet, with the authorization of the expenditure of approximately \$250 million for their replacement. The new low-floor trolleys are expected to be in service starting in 2004.

The Granville Mall transit routes serve both a local and regional function. Overall, 25% of all bus passenger boardings and service hours in the region occur on the 10 routes that pass through the Mall. They carry passengers making trips that begin and end locally, but they also serve as extensions to the regional routes for passengers making local connections from regional services such as the B-lines, Express Buses, SkyTrain and West Coast Express. A substantial proportion of trolley passengers transfer from regional services to complete their journeys.

b) Mall Reduces Auto Congestion and Improves Goods Movement

The Mall and the routes that operate on it also serve to relieve congestion on major roads in the downtown. Its high transit passenger traffic simply could not be accommodated without significant congestion impacts on Seymour and Howe Streets. Furthermore, the concentration of local routes on Granville helps ensure more efficient operation of the regional auto and Express and B-Line bus traffic that exists on Seymour and Howe. For example, Seymour Street carries a high volume of regional buses and is a main auto gateway to downtown. Given the close bus stop spacing and high passenger activity that characterize the Granville trolley routes, relocating all or some of them onto Seymour would likely cause significant delays to regional and local transit services, auto traffic and goods movement.

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c) Pedestrian Access Key to Attracting Riders

The pedestrian orientation of Granville Mall is critical to its success. A transit journey is often said to be a "break in a pedestrian trip." High quality pedestrian access and amenity is essential to attracting transit riders, particularly in denser parts of the region. Granville Mall has the second highest pedestrian volume of any street in the region, making it a key transit market.

d) Transit Visibility and Convenience

The concentration of trolley routes on Granville Mall is critical to reaching key downtown destination areas of high pedestrian traffic, but it also offers important benefits in terms of marketing transit. The focus of routes on the Mall makes the system easy to understand and is convenient for customers. Having a dedicated facility for transit also offers a high degree of presence and priority for the system that 'markets' transit.

e) Transit and the Downtown Economy

Transit makes an important contribution in facilitating commerce in Downtown Vancouver. The four-month bus stoppage in 2001 demonstrated transit's importance to the downtown businesses in general, and those along the Mall in particular. Despite the fact that SkyTrain, West Coast Express and West Vancouver Blue Buses were still providing transit service to the downtown, retailers reported sharp declines in sales and service providers (doctors, dentists, etc.) also reported declines in visits. Businesses on the Granville Mall, which saw a complete absence of bus transit service, reported sales declines of up to 60%. With 50,000 transit passengers – and a greater number of pedestrians – passing through the Mall daily, its transit and pedestrian priority provides businesses with some of the highest levels of exposure in the region.

f) The Mall is Efficient

For the transportation function it serves, the Granville Mall is highly efficient. The routes that travel on it help move 21% of all trips into the downtown core, yet the Mall has only 1.3% of the downtown's arterial road space dedicated to it. This priority saves buses considerable time versus having to compete with traffic on alternative routes, resulting in:

- millions of dollars in operating savings annually;
- the need for fewer trolley buses to deliver same levels of service;
- higher relative ridership and revenue; and
- reduced travel time for pedestrians and motorists.

Clearly, a reduction in the efficiency of transit operations on Granville Street would have wider impacts on the regional transportation network.

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g) The Mall Supports Local and Regional Policy

A number of City of Vancouver and GVTA policies call for transit priority measures to be implemented to improve transit speed and level of service, as well as to reduce transit cost. Transit moves a disproportionately large amount of people into the downtown core relative to the space provided to it. With 21% of all trips into the downtown using the Granville Mall, it is an example of where a high level of priority is warranted.

Mall Issues

Notwithstanding the Mall's importance to transportation in the downtown core, and its contribution to commerce, there are a number of transportation, urban realm and economic issues on the street that need to be addressed.

a) Transit Issues

While transit's performance is better than it would be without the Mall, its design and operations are not optimized for transit. For example:

- signals are not optimally timed for the flow of transit vehicles;
- trolleys currently lack passing bays or wires to pass. This will become a greater issue with the introduction of low-floor trolleys as delays due to wheelchair boarding have the potential to affect many services; and
- passenger facilities (shelters, seating) are dated and "streetside" information is insufficient.

b) Physical Realm

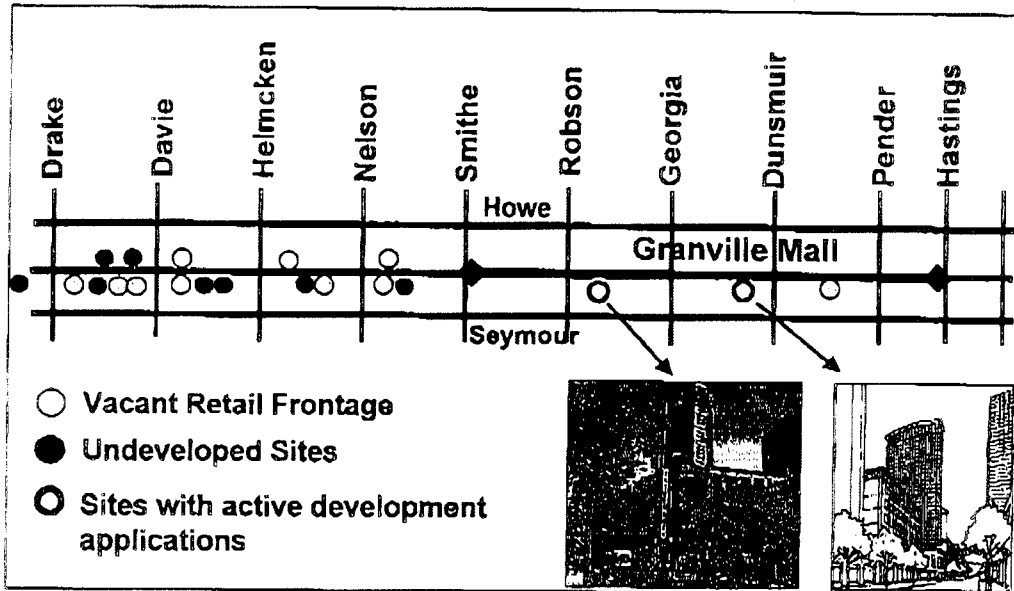
There are a number of issues related to the physical design and Mall space that directly and indirectly impact transit. Some sidewalks are relatively poorly maintained, there are many physical obstructions (e.g. signs), garbage often litters the sidewalks and many have commented that the streetscape appears "tired" and out of date. The public generally hold a very strong association of the Mall with transit operations. Therefore, negative sentiments towards the physical environment may carry negative associations with transit and as a result impair its attractiveness.

c) Non-transportation issues

Many issues identified by various stakeholders are not directly related to transportation, but affect the appearance and perception of the Mall. For example, people have commented that:

- panhandling and loitering are problems;
- there are a number of unusable retail frontages (e.g. the "blank wall" of Eaton's) and some vacant lots limit the attractiveness of the street; and
- Pacific Centre takes some retail traffic off of the street.

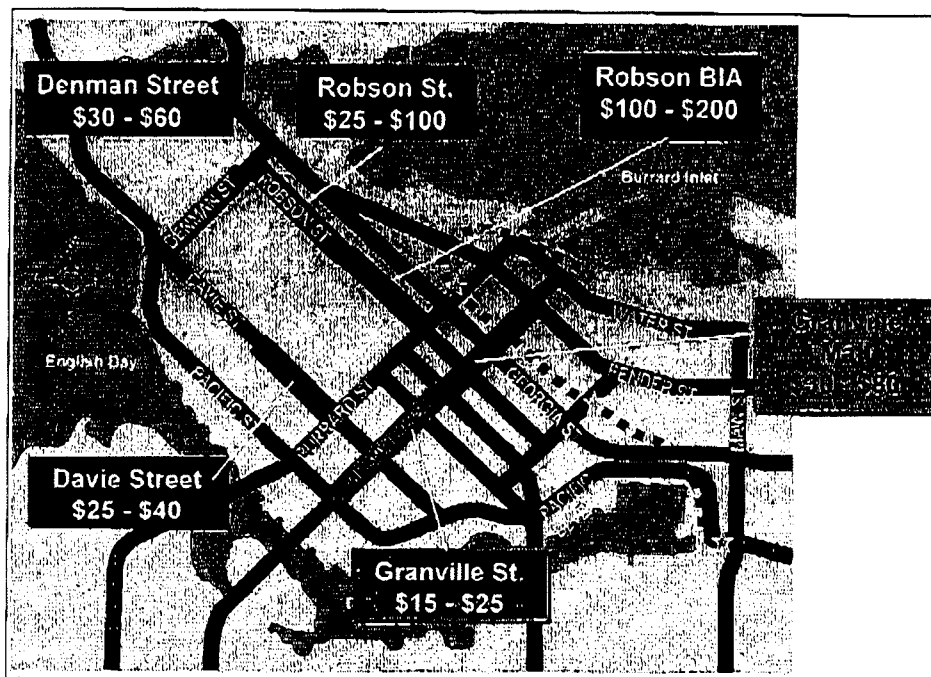
Figure 3 - Vacant Lots, Vacant Retail and Active Developments



Source: City of Vancouver

There is also a marked difference between the market lease rates of retail space on and off the Mall. Figure 4 shows that Granville Mall has the second highest retail lease rates in Downtown Vancouver. The areas south of the Mall where car access is permitted has among the lowest retail lease rates in the Downtown.

Figure 4 – Monthly Retail Lease Rates (per sq ft) in Downtown Vancouver



Source: City of Vancouver

There are several ongoing City planning initiatives that have led to improvements along the length of Granville Street downtown, and these are expected to continue exerting positive influences in the coming years. For example:

- there is an emerging residential district in Downtown South and the City has established Granville Street as the area's "High Street";
- Granville Street has been established as the Theatre Row Entertainment District and a significant number of spaces have been renovated or created to house cabarets, pubs and concert spaces. These venues will attract significant numbers of people and will present both challenges and opportunities in the provision of transit and pedestrian space;
- TransLink is contributing \$4.5 million to the construction of a new Granville SkyTrain Station entrance at Granville and Dunsmuir. The station is slated to open in 2004 and will improve the streetscape and presence of transit on the Mall.

In summary, Granville Street faces a number of physical, social and economic challenges. However, some of the most challenging of these are not on the Mall, but where car access already exists. Clearly, transportation is just one of a range of factors (including zoning, market forces, infrastructure investment, maintenance) that influence how Granville Street looks and feels. There are many positive developments on the Mall, and the presence of transit, particularly in the form of trolley buses, appears to be a complement to these.

Impact of Introduction of General Traffic

As part of the process of working with the City and their stakeholder group on assessing the impacts of introducing auto traffic on the Mall, TransLink co-funded a computer microsimulation of introducing traffic onto the Mall.

a) Modelling Assumptions

Three basic scenarios were evaluated in the microsimulation:

- 1) The status quo (transit only)
- 2) Three lanes, with one being traffic lane northbound only and some curbside parking
- 3) Four lanes, with auto traffic north and southbound and some curbside parking

In each of the scenarios, it was assumed that signals were optimized for transit and that passing of trolleys would be possible through the provision of passing wires and bus bays on sections of the Mall.

Computer microsimulation uses data based on observations of current traffic conditions to simulate responses to changes in a transportation network, assuming typical driver behaviour. The model assumes that drivers will make more or less rational decisions and choose the most efficient path to a series of destinations along the Mall. Three main challenges existed with modelling Granville Mall. The first is that, since the Mall does not currently allow automobile traffic, there was no reality to draw observed behaviour from, for the model to use. The second is that the model does not account for cruising or experiential driving (i.e. the 'Robson Street effect'). The third is that it assumes drivers 'learn' and will always take the quickest route – the behaviour of tourists, those who do not know the routes, or those who prefer directness over speed are not considered.

Historical vehicle volumes from 1972 (prior to the Granville Mall's conversion in 1974) indicate that vehicle volumes were considerably higher than those predicted by the microsimulation model. It is therefore assumed that the microsimulation results are conservative, and even greater negative impacts and costs to the GVTA and transit, pedestrians and auto users would materialize. The model was also run to evaluate the impact should 1972 levels of traffic materialize on a Granville Street open to auto traffic.

b) Impact Evaluation

The analysis of the alternatives indicates that permitting auto traffic on the Mall will have significant cost and user impacts, even at very low levels of access.

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The analysis revealed that, relative to transit-only operations, opening the Mall to auto traffic would have the following impacts:

- A reduction in transit speeds of 9-12%
 - this affects transit operating costs and increases travel time for users
- A reduction in transit reliability of 4-11%
 - this increases the "bunching" of buses and the number of buses required
- Area-wide reduction in travel speeds to all modes of 8-18%
 - area-wide increase in vehicle emissions by similar amount
- A reduction in the efficiency of east/west routes (e.g. North Shore routes, trolleys, or any other buses crossing Granville) due to new auto turning movements onto/off Granville

Figure 5 – Cost of Introducing Auto Traffic to the Granville Mall

	3 Lanes Traffic	4 Lanes Traffic
Costs to GVTA		
Transit Operation	\$370,000	\$1,000,000
Transit Capital (annual)	\$480,000	\$800,000
Lost revenue	\$250,000	\$330,000
GVTA Total	\$1,100,000	\$2,130,000
Costs of delay to users		
Transit Customers	\$15,000,000	\$16,000,000
Pedestrians	\$4,300,000	\$4,300,000
Auto Users	\$7,700,000	\$8,400,000
User Total	\$27,000,000	\$28,700,000

Notes:

- GVTA capital costs are annual debt service costs for additional trolley buses.
- Costs to public are estimates of value of time. Estimates are based on a rate of approximately half the average regional industrial wage rate (\$7.90 / hour). This rate is lower than those used in recent transportation studies (e.g. some studies have used rates of up to \$14 per hour).

Figure 5 shows how these impacts translate into direct costs to TransLink and costs to various transportation system users. Direct costs to TransLink could range from \$1.1 to \$2.1 million annually in new operating, capital and lost revenue costs.

There is also a range of user costs in the form of lost travel time that range from \$27 million to \$28.7 million annually. It is noteworthy that there is an increase in net delay and time cost to all user groups including motorists, meaning that, overall, the downtown transportation system is being made more inefficient. This will also have delay impacts to goods movement, which have not yet been quantified.

The simulation predicts that these impacts occur despite only very few cars accessing the Mall. Only 3-6 cars access the Mall per minute under the simulated scenarios; however, these autos incur significant delay costs. Auto access increases business exposure by less than 1% under the modelled scenarios; however, this exposure may be offset by fewer transit exposures due to declining ridership.

As mentioned previously, GVTA staff considers these results to be conservative. Analysis of historical auto volumes on Granville Street prior to the introduction of the Mall show actual historical auto counts to be considerably higher than those predicted by the simulation. Should these higher vehicle volumes materialize, delays could increase by up to 40%, with related increases to transit costs and delay.

CONCLUSION

There are significant benefits of retaining the Granville Mall as a priority route for transit, pedestrians and service vehicles. Benefits are significant, widespread and include:

- cost savings to the GVTA and efficient use of new trolleys
- travel time savings to pedestrians, transit users, motorists and goods movement
- increased ridership
- economic benefits to retailers and other businesses

It is concluded that providing auto access on the Mall will have significant area-wide impacts on all system users and on GVTA costs. The Granville Mall is economically healthy, retaining existing retailing businesses, attracting new development and investment and commanding high retail lease rates relative to other parts of the downtown.

However, there are significant challenges with respect to its physical appearance, transit operations performance and pedestrian and passenger amenity. Renewed investment and ongoing management will be essential for retaining the Mall's current transportation priorities and making it an attractive place to walk, do business and take transit.

Staff recommends that the Board endorse the City of Vancouver staff recommendations.