

## CITY OF VANCOUVER

### ADMINISTRATIVE REPORT

Report Date: January 4, 2007  
Author: D. Wong  
Phone No.: 604.871.6690  
RTS No.: 6472  
VanRIMS No.: 13-1400-20  
Meeting Date: January 16, 2007

TO: Standing Committee on Transportation and Traffic  
FROM: General Manager of Engineering Services  
SUBJECT: Canada Line Construction Update

#### RECOMMENDATION

THAT Council receive this report for INFORMATION.

#### SUMMARY

In 2007, the Canada Line Project will continue construction of the Canada Line rapid transit infrastructure on Cambie Street and in the downtown. In total, it is expected that over one hundred City blocks will be under construction this year. The unprecedented scale of this construction project has, and continues to be a challenge and an opportunity for the project partners to work with the City and community stakeholders to develop mitigation measures to minimize construction disruption for residents, businesses and commuters.

#### COUNCIL POLICY

On May 13, 2003, Council reiterated its support for a Richmond/Airport-Vancouver (RAV) rapid transit line as a key element in helping the City achieve its environmental, transportation and liveability objectives as part of a comprehensive, carefully-developed, adequately-funded, long-term, regional strategic transportation plan.

## PURPOSE

This report provides Council with an update on the Canada Line related construction activity to date, presents an overview of the construction schedule and anticipated challenges for the remainder of 2007 and details efforts of the Project and its partners to mitigate construction related impacts.

## BACKGROUND

The Canada Line project in Vancouver consists of:

- An underground tunnel from Waterfront Station in downtown Vancouver under Granville Street, Davie Street, False Creek, and Cambie Street to south of 64<sup>th</sup> Avenue;
- An elevated guideway from south of 64<sup>th</sup> Avenue across the Fraser River to Bridgeport Station in Richmond;
- A bus exchange at Marine Drive
- A total of 9 stations, 8 underground and one elevated at Marine Drive (plus 2 future stations), along the Vancouver portion of the route.

## DISCUSSION

### Progress to Date

The construction phase of the Canada Line Project is well underway. Generally, the construction can be categorized into 5 main types: Utility relocations, cut and cover tunnel, bored tunnel, elevated guideway and station construction. In some cases, utility work for Canada Line is being coordinated with other City and GVRD works, and with neighbourhood initiatives such as traffic calming.

#### Utility Relocations

Utility relocations are required to divert utilities in advance of cut and cover tunnel construction to allow residents and businesses to continue to be serviced throughout and following the construction period. Utility relocations have occurred in multiple locations along Cambie Street and in downtown. Utility relocations have also occurred on some cross streets and along streets parallel to Cambie such as Ash Street.

#### Cut and Cover Tunnel

Cut and cover tunnel construction is underway between West 64<sup>th</sup> Avenue to West 52<sup>nd</sup> Avenue, between West 49<sup>th</sup> Avenue and West 41<sup>st</sup> Avenue, between King Edward Avenue and West 39<sup>th</sup> Avenue, and between King Edward Avenue and West 19<sup>th</sup> Avenue. All traffic on Cambie Street from SW Marine Drive to West King Edward Avenue has been diverted to the western roadway to accommodate the construction activities.

#### Bored Tunnel

The tunnel boring machine (or "TBM"), launched in 2006 from the Olympic Village Station site at West 2<sup>nd</sup> Avenue and Cambie Street and has made its way under False Creek, past the Yaletown/Roundhouse Station site under Davie Street, and at the end of 2006 had reached Seymour Street as it began its turn north under Granville Street to the Waterfront Station site virtually without disruption to the surface above. The TBM is expected to

reach Granville Street, north of Pender Street, in March / April 2007, where it will be removed and taken back to the launch site at Olympic Village Station for the second pass.

### **Elevated Guideway**

The elevated guideway portion of the Canada Line, between 64<sup>th</sup> Avenue and Kent Avenue on Cambie Street, approaching the bridge over the North Arm of the Fraser River, is scheduled to begin construction in 2007. Utility relocations in this segment started in the fall of 2006.

### **Station Construction**

Construction activity has started at all of the station sites in Vancouver. Construction has mainly been associated with the relocation of underground utilities, demolition of existing buildings and site clearing, and drilling of "micro piles" (particularly in Yaletown) to stabilize the site for safe excavation. With the case of Kind Edward Avenue station, two two-lane bridges have been installed to facilitate east-west traffic while excavation for the underground station takes place.

### **Construction Expected in 2007**

In early 2007, construction activity will progress to the remaining Canada Line corridor. To date, construction has generally been focussed on Cambie Street, south of King Edward Avenue. This year, major construction activities will take place on Cambie Street, north of King Edward Avenue to the Cambie Street Bridge and on Granville Street, from Pender to Cordova Streets.

As construction at the northern end of Cambie Street begins and prior to the restoration work at the southern end of Cambie Street, over one hundred City blocks are expected to be under construction in 2007. To safely accommodate this work, access along Cambie Street and many cross streets will be affected. The traffic impacts will be similar to those experienced in the areas where construction activity has already began:

- Pedestrian access to businesses and residences will be maintained, although in some cases it will be at reduced levels;
- Vehicle traffic will continue to move along Cambie Street during the construction period, although the number of through lanes will be reduced;
- Along the route, vehicle traffic, though sometimes reduced, will be maintained for major east/west connectors
- Local east/west access roads will be available to local traffic, unless construction activity is taking place at the intersection.

In the Cambie Village area, refinements to the construction methodology have allowed the contractor to compress the construction schedule. Although subject to change, the current schedule for the cut and cover tunnel construction in this area will see the majority of the work started and completed in 2007. Road restoration following completion of the tunnel between West 24<sup>th</sup> Avenue and West 16<sup>th</sup> Avenue scheduled for the end of 2007. Restoration between West 16<sup>th</sup> Avenue and the Cambie Street Bridge (with the exception of Broadway Station work) is scheduled for the spring of 2008.

A detailed schedule of work can be found in Appendix A.

## Construction Impacts and Mitigation Strategies

Impacts of Canada Line related construction in 2007 are anticipated to be more extensive than what has been experienced to date largely because this work will be happening closer to the downtown where traffic and land use activities are greater.

City staff, along with representatives from InTransitBC, the Canada Line Project, and the Canada Line sponsored Business Liaison Committee, are working with stakeholders, where applicable, to develop and implement a number of initiatives to mitigate construction related impacts. These initiatives are described in Table 1.

Table 1 -Mitigation Measures

Mitigation Measures	Responsible Agency/Agencies
<b>Marketing Initiatives</b> Developed to minimize, as much as possible, construction-related inconvenience to businesses along the route.	Business Liaison and Communications Committee, CLCO
<b>Communications</b> Ongoing efforts to provide a number of means through which residents, commuters, business owners, and customers of businesses can access construction-related and trip planning information	InTransitBC, CLCO, BLCC, City of Vancouver
<b>General Way-finding Signage</b> Inform the general public of alternate routes available to access destinations affected by Canada Line construction activity	City of Vancouver, CLCO, InTransitBC
<b>Traffic Management Plan</b> Developed to maintain the functionality of the street system during the construction period, acknowledging that capacity reductions on Cambie Street and some east-west routes will be required to accommodate the construction work	InTransitBC, approved by City of Vancouver
<b>Resident and Business Parking Modifications</b> Ongoing review of street regulations to protect residential parking needs and creating opportunities for short term parking for businesses to replace spaces lost due to construction activity, where possible	City of Vancouver
<b>Implementation of Traffic Calming Measures</b> Ongoing monitoring of traffic flows & implementation of traffic calming measures to discourage shortcutting through residential streets by commuters while maintaining access by residents and to businesses along the construction corridor during the construction period	City of Vancouver, InTransitBC

A detailed list of Canada Line Project initiatives is shown in Appendix B.

On Cambie Street, from 2<sup>nd</sup> Avenue to Kent Avenue, these impacts are magnified as a result of a reduction in capacity of Cambie Street in a segment that has traditionally been heavily relied upon to accommodate north-south commuter traffic. Also, construction activity will limit accessibility to the residential developments and businesses in the Cambie Village area that rely on street access and parking.

On Granville Street, from Robson to Georgia Street, and from Pender to Cordova Streets, businesses will operate adjacent to an active work site. In addition, the downtown street network will be adjusted to accommodate the lane closures required for the construction of the downtown tunnel and stations. Construction impacts include the long term closure of the eastbound lanes on Cordova immediately west of the Granville Street intersection and short term closures of the intersection of Pender Street at Granville Street for the two TBM extractions. Changes in street regulations will be required to partially offset these impacts. Potential measures may include the implementation of shared bus & bicycle lanes to provide a higher level of service for these higher priority modes and extending parking restrictions to allow the rerouting of vehicles onto adjacent arterial streets.

### **Road Restoration & Streetscape Plan**

It is expected that some segments of Cambie Street will be restored in 2007 as cut and cover tunnel construction is completed. The Canada Line Project is responsible to reinstate any City infrastructure that is impacted by their construction activities. CLCO and the City have identified an opportunity to implement improvements to Cambie Street in coordination with the restoration of the road.

Beginning in early 2007, the City will be initiating a public process, including input from businesses along Cambie Street, to develop streetscape plans for segments of the Cambie Street corridor through established Neighbourhood Centres and other segments of Cambie Street that will be undergoing significant reconfigurations of the street. The streetscape plans will define the long term look and feel of the urban landscape including, but not limited to, sidewalk treatments, street furniture, street tree planting, pedestrian level lighting and other pedestrian scale amenities. Developing these plans now will allow the City to take advantage of cost efficiencies arising from the restoration of the road following Canada Line construction.

### **FINANCIAL IMPLICATIONS**

There are no financial implications.

### **CONCLUSION**

The Canada Line rapid transit system is a key element in helping the City achieve its environmental, transportation and liveability objectives. The temporary disruption resulting from the construction of the system presents both challenges and opportunities. The project partners are working with the City and community stakeholders to develop mitigation measures to minimize construction disruption for residents, businesses and commuters. Furthermore, opportunities to improve areas impacted by Canada Line construction are being explored.

\* \* \* \* \*

PROGRESS TO DATE & ANTICIPATED CANADA LINE RELATED CONSTRUCTION 2007

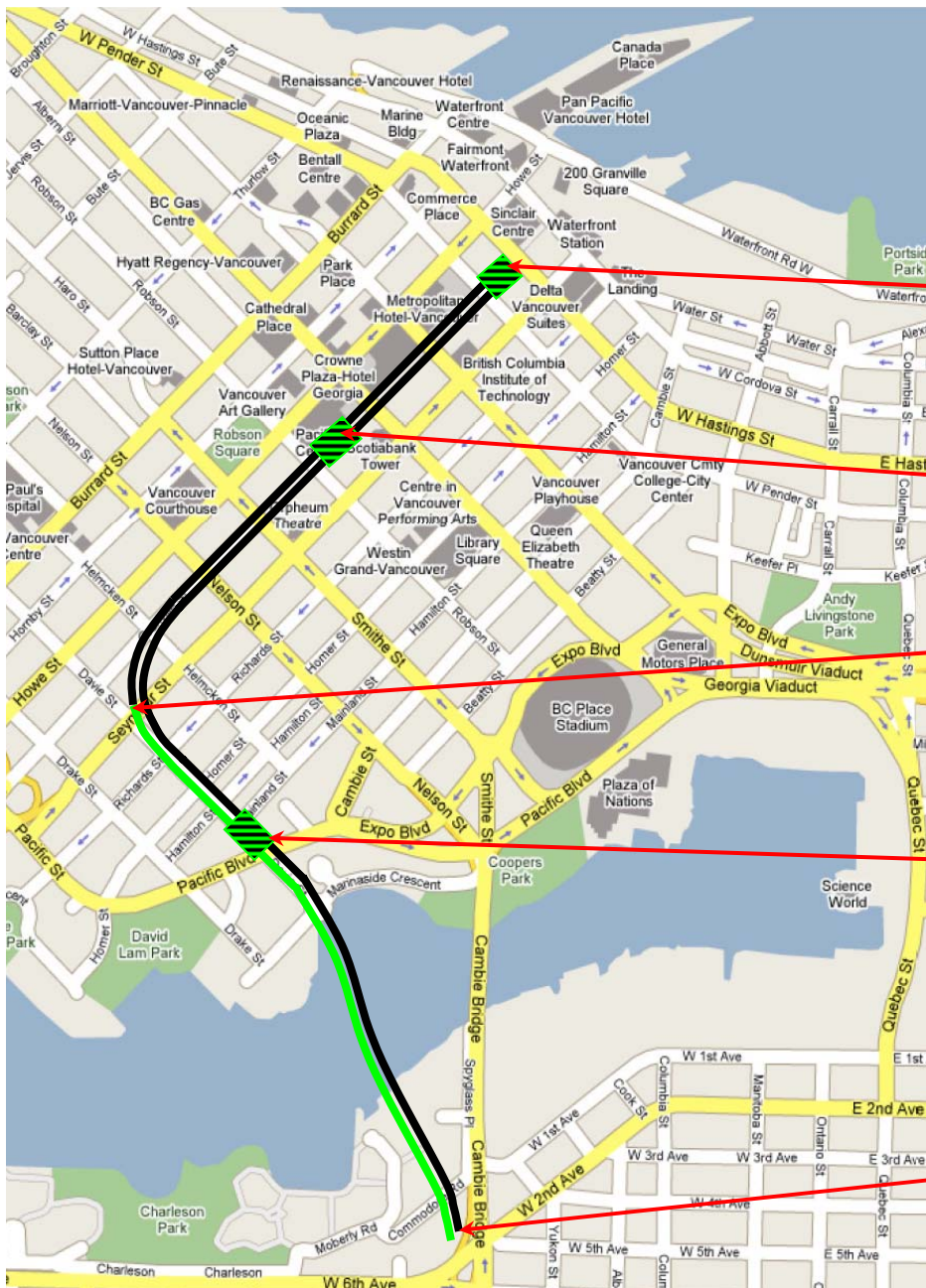
2006 CANADA LINE CONSTRUCTION PROGRESS - DOWNTOWN VANCOUVER

2006 CANADA LINE CONSTRUCTION PROGRESS - CAMBIE STREET

2007 CANADA LINE CONSTRUCTION

CANADA LINE ANNUAL LOOK-AHEAD SCHEDULE JAN- DEC 2007

### Canada Line Construction Progress – End of 2006 Downtown Vancouver



Waterfront Station  
Excavation

Vancouver City  
Centre Station  
Excavation

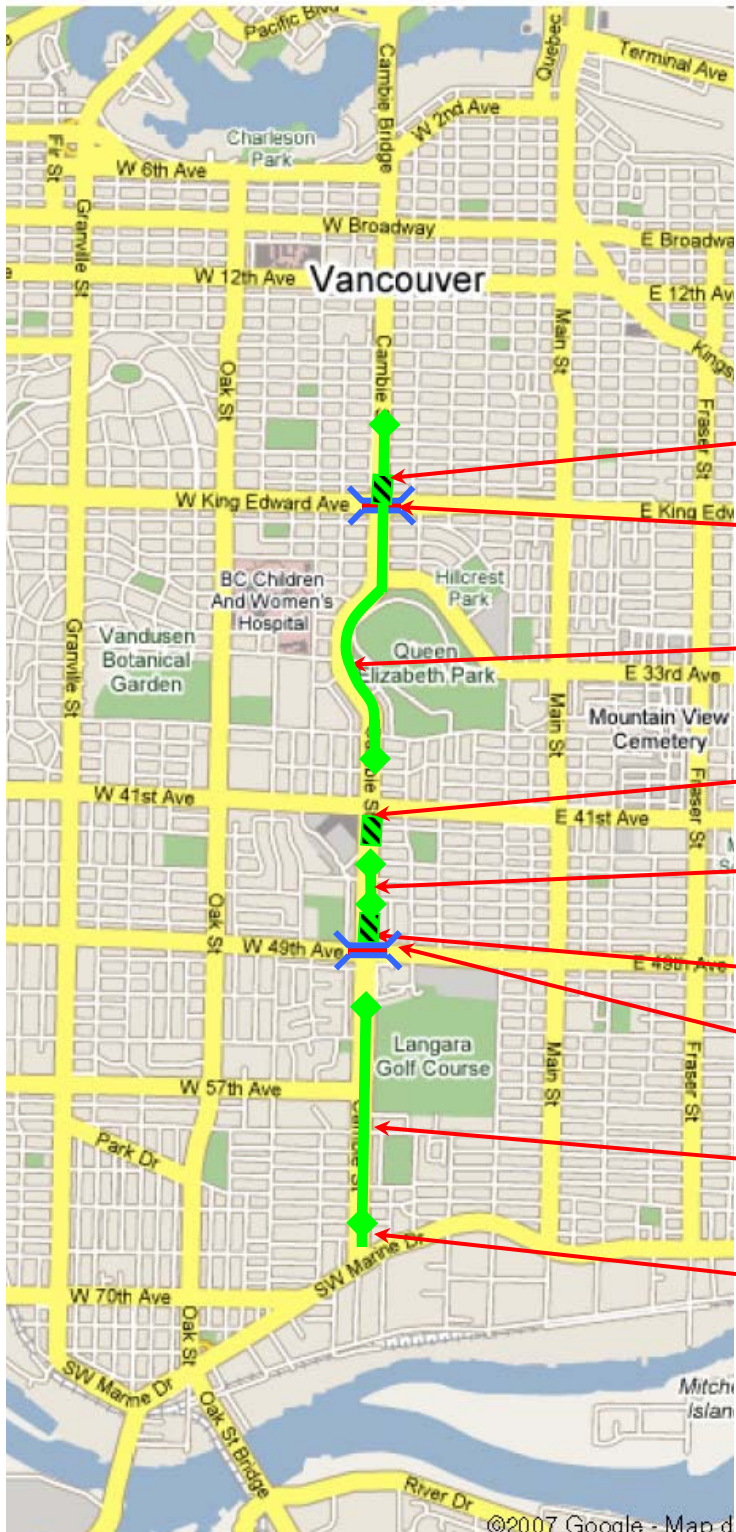
Bored Tunnel  
Progress – End of  
2006

Yaletown Station  
Excavation

TBM Launch and  
Support Site



### Canada Line Construction Progress – End of 2006 Vancouver – Cambie Street

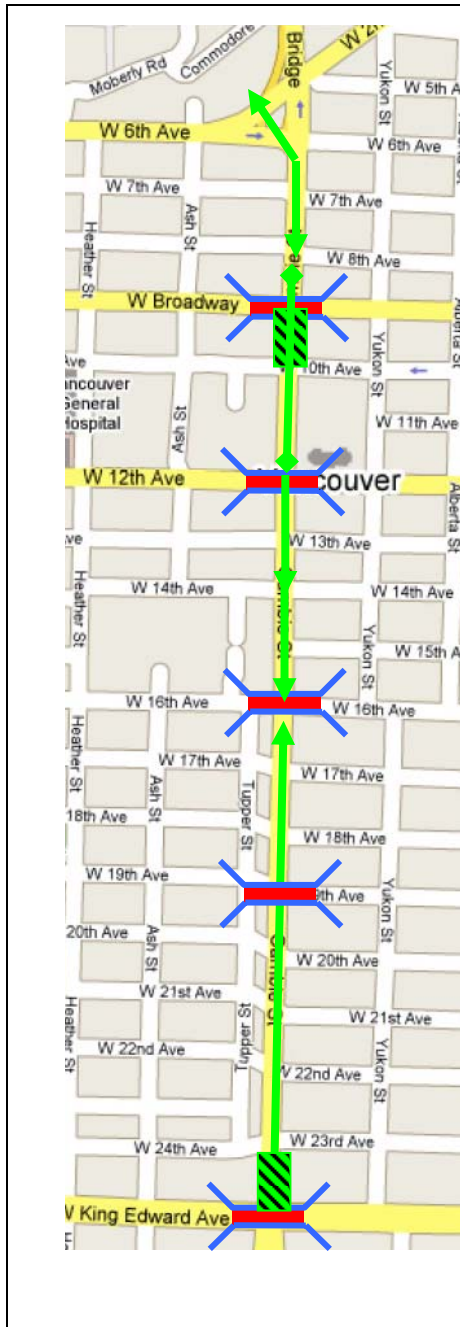


- King Edward Station Excavation
- Temp Bridges at King Edward
- C&C Tunnel 39<sup>th</sup> to 19<sup>th</sup> Ave.
- 41<sup>st</sup> Ave Station Excavation
- C&C Tunnel 49<sup>th</sup> to 43<sup>rd</sup> Ave.
- 49<sup>th</sup> Ave Station Excavation
- Temp Bridges at 49<sup>th</sup> Avenue
- C&C Tunnel 52<sup>nd</sup> to 64<sup>th</sup> Ave.
- Tunnel Portal 64<sup>th</sup> to Marine Dr.



# Canada Line Construction in 2007

# Schedule A



	2007												2008				
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
C&C Tunnel: W.6 <sup>th</sup> Ave to W.2 <sup>nd</sup> Ave – Feb 2007 to Jan 2008		■	■	■	■	■	■	■	■	■	■	■	■				
C&C Tunnel: W.6 <sup>th</sup> Ave to W.8 <sup>th</sup> Ave – Jun 2007 to Feb 2008						■	■	■	■	■	■	■	■	■			
Broadway Bridge: Temporary reduction to 1 lane in each direction during installation – Feb 2007 to Mar 2007		■	■	■													
Broadway Station: Station Scheduled to be completed in June 2009; Station box and restoration of Cambie scheduled for Apr 2008																	■
C&C Tunnel: W.8 <sup>th</sup> Ave to W.12 <sup>th</sup> Ave – Jan 2007 to Feb 2008	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
W.12 <sup>th</sup> Ave Bridge: Temporary reduction to 1 lane in each direction during installation – Jan 2007 to Feb 2007	■	■															
C&C Tunnel: W.12 <sup>th</sup> Ave to W.14 <sup>th</sup> Ave – Jan 2007 to Oct 2007	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
C&C Tunnel: W.14 <sup>th</sup> Ave to W.16 <sup>th</sup> Ave – Jan 2007 to Jan 2008	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
W.16 <sup>th</sup> Ave Bridge: Feb 2007 to Mar 2007		■	■	■													
C&C Tunnel: W.24 <sup>th</sup> Ave to W.16 <sup>th</sup> Ave – Jan 2007 to Dec 2007 (Section south of W.19 <sup>th</sup> Commenced in Nov 2006)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
W.19 <sup>th</sup> Ave Bridge: Feb 2007		■															
King Edward Station: Station scheduled to be completed in May 2009; Station box and restoration of Cambie scheduled for Aug 2007																	■
King Edward Bridge: Installation of bridge completed in 2006; Removal of bridges and restoration of King Edward schedule for Aug 2007								■									

\* Construction schedules are subject to change.

# Canada Line Annual Look-ahead Schedule

## January - December 2007



Construction of the Canada Line is underway in the cities of Vancouver and Richmond. Visit [InTransitBC](http://InTransitBC) online at [www.canadalineline.ca](http://www.canadalineline.ca) for more detailed information and to view Public Notices on traffic and construction activity.

**Pedestrian access to the businesses and residences in the construction area will be maintained throughout construction. Businesses in the construction area remain open and accessible, and welcome your continued patronage.**

CANADA LINE ROUTE SEGMENT		J	F	M	A	M	J	J	A	S	O	N	D
<b>SEGMENT 1 - Downtown Vancouver (Waterfront to 2nd Avenue)</b>													
<b>Granville Street</b>													
<b>Waterfront Station Construction</b>													
Utility Relocation, Site Preparation, Hastings Bridge Installation, Reconfiguration of Cordova Street, Excavation, Station Structure Work	Involves construction activity on Granville Street between Cordova Street and W. Pender Street. Granville Street is closed to vehicle traffic from Pender Street to Hastings Street.  Bridge installation work on Hastings Street at Granville Street involves moderate traffic pattern changes on Hastings Street.  Road reconfiguration work on Cordova Street involves moderate traffic pattern changes on Cordova Street.	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>Tunnel Boring Machine (TBM) Exit Area</b>													
Exit Pit Excavation	Involves excavation and general construction activity. Moderate traffic pattern changes on Pender Street.	◆	◆	◆									
TBM Removal	Involves a temporary partial closure of Pender Street between Howe Street and Seymour Street during TBM removal only.			◆	◆	◆							
<b>Vancouver City Centre Station Construction</b>													
Station Pit Excavation	Involves station excavation work. Granville Street is closed to vehicle traffic from Robson Street to W. Georgia Street.	◆	◆										
Station Structure Work	Involves station construction activity. Granville Street is closed to vehicle traffic from Robson Street to W. Georgia Street.		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆

# Canada Line Annual Construction Look-ahead Schedule *cont...*

## January – December 2007

Pedestrian access to the businesses and residences in the construction area will be maintained throughout construction.  
Businesses in the construction area remain open and accessible, and welcome your continued patronage.

CANADA LINE ROUTE SEGMENT		J	F	M	A	M	J	J	A	S	O	N	D
<b>SEGMENT 1 - Downtown Vancouver (Waterfront to 2nd Avenue) <i>cont...</i></b>													
<b>Yaletown-Roundhouse Station Construction</b>													
Station Pit Excavation	Involves station excavation work, and moderate traffic pattern changes on Pacific Boulevard at Davie Street, and on Mainland Street. Davie Street is closed to vehicle traffic between Hamilton Street and Pacific Boulevard.	◆	◆	◆									
Station Structure Work	Involves station construction activity, and moderate traffic pattern changes on Pacific Boulevard at Davie Street, and on Mainland Street. Davie Street is closed to vehicle traffic between Hamilton Street and Pacific Boulevard.			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>SEGMENT 2 - Cambie North (2nd Avenue to King Edward Avenue)</b>													
<b>Tunnel Boring Machine Work Site and Olympic Village Station Construction</b>													
1st Pass of Bored Tunnel (TBM)	24-hour underground tunnel work.	◆	◆	◆	◆	◆							
2nd Pass of Bored Tunnel (TBM)	24-hour underground tunnel work.						◆	◆	◆	◆	◆	◆	◆
Station Construction Activity	Involves station excavation and station structure work.	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>Cambie Street Bridge</b> Reconfiguration of the East/west Exit on the South End of the Bridge	Traffic pattern changes on the south end of the Cambie Street Bridge, on 2nd Avenue. South and northbound motorists on the bridge, and east-west traffic on 2nd Avenue will experience delays throughout construction. This work will require the closure of the southbound, south side ramp to 2nd Avenue. Motorists wishing to travel westbound from the Cambie Street Bridge will be required to travel to Broadway.	◆	◆	◆	◆	◆	◆						
<b>Tunnel Construction and Site Restoration Work</b> On Cambie Street Between 2nd Avenue and King Edward Avenue	Involves excavation and tunnel construction activity, and several traffic pattern changes on Cambie Street.	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆

# Canada Line Annual Construction Look-ahead Schedule *cont...*

## January – December 2007

Pedestrian access to the businesses and residences in the construction area will be maintained throughout construction.  
Businesses in the construction area remain open and accessible, and welcome your continued patronage.

CANADA LINE ROUTE SEGMENT		J	F	M	A	M	J	J	A	S	O	N	D
<b>SEGMENT 2 - Cambie North (2nd Avenue to King Edward Avenue) <i>cont...</i></b>													
<b>Broadway-City Hall Station Construction</b>													
Site Preparation Work and Station Pit Excavation	Involves demolition, site preparation work, excavation and construction of the station pit. Moderate traffic pattern changes on Cambie Street and on Broadway.	◆	◆	◆	◆	◆	◆						
Station Structure Work	Involves station construction activity, and moderate traffic pattern changes on Cambie Street and on Broadway.						◆	◆	◆	◆	◆	◆	◆
<b>Broadway Vehicle/Pedestrian Bridge Installation</b>	Involves excavation, bridge installation and general construction activity. Moderate traffic pattern changes on Cambie Street and on Broadway.		◆	◆	◆								
<b>12th Avenue Vehicle/Pedestrian Bridge Installation</b>	Involves excavation, bridge installation and general construction activity. Moderate traffic pattern changes on Cambie Street and on 12th Avenue.	◆	◆										
<b>16th Avenue Vehicle/Pedestrian Bridge Installation</b>	Involves excavation, bridge installation and general construction activity. Moderate traffic pattern changes on Cambie Street and on 16th Avenue.		◆	◆									
<b>Pedestrian Bridge Installation at 18th Avenue</b>	Minimal effect to traffic near 18th Avenue.	◆	◆	◆									
<b>19th Avenue Vehicle/Pedestrian Bridge Installation</b>	Involves excavation, bridge installation and general construction activity. Moderate traffic pattern changes on Cambie Street.		◆	◆									
<b>SEGMENT 3 - Cambie South (King Edward Avenue to the Fraser River)</b>													
<b>Tunnel Construction and Site Restoration Work</b> On Cambie Street from King Edward Avenue to the Portal (64th Avenue)	Involves excavation, tunnel construction and road restoration work. Moderate traffic pattern changes on Cambie Street.	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆

# Canada Line Annual Construction Look-ahead Schedule *cont...*

## January – December 2007

Pedestrian access to the businesses and residences in the construction area will be maintained throughout construction. Businesses in the construction area remain open and accessible, and welcome your continued patronage.

CANADA LINE ROUTE SEGMENT		J	F	M	A	M	J	J	A	S	O	N	D
<b>SEGMENT 3 - Cambie South (King Edward Avenue to the Fraser River) <i>cont...</i></b>													
<b>King Edward Station Construction</b>													
Station Pit Excavation	Involves station excavation work, and moderate traffic pattern changes on Cambie Street and on King Edward Avenue.	◆	◆										
Station Structure Work	Involves station construction activity, and moderate traffic pattern changes on Cambie Street and on King Edward Avenue.		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>41st Avenue Vehicle/Pedestrian Bridge Installation</b>	Involves excavation, bridge installation and general construction activity. Moderate traffic pattern changes in the Cambie Street and 41st Avenue intersection.	◆	◆	◆									
<b>Oakridge-41st Avenue Station Construction</b>													
Station Pit Excavation	Involves station excavation work, and moderate traffic pattern changes on Cambie Street and on 41st Avenue.	◆	◆	◆									
Station Structure Work	Involves station construction activity, and moderate traffic pattern changes on Cambie Street and on 41st Avenue.			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>Langara-49th Avenue Station Construction</b>													
Station Pit Excavation	Involves station excavation work, and moderate traffic pattern changes on Cambie Street and on 49th Avenue.		◆	◆	◆								
Station Structure Work	Involves station construction activity and moderate traffic pattern changes on Cambie Street and on 49th Avenue.				◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>Tunnel Portal Construction</b> On Cambie Street at 64th Avenue	Involves construction of an entry/exit structure where the tunnel transitions from underground to above-ground on the east side of Cambie Street. Further traffic pattern changes are not required for this work.	◆	◆	◆	◆	◆							

# Canada Line Annual Construction Look-ahead Schedule *cont...*

## January – December 2007

Pedestrian access to the businesses and residences in the construction area will be maintained throughout construction.  
Businesses in the construction area remain open and accessible, and welcome your continued patronage.

CANADA LINE ROUTE SEGMENT		J	F	M	A	M	J	J	A	S	O	N	D
<b>SEGMENT 3 - Cambie South (King Edward Avenue to the Fraser River) <i>cont...</i></b>													
<b>Utility Relocation and Elevated Guideway Site Preparation Work</b> On Cambie Street from the Tunnel Portal (64th Avenue) to the Fraser River	Involves utility and site preparation work, and minor traffic pattern changes on Cambie Street, on S.W. Marine Drive and on Kent Avenue.	◆	◆	◆									
<b>Foundation and Column Construction for Elevated Guideway</b> On Cambie Street from the Tunnel Portal (64th Avenue) to the Fraser River	Involves guideway foundation and column work, and general construction activity. Minor traffic pattern changes on Cambie Street, on S.W. Marine Drive and on Kent Avenue.			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>Marine Drive Station Site Preparation and Construction</b>	Involves site preparation, foundation and column work, station construction and general construction activity. Moderate traffic pattern changes on Cambie Street south of S.W. Marine Drive.	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>SEGMENT 4 - Fraser River: North and Middle Arm Bridge</b>													
<b>Middle Arm Bridge Construction and Track Installation</b>	Conducted offshore in the Fraser River using barges and cranes. Minimal onshore construction and traffic pattern impacts.	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>North Arm Bridge Construction and Track Installation</b>	Conducted offshore in the Fraser River using barges and cranes. Minimal onshore construction and traffic pattern impacts.	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>SEGMENT 5 - Bridgeport Area in Richmond</b>													
<b>Elevated Guideway Construction and Track Installation</b> North Arm and Middle Arm Elevated Guideway Construction and track installation to OMC	Involves elevated and at-grade guideway construction, track installation, and general construction activity. Minor traffic pattern changes in the Bridgeport area.	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>Operations and Maintenance Centre (OMC) Construction</b> Site Preparation and Construction	Involves excavation, concrete works, and facility foundation and general construction activity. Minor traffic pattern changes in the Bridgeport area.	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆

# Canada Line Annual Construction Look-ahead Schedule *cont...*

## January – December 2007

Pedestrian access to the businesses and residences in the construction area will be maintained throughout construction.  
Businesses in the construction area remain open and accessible, and welcome your continued patronage.

CANADA LINE ROUTE SEGMENT		J	F	M	A	M	J	J	A	S	O	N	D
<b>SEGMENT 5 - Bridgeport Area in Richmond <i>cont...</i></b>													
<b>Elevated Guideway Construction and Track Installation</b> From the OMC to Bridgeport Station	Involves elevated and at-grade guideway construction, track installation, and general construction activity. Minor traffic pattern changes in the Bridgeport area.	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>Bridgeport Station Construction</b>													
Site Preparation Work, Foundation and Column Construction	Involves site preparation, piling, guideway foundation and column work, station construction and general construction activity. Minor traffic pattern changes in the Bridgeport area.	◆	◆										
Station Structure Work	Involves station construction activity, and minor traffic pattern changes in the Bridgeport area.		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>Elevated Guideway Construction</b> From Bridgeport Station to Sea Island Way	Involves the launching girder (crane) lifting and locking concrete segments into place, and general construction activity. Minor traffic pattern changes in the Bridgeport area.	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>SEGMENT 6 - No. 3 Road North in Richmond (Sea Island Way to Alderbridge Way)</b>													
<b>Phase I: Sea Island Way to Cambie Road</b>													
Foundation and Column Work (Substructure Work)	Involves piling, foundation and column construction and general construction activity on the east side of No. 3 Road. Moderate traffic pattern changes on No. 3 Road.	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Elevated Guideway Work (Superstructure Work)	Involves the launching girder (crane) lifting and locking concrete segments into place, and general construction activity. Moderate traffic pattern changes on No. 3 Road.			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆



# Canada Line Annual Construction Look-ahead Schedule *cont...*

## January – December 2007

Pedestrian access to the businesses and residences in the construction area will be maintained throughout construction. Businesses in the construction area remain open and accessible, and welcome your continued patronage.

CANADA LINE ROUTE SEGMENT		J	F	M	A	M	J	J	A	S	O	N	D
<b>SEGMENT 6 - No. 3 Road North in Richmond (Sea Island Way to Alderbridge Way) <i>cont...</i></b>													
<b>Phase II: Cambie Road to Leslie Road</b>													
Site Preparation and Road Reconfiguration Work	Involves site preparation and road reconfiguration work along the centre of No.3 Road from Cambie Road to Leslie Road. Minor traffic pattern changes on No.3 Road.	◆											
Foundation and Column Work (Substructure Work)	Involves piling, foundation and column construction and general construction activity on the east side of No. 3 Road. Moderate traffic pattern changes on No. 3 Road.		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Elevated Guideway Work (Superstructure Work)	Involves the launching girder (crane) lifting and locking concrete segments into place, and general construction activity. Moderate traffic pattern changes on No. 3 Road.							◆	◆	◆	◆	◆	◆
<b>Aberdeen Station Construction</b>													
Site Preparation Work, Foundation and Column Construction	Involves site preparation, piling, foundation and column work, station construction and general construction activity. Minor traffic pattern changes on No. 3 Road.	◆	◆	◆	◆	◆							
Station Structure Work	Involves station construction activity, and minor traffic pattern changes on No. 3 Road.					◆	◆	◆	◆	◆	◆	◆	◆
<b>SEGMENT 7 - No. 3 Road South in Richmond (Alderbridge Way to Granville Avenue)</b>													
<b>Phase III: Leslie Road to Westminster Hwy</b>													
Site Preparation, Utility Work and Road Reconfiguration Work	Involves site preparation, utility work, and road reconfiguration work along the centre of No. 3 Road from Leslie Road to Westminster Hwy. Moderate traffic pattern changes on No. 3 Road. Utility relocation work will also occur along the east side of No. 3 Road which will result in traffic pattern changes on No. 3 Road.	◆	◆	◆									

# Canada Line Annual Construction Look-ahead Schedule *cont...*

## January – December 2007

Pedestrian access to the businesses and residences in the construction area will be maintained throughout construction. Businesses in the construction area remain open and accessible, and welcome your continued patronage.

CANADA LINE ROUTE SEGMENT		J	F	M	A	M	J	J	A	S	O	N	D
<b>SEGMENT 7 - No. 3 Road South in Richmond (Alderbridge Way to Granville Avenue) <i>cont...</i></b>													
<b>Phase III: Leslie Road to Westminster Hwy <i>cont...</i></b>													
Foundation and Column Work (Substructure Work)	Involves piling, foundation and column construction and general construction activity on the east side of No. 3 Road. Moderate traffic pattern changes on No. 3 Road.			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Elevated Guideway Work (Superstructure Work)	Involves the launching girder (crane) lifting and locking concrete segments into place, and general construction activity. Moderate traffic pattern changes on No. 3 Road.									◆	◆	◆	◆
<b>Lansdowne Station Construction</b>													
Site Preparation Work, Foundation and Column Construction	Involves site preparation, piling, foundation and column work, station construction and construction activity. Minor traffic pattern changes on No. 3 Road.	◆	◆										
Station Structure Work	Involves station construction activity, and minor traffic pattern changes on No. 3 Road.		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>Phase IV: Westminster Hwy to Saba Road</b>													
Site Preparation and Road Reconfiguration Work	Involves site preparation and road reconfiguration work along the centre of No. 3 Road from Westminster Hwy to Saba Road. Minor traffic pattern changes on No. 3 Road.			◆	◆	◆	◆	◆					
Foundation and Column Work (Substructure Work)	Involves piling, foundation and column construction, and general construction activity on the east side of No. 3 Road. Moderate traffic pattern changes on No. 3 Road.							◆	◆	◆	◆	◆	◆

# Canada Line Annual Construction Look-ahead Schedule *cont...*

## January – December 2007

Pedestrian access to the businesses and residences in the construction area will be maintained throughout construction. Businesses in the construction area remain open and accessible, and welcome your continued patronage.

CANADA LINE ROUTE SEGMENT		J	F	M	A	M	J	J	A	S	O	N	D
<b>SEGMENT 7 - No. 3 Road South in Richmond (Alderbridge Way to Granville Avenue) <i>cont...</i></b>													
<b>Richmond-Brighthouse Station Construction</b>													
Site Preparation Work, Foundation and Column Construction	Involves site preparation, piling, foundation and column work, station construction and general construction activity. Minor traffic pattern changes on No. 3 Road.	◆	◆	◆	◆	◆							
Station Structure Work	Involves station construction activity, and minor traffic pattern changes on No. 3 Road.					◆	◆	◆	◆	◆	◆	◆	◆
<b>SEGMENT 7 - Sea Island (YVR)</b>													
<b>Elevated Guideway Work: Middle Arm Bridge to Sea Island</b>	Involves the launching girder (crane) lifting and locking concrete segments into place, and general construction activity. Temporary closures of the Arthur Laing Bridge.	◆	◆	◆	◆	◆	◆	◆	◆	◆			
<b>At-Grade Guideway Work: East of Templeton Station to West of Sea Island Centre Station</b>	Involves at-grade guideway and general construction activity, and minor traffic pattern changes near Templeton Road and Grant McConachie Way.	◆	◆	◆	◆	◆	◆						
<b>Templeton Station (At-grade)</b>													
Site Preparation and Foundation Work	Involves pre-loading, site preparation, excavation, foundation, and construction activity. Minor traffic pattern changes near Templeton Road and North Service Road.	◆	◆										
Station Structure Work	Involves station construction activity, and minor traffic pattern changes near Templeton Road and North Service Road.		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>Sea Island Centre Station Construction (At-grade)</b>													
Site Preparation and Foundation Work	Involves pre-loading, site preparation, excavation, foundation, and construction activity. Minor traffic pattern changes near Grant McConachie Way.	◆	◆	◆									

# Canada Line Annual Construction Look-ahead Schedule *cont...*

## January – December 2007

Pedestrian access to the businesses and residences in the construction area will be maintained throughout construction. Businesses in the construction area remain open and accessible, and welcome your continued patronage.

CANADA LINE ROUTE SEGMENT		J	F	M	A	M	J	J	A	S	O	N	D
<b>SEGMENT 7 - Sea Island (YVR) ENT 7 - Sea Island (YVR) <i>cont...</i></b>													
<b>Sea Island Centre Station Construction (At-grade) <i>cont...</i></b>													
Station Structure Work	Involves station construction activity, and minor traffic pattern changes near Grant McConachie Way.			◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
<b>Elevated Guideway Work: West of Sea Island Centre Station to YVR-Airport Station</b>	Involves the launching guider (crane) lifting and locking concrete segments into place, and general construction activity. Minor traffic pattern changes on Grant McConachie Way near YVR Airport Terminals. Traffic will be maintained to and from Vancouver International Airport and its facilities at all times.	◆	◆	◆	◆	◆							
<b>YVR- Airport Station Construction (Elevated)</b>													
Site Preparation, Foundation and Station Structure Work	Involves pre-loading, site preparation, excavation, foundation and column work, station construction and general construction activity. Minor traffic pattern changes on Grant McConachie Way near YVR Airport Terminals. Traffic will be maintained to and from Vancouver International Airport and its facilities at all times.	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆

# Canada Line Annual Construction Look-ahead Schedule *cont...*

## January – December 2007

### Please note:

**During all Canada Line construction, the following traffic management and construction details will be in effect in the immediate working areas:**



- Left and right turn restrictions may be in effect. Two-way vehicle traffic will be maintained at all times.
- On-street parking may be restricted in the working area. Crews will make every effort to restore street parking at the earliest possible date.
- Pedestrian walkways will be maintained. Access to businesses and residences will be maintained, and businesses in the construction area remain open and accessible and welcome your continued patronage.
- Businesses and residents in the area may experience general disruption associated with truck traffic, noise from crews and heavy equipment, vibration, dust and inconvenience resulting from excavation, foundation and column work, elevated guideway work, and general construction activity. Crews will endeavour to minimize disruption to businesses and residents in the area, and we thank you for your patience while we build.
- All hours of work will be conducted in approval by the City of Vancouver, City of Richmond, or by Vancouver International Airport Authority.
- Transit service will remain, although some bus stops and shelters may be temporarily removed or relocated while crews and equipment are working in the immediate area. For transit service information, please contact TransLink's Customer Information Centre at 604-953-3333.
- *Being aware is being safe*, so please ensure you use caution when travelling through a construction zone and adhere to posted speed limits.

### Learn More / Share Your Thoughts:

✉ [info@canadaline.ca](mailto:info@canadaline.ca)

For Construction Information:

For Project Information:

🌐 [www.canadaline.ca](http://www.canadaline.ca)

📞 604.608.0200

📞 604.484.6700

📞 604.484.6799

📄 Canada Line Rapid Transit Inc.

1650 - 409 Granville St, Vancouver, BC, V6C 1T2

**TRANSITBC**  
Canada Line Design, Construction & Operations



Funding Agencies:



Supporting Agencies:



OVERVIEW OF CANADA LINE BUSINESS AND COMMUNITY SUPPORT INITIATIVES

## **Overview of Past and Future Community and Business Support by Canada Line Rapid Transit Inc. (CLCO) and InTransitBC**

### **I. Introduction**

At the inception of the Canada Line Project, Canada Line Rapid Transit Inc. (CLCO, the Company responsible for implementing the Line) made a commitment to establish innovative business programs designed to reduce construction-related impacts, where possible, and achieve predictability in the construction schedule for corridor residents, and adjacent businesses. In developing its programming, CLCO retained Harris Consulting to provide a case study review that assessed business impact mitigation methods used during the construction of major North American transit projects. The Report was designed to provide suggestions and information from other projects for CLCO to consider in working with agencies, businesses and communities to help mitigate impacts associated with the construction of the Canada Line.

Based on extensive consultation with businesses along the Canada Line route and case study research, CLCO made 3 initial commitments to business stakeholders along the Canada Line:

1. Conduct a market access report for merchants along the Canada Line
2. Establish and support Business Liaison & Communications Committees in Vancouver and Richmond
3. Conduct Retail Workshops

These 3 commitments have been met and documented. In addition, an interactive website, [canadaline.ca](http://canadaline.ca), was created. The following report outlines these initiatives as well as other community and business liaison programs that have been or will be undertaken by CLCO and/or InTransitBC along the Canada Line. With pending construction on Cambie Street between King Edward and 2<sup>nd</sup> Avenue in early 2007, the Report will focus on Cambie Street.

### **II. Initial Key Undertakings**

#### **1. Market Research to Aid Business Planning During the Construction and Post-Construction Periods**

CLCO worked with Canada Line retailers to develop a market information program (exit or intercept survey and a telephone survey) designed to help small and independently-owned businesses identify current shopping activity patterns and other information vital to the businesses along the route. The Mustel Group was retained and released a report "*Market research for business communities along the Canada Line*" on June 2005. This information is being used to develop customer attraction/promotion programs implemented during the construction period.

#### **2. Retail Consultant to Help Businesses Plan for Construction and Post-Construction Periods**

Many of the businesses along Cambie Street and other segments of the Canada Line are smaller independently-owned businesses. The Vancouver Business Liaison Committee formally agreed that the



owners and managers of these smaller businesses could benefit from access to strategic planning and coaching and other retail management consulting services that focus on marketing, sales management, inventory management, and merchandise management, especially during the construction period when normal traffic and customer patterns are disrupted. CLCO retained the services of Sharon Hayles, InFocus The Retail Consultant who facilitated 5 retail workshops along the Canada Line, including Cambie Street on 31 May 2006 at the Plaza 500 Hotel. The workshops provided targeted retail/marketing strategies to help businesses along the Canada Line route manage through the construction disruption and capitalize on the anticipated traffic increase in the future. They also provided area-specific detailed Canada Line construction information.

### 3. Full-time Director and Vancouver and Richmond Business Liaison Committees

The Vancouver and Richmond Business Liaison Committees were established by CLCO to help minimize construction-related disruption to businesses along the route. The Committees' objectives are to facilitate construction coordination, communications and to provide retail marketing initiatives. The Vancouver Business Liaison Committee is comprised of 10 members, including representatives of the Business Improvement Associations located along the Canada Line route. Members from Cambie Street include: Raina Hantz, Coordinator, Cambie Village Business Association; Bob Nicholson, Best Buy Canada; Doug MacDougall, Oakridge Shopping Centre; Lynn Warwick, Mount Pleasant Business Improvement Area.

CLCO also provides both direct and in-kind financial support for the Committees, which includes:

- \$1.325 Million direct support to the Business Liaison Committees for retail marketing activities. (Budget and Programming controlled by the Vancouver and Richmond Business Liaison Committees.)
- \$1.6 Million in-kind support, including:
  - a. Independent Project Director to support the activities of the Committees
  - b. Office space and administrative support
  - c. Programming, events, signage, etc.

To date, the Vancouver Business Liaison Committee has supported Cambie Street merchants through the following initiatives, among others:

#### i. *"Business is Open" Campaign*

Launched in March 2006 the objective of the "Business is Open" campaign was to remind community members, businesses, residents and shoppers that neighbourhood shops, businesses and restaurants remain open during construction of the Canada Line. Unique visuals were created for Cambie Street and the other businesses areas and were placed on TransLink bus boards and SkyTrains. The brand has been further deployed with the key messaging appearing in print, radio, on signage and at special events.



*"Business is Open" marketing campaign - Cambie Street visual*

## ii. *"I Shop the Line" Campaign*

This advertising campaign was launched in late November 2006 and will run until late January 2007. Approximately 40 billboards, with three different images, will feature prominent Vancouverites in areas under construction. The objective of the campaign is to remind Vancouverites to "Shop the Line" to help support businesses during construction. The billboards feature Mayor Sam Sullivan, a Yaletown resident who regularly shops in the area; Vikram Vij and his wife Meeru Dhalwala, who have lived and shopped in Cambie Village for more than a decade; John Fluevog, Granville Street entrepreneur.



*"I Shop the Line" marketing campaign visuals*

## iii. *Neighbourhood Mail Drops*

A number of direct mail marketing initiatives have been led by the Vancouver Business Liaison Committee to promote neighbourhood shopping districts during construction. Packages have been assembled, including business flyers, promotional items and location maps. These packages have been sent, via Canada Post, to thousands of households in Yaletown, Cambie Street/South East Marine Drive, and Cambie Street/41<sup>st</sup>.

## III. Other Retail/Marketing Initiatives

In addition to the "I Shop the Line" billboard campaign, CLCO and the Vancouver Business Liaison Committee have worked with the Business Improvement Associations along the Canada Line to help ensure the success of key 2006 retail periods, such as Halloween and Christmas. Initiatives included:

### i. *Cambie Village Halloween Hunt*

The Cambie Village Business Association, with the financial and administrative support of CLCO and the Vancouver Business Liaison Committee held the first-ever 2006 Halloween Hunt. The objectives were to raise awareness of the Cambie Village and build customer loyalty. Dozens of merchants participated in the initiative that ran from 25<sup>th</sup> to 2<sup>nd</sup> Avenue along Cambie Street. Activities included: Halloween treasure hunt, pumpkin carving, and street party with prizes and candy. The event was a huge success with hundreds of children and parents participating.



*Cambie Village Halloween Hunt*

### ii. *Canada Line Street Teams*

The Street Teams helped “kick-off” the Christmas season in the Cambie Village and Yaletown starting on November 25 and were present every weekend up to December 24. The Canada Line Street teams helped to create an enthusiastic and memorable interaction for all consumers and retailers in the Cambie Village and Yaletown by providing free warm beverages as well as distributing business flyers, directions and assistance navigating the construction sites. The program objective was to help encourage an increase in pedestrian traffic counts and customer loyalty in both areas.



*Canada Line Street Team with friends in Yaletown*

### iii. *Cambie Christmas Windows*

Decorating teams worked with Cambie Village merchants to add light and festivity to storefronts over the 2006 Christmas season. Participating merchants received free window decorating including lights and customized wreaths. Over 45 merchants participated, helping to demonstrate that Cambie Village is “Open for Business” and build goodwill with customers in anticipation of the 2007 construction program.





#### iv. *Cambie Village Parking Strategy*

The City of Vancouver in conjunction with CLCO developed and implemented the temporary Cambie Village Parking plan. The plan was developed in consultation with the Cambie Village Business Association, area merchants and residents and provides short-term commercial parking to offset the pending loss of parking on Cambie Street, as well as residential permit parking.

#### v. *Signage and Station Art*

CLCO and the Vancouver Business Liaison Committee have implemented a comprehensive business sign program designed to maintain business visibility and support pedestrian wayfinding in construction areas along the Canada Line. For example, business logo and pedestrian wayfinding signs have been created and located on the hoarding at the 3 downtown stations. Signage has also been created to support retail initiatives such as the recent "Shop Granville" campaign. As noted in *Section V*, of Appendix B, InTransitBC has agreed to design, install, and repair signage for businesses in the Cambie Village.

A pilot art project, sponsored by InTransitBC, will be displayed at the Yaletown-Roundhouse Station in early 2007 to help beautify the construction site and attract shoppers and visitors into the area. Large artworks by Vancouver artist Landon MacKenzie will be displayed at the east and west side of the Station construction site.



*Canada Line logo signs at Vancouver City Centre Station site*

## IV. **Communications and Community Relations**

#### i. *Canada Line Community Information Centre, 483 W 16<sup>th</sup> Avenue*

The Centre opened to the public on 11 March 2006 and serves as a community-based information centre for residents and businesses. A full-time office manager staffs the Centre and is available to answer questions and distribute construction and Project related information. A computer is also available for the public to

access the Canada Line website. In addition, meetings can be scheduled at the Information Centre with the Vancouver Community Liaison Officer as well as other InTransitBC and CLCO staff members. The Community Information Centre serves as the resource centre for the Vancouver Business Liaison Committee and the Independent Project Director, Karen Peterson Ivanick.

### *ii. Canada Line Website*

Public use of the Canada Line project website has grown considerably since the site was launched in November 2005. Featuring an interactive map with up to date construction and traffic information, [www.canadaline.ca](http://www.canadaline.ca) is the principal source for Project related material. The site provides detailed information on construction scheduling and methodology, public information materials, community and business support pages including individual business products such as Tomato Café's cookbook. Through the website, the public can subscribe to Canada Line information updates, contact Project personnel and provide feedback. In 2006, a total of more than 106,000 unique or different visitors accessed the Canada Line site with a total of over 18,802,585 hits. Approximately 6,000 people receive Canada Line updates through the subscription service.

### *iii. Construction Communications*

With the inception of active construction, InTransitBC is now the lead with respect to the delivery of construction and traffic notification. Its activities are guided by a formal notification plan<sup>1</sup>. From a community relations perspective, CLCO plays a supportive and formal monitoring role and remains responsible for conveying general Project information. Communication tools/sources include:

- Canada Line Community Information Centre, Cambie Street and 16<sup>th</sup> Avenue
- Canada Line website with interactive traffic map: [canadaline.ca](http://canadaline.ca)
- Email inquiries: [info@canadaline.ca](mailto:info@canadaline.ca)
- Public Notices, monthly construction updates, e-post cards, construction updates (specific area), media advisories
- Construction Information by Phone: 604.608.0200
- Town Hall information meetings/consultations
- Vancouver Community Liaison Officer
- Independent Project Director for the Business Liaison Committees

## **V. Support for Cambie Village Merchants during 2007 Construction (InTransitBC)**

With the advent of Canada Line tunnel construction in the Cambie Village, InTransitBC has made the following commitments to the Cambie Village Business Association to help support area merchants:

- Pedestrian/Vehicle Bridges at 16<sup>th</sup> and 19<sup>th</sup> Avenues (Cambie Street)
- Pedestrian Bridge between 17<sup>th</sup> and 18<sup>th</sup> Avenues
- Full time construction monitor between 16<sup>th</sup> and 19<sup>th</sup> Avenues during construction period
- Signage for businesses (design/install/repair)
- Access signs in advance of construction zone
- Full page colour map of Cambie Village (parking/traffic) published twice in Vancouver Courier
- Postal code drop of map along north Cambie corridor

---

<sup>1</sup> Construction Period Liaison and Notification Plan, ITBC, November 2005

Richard Sawchuk  
Director, Government & Community Relations  
Canada Line Rapid Transit Inc.  
604.484.6733