

# TORONTO TRANSIT COMMISSION REPORT NO.

**MEETING DATE:** May 1, 2012

**SUBJECT:** LRT PROJECTS IN TORONTO - STATUS REPORT

## **INFORMATION ITEM**

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### **RECOMMENDATION**

It is recommended that the Commission receive this report for information.

### **FUNDING**

This report does not have direct funding implications for the TTC.

### **BACKGROUND**

The Province of Ontario and Metrolinx have committed \$8.4 billion to new transit in Toronto.

In 2007, the Commission adopted a plan for light rail transit (LRT) lines to provide faster, more reliable, accessible transit on the busiest, most congested corridors in Toronto, and directed staff to commence the preliminary planning and environmental assessments for the projects.

In November 2008, Metrolinx adopted the Big Move Transportation Plan for the Greater Toronto and Hamilton Area. The Big Move top 15 priority projects for early implementation included the Sheppard East LRT, Finch West LRT, Eglinton Crosstown LRT and the Scarborough RT.

In May and April 2009, the Province of Ontario announced funding for the Eglinton Crosstown LRT, Scarborough RT conversion and extension, Finch West LRT and, with a federal contribution, Sheppard East LRT.

Also in early 2009, the Province of Ontario amended the *Metrolinx Act 2006* bringing into force provisions for Metrolinx to own and control transit projects and be responsible for decisions regarding scope, budget, schedule and delivery. Metrolinx, TTC and the City of Toronto developed a governance structure for the transit project implementation whereby TTC would deliver the projects on behalf of Metrolinx. An Interim Funding Memorandum of Agreement provided Metrolinx funding to the TTC to carry on with the project

implementation with Metrolinx responsible for award of contracts and payment to consultants, the TTC staff working on the project and contractors.

### **The LRT Plan for Toronto**

In July 2010, following completion of the preliminary planning and updated cost estimates for Sheppard East LRT, Finch West LRT, Eglinton Crosstown LRT and the Scarborough RT projects, Metrolinx reviewed each of the LRT projects and announced the “5 in 10 Plan” that provided scope, budget and schedule for the first phase of the projects:

- Sheppard East LRT – 13 km from Don Mills Station to Morningside Avenue including a new yard at Conlins Road
- Finch West LRT – 11 km from Finch West Station on the Spadina Subway extension (under construction) to Humber College
- Eglinton Crosstown LRT – 19 km from Jane Street to Kennedy Station with the 10 km central section from Black Creek Drive to Laird Drive underground including a new maintenance and storage facility at Black Creek Drive and Eglinton Avenue
- Scarborough RT – 10 km from Kennedy Station to Sheppard Avenue - 7 km conversion of the existing line and a 3 km extension.

In March 2011 the Mayor of Toronto, Province of Ontario and Metrolinx entered into a Memorandum of Agreement that significantly changed the transit projects for Toronto from the Metrolinx “5 in 10 Plan”, resulting in the suspension of the Sheppard East LRT, Finch West LRT, extension of the Scarborough RT from the Scarborough City Centre to Sheppard Avenue and revising the plans for the east end of the Eglinton Crosstown LRT to an underground alignment.

At its meeting on February 8, 2012, Toronto City Council confirmed its support for the early implementation of the Eglinton Crosstown LRT, Finch West LRT, and Scarborough RT conversion to LRT and extension consistent with the Metrolinx “5 in 10 Plan”.

At its meeting on March 21 and 22, 2012, Toronto City Council confirmed its support for the early implementation of the Sheppard East LRT consistent with the Metrolinx “5 in 10 Plan”.

On March 22, 2012 the Minister of Transportation indicated that Metrolinx will review the plan approved by Toronto City Council at its April 25, 2012 Board Meeting.

## **DISCUSSION**

### **Progress on the Implementation of the LRT Plan for Toronto**

Through 2008, 2009 and 2010, TTC staff conducted preliminary planning and Environmental Assessments for the Sheppard East LRT, Finch West LRT, Eglinton Crosstown LRT and the Scarborough RT including extensive public consultation for specific

phases of the development of the plans. Appendix A provides the key approval dates for each project.

As the environmental assessments were completed, TTC started the development of the design and engineering of the projects.

### **Eglinton Crosstown LRT**

The Eglinton Crosstown LRT EA approved in 2010 provided a project scope consisting of a 30 km transit line:

- At-grade LRT in the centre of the road west of from Kennedy Station to Laird Drive - 9 km;
- Underground LRT from Laird Drive to Black Creek Drive - 10 km;
- At-grade and elevated LRT from Black Creek Drive to Pearson Airport - 10 km.

The Metrolinx *"5 in 10 Plan"* confirmed funding of the first phase from Kennedy Station to Black Creek Drive with completion by 2020. The MOU between the Mayor of Toronto, Metrolinx and the Province in March 31, 2011, did not change the central underground section of the Eglinton Crosstown and Metrolinx directed that TTC continue the design and engineering on this section.

As a result, significant progress has been made on the central underground section as follows:

### **The Eglinton Crosstown West Tunnel**

Four tunnel boring machines (TBMs) were ordered by Metrolinx from Caterpillar, formerly Lovat, in Mississauga in June 2010. In August 2012, two TBMs are expected to be delivered to the West Launch site for the tunnels from there to Yonge Station. The TBMs will be assembled ready for the tunnelling start in late 2012.

In August 2011, construction started on the west launch site at Black Creek Drive and Eglinton Avenue by Kenaiden Contracting Ltd. The west launch is a major excavation built to receive and launch TBMs. The west launch site construction has been proceeding on schedule and will be completed

The design and engineering for the west tunnel was started in 2010 and completed in March 2012 by the engineering consulting firm Hatch Mott MacDonald. The contract for the construction of the west tunnel from Black Creek Drive to Yonge Street will be tendered in April 2012 and is expected to be awarded by Metrolinx in July 2012.

From September 2012 to March 2014, the tunnelling contractor will construct the station headwalls at Keele, Caledonia, Dufferin, Eglinton West/Allen Road, Bathurst, Chaplin and Avenue Stations.

The tunnelling will start at Black Creek Drive in November 2012 and proceed eastward to Allen Road. As the risk of tunneling under the Spadina Subway is high, the TBMs will be extracted immediately west of Allen Road in the late fall of 2013. Immediately east of Allen Road another launch site will be constructed between late 2013 to late 2014. The TBMs will then launch from there to continue tunnelling to Yonge Street. The tunnelling to Yonge Street will be completed by the end of 2014.

The tunnelling from Yonge Street to Laird Drive will be the subject of a separate contract.

### **Stations**

Through 2011 extensive progress was achieved on the design of the west end underground stations at Keele, Dufferin, Eglinton West/Allen Road, Bathurst and Chaplin.

In 2011, the Conceptual Station Design Guidelines were completed by the consulting firm joint venture, Lea/Halsall and established the essential elements common to each underground station including:

- Underground station box size requirements;
- One main entrance - fully accessible with elevators and escalators;
- One secondary entrance with stairs;
- Fare collection requirements;
- Emergency egress facilities;
- Ventilation requirements.

In February 2011, Metrolinx awarded the design contracts for the west end stations as follows:

- Keele Station - Arup Canada
- Caledonia Station - Arup Canada
- Dufferin Station - Crosstown Consortium, a Joint Venture of IBI Group and SNC-Lavalin;
- Oakwood Station - Aecom Canada
- Eglinton West/Allen Road Station - HDR/Halcrow Yolles Joint Venture
- Bathurst Station - Crosstown Consortium, a Joint Venture of IBI Group and SNC-Lavalin;
- Chaplin Station - Aecom Canada.

The preliminary station designs determined:

- The size and location of the underground station box;
- The location of the entrances, vent shafts and other above ground requirements;
- Major utility relocation requirements;
- Preliminary property requirements.

The public was consulted on the preliminary station designs for Keele, Dufferin, Eglinton West/Allen Road and Bathurst Stations at individual open houses in December 2011, and January/February 2012 and through on-line consultation on the Crosstown website.

Issue specific community meetings were held as requested. The preliminary station designs and public consultation reports are available on the Crosstown website.

Appendix B includes the Keele, Dufferin, Eglinton West/Allen Road and Bathurst preliminary station designs. These station designs will progress and public consultation on the final designs will held over the next few months. The Chaplin and Caledonia Stations designs are also underway and the preliminary designs will be presented for public consultation in late April 2012.

The Conceptual Station Design Guidelines and the Preliminary Station Designs have been developed in collaboration with the City Planning and Transportation Services and have been presented to the City's Urban Design Review Panel.

The design of Yonge Station is expected to be awarded by Metrolinx in June 2012 and the design of Avenue, Mt, Pleasant, Bayview and Laird Stations in July 2012.

### **City of Toronto Planning Study**

Recognizing the importance of integrated land use, urban design and transit planning, City Planning has established a dedicated team to develop a plan for the Eglinton corridor consistent with Official Plan policies. The City planning team also works closely with the TTC on the station designs and with Metrolinx on the mobility planning. During the next two years, City Planning staff will lead a comprehensive planning study of Eglinton Avenue with the objective of coordinating urban development and transportation infrastructure through appropriate policies and planning tools that balance social, economic and environmental concerns.

### **Community Relations**

TTC and Metrolinx have emphasized community relations for the Crosstown project.

Dedicated community liaison staff have been in place since 2010 and the first Crosstown Community Office was opened at Dufferin Street and Eglinton Avenue West in June 2011.

Staff assigned to the office have developed strong relationships with residents, groups, businesses and institutions in the Crosstown corridor. They are the advocates for the community with the project team on issues of concern and ensure construction notices are provided to those immediately affected. They have responsibility to ensure people affected by the new project and the construction are informed and encouraged to participate in public consultations and outreach. The community liaison staff organize the formal station design consultations but also look for informal opportunities to provide information and "be where the people are" such as at the local supermarkets and the local arenas on Saturday mornings, street festivals, and resident association community events. The community

liaison are working closely with the BIAs and are frequent presenters at their meetings to provide information and updates about the progress of the Crosstown project.

In September 2011, the Crosstown website was launched. It provides up-to-date information about the project, information on the station design and consultations and includes informational videos and presentations on aspects of the planning and construction.

While most of the Crosstown community relations activities are initiated by the TTC, staff are also available to provide presentations and updates as requested by Councillors, BIAs and other organizations.

### **Scarborough RT Conversion and Extension**

The Scarborough RT Environmental Assessment was completed in 2010 and included the conversion of the RT to LRT, the reconfiguration of Kennedy Station to provide the Crosstown connection transfer and a better, more convenient transfer for passengers between the RT and the Crosstown and Bloor-Danforth Subway, an extension of the line to the Malvern Town Centre and a connection to the planned LRV Maintenance and Storage Facility at Conlins Road.

The Metrolinx *"5 in 10 Plan"* confirmed funding for the first phase of the Scarborough RT consisting of the conversion of the existing line to LRT, the extension to Sheppard Avenue, the reconfiguration of Kennedy Station and the connection with the maintenance and storage facility at Conlins Yard. Construction was to start immediately following the Pan Am Games in 2015 with completion in 2019.

The design for the conversion of the SRT by URS Corporation started in August 2009 and 30% design is complete.

### **Kennedy Station**

The approved environmental assessment provided for the connection for the Crosstown and convenient passenger transfer between the Crosstown, the SRT and the Bloor-Danforth Subway. Kennedy Station has also been identified by Metrolinx as a mobility hub.

Kennedy Station design by AECOM Consulting was nearing 10% completion when the change of plan for the Crosstown required a revised plan for the major interchange station. Design was subsequently redeveloped to 10% in December 2011.

With a Metrolinx direction the design for Kennedy Station will be redeveloped and it is expected that the conceptual design will be presented for public consultation in the fall of 2012.

### **The Sheppard East LRT and Agincourt GO Grade Separation**

The Sheppard East LRT Environmental Assessment was completed in 2009 and provided for a connection of the LRT at subway level at Don Mills Station, continuing underground to surface at Consumers Road, and continuing to Meadowvale Road with a maintenance and storage facility at Conlins Road. The *Metrolinx "5 in 10 Plan"* confirmed funding for the Sheppard East LRT to Morningside Road with construction starting in 2009 and completion in 2014.

In 2010, construction was started on the Sheppard East LRT with the first contract awarded to Dufferin Construction for the Agincourt GO Grade Separation.

In December 2010, the Sheppard East LRT project was suspended by Metrolinx and further design did not proceed. However, Metrolinx approved continuing with the construction of the Agincourt GO Grade Separation as a stand-alone project. The Agincourt GO Grade Separation is progressing and is expected to be completed in late 2012.

### **Finch West LRT**

The approval of the Finch West Environmental Assessment in 2010 provided for at-grade LRT from Yonge Street to Humber College with an interchange station at the future Finch West Station on the Spadina Subway Extension. The Metrolinx *"5 in 10 Plan"* confirmed funding for the first phase 11 km from Finch West Station to Humber College with construction start in 2016 and completion in 2019.

### **Light Rail Vehicles**

In July 2010, Metrolinx awarded the contract for the manufacture of 182 light rail vehicles (LRVs) to Bombardier. The vehicles are being designed and engineered.

A mock-up of the new vehicles may be available for the public this summer.

### **Maintenance and Storage Facilities**

In February 2012, Metrolinx acquired the 58 acre Kodak lands site at Black Creek Drive and Eglinton Avenue West for the Crosstown LRV Maintenance and Storage Facility. The preliminary planning and environmental assessment for the maintenance and storage facility has started. It is expected that the first public consultation for the environmental assessment site will be in fall 2012. Metrolinx has identified this area as the Weston Mobility Hub.

In 2010, TTC and Metrolinx worked with Infrastructure Ontario as the agent for Alternative Financing and Procurement for the Sheppard East LRV Maintenance and Storage Facility for the Sheppard East LRT at Conlins Road. Although the procurement for the facility was suspended with the Sheppard East LRT in early 2011, work continued on site preparation works on the Conlins Road site.

The maintenance and storage facility at McCowan Yard is under review pending the Metrolinx decision on the Sheppard East LRT and related maintenance and storage facility at Conlins Road.

In 2011, Metrolinx acquired 20 acres for the maintenance and storage facility at Finch Avenue west of Jane Street.

### **Project Delivery and Governance**

At its meeting on January 31 2012, the Commission considered a staff report *Eglinton Scarborough Crosstown Project Update*. The report addressed the project delivery and the Commission adopted the recommendation that the CEO report to the Commission on the Crosstown project delivery, project governance, and the role of the TTC in design, construction, maintenance and operations. As no new information is available at this time, the report on project delivery and governance will be submitted to a future Commission meeting.

### **CONCLUSION**

Although the LRT plan for Toronto was changed significantly in 2011, work progressed on the components of the plan, underground central section of the Eglinton Crosstown and the Scarborough RT Conversion. With Metrolinx direction, work will resume on the other components of the plan.

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April 27, 2012

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03-06-000068427

### Appendices

Appendix A - LRT Projects in Toronto - Key Approval Dates

Appendix B - Eglinton Scarborough Crosstown - Station Design Consultation Strategy

Appendix C - Eglinton Scarborough Crosstown Preliminary Station Renderings for  
Keele, Dufferin, Eglinton West and Bathurst Stations



## Appendix A: LRT Projects in Toronto - Key Approval Dates

### **FINCH:**

Commission Approval – December, 2009  
City Council Approval – January, 2010  
Final Environmental Project Report – March, 2010  
Ministry of Environment Approval – May, 2010  
Transit Project Assessment Completed – May, 2010  
Memorandum of Understanding between Mayor Ford and Province - March 31, 2011: work stopped on project  
City Council re-affirmation of support for Finch West LRT – February 8, 2012

### **EGLINTON:**

Notice of Commencement – November 13, 2009  
Commission Approval – November 17, 2009  
City Council Approval – December 4, 2009  
Notice of Completion – March 11, 2010  
Minister's Notice – May 17, 2010  
Statement of Completion – May 18, 2010  
Memorandum of Understanding between Mayor Ford and Province - March 31, 2011 - scope of project shifted to all-underground between Black Creek and Kennedy Station  
City Council re-affirmation of support for project from Jane Street to Kennedy Station, including an underground central section from Keele Street to Laird Drive, and at-grade sections running west of Keele and east of Laird - February 8, 2012

### **SCARBOROUGH:**

Commission approval – May 6, 2010  
City Council approval – June 8/9, 2010  
Ministry of Environment Approval – October 6, 2010  
City Council re-affirmation of support for Scarborough RT conversion to LRT (grade-separated) from Kennedy Station to Scarborough City Centre and extension to Sheppard Avenue - February 8, 2012

### **SHEPPARD:**

Commission approval – June 18, 2008  
Official plan amendment – June 5, 2008  
City Council approval – July 15, 2008  
Final report – December 2008  
Environmental Assessment connection to Don Mills Station – May 28, 2009  
Memorandum of Understanding between Mayor Ford and Province - March 31, 2011: work stopped on project;

# Transit Expansion Department

City Council confirmation of Light Rail Transit as the preferred rapid transit mode for Sheppard Avenue East from Don Mills Road to Morningside Avenue; also confirmation of Sheppard Avenue East LRT as a priority line within the approved Metrolinx "5 in 10" plan - March 22, 2012

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# Appendix B Station Design Consultation Strategy

December 2011

# Crosstown Station Design Public Consultation and Outreach

Phase 1 - Preliminary Station Design Consultation

Phase 2 - Final Station Design Consultation

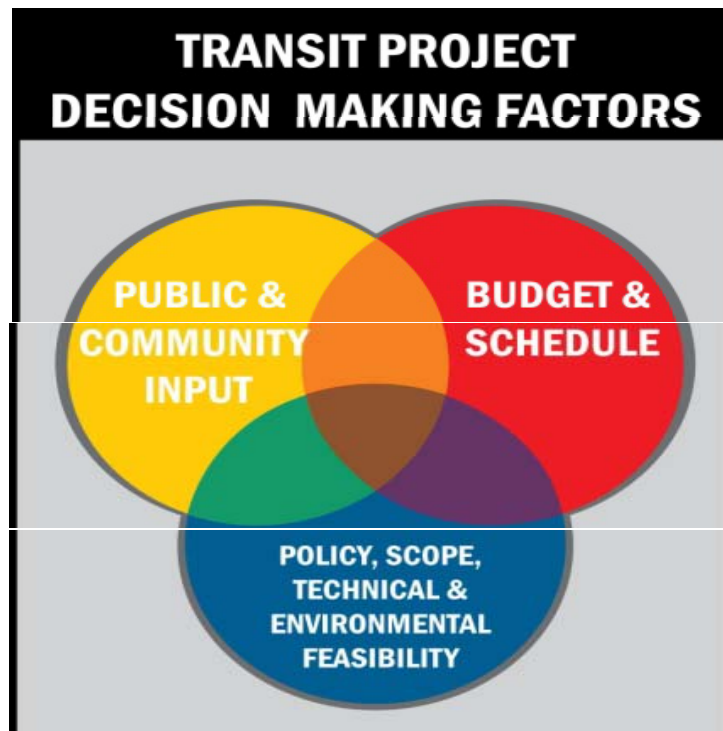
Phase 3 - Station Design Outreach

Phase 4 - Pre-construction Consultation and Outreach

Phase 5 - Construction Liaison

# Crosstown Station Design Public Consultation and Outreach

## Public Expectation Setting



# Crosstown Station Design Public Consultation – Phase 1

## Preliminary Station Design Consultation

- Location of entrances
- Location of other at-grade elements
- Properties required
- Station design Video
- Open House – technical and expert staff
- On-line consultation and social media –
- Outreach at nearby stations

# Crosstown Station Design – Phase 1 Open House



- Display Panels, 1 on 1 conversations,
- Looping PowerPoint with Voice-Over
- Tables for discussion with staff by theme (e.g. accessibility)
- Feedback forms (same questions as online consultation)



# Crosstown Station Design Public Consultation – Phase 1

## Prior to Consultation

- Chair Briefing
- Councillor Briefings
- Community Liaison visits with BIAs and heads of residence groups and other local leaders
- Metrolinx to Brief MPPs and other Provincial officials



# Crosstown Station Design

## Public Consultation and Outreach

### At Consultation

- TTC staff- community liaison , project experts, consultants
- City Planning, Real Estate, Transportation

### Post Consultation

- Continue on-line
- Consultants report

# Crosstown Station Design Public Consultation - Phase 1

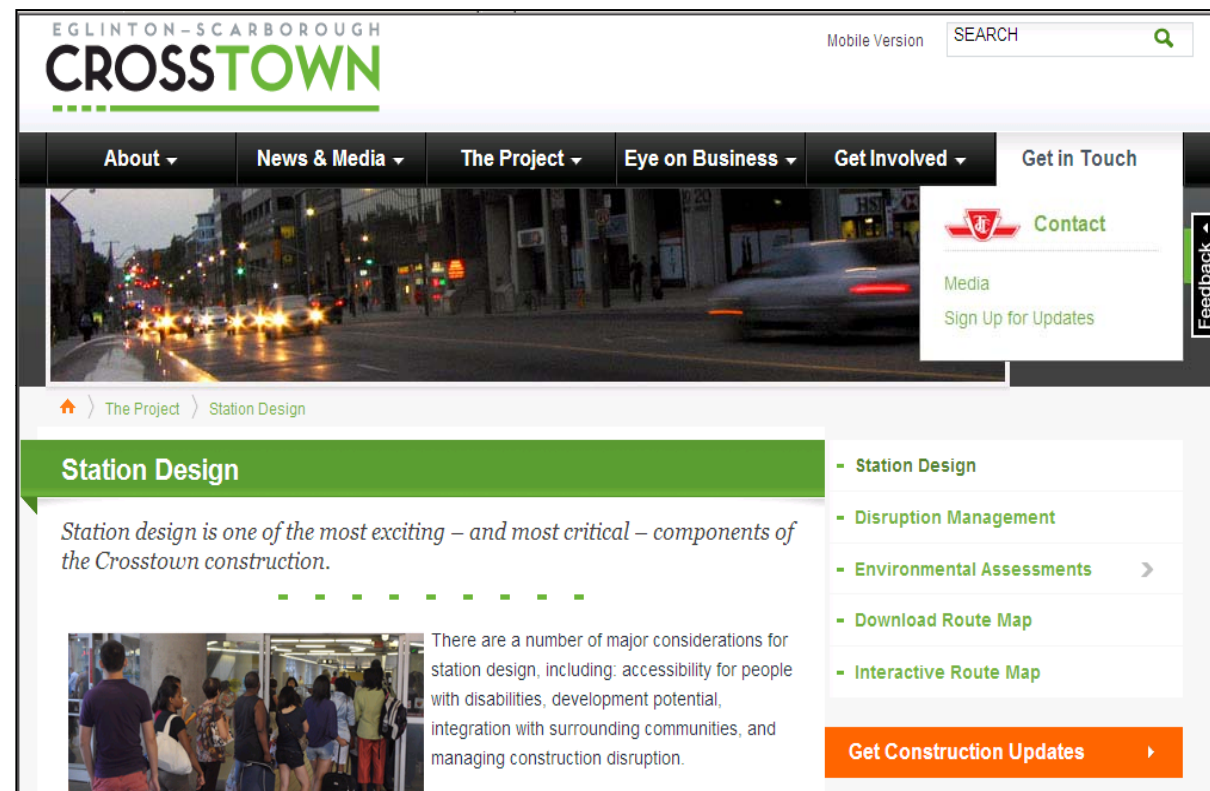
Property Acquisition can be highly controversial

- Prior to consultation
- letter indicating their property may be affected,
- Community Liaison visit affected owners
- 1 on 1 private meetings with Real Estate staff
- Additional Properties will be identified as the design proceeds

# Crosstown Station Design Online Consultation

[www.thecrosstown.ca](http://www.thecrosstown.ca)

- Reach transit users and wide audience across area



# Crosstown Station Design

## Public Consultation and Outreach

### Phase 2: Final Station Design Consultation

- 6-7 months after Preliminary
- Response to first consultation
- architectural treatments

### Phase 3: Final Station Design Outreach

- Get out to the people to make sure they know about the project and stations design

# Outreach Events



- Community Liaisons at local street festivals & TTC Stations
- Go “to the people” vs expecting them to “come to us”
- Informal, 1 on 1 discussions, kids tables
- Building goodwill locally in advance of station consultations

# Crosstown Station Design

## Public Consultation and Outreach

### Phase 4 – Pre-construction Consultation Outreach

- Before construction
- Making sure people are informed about disruption
- Consult on traffic management, parking and access
- Disruption Management
- Construction Staging
- Access

### Phase 5 – Station Construction Liaison

- 3-4 years of construction
- Helping communities and businesses through the construction

# Station Design Consultation and Outreach

## Thank you

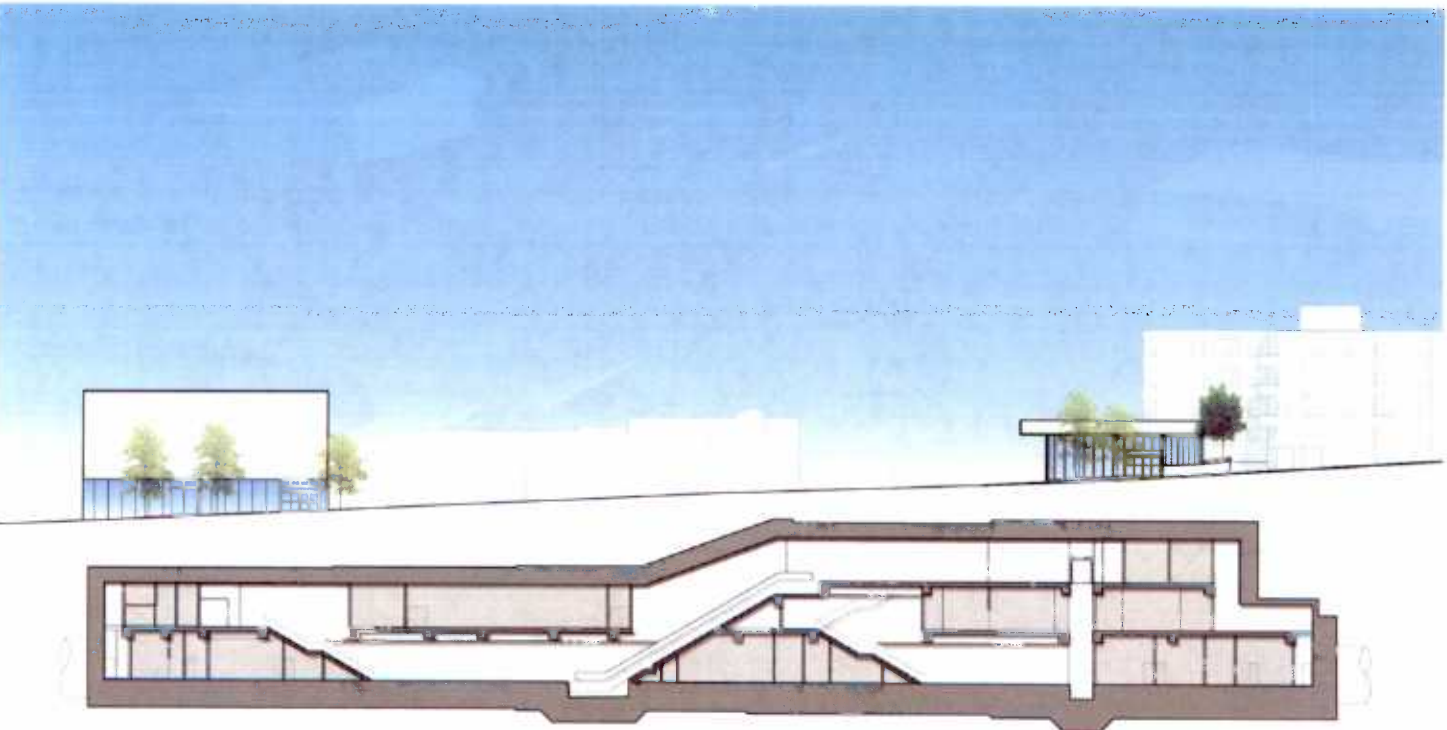
# Bathurst Station

3D Renderings/Models: Main entrance, secondary entrances, and underground levels



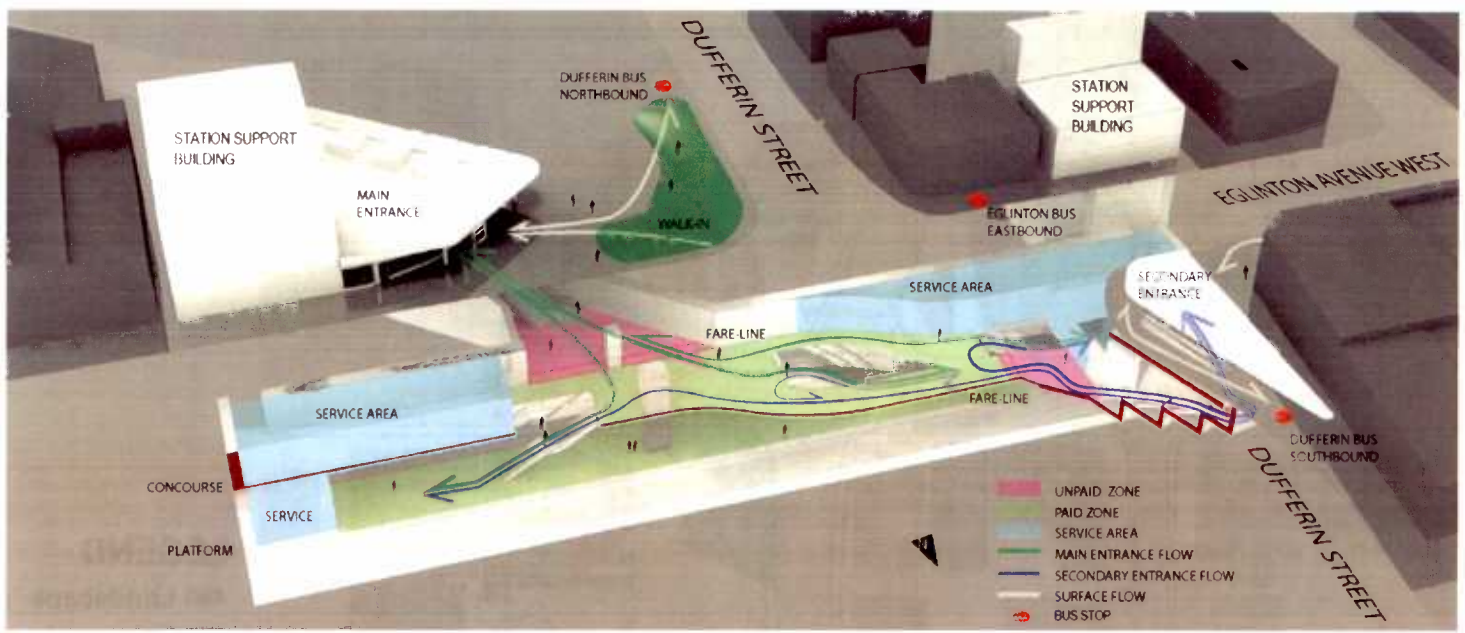
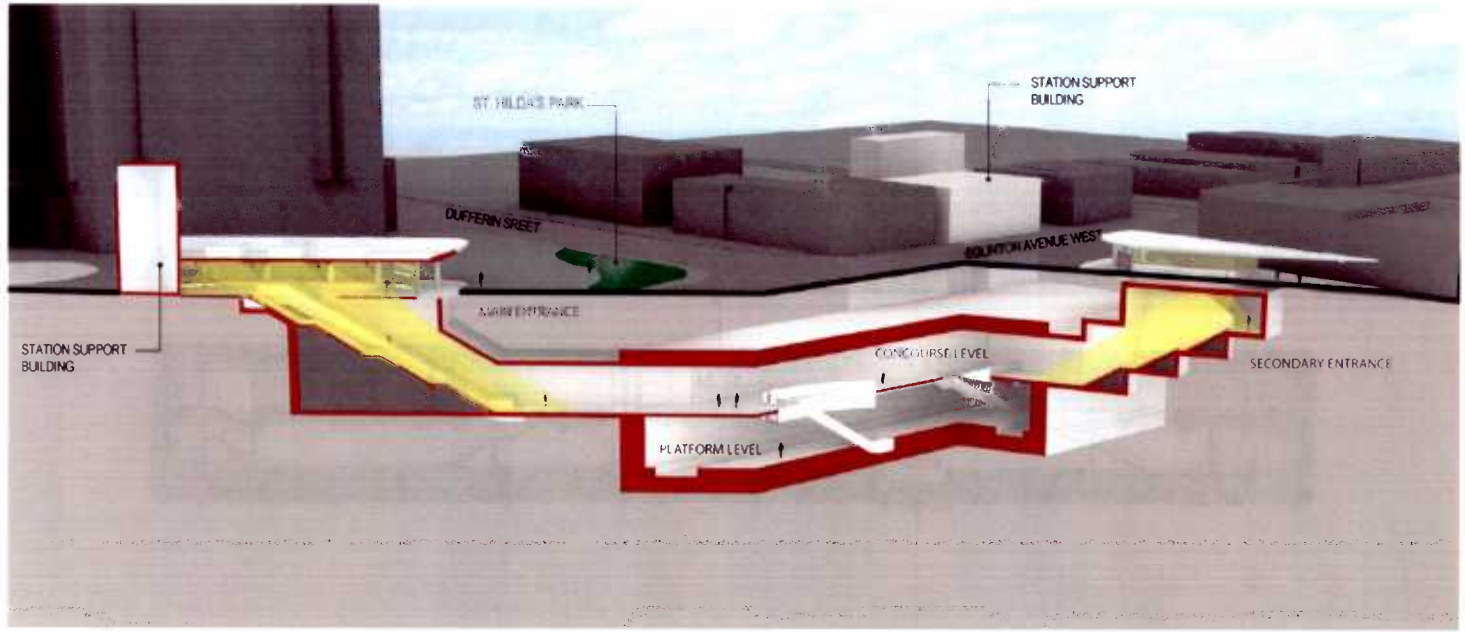


# Bathurst Station continued

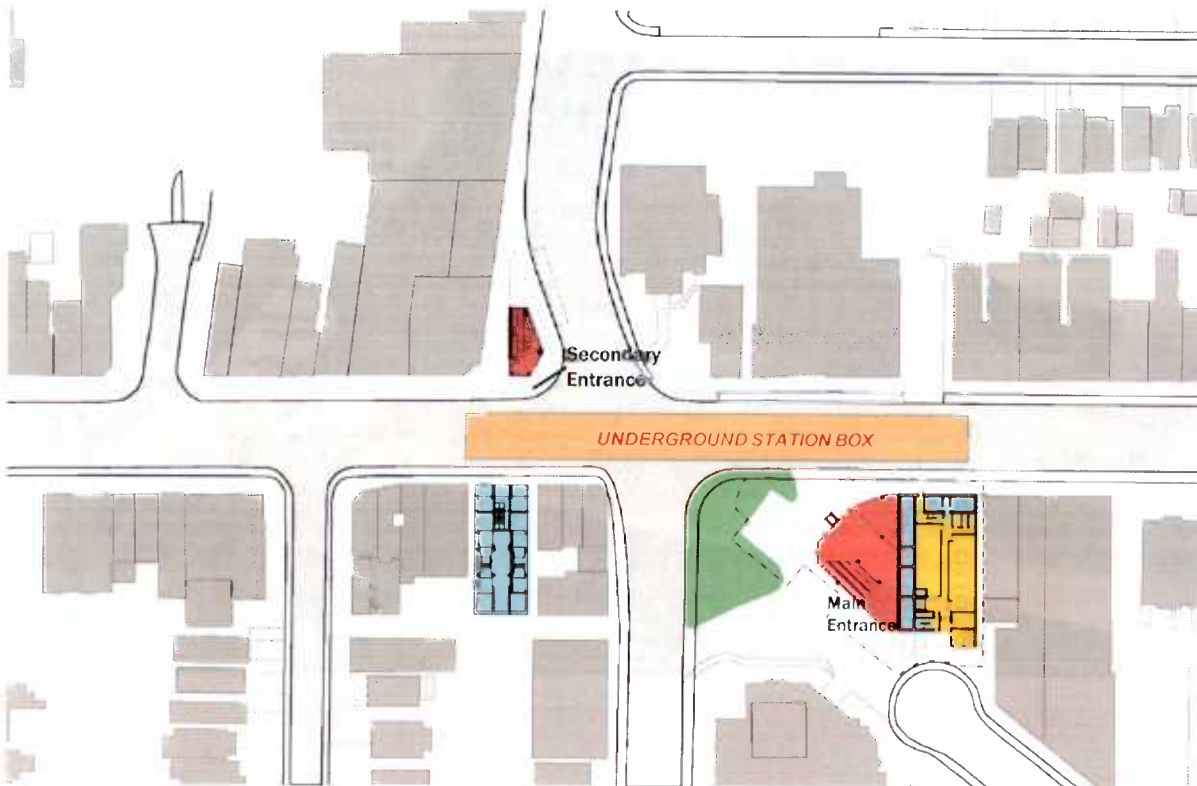
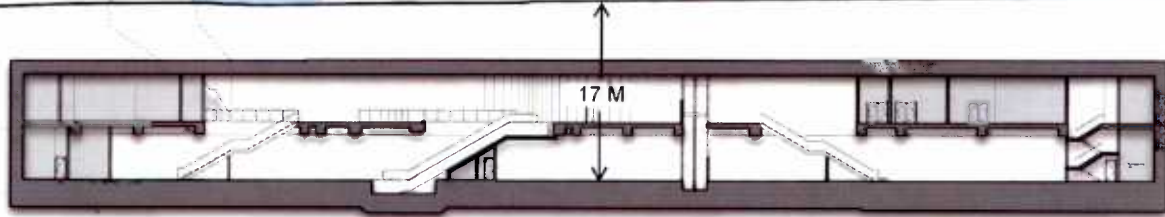


# Dufferin Station

3D Renderings/Models: Main entrance, secondary entrances, and underground levels



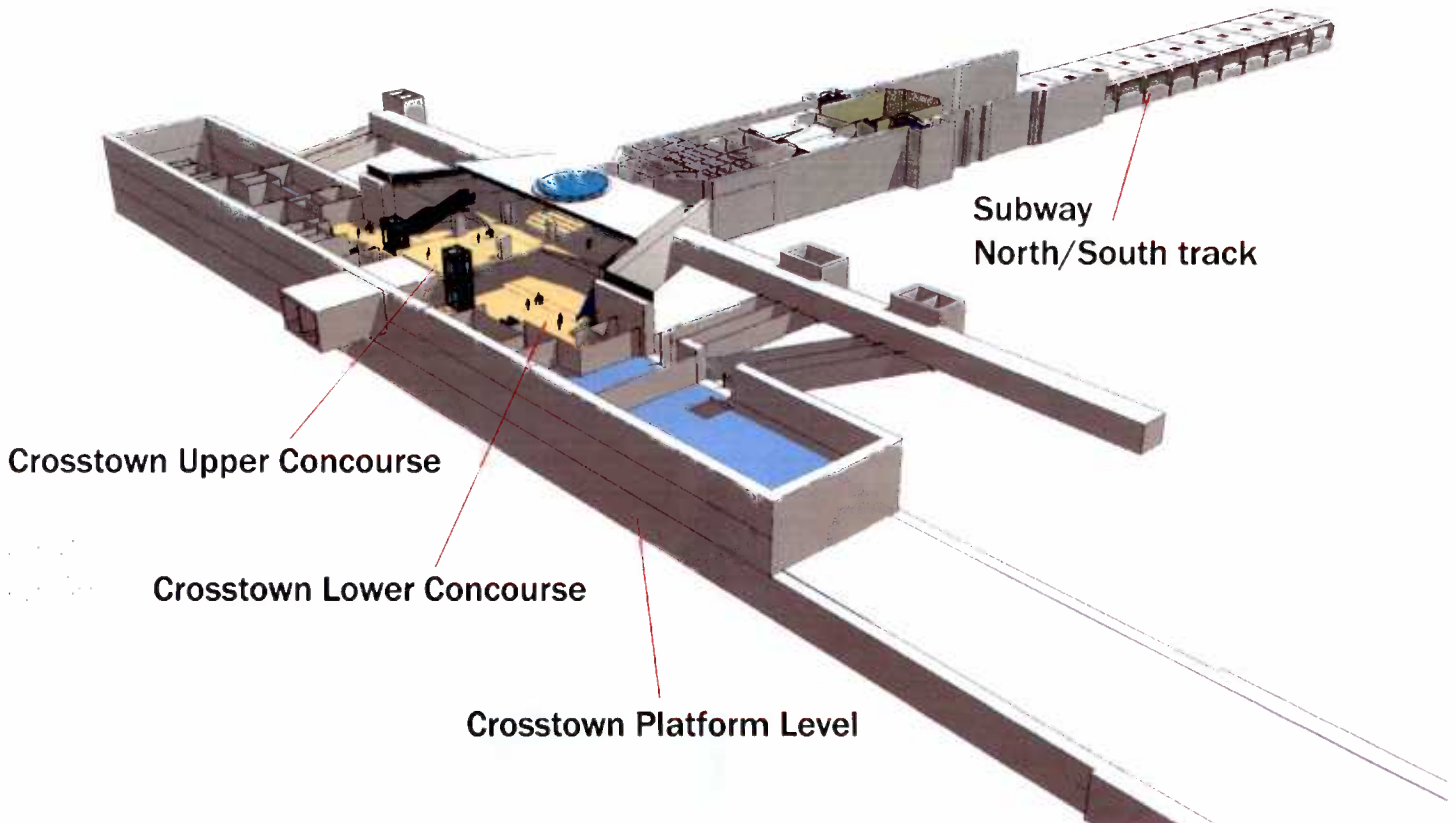
# Dufferin Station continued



- LEGEND**
- Landscape
  - Entrances
  - Service Area
  - Substation

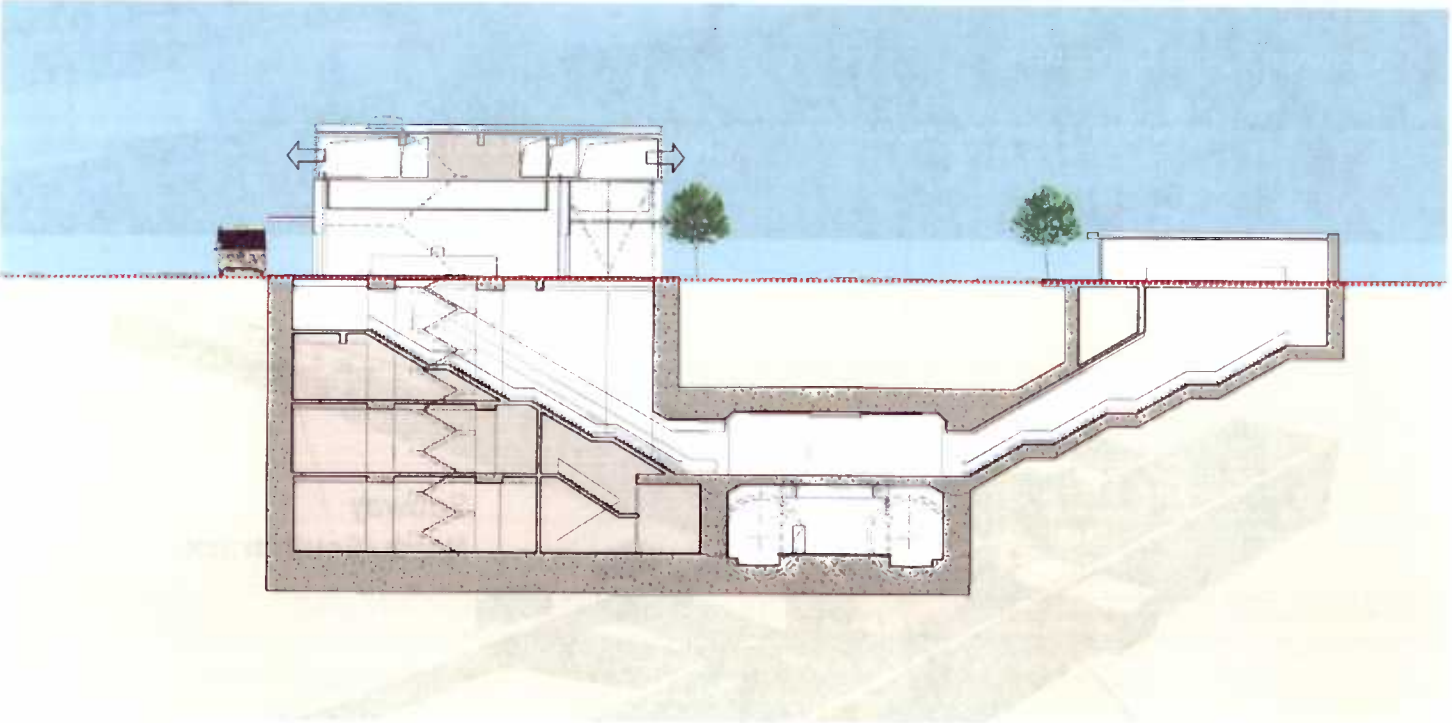
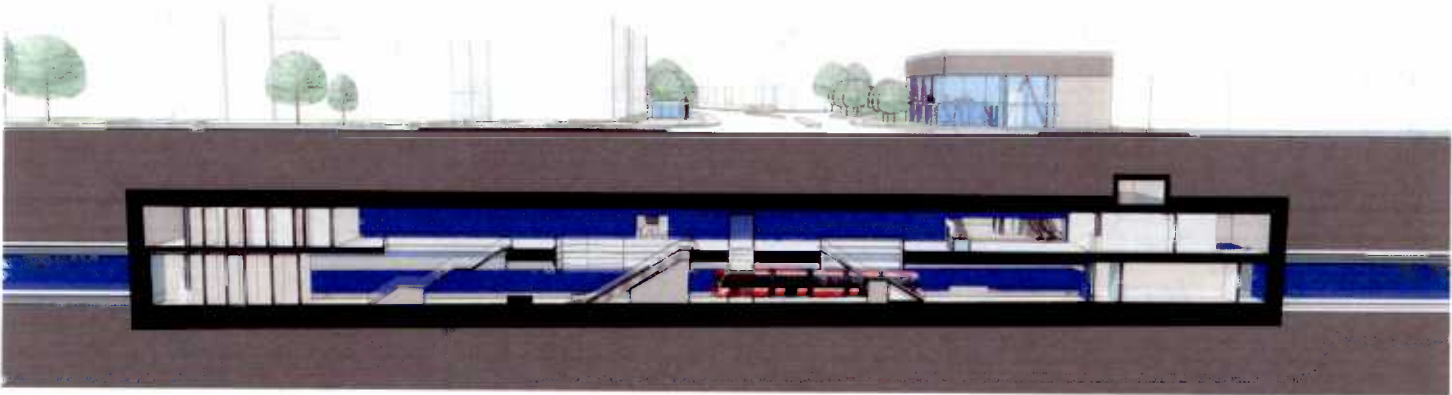
# Eglinton West Station

3D Renderings/Models: Main entrance, secondary entrances, and underground levels



# Keele Station

3D Renderings/Models: Main entrance, secondary entrances, and underground levels



Keele Station continued

