

WELCOME TO OUR OPEN HOUSE Eglinton Crosstown Light Rail Transit (LRT) Preliminary Planning for a Transit Project Assessment Study

August 14, 19, 25, 27 and September 4, 2008

Members of the Project Team are available to discuss the project with you.

Please feel free to ask questions and fill out a comment sheet.

Visit us at: www.toronto.ca/involved

PLEASE SIGN IN





PURPOSE OF THIS OPEN HOUSE

Thank you for attending our open house on the Eglinton Crosstown LRT study. The purpose of the open house is to present information about the study and to listen to your comments. During the open house we will present:

- The planning context (rationale) for LRT on Eglinton Avenue
- Background information about the Eglinton Avenue corridor
- Proposed stop and station locations and proposed construction methods
- Next steps and how to stay informed and involved

Feel free to walk about and read the panels on display. Members of our study team are available to answer any questions you may have. Simply ask any team member (one who is identified by a name badge). Or, complete a comment card at the registration table before you leave.

We look forward to hearing from you.









ABOUT THE EGLINTON CROSSTOWN LRT

The Eglinton Crosstown LRT is approximately 31 kilometres in length, from Kennedy Station in the east to the Lester B. Pearson International Airport in the west. It will provide high-quality east-west transit service across the City of Toronto.

The LRT will operate at surface in the centre of Eglinton Avenue from Martin Grove Road to Jane Street and from Leslie Street to Kennedy Road. However, between Keele Street and Leslie Street, the width of Eglinton Avenue is too narrow to accommodate two lanes of traffic in each direction and the LRT; therefore, the LRT will operate underground in this section. For the section between Jane Street and Keele Street, further study is needed to determine whether the LRT will be underground or at surface.

The LRT will provide convenient connection with the Spadina Subway, the Yonge Subway, the Bloor-Danforth Subway, Scarborough RT, and proposed Jane LRT, Don Mills LRT, and Scarborough/Malvern LRT lines. A potential connection to the proposed Mississauga Transit Bus Rapid Transit (BRT) facility will also be investigated.

"What is LRT?"

A metropolitan electric railway system characterized by its ability to operate single cars or short trains along shared or exclusive rights-of-way at ground level, underground or elevated, and to board and discharge passengers at track or car-floor level.







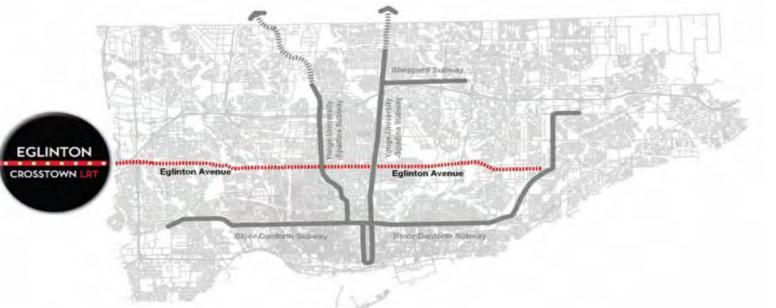


PRELIMINARY PLANNING FOR A TRANSIT PROJECT ASSESSMENT STUDY

EGLINTON CROSSTOWN LRT STUDY AREA



The Study Area for the Eglinton Crosstown LRT is a 1 km wide corridor centered on Eglinton Avenue from the Lester B. Pearson International Airport in the west to Kennedy Road in the east.







TTC PLANNING POLICIES

The project is consistent with the policies and the objectives of the Toronto Transit Commission:



Ridership Growth Strategy

In support of the City's Official Plan, the TTC prepared a strategy, that focuses on increasing service and improving the speed and reliability of the TTC, and identifies corridors for transit infrastructure investment. A key element of this strategy is transit in dedicated rights-of-way, separated from traffic.

Toronto Transit City LRT Plan ("Building a Transit City")

In 2007, the TTC developed a plan which built upon the transit concepts from previous studies, including the Ridership Growth Strategy and the City's Official Plan. The plan recommends a widely-spaced network of electric light rail lines, each on its own right-of-way throughout the City.

The LRT lines reach all across Toronto, all connecting with the City's existing and planned rapid transit routes. The intent is that no one should be disadvantaged getting around Toronto if they don't own a car.

The plan focuses on linking land use and transportation planning policies to create an effective strategy for accommodating the City's future trip growth.







TORONTO TRANSIT CITY LRT PLAN

"The Toronto Transit City LRT Plan is a bold vision for public transit. It will allow us to tackle climate change and reduce congestion while improving service in all parts of the City"

- Mayor David Miller

In June of 2007, the Province announced, "Move Ontario 2020", a plan to fund 52 transit projects in Ontario, including funding for the TTC's Transit City Light Rail Plan.

- Premier Dalton McGuinty



The plan is premised on developing a widely-spaced network of electric light-rail lines, each on its own right-of-way. The lines reach all across Toronto, all connecting with the City's existing and planned rapid transit routes.

In total, 120 km of service will be added over the entire city. By 2021, the new lines would carry 175 million riders per year.





CITY PLANNING POLICIES

The project is consistent with the policies and the objectives of the City of Toronto:



City of Toronto's Official Plan

The City's Official Plan supports continued growth in Toronto, but places greater emphasis on using available road space more efficiently to move people, rather than vehicles. <u>Transit, walking and bicycle lanes</u> in conjunction with providing a better variety and density of transit-oriented development are major cornerstones of the Official Plan.

The Official Plan's Map 4 - Higher Order Transit Corridors, and Map 5 – Surface Transit Priority

Network, identifies Eglinton Avenue as part of the future transit network.

The City's transportation network will be developed to support increased transit priority over vehicles on selected corridors, including those identified on Map 5. Transit priority measures may include: reserved or dedicated lanes for transit; and, limiting or removing on-street parking during part or all of the day (Policy -2.2 3h).

City of Toronto's Bike Plan

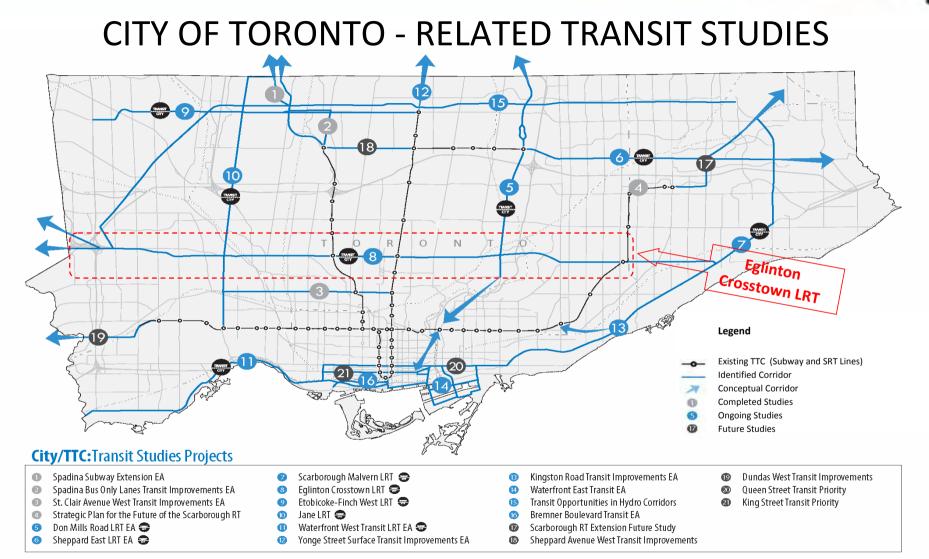
The City of Toronto's Bike Plan is a 10 year strategy that includes the implementation of infrastructure to create a bicycle friendly environment that encourages the future use of bicycles for everyday transportation and enjoyment. Bike lanes will be considered for inclusion along or adjacent to the entire route. In many instances, bicycle routes currently exist parallel to Eglinton Avenue, and could potentially serve as the bicycle path along the corridor.













PROVINCIAL PLANNING POLICIES

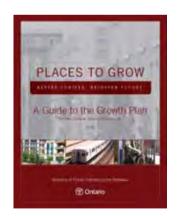
The project is consistent with the policies and the objectives of the Province of Ontario:



Provincial Policy Statement

- Transportation, transit and infrastructure facilities are to be planned to meet current and projected needs, providing for an efficient, cost-efficient, reliable multi-modal transportation system that supports long-term economic prosperity.
- Public transit and other alternative modes of transportation are to be supported to improve energy efficiency and air quality.

Policies – 1.6.6.1, 1.7.1 d), and 1.8.1 b)



Growth Plan for the Greater Golden Horseshoe

- Public transit will be the first priority for transportation and major transportation investments.
- Major transit station areas and intensification corridors will be designated in official plans.
- Major transit station area and intensification corridors will be planned to ensure the viability of existing and planned transit service levels.
- Major transit stations will be planned and design to provide access from various transportation modes including pedestrians, bicycles and passenger drop-off.

Policies - 2.2.5, 3.2.3

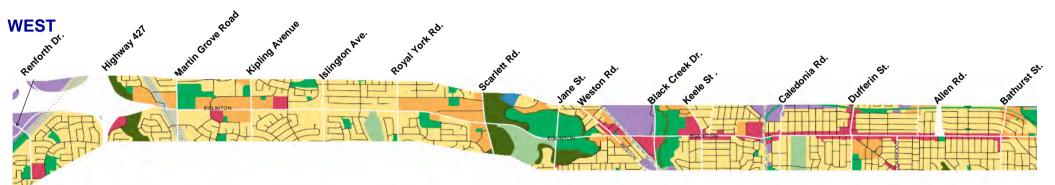






PRELIMINARY PLANNING FOR A TRANSIT PROJECT ASSESSMENT STUDY

OFFICIAL PLAN LAND USE



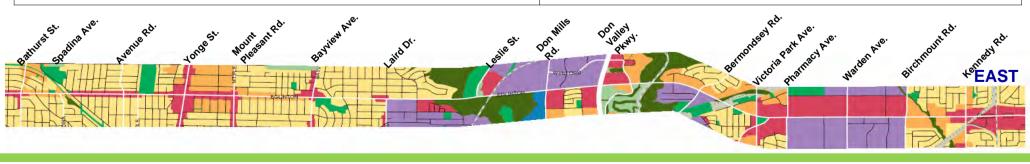
The Official Plan for the City of Toronto identifies land uses throughout the city. This map presents the land use plan within the Eglinton Crosstown LRT Study Area. Within the Study Area are:

- 2 golf courses
- 41 parks and parkettes
- 29 elementary schools
- 11 high schools
- 2 colleges
- 3 private schools

- 9 libraries
- 3 medical institutions
- 8 community recreation centres
- 52 places of worship
- 2 heritage designated properties

Neighbourhoods Natural Areas Institutional Areas Apartment Neighbourhoods Parks Regeneration Areas Mixed Use Areas Other Open Space Areas (Including Golf Courses, Cemeteries, Public Utilities) Employment Areas Utility Corridors Utility Corridors

LAND USE DESIGNATIONS





EXISTING TRANSIT ROUTES

Seneca College 52 52 Yorkdale Campus Toronto Pearson Wright AM Rust BING The Westway The Ave. International 112C Royal York Trethewey PM Rush Airport International ongbourne 405 45+ 520 Plaza Tycos Dr Gulliver Dr Ingram Islington West Parl Rd. 111 Clement Wingold Av Rd A,C Renault Cr. **Health** Care 73B 405 Richview Richarove Scarle Dr Centre La Rose Ave. Widdicombe Square Dr 73B) Hill Blvd. to. Humber River Regional Hosp Emmet 5 AR 32C AB 141 71B Lloyd Manor **Keele Site** Ave Plaza West Eglinton C Rd York York or Civic 8 Centre X Blvd. argaret XJork Lambton Enngate Dr Rapid Transit pinic 161 or state live living The Party of Street of Str **Existing Transit Routes – East Service Area** Sector second in a a William Lines York Universit Surface Routes Glendon Coll Glencaim Ave Glencairn Suncrest Dr. 11C 124+ 100 Sunnybruck Park Sumpybrook Health Sciences Centre Conge-Editator Centre Þ P Eglinton Ave. East glinto Vandemool West Ontario East Science . Contro Epenton Square Beltize B1 88 A F AS MOOT

11











EXISTING TRANSIT ROUTES

A number of bus routes provide service to the Eglinton Avenue Corridor today. Three routes directly serve all or portions of Eglinton Avenue west of the Yonge Subway, and five routes directly serve all or portions of the Avenue east of the Yonge Subway. Thirty-four routes feed the Eglinton Avenue Corridor. Below are ridership statistics for each route.

Routes On Eglinton Avenue

Eglinton West Corridor			
Route Name	No. of Customers on Typical Weekday		
32 Eglinton West (all branches)	41,500		
61 Avenue Rd. North	3,200		
5 Avenue Rd (both branches)	1,800		
Total West All Day Ridership	46,500		

Eglinton East Corridor	
Route Name	No. of Customers on Typical Weekday
54 Lawrence East (all branches)	33,900
34 Eglinton East (both branches)	26,300
100 Flemingdon Park (all branches)	15,500
56 Leaside (both branches)	3,500
51 Leslie	3,400
Total East All Day Ridership	82,600

Routes That Intersect Eglinton Avenue

East Corridor		West Corridor	
Route	No. of Customers on Typical Weekday	Route	No. of Customers on Typical Weekday
25 Don Mills	41,823	29 Dufferin	43,648
24 Victoria Park	22,718	35 Jane	40,731
7 Bathurst	21,427	41 Keele	22,765
68 Warden	16,442	45 Kipling	18,461
43 Kennedy	14,624	63 Ossington	16,938
17 Birchmount	10,137	37 Islington	16,241
70 O'Connor	7,960	47 Lansdowne	14,076
11 Bayview	7,808	89 Weston	12,987
91 Woodbine	4,949	73 Royal York	8,850
67 Pharmacy	4,537	46 Martin Grove	8,609
113 Danforth Rd.	4,183	112 West Mall	7,663
97 Yonge	3,606	191 Hwy. 27 Rocket	7,530
14 Glencairn	1,764	79 Scarlett Rd.	7,382
103 Mt. Pleasant North	1,381	Vaughan	6,190
74 Mt. Pleasant	866	East Mall	6,057
144 Don Valley Exp.	573	Ranee	3,815
142 Avenue Rd. Expr.	168	Runnymede	2,547
Total All Day Ridership Crossing East Corridor	164,966	Total All Day Ridership Crossing West Corridor	244,490





WHY LRT?

AN EVALUATION OF ALTERNATIVE TRANSIT TECHNOLOGIES

Three alternative transit technologies are potential candidates for providing improved transit service along Eglinton Avenue: Subway/SRT; LRT; and, Bus Rapid Transit (BRT). This panel provides a brief explanation and general description of each technology. The following panel shows the application of each technology related to the number of passengers carried, with a brief explanation as to why LRT is preferred.

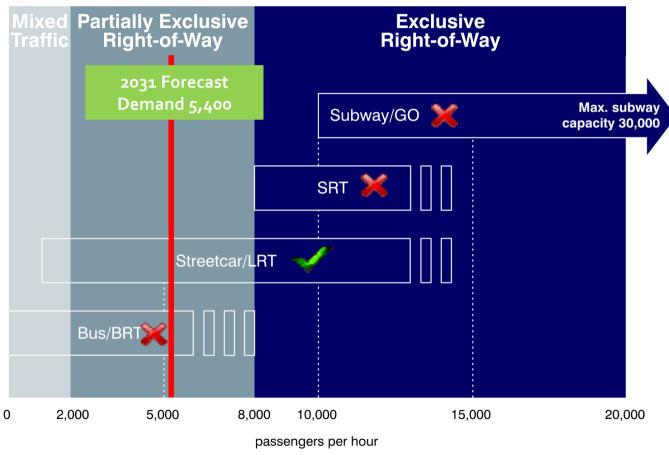
Alternative Technologies	Highlights of Alternative Technologies	
Subway / Rapid Transit Technology (SRT)	•Electric powered rail vehicles •Fully exclusive right-of-way •No influence from other traffic •Carries very high volumes of people	
Light Rail Transit (LRT)	•Electric powered rail vehicles •Partially exclusive right-of-way (dedicated lanes) •Traffic crossings at signalized intersections •Carries medium to high volumes of people	
Bus Rapid Transit (BRT)	 Diesel or hybrid powered buses Partially exclusive right-of-way (dedicated lanes) Traffic crossings at signalized intersections Carries medium volumes of people 	





SCREENING OF ALTERNATIVE TRANSIT TECHNOLOGIES

Transit Rights-of-Way and Technologies



The ridership forecast for the year 2031 at the location with the highest demand in this corridor is 5,400 passengers per hour in one direction.

The forecast travel demand falls below the minimum 10,000 people per hour required to support the massive capital investment of a subway. It also falls below the minimum 8,000 people per hour required to support the capital investment of a SRT.

The forecast travel demand falls within the upper range for Bus/BRT; however, this technology has limited ability to serve any potential ridership increase in the corridor above the forecast.

As such Bus/BRT, SRT and Subway/GO were not carried forward as transit technologies.



PRELIMINARY PLANNING FOR A TRANSIT PROJECT ASSESSMENT STUDY

RECOMMENDATION

TYPICAL MODERN LRT VEHICLES



AMSTERDAM, NETHERLANDS



STOCKHOLM, SWEDEN

The TTC recently released a Request for Proposals for the design and supply of a new Light Rail Vehicle for Toronto.

The LRT vehicles used on Eglinton Crosstown Corridor will be:

- Larger capacity about twice as long as standard streetcars in Toronto
- Fully accessible low-floor vehicles with level loading from on-street platforms
- Have loading on all doors significantly reduces the time spent serving stops
- Have operator cabs at both ends
- the vehicle can operate in either direction and not require a loop to turn around
- Have a modern "Europeanstyle" design - some examples are shown



MONTPELIER, FRANCE



STRASBOURG, FRANCE







CHARACTERISTICS OF LRT TECHNOLOGY

Light Rail Transit (LRT)		
Comfort:	Quiet ride	
Air Quality:	No emissions on the street	
Capacity:	The new Light Rail Vehicles that will be designed for the TTC will comfortably carry an average of 130 people. A peak point demand of 5,400 people per hour would require a vehicle every 1 minute, 30 seconds. This frequency would likely be difficult to operate and avoid vehicle 'bunching'. Therefore, when approaching this demand, the Light Rail Vehicles would be 'coupled' together and operated in trains so that the time between vehicles is every 3-4 minutes, which makes for a more manageable operation.	
Land Use:	Preferred with respect to helping to create transit-oriented development in the corridor.	

A recent study by the Region of Waterloo concluded:

"Rail transit ... is recognized to be a planning tool that can support and encourage the development of more sustainable land use patterns LRT, like subways, has been shown to influence land development in part because, being tied to tracks it is both distinct and perceived to be permanent".







STATION AND STOP LOCATIONS

Access to the Eglinton Crosstown LRT will be by means of stops located at key intersections on the surface sections of the corridor (similar to the stops on the Spadina Streetcar line, for example) and at stations located in the underground section of the corridor (similar to an existing subway station).

LRT stations and stop locations are selected based on the right balance between good local access and speed of the service. Closely spaced stops provide excellent local access, but speed of the service will suffer if stops are spaced too closely. Higher speeds are desirable for longer distance travel, but access to specific locations between stations and stops becomes less convenient. Examples of average stop spacing versus route speed on selected existing TTC services include:

Example	Stop Spacing	Route Speed
510 Spadina Streetcar	280 metres	14 kph
34 Eglinton East Bus Route	299 metres	16 kph
32 Eglinton West Bus Route	317 metres	18 kph
Bloor-Danforth Subway	875 metres	32 kph







STATION AND STOP LOCATIONS

For the Eglinton Crosstown LRT, station and stop locations will be located where current TTC services (buses and subways) intersect Eglinton Avenue in order to provide convenient passenger connections between those services and the LRT. Additional considerations include access to existing neighbourhoods and commercial areas, as well as access to future developments. The results of the station and stop location process are depicted on the following panels.

On average, the surface stops are located about 500-600 metres apart. This average distance is a good compromise between the desire to provide higher travel speeds and maintain access to business and residences on Eglinton Avenue.

While the distance between underground stations is longer than the distance between surface stops, the resulting longer walk is an acceptable compromise between access, increased reliability, and cost.





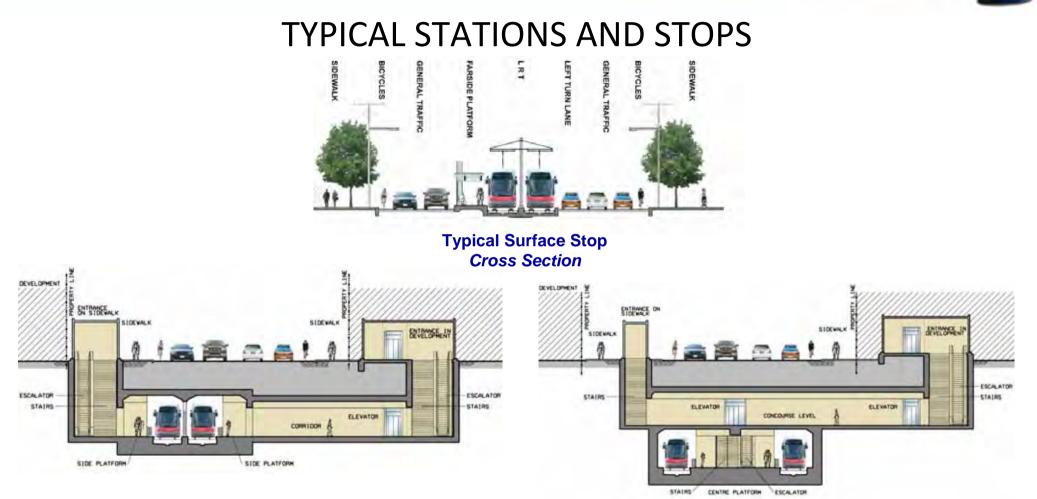








PRELIMINARY PLANNING FOR A TRANSIT PROJECT ASSESSMENT STUDY



Typical Underground Shallow Station Cross Section

TCG

Transit City Group

Typical Underground Deep Station Cross Section

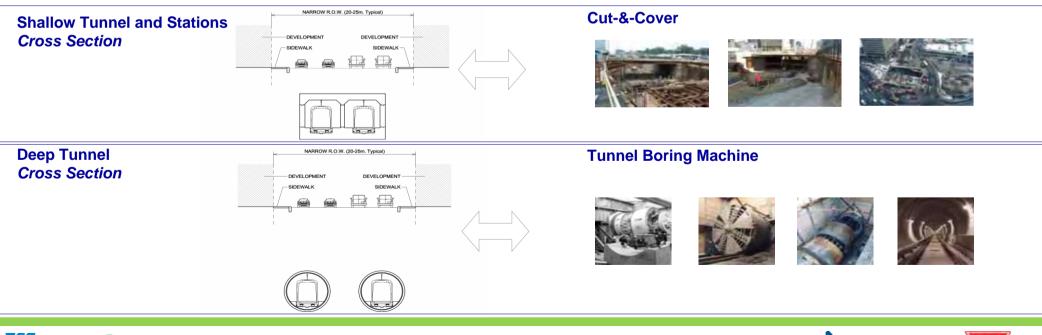




POTENTIAL CONSTRUCTION METHODS FOR UNDERGROUND SECTION

An underground alignment has been proposed from Keele Street to Leslie Street, primarily due to right-of-way width constraints. This segment has a 20-25 m right-of-way which would not permit development of an LRT at surface while maintaining two lanes of traffic in each direction.

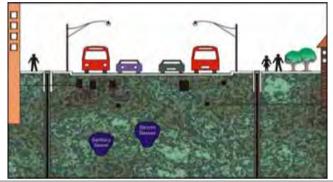
A deep tunnel alignment is being considered for most of the underground segment. A shallow tunnel alignment is also being considered in select locations and at stations. A deep tunnel would be constructed using a tunnel boring machine (TBM). Most of the TBM construction activities will occur underground with minimal disruption on the surface. A shallow tunnel and stations would be constructed by the cut-and-cover method involving open excavation at ground level.



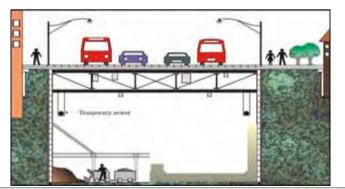


CUT AND COVER CONSTRUCTION

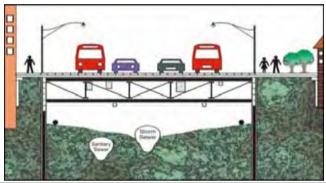
The following graphics depict the general sequence of events during the process of building an underground transit facility using the cut and cover construction technique.



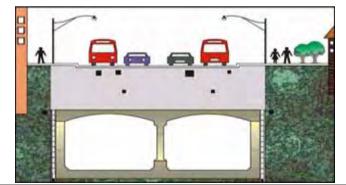
Step 1. Underground utilities are located to determine which are in conflict with the proposed project. Sheet piling is installed at this time to shore the excavation site. Half of the street is excavated to begin work on creating the tunnel. Utilities that are in conflict are either relocated or temporarily suspended. Once half of the street has been excavated to the desired depth, the process is then conducted on the other half of the street.



Step 3. The excavation and new construction are completed under the decking. Surface activities continue to operate on the decking.



Step 2. As soon as sufficient excavation has been made, decking, either of wood or steel, is installed so surface activities such as roads can be temporarily reinstalled. Utilities that were not relocated are suspended from the decking.

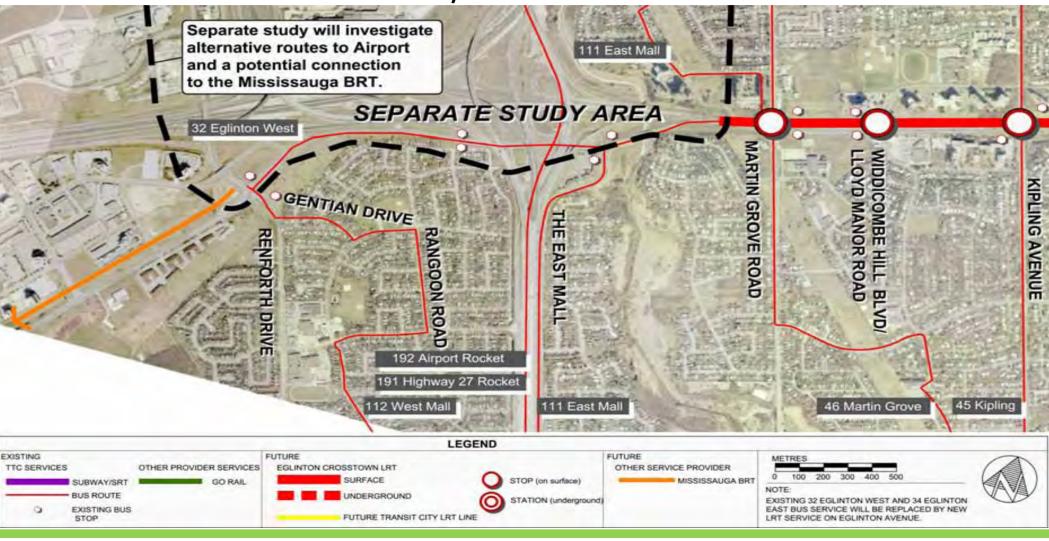


Step 4. The tunnel box is constructed, and the area above the tunnel is backfilled. When the finished construction is close to the surface, the temporary decking is removed and all surface amenities (e.g. roads and sidewalks) are reinstated.



PRELIMINARY PLANNING FOR A TRANSIT PROJECT ASSESSMENT STUDY

STATION / STOP LOCATIONS 1 of 7 Airport Area to Kipling Ave

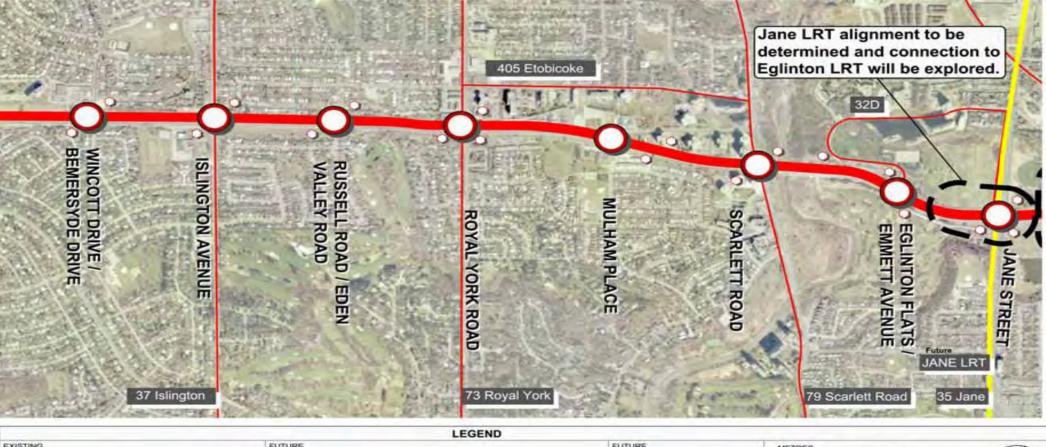






PRELIMINARY PLANNING FOR A TRANSIT PROJECT ASSESSMENT STUDY

STATION / STOP LOCATIONS ^{2 of 7} Wincott Dr/Bemersyde Dr to Jane St

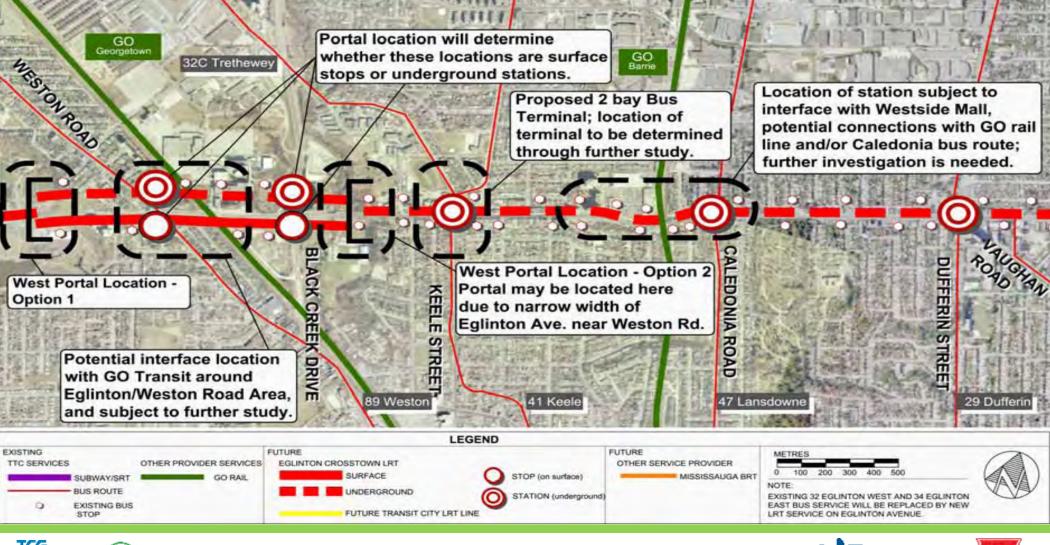






PRELIMINARY PLANNING FOR A TRANSIT PROJECT ASSESSMENT STUDY

STATION / STOP LOCATIONS 3 of 7 Weston Rd to Dufferin St





PRELIMINARY PLANNING FOR A TRANSIT PROJECT ASSESSMENT STUDY

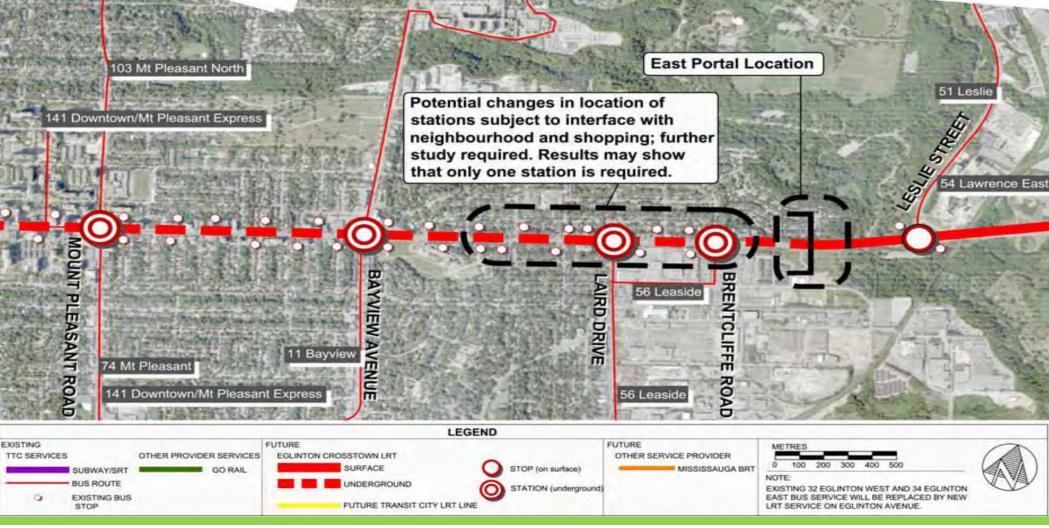
STATION / STOP LOCATIONS 4 of 7 Oakwood Ave to Yonge St





PRELIMINARY PLANNING FOR A TRANSIT PROJECT ASSESSMENT STUDY

STATION / STOP LOCATIONS 5 of 7 Mt Pleasant Rd to Leslie St







PRELIMINARY PLANNING FOR A TRANSIT PROJECT ASSESSMENT STUDY

STATION / STOP LOCATIONS 6 of 7 Don Mills Rd to Pharmacy Ave





PRELIMINARY PLANNING FOR A TRANSIT PROJECT ASSESSMENT STUDY

STATION / STOP LOCATIONS 7 of 7 Lebovic Ave to Kennedy Station





NEXT STEPS

This Open House is one of three open houses planned for the Eglinton Crosstown LRT. In the next few

months we plan to:

•Review and respond to input received during the first round of consultation

•Evaluate underground options, preliminary construction methods and portal locations. Factors to be considered include cost, constructability, and potential effects on the community

•Confirm or refine station/stop locations and identify bus terminal locations

•Commence preparation of design concepts of typical LRT station and stop design and identify locations of potential turning restrictions (surface sections only)

- •Determine interfaces with existing subway and proposed Transit City LRT lines
- Assess impacts and identify mitigation measures

•Identify preferred route between Martin Grove Road and Lester B. Pearson International Airport

Information resulting from this work will be presented at Open House #2. Please watch for notices of Open House #2 throughout the coming months.

Stay informed and involved.

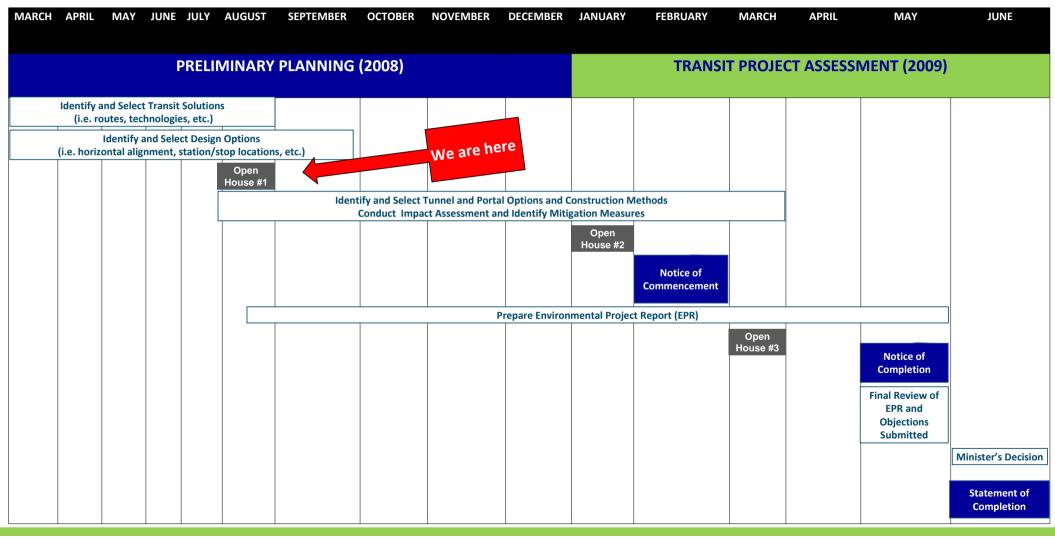






PRELIMINARY PLANNING FOR A TRANSIT PROJECT ASSESSMENT STUDY

STUDY SCHEDULE AND TRANSIT PROJECT ASSESSMENT PROCESS









FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY ACT REQUIREMENTS

Comments and information regarding this study are being collected to meet the requirements of the *Environmental Assessment (EA) Act*. This material will be maintained on file for use during the study and may be included in project documentation.

Information collected will be used in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

You are encouraged to contact the TTC if you have any questions or concerns regarding the above information.







CONTACT INFORMATION

There are five ways to submit your comments:

- **1.Please hand in your comment form before you leave**
- 2.E-mail: eglintontransit@toronto.ca
- 3.Phone: 416-392-6900 (24/7 Comment Line)
 - TTY: 416-397-0831
- 4.Fax: 416-392-2974

5.By Mail:

Eglinton Crosstown LRT Public Consultation Metro Hall, 19th Floor 55 John Street, Toronto, Ontario, M5V 3C6

Comments would be appreciated by September 10, 2008.

Thank you for your participation.



