

Frequently Asked Questions Eglinton Crosstown Light Rail Transit (LRT)

General

Q1) What key benefits will this project bring to the City and local residents in particular? How does the project fulfill Official Plan objectives?

By operating public transit in its own, dedicated lane, the Eglinton LRT can provide a fast, reliable ride for customers that is unaffected by private vehicle traffic. This will improve the TTC service currently operating in the Eglinton corridor and make transit a more attractive alternative to the private auto. We are taking a major step towards 'Building a Transit City'. Toronto's Official Plan is premised on such an approach to making transit a more attractive travel option as the City grows.

This 31-kilometre long corridor will provide LRT service across Eglinton Avenue from Kennedy Station to Martin Grove Road and potentially as far as Lester B. Pearson International Airport. The light rail line will connect with Kennedy Station on the Bloor-Danforth Subway Line, Eglinton Station on the Yonge Subway Line and Eglinton West Station on the Spadina Subway Line. As well, the line will also connect with the future Jane, Don Mills and Scarborough-Malvern light rail corridors.

Q2) What is the purpose of the project?

TTC and the City of Toronto want to identify the best way to provide high quality transit service across Eglinton Avenue and to the Airport, in a manner which:

- i) is affordable
- ii) makes transit a much more attractive travel option relative to the private auto
- iii) supports the City's growth objectives of a better variety and density of transit-oriented developments

It is recommended that new, modern, electrically powered light rail vehicles be operated in dedicated lanes, with the only 'interference' from other traffic limited to crossings at intersections.

Q3) What is the projected ridership of the route?

By 2021, forecast ridership for the Eglinton Crosstown LRT is 53 million riders a year. Recent forecasts (premised on expected development levels to 2031) suggest ridership of 5,000 to 5,400 people per hour in a single direction at the busiest point on the line.

Technology

Q4) What is LRT?

There are two basic criteria that are generally required for a facility to be called "LRT" (Light Rail Transit): electrically powered rail vehicles with power supplied from overhead wires – which allows them to operate on a city street – and operation of these vehicles in a dedicated right-of-way. The vehicles can be operated individually, or combined into 'trains'. The reserved right-of-way can take many forms – from dedicated lanes in the middle of the street, to underground tunnels, or hydro and abandoned railway corridors.

In addition to the above, all-door loading (not just front doors) with automatic fare collection is characteristic of modern LRT lines in North America and there is normally a much greater distance between stops, relative to a typical bus route.

Q5) Why is LRT preferred over a subway extension?

The design of a transit service is based on the number of people it is expected to carry per hour in a single direction at the “peak point” – the busiest spot on the line. City planning forecasts for the **Eglinton Crosstown** corridor into the foreseeable future show a peak point demand in the order of 5,000 to 5,400 people per hour. This demand can easily be accommodated by LRT, particularly given that the new light rail vehicles being designed for the TTC will be about twice the size of a standard Toronto streetcar, and can be easily ‘coupled’ to operate as two-car or three-car trains, if single vehicle operation is too frequent to avoid vehicle bunching. A peak point demand of 5,000 to 5,400 per hour is well below the 10,000 passengers per hour generally required to justify the much higher cost of a subway.

Q6) Why is LRT preferred over buses?

LRT is more comfortable for riders, quieter, has no emissions on the street, and is far superior in carrying capacity in a constrained environment such as an arterial roadway. Buses in dedicated lanes, sometimes called BRT, or bus rapid transit, could not easily accommodate 5,000 to 5,400 people – the peak hour demand projected in the corridor – unless the bus ROW included by-pass lanes at intersections/stations to allow some buses to operate “express” and pass “local buses” stopped to serve customers.

To illustrate the problem, the forecasted demand would require as many as 72 buses per hour (one 18-metre long “articulated” bus about every 50 seconds. Even with dedicated lanes, buses operating this close together would catch up to one another and ‘bunching’ would result if some of them don’t operate express. Given that there are a variety of important objectives for the study corridor in addition to high quality transit – such as a comfortable walking environment, attractive streetscaping, bike lanes, etc. – there is insufficient width available to allow the construction of a by-pass lane to be added to the transit right of way.

Q7) What sections of the LRT line will at surface level (i.e. on the road)?

The LRT will operate at surface in the centre of the road between: (1) Martin Grove Road and Jane Street and (2) Leslie Street and Kennedy Road.

For the section between Jane Street and Keele Street, further study is required to determine whether the LRT will be underground or at surface.

For the sections of the LRT which operate at the surface, stops will be located about 500 to 600 metres apart. This average distance is a good compromise between the desire to provide higher travel speeds and maintain access to businesses and residences on Eglinton Avenue.

Q8) Why is the central section of the LRT line located underground, below Eglinton Avenue, instead of at surface?

In the area of the proposed underground section between Keele Street and Leslie Street, the width of Eglinton Avenue is between 20 and 25 metres wide. This width is not sufficient to accommodate

the LRT line and maintain two lanes of traffic in each direction. Therefore, the LRT line will be underground over this 13 kilometre section of Eglinton Avenue.

In the underground section, stations will be located about 850 metres apart, typically at intersections where existing north-south bus routes or the Yonge and Spadina Subway lines cross Eglinton Avenue. This station spacing is similar to the central sections of the existing Bloor-Danforth and Yonge-University-Spadina subway lines where passengers accept a longer walk to reach the frequent, reliable service and weather-protected waiting area provided by the underground operation.

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

Q9) Why will the sections of the LRT at surface run in the middle of the street?

In designing dedicated transit lanes, any crossings by other traffic must have a traffic signal to ensure everyone knows who has the right-of-way. In the study corridor, or on any roadway where there are very frequent un-signalized intersections and driveways, a side of the road option is not feasible because of the safety issue and need for signalization at each location.

Q10) What is the difference between a stop and a station?

Along the surface sections of the line, passengers will board the vehicles at stops. Stops are platforms located in the centre of the road at signalized intersections.

For the underground section of the line, passengers will board the vehicles at stations. Stations are underground platforms where the LRT vehicles stop to drop off and pick up passengers. Passengers will access the platforms from the surface by elevators, stairs and escalators.

Important Connections

Q11) Where will the Eglinton Crosstown LRT connect to the larger transit network (subway lines, Scarborough RT, future LRT)?

The Eglinton Crosstown LRT will have a connection to the Spadina Subway at Eglinton West Station, the Yonge Subway at Eglinton Station, and the Bloor-Danforth Subway/Scarborough RT at Kennedy Station. It will also connect to the future Jane, Don Mills, and Scarborough-Malvern light rail corridors .

Q12) How will the connection to Pearson International Airport be made?

A special study is currently underway to determine the preferred route between Martin Grove Road and the Airport. Results of this special study will be presented at public open houses to be held at the end of 2008.

Q13) How will a connection be made at the Eglinton West, Eglinton and Kennedy subway stations?

It is essential that convenient and high quality connections be provided between the LRT line where it meets existing subway stations. Studies are currently underway to review and evaluate alternatives. Exact details are not available at this time.

Bike Lanes

Q14) Will there be bike lanes on any portion of the Eglinton Crosstown LRT route?

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.

Traffic and Other

Q15) Will any lanes of traffic be removed on any streets to accommodate the LRT?

The standard Transit City street cross section proposes two traffic lanes in each direction plus the dedicated transit lanes. Left turn lanes will be provided at major intersections.

The sections of Eglinton Avenue where the LRT will operate at surface (Martin Grove to Jane and Leslie to Kennedy Station) has enough space within the existing road allowance to maintain two lanes of traffic in each direction plus the dedicated transit lanes for LRT in the centre of the road.

Q16) Will there be left-turn restrictions on any streets to accommodate the LRT?

For the sections of the Eglinton Crosstown LRT that will be on the surface, left turns will only be permitted where there is an existing traffic signal. Between traffic signals, where the LRT travels across un-signalized intersections or driveways, left turns will be prohibited. However, there will be separate left turn lanes provided at all signalized intersections and motorists will be able to make U-turns from these lanes. For example, a motorist on Eglinton Avenue who now makes a left turn into a mid-block driveway could, with the LRT in place, simply go past the driveway, to the next signalized intersection, and make a simple "U" turn to return to his/her destination. The locations of these U-turn opportunities will be identified in the next stage of the study.

For the underground sections of the LRT (from Keele to Leslie), there will be no new left turn restrictions.

Q17) Will traffic entering or exiting Highway 427 or the Don Valley Parkway be affected in any way by the LRT? How will the LRT cross Highway 427 and the Don Valley Parkway?

The manner in which the Eglinton Crosstown LRT will pass through the interchange at Highway 427 is part of a special study to determine the best route to reach the Airport. The results of that study will be presented at public open houses to be held at the end of 2008.

At the Don Valley Parkway, the Eglinton Crosstown LRT is proposed to be on the surface in the middle of Eglinton Avenue. No significant impacts to the interchange traffic operations are anticipated.

Q18) Can emergency vehicles use the dedicated right of way for the LRT?

Yes. Emergency Medical Services and Fire Services are being consulted on how the LRT right-of-way can be designed to accommodate their vehicles.

Q19) Will there be noise or vibration from the LRT?

With current track design technology, there will be very little noise or vibration. In the past, the greatest problem with noise on streetcar lines has been at locations where the vehicle must operate through a loop to turn around. This creates "wheel squeal". The new LRT vehicles are planned to be double-ended – i.e. have an operators' cab at both ends so it can be operated in

either direction. It will reverse direction at each end of the line, similar to the operation of a subway, and therefore will **not** need loops. TTC will design the trackbed to dampen vibration and ensure it is kept at an acceptable level. The TTC will also conduct a vibration assessment as part of the provincial Environmental Assessment (EA) process.

Consultation

Q20) What key decisions have been made? What decisions are open for comment? What does TTC want feedback on? (e.g. technology, route, centre right of way etc.)

In projects like the Eglinton LRT, the TTC and City staff make recommendations to City Council who have the authority to make the final decision on these matters. The rationale for recommending an LRT operating along Eglinton Avenue at surface from (1) Martin Grove to Jane and (2) Leslie to Kennedy Station and underground from Keele to Leslie is being presented as the best way of achieving the TTC and City objectives in this corridor. Further studies are currently underway to review and evaluate:

- (1) alternative routes between Martin Grove and the Airport;
- (2) connections to existing subway stations and other Transit City LRT lines; and
- (3) construction methods for the underground section.

The results of these investigations will be fully explained at the second round of Open Houses.

All public comments will be considered and evaluated as part of this project. However, if no compelling arguments against the recommendations are presented, the LRT design will proceed as planned.

There are aspects of the actual design that we do not yet have a recommendation on – examples are the exact location of some of the LRT stops and the design of the connection at subway stations. These issues will be discussed with the public to assist us in developing the best recommendations to submit to Council.

For more information, please visit the project website or contact us to be placed on the project mailing list:

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Cost and Timelines

Q21) What is the projected cost of this project?

A preliminary cost estimate for the project is approximately \$2.3 billion (excluding vehicles).

Q22) When could construction start?

The start of construction is currently scheduled for late 2009 contingent upon the staging of the entire Transit City program, completion of the EA study and funding.

Businesses

Q23) How long will construction take?

Estimating construction timelines for any single business or residence is difficult to forecast as it is in direct correlation to the scope or amount of work being completed in close proximity to that home or business. The scope of work changes along the entire length of the corridor and is a function of utility relocation requirements, amount of streetscape improvements and roadway and sidewalk changes. Indirect impacts such as traffic detours, etc. can be expected to last up to one-year.

Q24) What will be done to minimize disruption during construction?

Experience on other large LRT and Subway projects in the City has suggested that the most prevalent issues of disruption to business are reduced access to the area, loss of parking, noise and vibration. The City and the TTC are committed to accelerating construction as much as possible in an effort to minimize construction-related impacts to residents and businesses. Auto and transit traffic will be maintained throughout construction in a single lane in each direction. Pedestrian access may be detoured at times but will also be maintained throughout construction.

Every attempt at replacing short term parking loss for each individual home and business will be made. Detailed condition surveys of buildings thought to be vulnerable to ground borne vibration will be monitored pre and post construction. Contract documents assign strict limits for construction related noise to daytime hours only. All construction related activities are subject to building code provisions including the applicable noise by-laws.

Q 25) How will the City /TTC work with businesses on the project?

Experience shows that the biggest concern for business during large construction projects is anticipating the impacts stemming from construction. The City/TTC are often told that having quick access to construction related information, specifically schedule and timing information is critical to reducing or minimizing impacts. For this reason the City / TTC will form during construction a "*Construction Liaison Committee*" (CLC).

The CLC will be made up of City / TTC and Contractors staff who can meet bi-weekly on site. Business owners and residents directly affected by the construction activity will be invited and encouraged to attend these meetings where the day-to-day issues affecting their home / business are discussed and resolved. Issues such as business deliveries, local parking, and garbage pick-up are often topics of concern. Further, construction schedules and activity timing is also a prime topic. Besides the CLC, the City and TTC will undertake, prior to each phase of construction, a comprehensive public awareness campaign to notify people of the work. Keeping the area up to date and well informed in advance of construction can dramatically reduce the inevitable disruption brought about by large construction projects.