WELCOME TO OUR PUBLIC OPEN HOUSE

EGLINTON CROSSTOWN LIGHT RAIL TRANSIT (LRT)

Preliminary Planning for a Transit Project Assessment

June 15, 17, 18, 23, 24 and 25, 2009

PLEASE SIGN IN

Members of the Project Team are available to discuss the project with you.
There is a roll plan of the entire corridor for your review.
Please feel free to ask questions and fill out a comment sheet.

Visit us at: www.toronto.ca/transitcity

Open House Objectives

Purpose of today's Open House 2

- Provide updated information about the Eglinton Crosstown Light Rail Transit (LRT) Project, covering:
  - An updated Study Schedule
  - Responses to frequently heard comments at Open House 1
  - Key objectives of the Eglinton Crosstown LRT
  - The resulting design concept from applying
  - Details of specific surface stops and underground stations
  - Potential construction methods
  - Next steps (future studies)
- Staff will be available to listen to any comments or concerns about the project. Please feel free to tell us what you think.

We are here

Open House 1 – Aug/Sept 2008

WHAT IS PLANNED? **Introduce the idea of LRT, provide preliminary stop and station locations and outline potential construction methods.**

Open House 2 – June 2009

HOW MIGHT IT WORK? **These boards outline the current concept, including the provision of typical stops and stations and preliminary concept for each stop and station.**

Open House 3 – Nov/Dec 2009

WHAT IS THE PREFERRED CONCEPT? **Present the preferred design concept, including the recommended methods of constructing the LRT, identification of potential impacts that may arise (both during construction and during operation of the LRT), and proposed means of minimizing and mitigating impacts.**

A "Frequently Asked Questions" handout is available that addresses issues / questions received to-date, and provides other project information. If your issue / question is not presented here, or you have not received a response, staff will be happy to speak to you tonight.

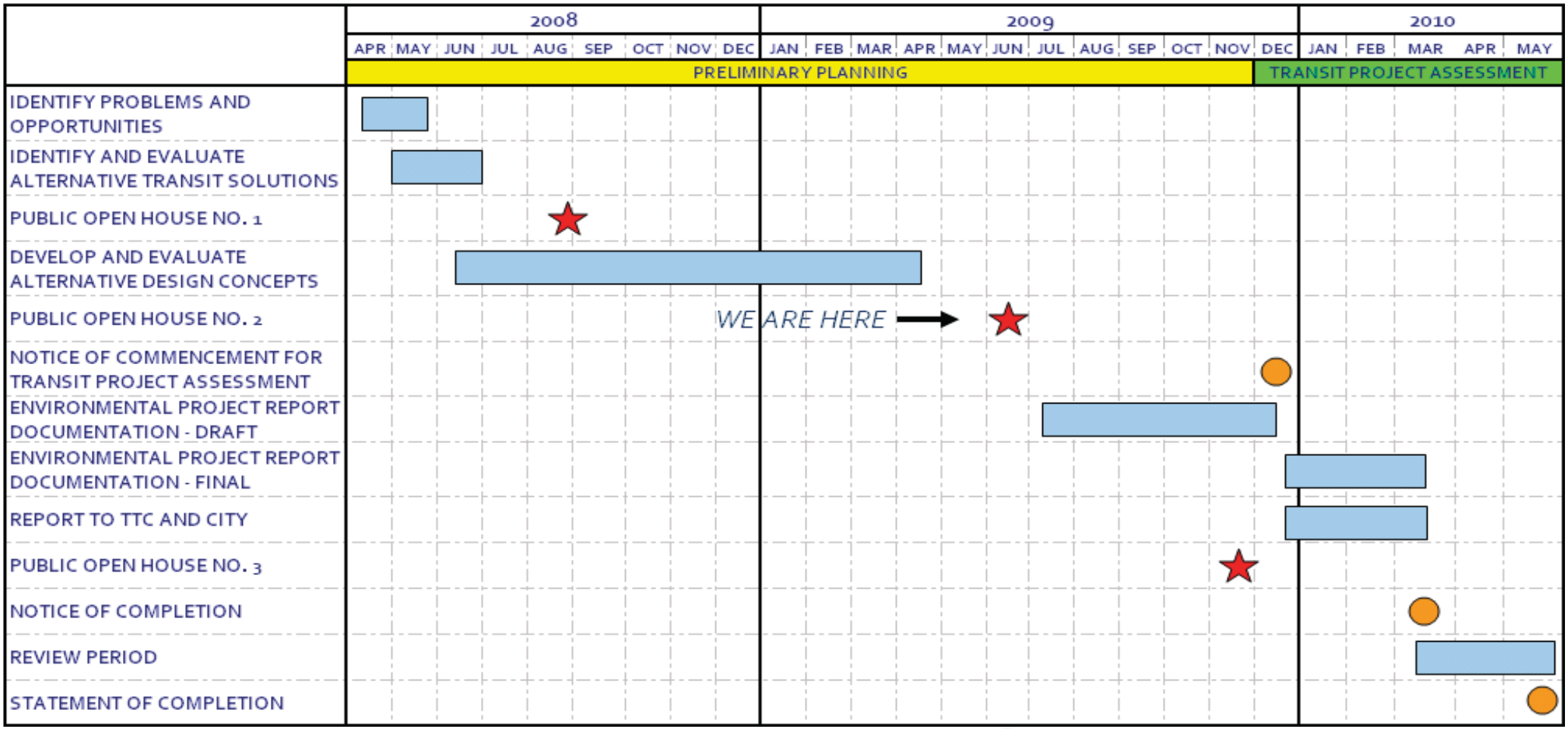
About the Eglinton Crosstown LRT

The **Eglinton Crosstown LRT**, part of the Transit City LRT Plan, is approximately 33 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 **Transit City LRT 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.

Study Schedule



Issues Raised from Open House 1

Six Public Open Houses were held between August 14 and September 22, 2008

- Nearly 700 people attended the 6 open houses
- Almost 150 comment sheets or e-mails were received from you by the end of the comment period
- Frequently raised concerns are identified and addressed below, but there was general support for the project

Parallel bus service on Eglinton Ave.	Parallel bus service is not proposed at this time. The distance between stops and stations is a balance between providing fast service and convenient access to local attractions. See Panel 16 for more information.
Impacts during construction	TTC will attempt to minimize construction impacts to the greatest degree possible. Potential impacts would include noise, vibration, dust, traffic restrictions/detours and business disruption. Detailed mitigation plans will be developed during design and shared with the community prior to implementation.
Noise and vibration	Noise and vibration investigation will be undertaken prior to Open House 3. Findings will be presented at Open House 3.
How will traffic be affected?	Traffic analyses have been undertaken at major intersections to understand how the LRT would operate and how traffic would be affected. The results of the analyses, which includes re-routed left turns at some locations, are presented in the following panels.
LRT at surface versus completely underground	Some commenters felt the entire project should be underground to provide higher speeds, while others believed a surface LRT provides a more pleasant riding environment. The project provides the most cost-effective solution toward meeting the goals of speed, accessibility and minimizing impact.

Key Objectives: Accommodate Long-Term Travel Demand Cost-Effectively

- The City's Official Plan supports continued growth in Toronto, in order to ensure the City's vitality and economic growth. It also places greater emphasis on using available road space more efficiently to move people rather than vehicles. The introduction of Light Rail Transit (LRT) service in the Eglinton Avenue corridor is consistent with this objective.
- An LRT is 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.
- The LRT is being designed to initially operate in two-car trains but with expansion capability to three-cars to meet future demand.

VALENCIA AND ALICANTE, SPAIN

PORTO, PORTUGAL

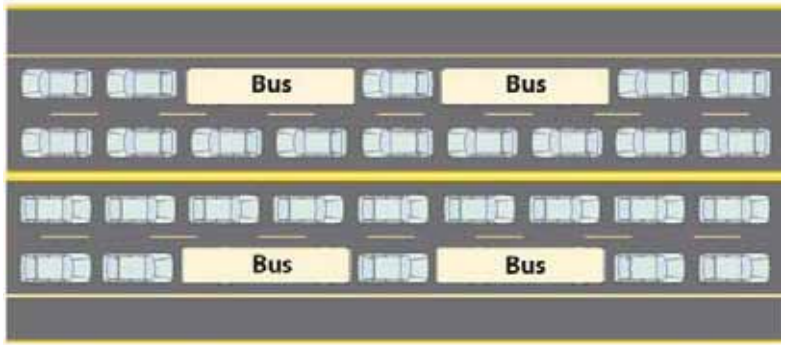
MINNEAPOLIS, USA

Key Objectives: Increase Passenger Capacity on Eglinton

Future without Improved Transit

"DO NOTHING"

Will result in a lack of travel alternatives to the private auto and an increasing dependency on private auto travel.



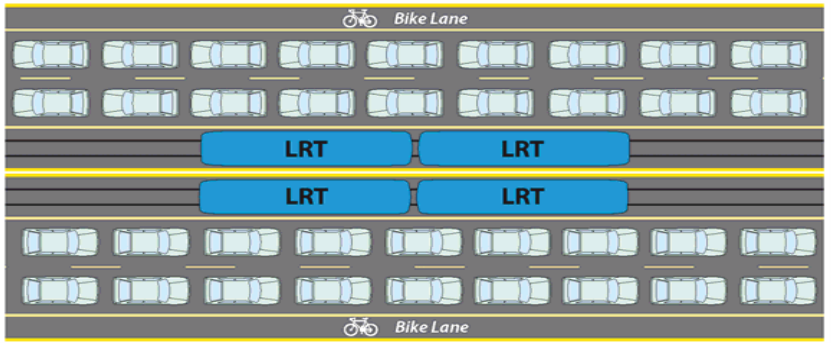
FUTURE OUTCOME

Traffic congestion will increase, along with increased travel times and longer delays, due to increase in population and employment in the City and surrounding regions.

Future with Transit City

"PROVIDE FREQUENT AND RELIABLE TRANSIT"

Provides an attractive alternative to private auto use, achieved by re-allocating road space to create reserved transit lanes.



FUTURE OUTCOME

Reserving road space for transit may increase traffic congestion at specific locations, In response, motorists may choose to travel by transit, or change routes and / or times.

For those choosing not to alter their travel behaviour, increased travel times and longer delays will be experienced.

People Movement Capacity Per Hour
(Example: Eglinton West between Martin Grove Road and Jane Street - 2 existing lanes)

2000 vehicles and buses

4100 people

2000 vehicles + 17 Light Rail Trains *

6800 people

60% Increase

* 2 Light Rail Vehicles per Train.

Key Objectives: Fast, Reliable and Frequent Transit Service

The LRT will be designed so that the light rail vehicles are able to average 22 km/h on surface sections and 30 km/h in underground sections. (By comparison, the existing subways average 30 km/h also.)

	Travel Time			Transfers Required	
	Existing - bus (minutes)	Proposed - LRT (minutes)	% Decrease	Existing - bus	Proposed - LRT
Pearson Airport to Eglinton - Yonge Station	70	48	31%	3	0
Eglinton - Yonge Station to Kennedy Station	43	30	30%	0	0
Keele Street to Brentcliffe Road	48	19	60%	1	0
Bathurst Street to Don Mills Road	31	17	45%	1	0
Eglinton West – Allen Station to Eglinton - Yonge Station	16	7	56%	0	0

EGLINTON CROSSTOWN LRT

Key Objectives: Provide Important Transit Connections

- The LRT will be designed to provide smooth connections to existing and proposed higher-order transit facilities including:
  - Mississauga Transit BRT (future)
  - GO Transit
  - Jane LRT (future)
  - Spadina Subway
  - Yonge Subway
  - Bloor-Danforth Subway
  - Don Mills LRT (future)
  - Scarborough-Malvern LRT (future)
  - Scarborough RT
- These connections will provide Torontonians with the ability to ride seamless, high-speed, high-frequency transit service throughout most of the City and also provide inter-regional transit connections.

Key Objectives: Provide an Accessible Facility

- Low-floor light rail vehicles to facilitate easy boarding by all passengers.
- The payment system will be a Proof-of-Payment (POP) system, which eliminates the need for barriers at station and stop entrances.
- Station entrances on the underground section will include elevators.

ENHANCED ACCESSIBILITY

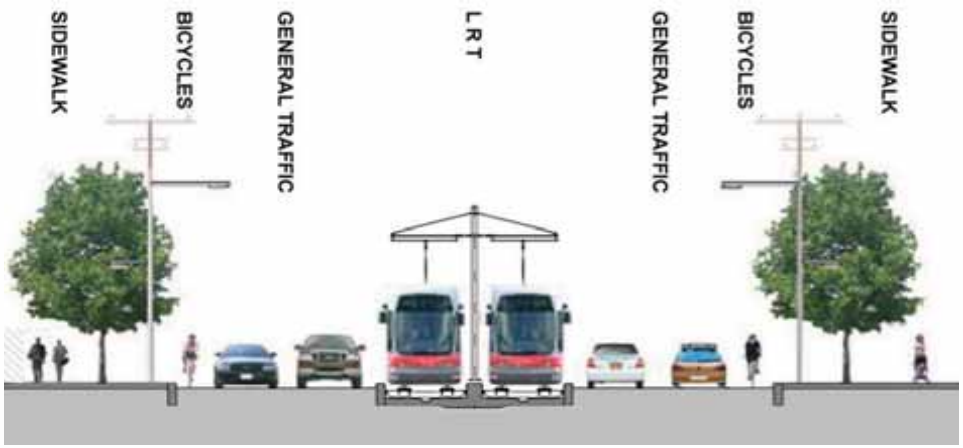
MELBOURNE, AUSTRALIA

Key Objectives: Support Toronto Official Plan

- The Toronto Transit City Light Rail Plan, including the Eglinton Crosstown Light Rail Transit (LRT) project, will implement the Toronto Official Plan by moving more people and encouraging new development and intensification along identified transit corridors, allowing a more productive and efficient use of the City's infrastructure and rights-of-way.
- The LRT will create a people-friendly, mixed-use pedestrian environment that is supportive of active life styles and an attractive liveable City.
- The LRT will also place greater emphasis on using available road space, focusing on movement of people, rather than vehicles, in order to address the future growth in travel.

Key Objectives: Maintain Two Travel Lanes

The LRT will be designed to carry two lanes of through traffic in the corridor. The LRT and two lanes of traffic (as indicated in the graphic to the right) will be on the surface between Martin Grove Road and Keele Street and from Brentcliffe Road to Kennedy Road. Due to the narrow width of Eglinton Avenue between Keele Street and Brentcliffe Road, the LRT will be underground and two lanes of through traffic will be maintained.

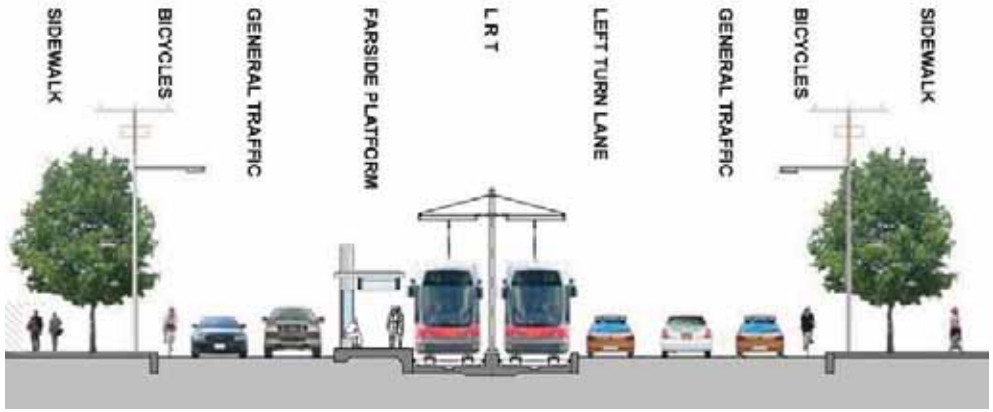


Section	Existing No. of Lanes per Direction	Proposed No. of Lanes per Direction
Martin Grove Road to Weston Road	2	2
Weston Road to Black Creek Drive	3	2 (1)
Black Creek Drive to Keele Street	2	2
Keele Street to Brentcliffe Road	Primarily 2	Primarily 2 (2)
Brentcliffe Road to Kennedy Road	2 + HOV lane	2

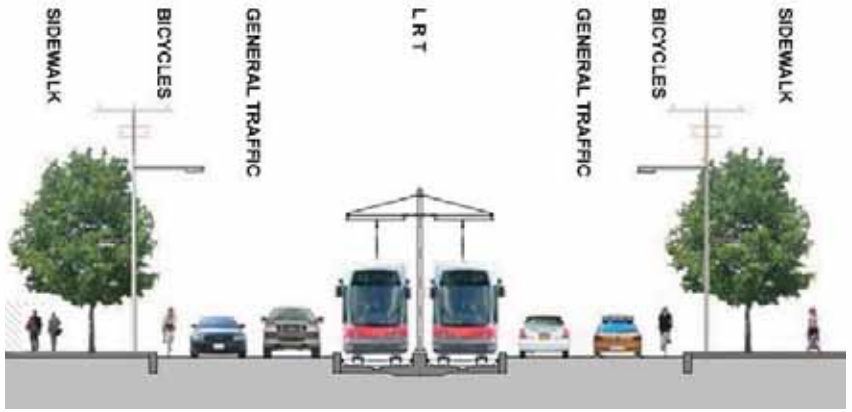
(1) For surface route option.

(2) In the section from Black Creek Drive to Brentcliffe Road, the LRT will be underground. Lane configurations on Eglinton Avenue in this section will be unaffected.

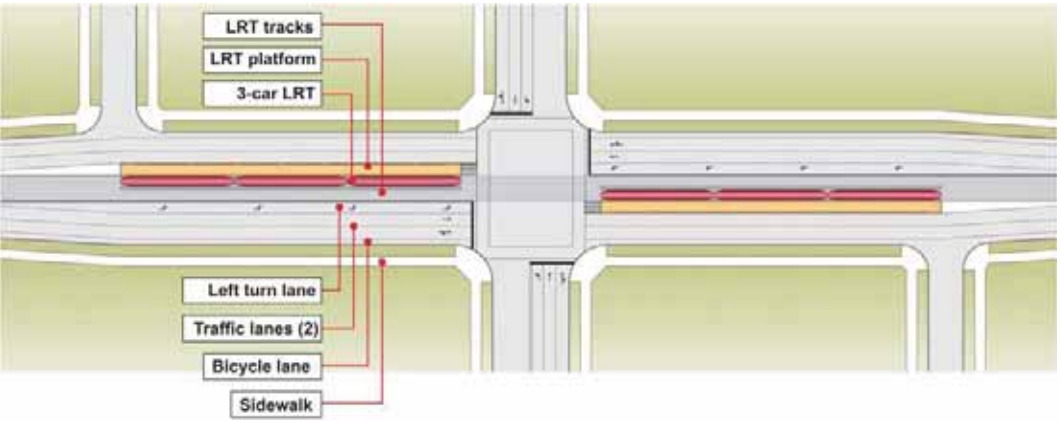
Design Concept – Surface Stop and Midblock



Typical cross section with farside platform



Typical midblock cross section



Typical plan with farside platforms

Surface side platforms are 90m long and 3m wide.
Most intersections will have farside platforms with left turn lanes. Some intersections will have nearside, parallel or centre platforms without left turn lanes.

Farside platforms are located beyond the intersection in the direction of travel. Nearside platforms are located before the intersection in the direction of travel.

Compared to typical streetcar platforms, LRT platforms will:
- **be wider and longer;**
- **provide shelter along the entire length;**
- **be handicap accessible throughout and lit all night;**
- **include ticket vending machines and other amenities.**

Design Concept – Portals

510 Spadina Streetcar Portal at Bloor Street

510 Spadina Streetcar Portal at Bloor Street

510 Spadina Streetcar Portal at Bloor Street

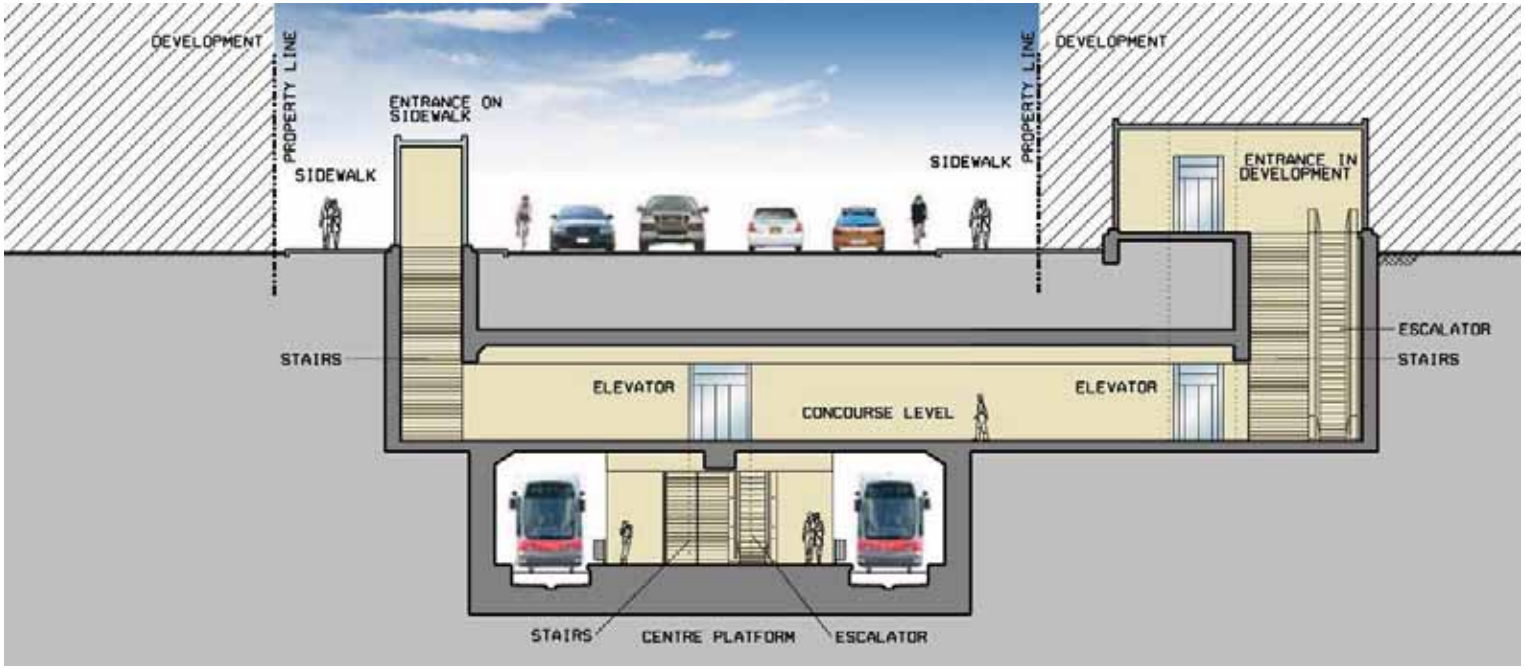
510 Spadina Streetcar Portal at Bloor Street

The Portal is the approach entrance where the LRT surface section transitions into the LRT underground section.

There are two portals for the Eglinton Crosstown LRT, one at each opening to the tunnel section. The west portal is currently planned for east of Black Creek Drive and the east portal is currently planned for east of Brentcliffe Road.

Design Concept – Underground Stations

The typical underground station will include two station entrances, one located on each side of Eglinton Avenue. The entrances will be connected to a station concourse level through an underground walkway. The main entrance will be 100% barrier free with an elevator connecting to the concourse level. Elevator and escalator connections will be provided between the concourse level and the platform level.

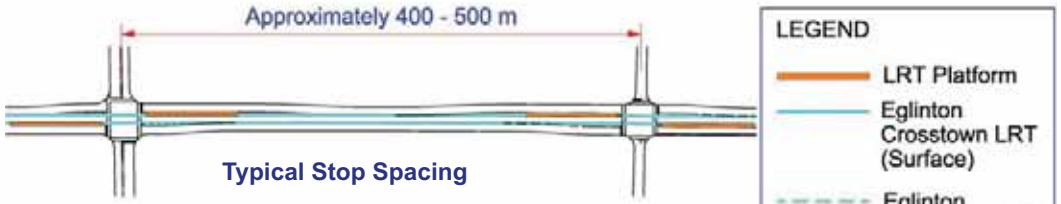


Typical cross section

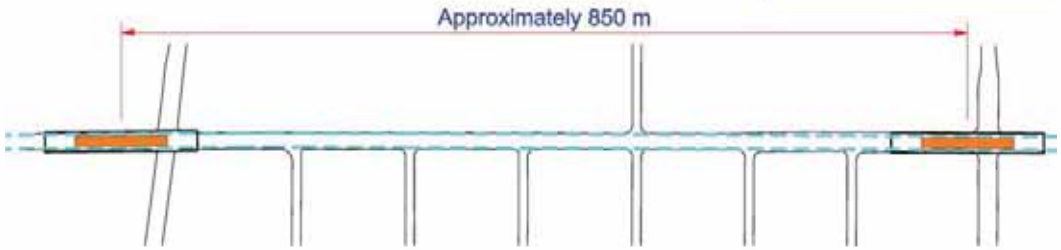
Design Concept: Station and Stop Spacing

Stop and station 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.

Existing Example (TTC)	Stop Spacing	Route Speed
510 Spadina Streetcar	280 metres	14 km/hr
34 Eglinton East Bus Route	299 metres	16 km/hr
32 Eglinton West Bus Route	317 metres	18 km/hr
Bloor-Danforth Subway	875 metres	30 km/hr



Typical Stop Spacing



Typical Station Spacing

The table to the left highlights this balance using existing TTC examples for buses, a streetcar and the subway.

Stop and station 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. As shown in the graphic to the left, the LRT stop and station spacing will be:

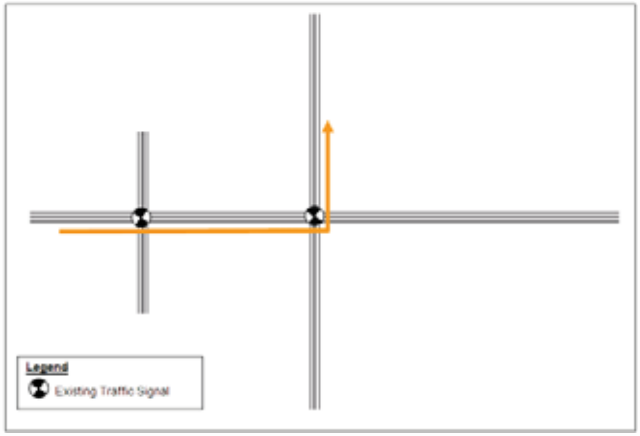
- Surface stops – average of **400-500 metres** apart – good compromise between the desire to provide higher travel speeds and maintain access to business and residences on Eglinton Avenue.
- Underground stations – longer than the distance between surface stops (approximately **850 metres** apart), however the resulting longer walk is an acceptable compromise between access, increased reliability, and cost.

The Challenge: Surface Re-routed Left Turns

Existing Situation: Today, traffic is permitted to make left turns in all directions at most major intersections where major north-south roads cross Eglinton Avenue.

Objective: When the LRT goes into operation, transit signal priority or a special signal phase will be provided for the LRT vehicles in order to achieve fast and reliable service.

Problem: If left turns continue to be permitted at major intersections, there will be limited “green” time available for the LRT. As a result, the operating speed and reliability of the LRT service will suffer.



EXISTING LEFT TURN

The Proposal: Surface Re-routed Left Turns

Proposal: Re-routing of left turns at several major intersections (see right) is being considered. Instead of making the left turn at the intersection, motorists will be directed to a U-turn location. These will be provided on both Eglinton Avenue and the north-south road.

All U-turn locations will have traffic signals. U-turns will be designed to accommodate a delivery truck. Please refer to the drawings below.

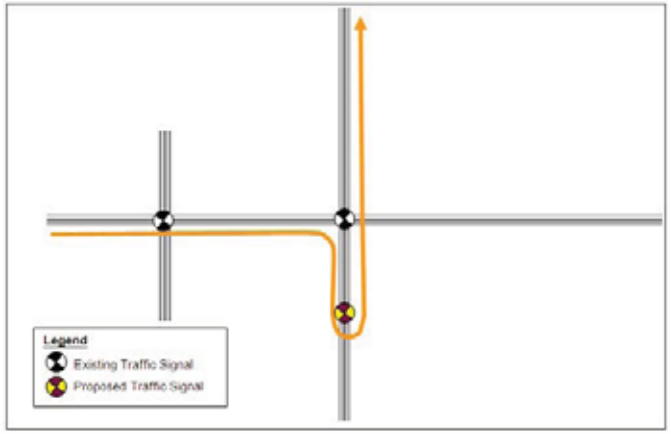
Re-routing of left turns will support the overall objectives of the Eglinton LRT to provide fast and reliable service and a people-friendly, pedestrian-oriented environment, and support the future growth of the City in accordance with the Official Plan.

Benefits: Re-routing of left turns will achieve more efficient operation and reduce delays to the LRT trains. In addition, re-routing left turns will reduce wait time for pedestrians.

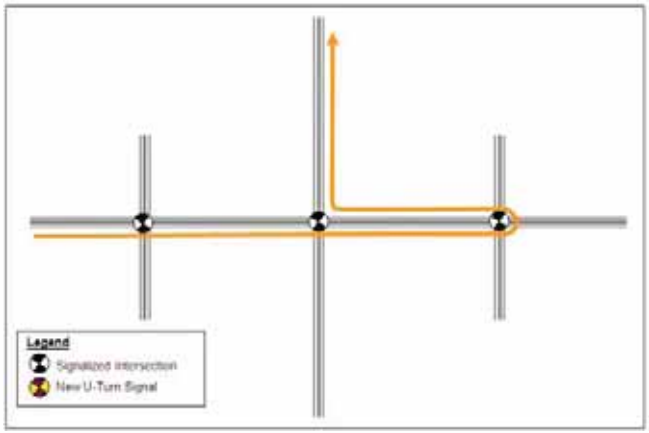
Next Steps: Further study will be conducted with recommendations presented at Public Open House 3.

Major intersections requiring re-routed left turns:

- Martin Grove
- Kipling
- Islington
- Royal York
- Scarlett
- Jane
- Victoria Park
- Pharmacy
- Warden
- Birchmount



RE-ROUTED LEFT TURN – OPTION 1 - PREFERRED



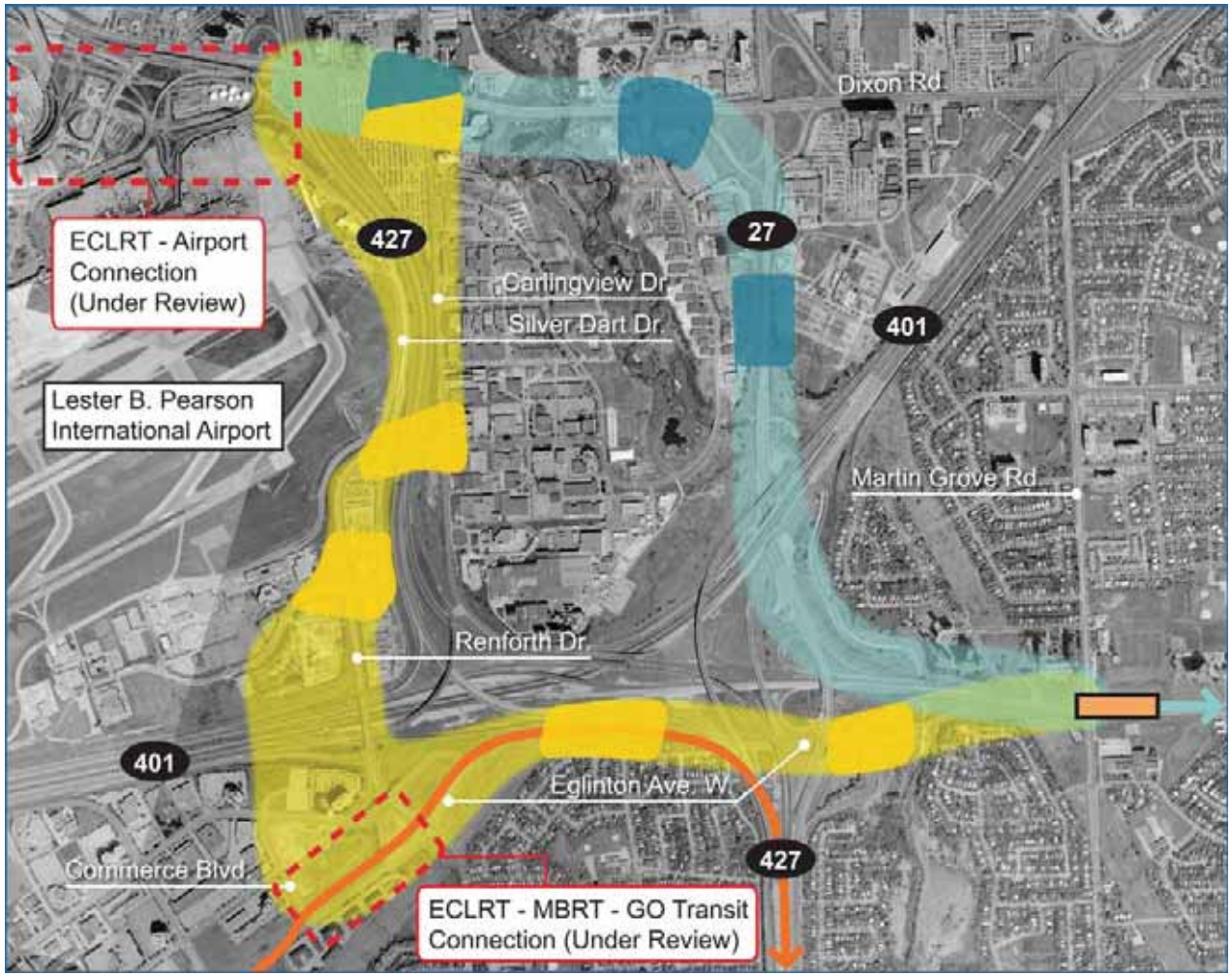
RE-ROUTED LEFT TURN – OPTION 2

Eglinton Crosstown LRT Project Description

Introduction

- The design concepts described earlier have been applied to each stop and station. Most stops and stations are presented in the following panels. Options being considered have also been identified.
- Most stops and stations are presented from west to east. In addition, a roll-out drawing showing the entire project is available for viewing.

Martin Grove to Pearson International Airport



A special study is currently underway to evaluate two alternative surface Eglinton Crosstown LRT corridors from Martin Grove Road to Terminal 1 of Pearson International Airport. The recommended Eglinton Crosstown LRT route and stop locations will be presented at Open Houses to be held later this year.

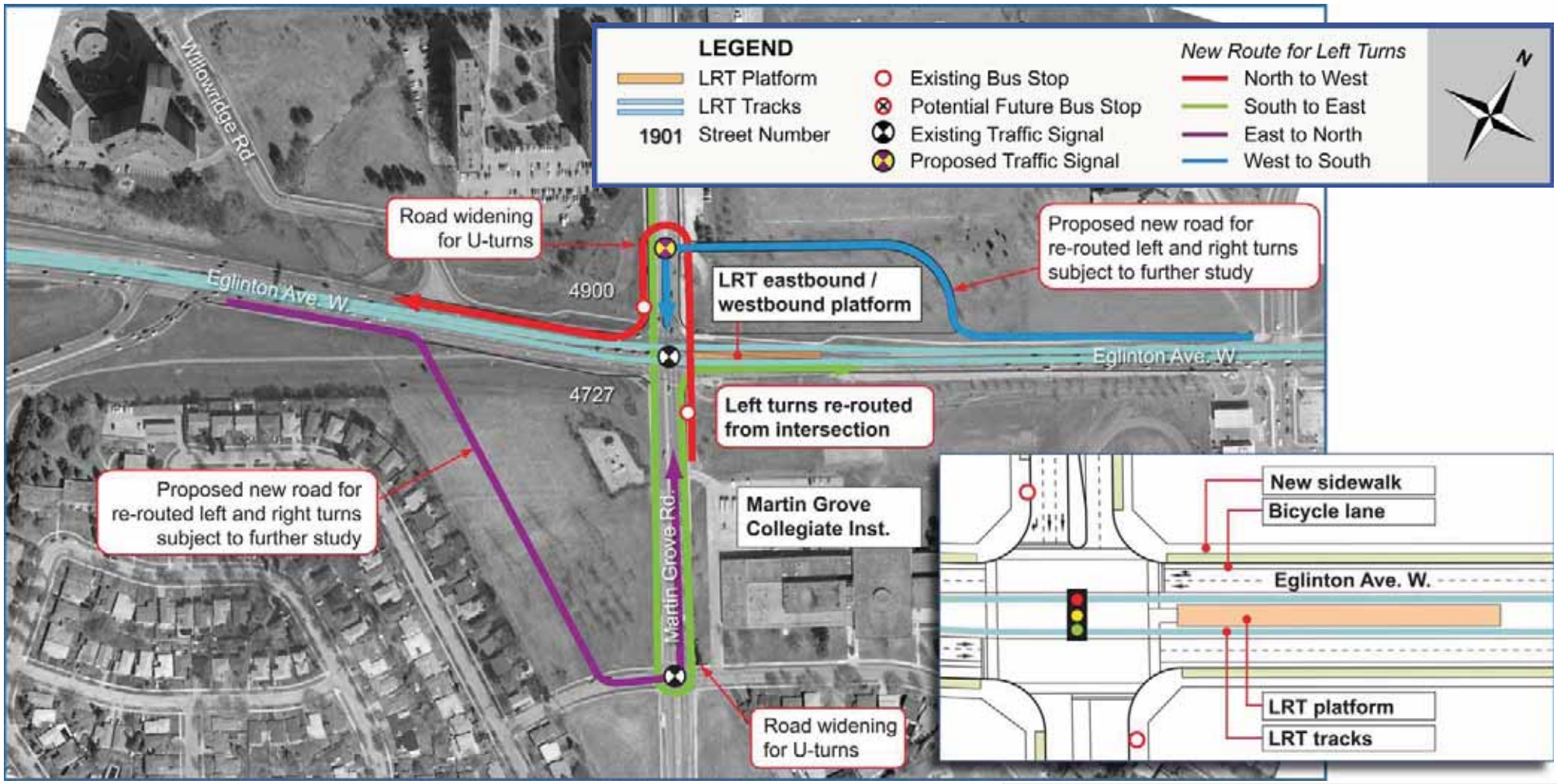
TTC is also conducting a feasibility study for a potential future extension of the Finch West LRT from Humber College to the Airport. If the feasibility study recommends implementation of the Finch West LRT extension a separate Transit Project Assessment will be conducted.

LEGEND

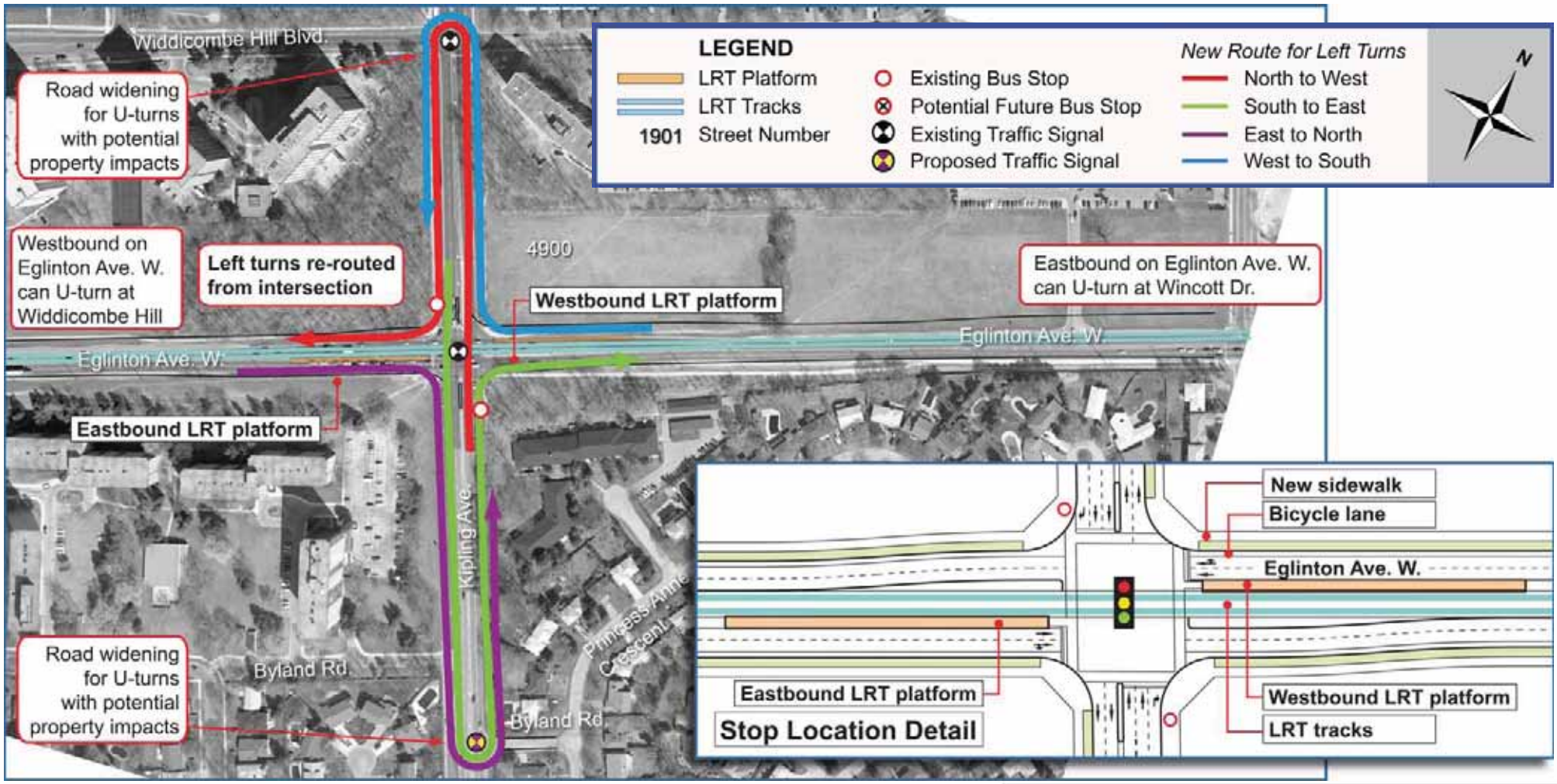
- ECLRT Route 'A' Corridor
- ECLRT Route 'B' Corridor
- ECLRT Route 'A' Stop Locations
- ECLRT Route 'B' Stop Locations
- ECLRT Proposed Surface Route
- Mississauga BRT Proposed Route
- ECLRT Stop

N

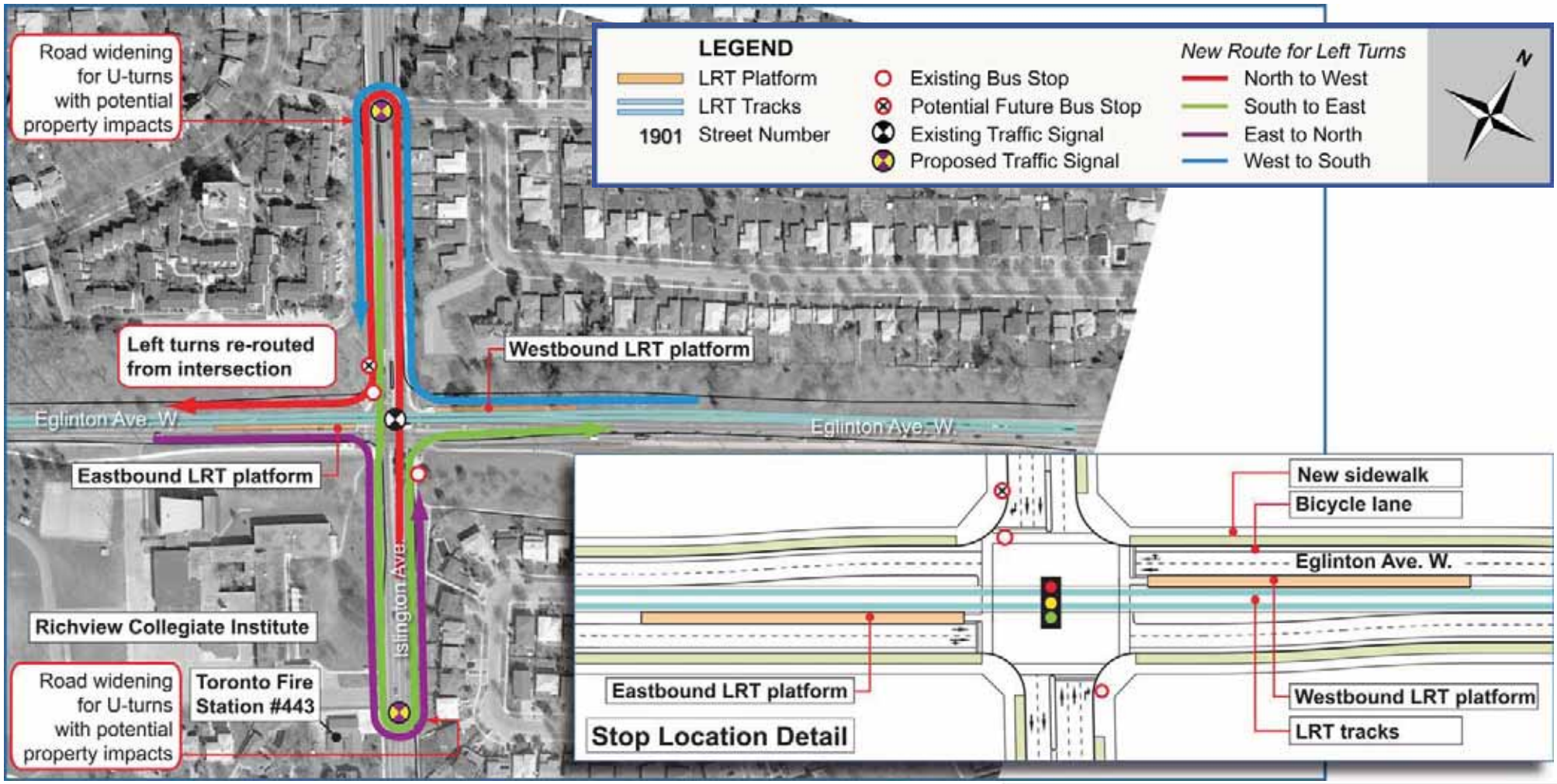
Martin Grove Stop



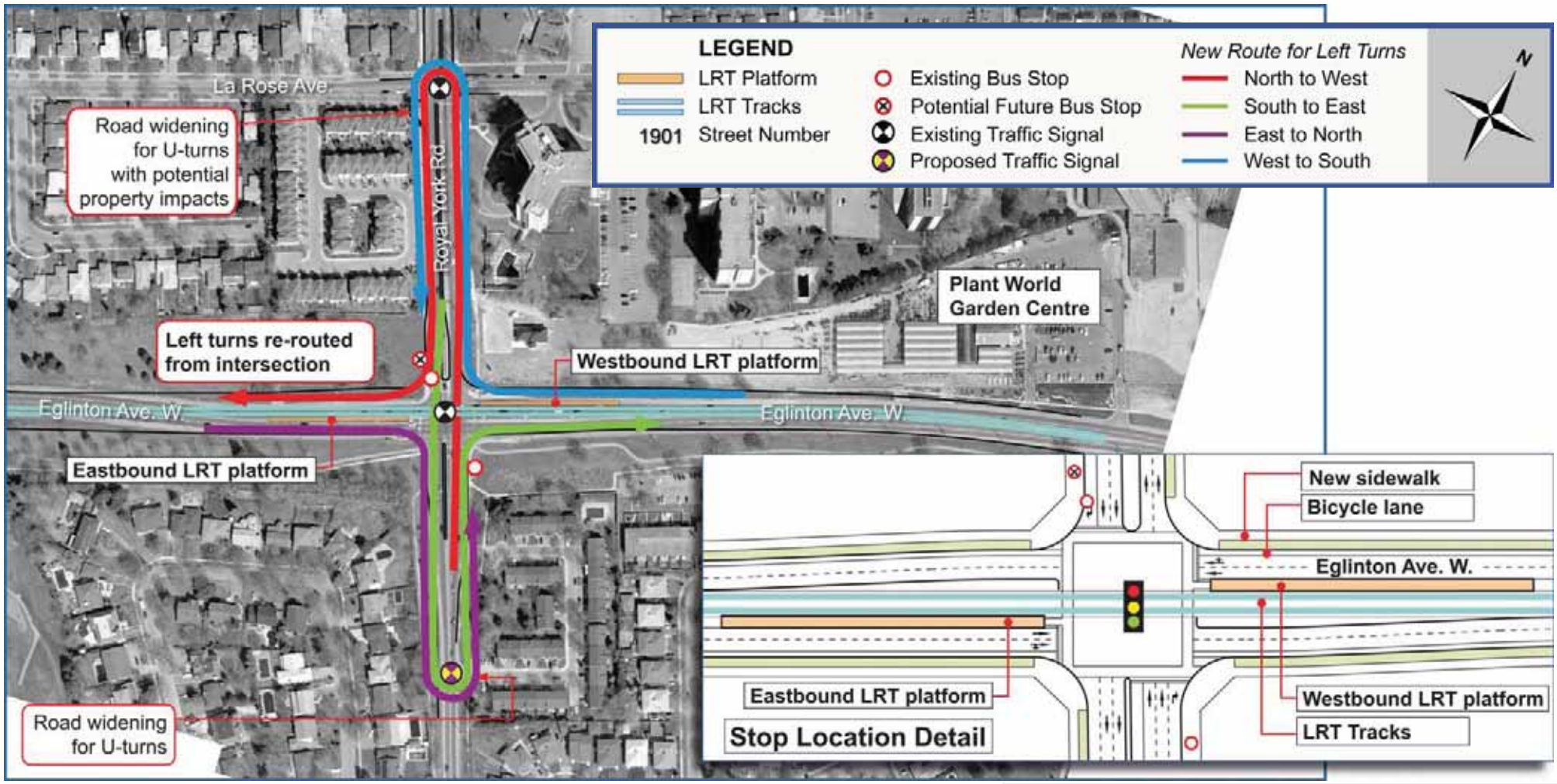
Kipling Stop



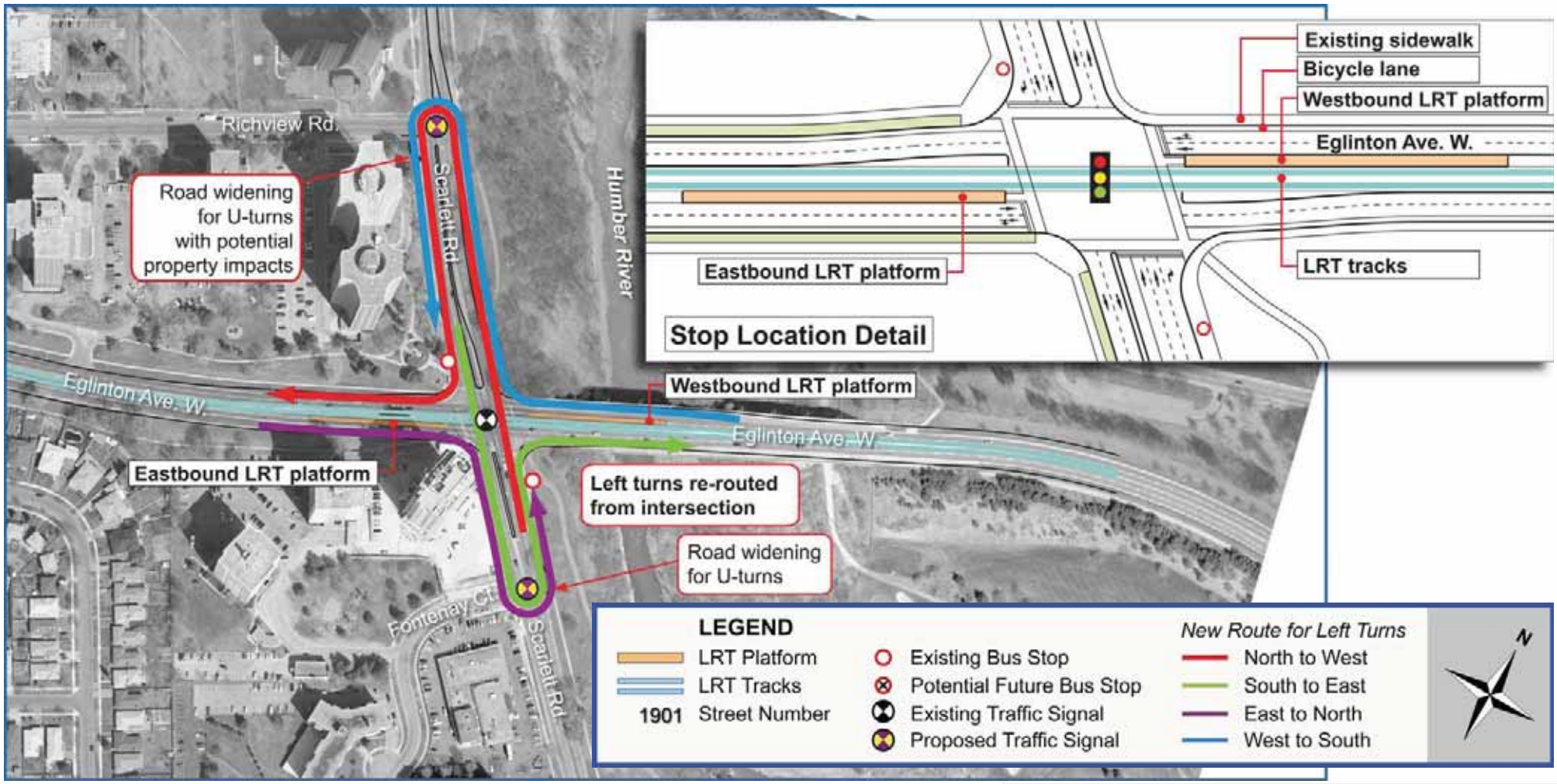
Islington Stop



Royal York Stop



Scarlett Stop



Jane Stop – Option 1 (Both Stops on Roadway)

Tracks connecting Jane LRT and Eglinton Crosstown LRT may be required for trains to access Maintenance and Storage Facilities. These requirements will be determined once the Maintenance and Storage Facilities sites are selected.

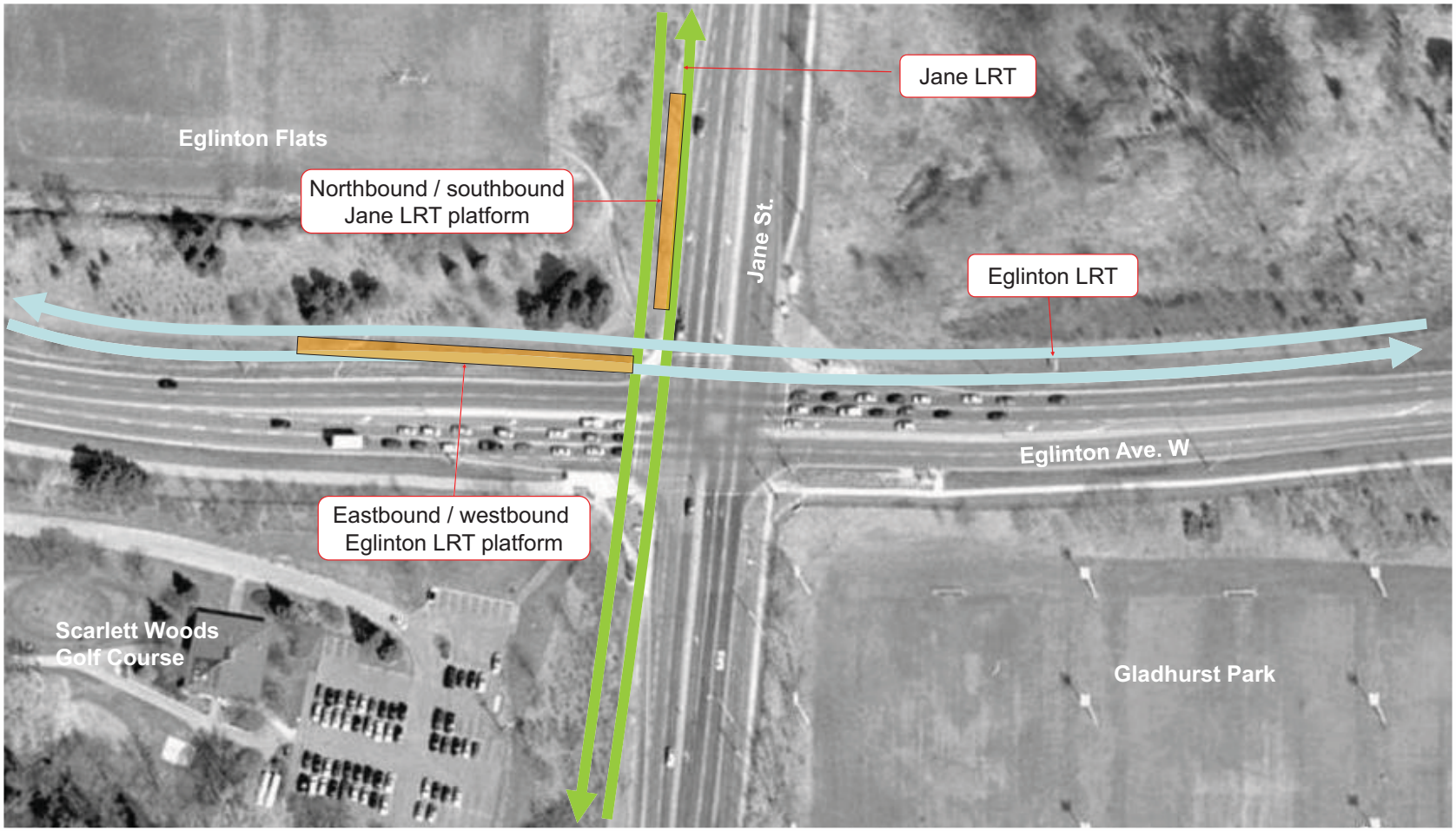
LEGEND

- LRT Platform
- Jane LRT (Surface)
- Eglinton Crosstown LRT (Surface)

N

Drawing not to scale.

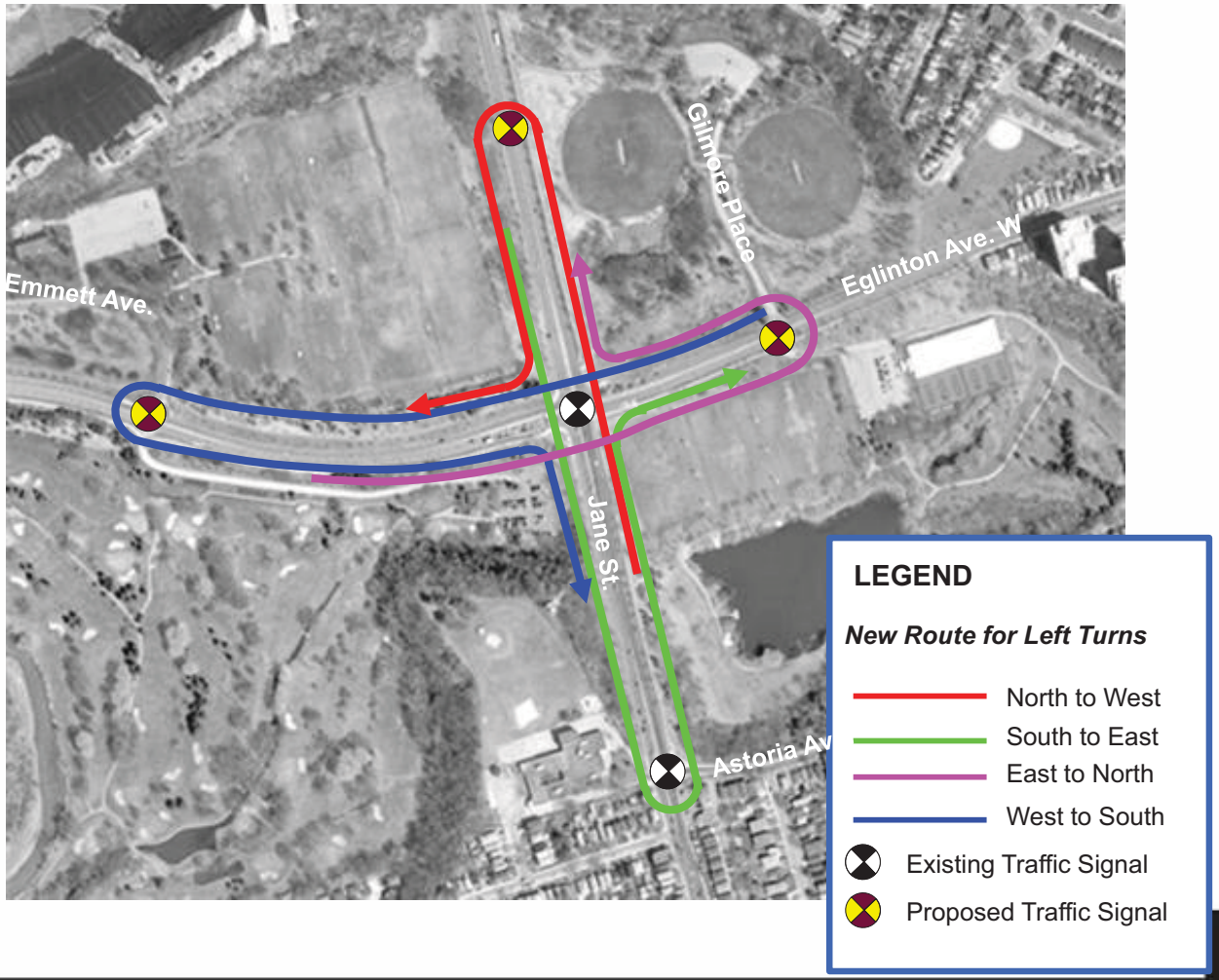
Jane Stop – Option 2 (Both Stops Off Roadway)



Tracks connecting Jane LRT and Eglinton Crosstown LRT may be required for trains to access Maintenance and Storage Facilities. These requirements will be determined once the Maintenance and Storage Facilities sites are selected.

Drawing not to scale.

Jane Stop – Re-routed Left Turns

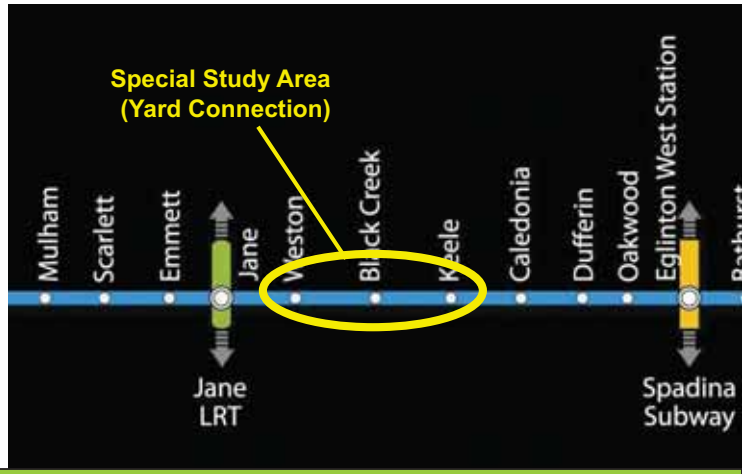


Left turns are proposed to be re-routed in both Option 1 and Option 2 in order to achieve efficient LRT operation at the intersection of Jane Street and Eglinton Avenue. Refer to Panels 17a and 17b for more information on why re-routed left turns are being considered.

EGLINTON CROSSTOWN LRT

Special Study Area – Weston to Black Creek

There are five options that are under consideration for the Weston to Black Creek area. There are many items that will be considered prior to making a decision about the preferred option, including what is the best way to connect to the proposed Maintenance and Storage Facility; what option will provide the best opportunities for future development and future connection to GO Transit; and which option will provide the best overall usability by providing well located stops or stations. A decision about the preferred option will be made prior to Open House 3.

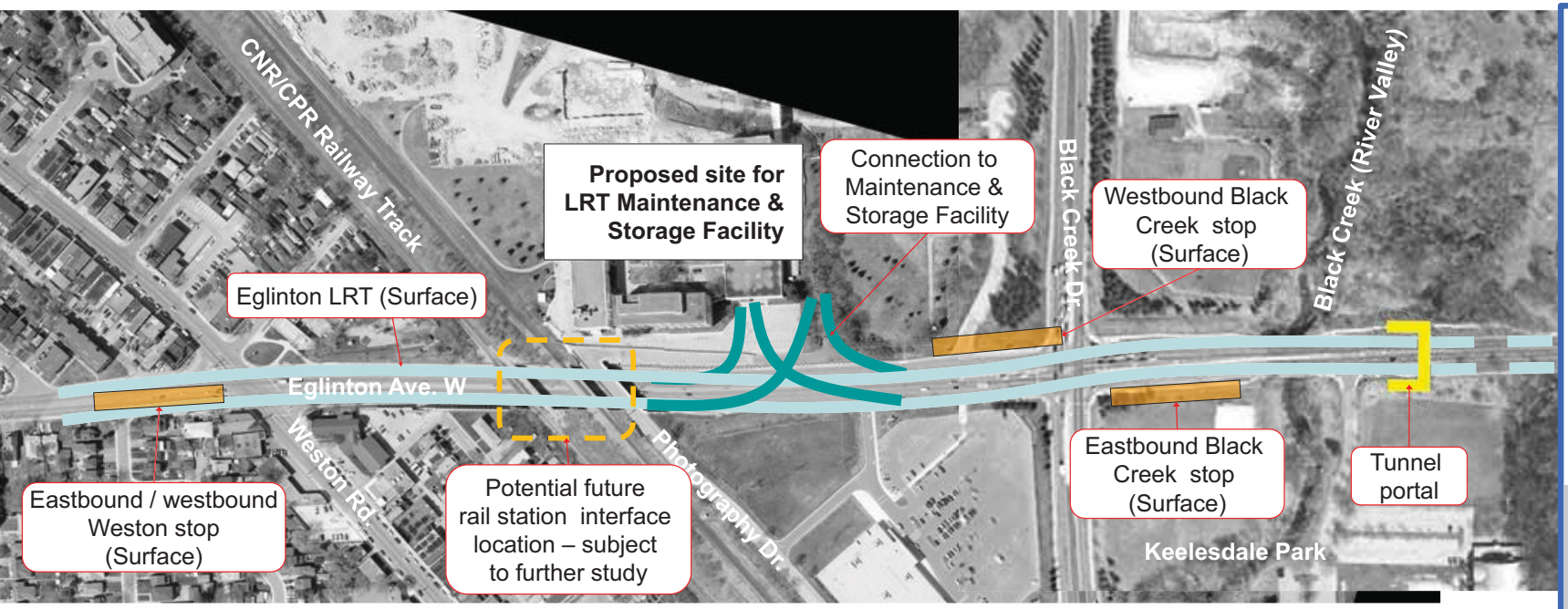


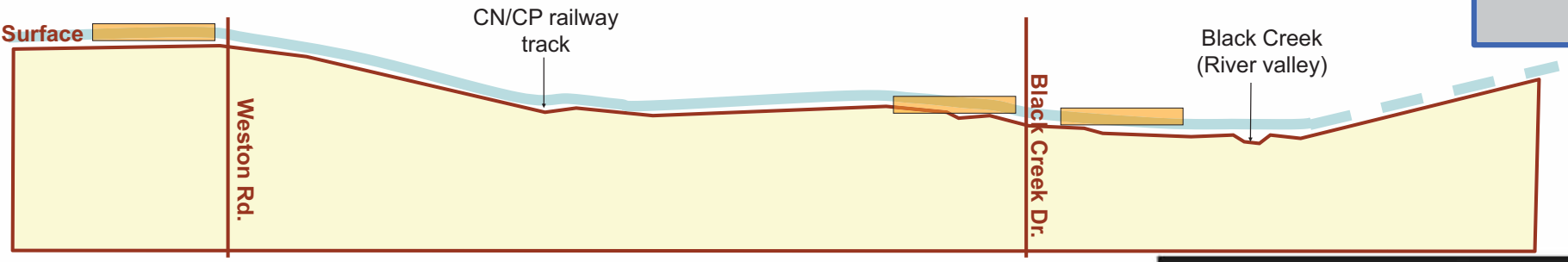
Alternative options shown on next 5 boards

Option	Weston	Black Creek	Portal Locations
1	Surface Stop	Surface Stop	Option does not create new portals.
2	Underground Station	Elevated Platform (South Side)	Portals are located east of Jane Street and east of CN/CP railway (both located south of Eglinton).
3	Underground Station	Elevated Platform (North Side)	Portals are located east of Jane Street and east of CN/CP railway (both located north of Eglinton).
4	Underground Station	Underground Station	Portal is located east of Jane Street. This option eliminates the need for the main tunnel portal located east of Black Creek.
5	Underground Station (North Side Alternative)	Elevated Platform (North Side)	Portals are located east of Jane Street and east of CN/CP railway (both located north of Eglinton).

NOTE: Portal locations for the main tunnel are located east of Black Creek and east of Brentcliffe. The main tunnel portals are in addition to the portal locations listed above.

Black Creek Stop & Weston Stop – Option 1 (Surface)





ELEVATION

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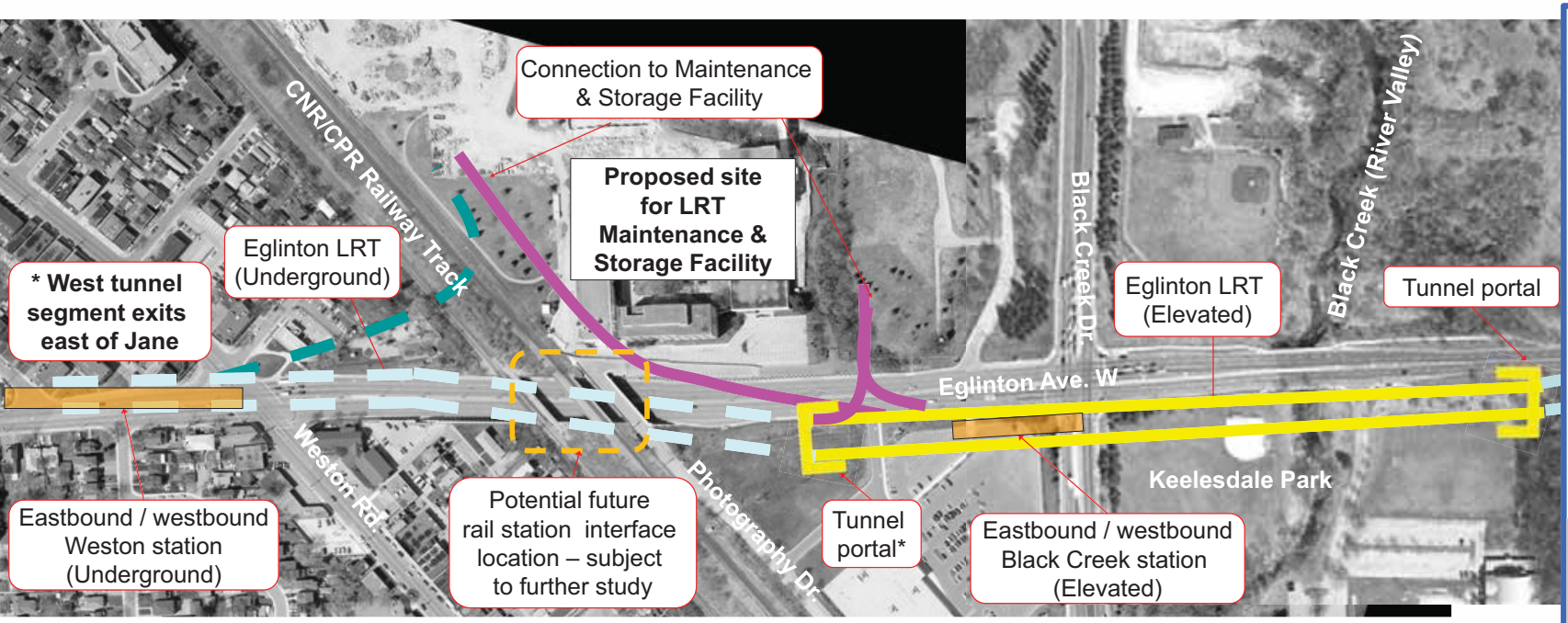
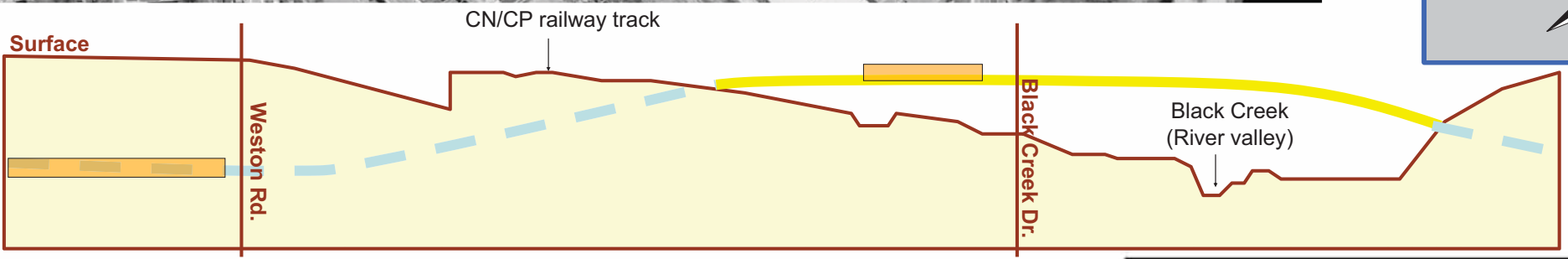
Black Creek Stop & Weston Station – Option 2 (Elevated South Side)



LEGEND

- LRT Platform
- Eglinton Crosstown LRT (Underground)
- Eglinton Crosstown LRT (Elevated)
- Connection to M & S Facility (Underground)
- Connection to M & S Facility (Surface)
- Connection to M & S Facility (Elevated)
- Tunnel Portal



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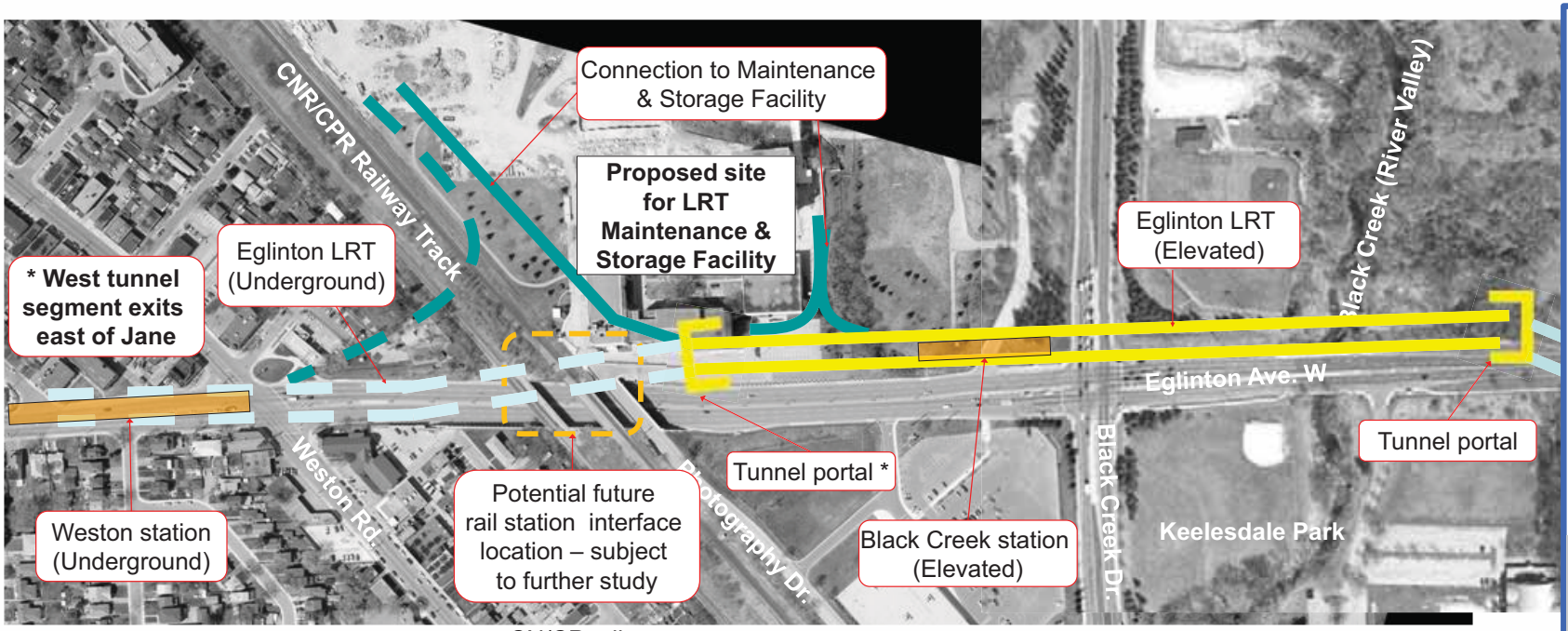
ELEVATION

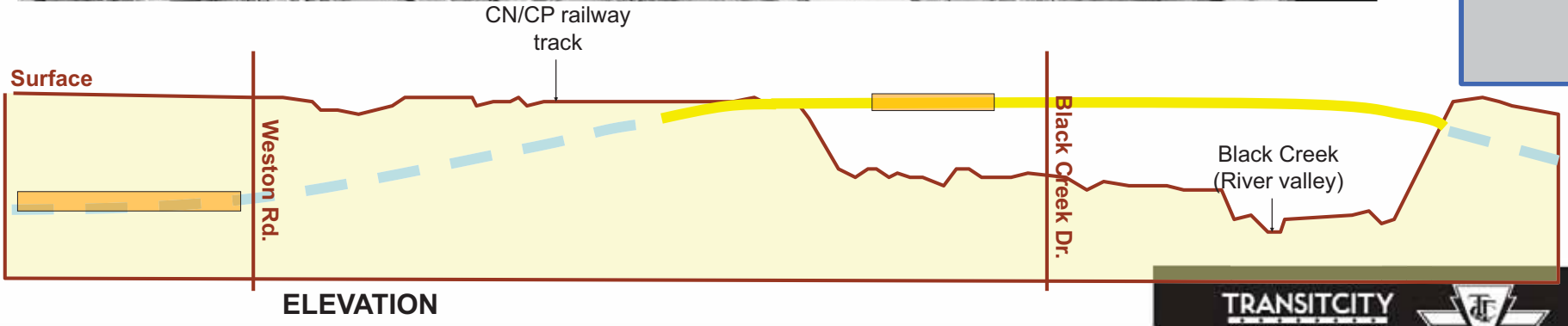
Black Creek Stop & Weston Station – Option 3 (Elevated North Side)



LEGEND

- LRT Platform
- Eglinton Crosstown LRT (Underground)
- Eglinton Crosstown LRT (Elevated)
- Connection to M & S Facility (Surface)
- Connection to M & S Facility (Underground)
- Tunnel Portal

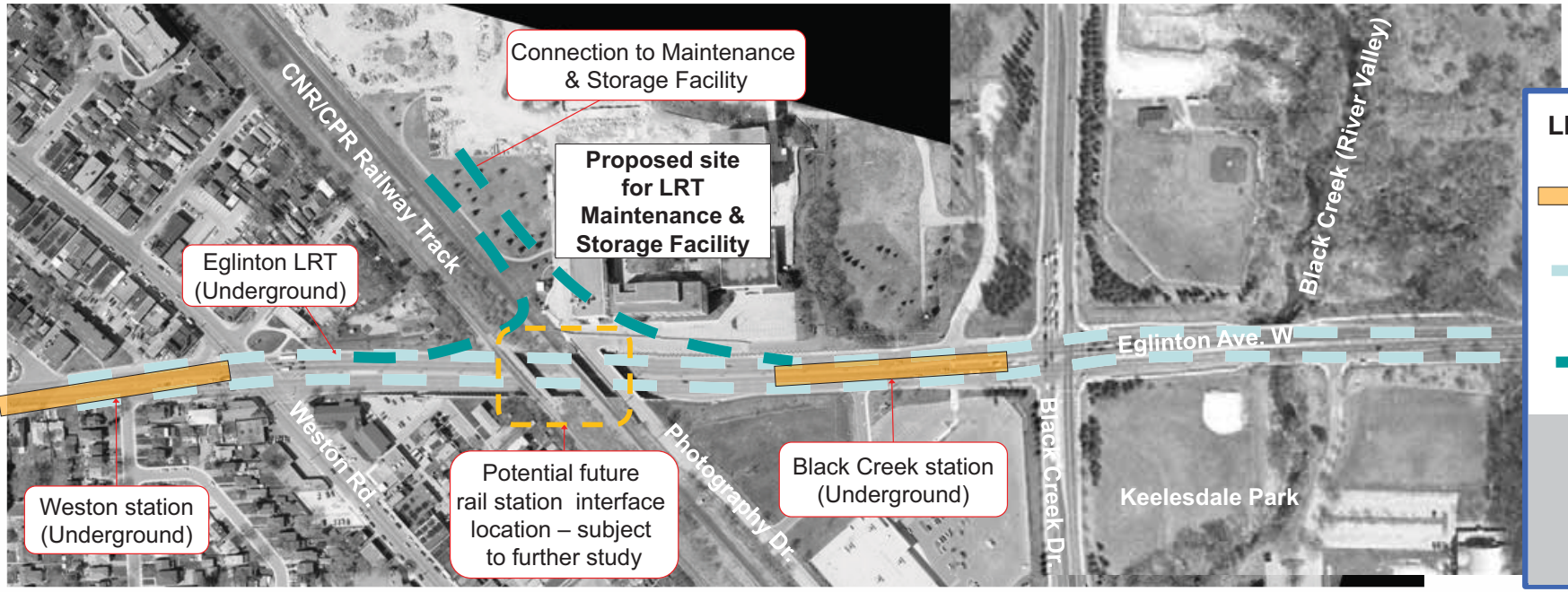
N

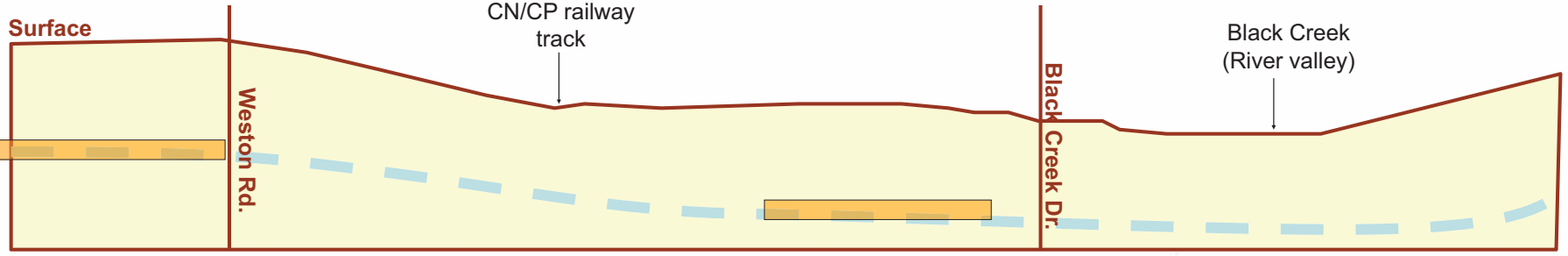


ELEVATION

Drawing not to scale.

Black Creek Station & Weston Station – Option 4 (Underground)

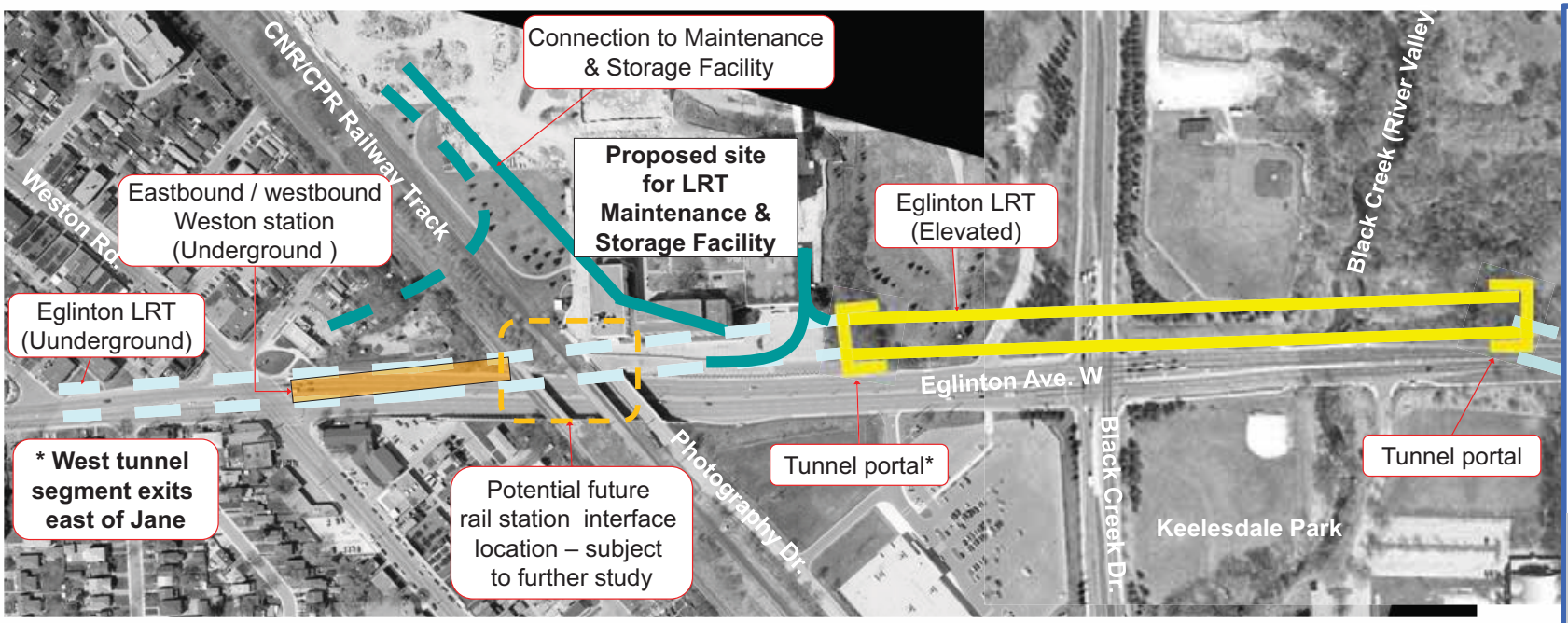




Drawing not to scale.

ELEVATION

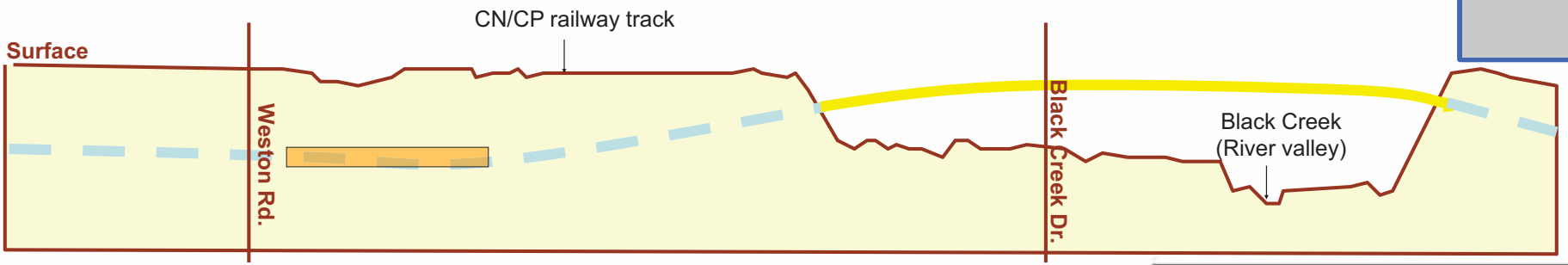
Black Creek Stop & Weston Station – Option 5 (Alt. Elevated North Side)



LEGEND

- LRT Platform
- Eglinton Crosstown LRT (Underground)
- Eglinton Crosstown LRT (Elevated)
- Connection to M & S Facility (Surface)
- Connection to M & S Facility (Underground)
- Tunnel Portal

N



Drawing not to scale.

ELEVATION