Presentation on Behalf of the Major Mackenzie & 48 Land Owners Group

Stouffville Corridor
Rail Service Expansion
Class Environmental Assessment

City of Markham

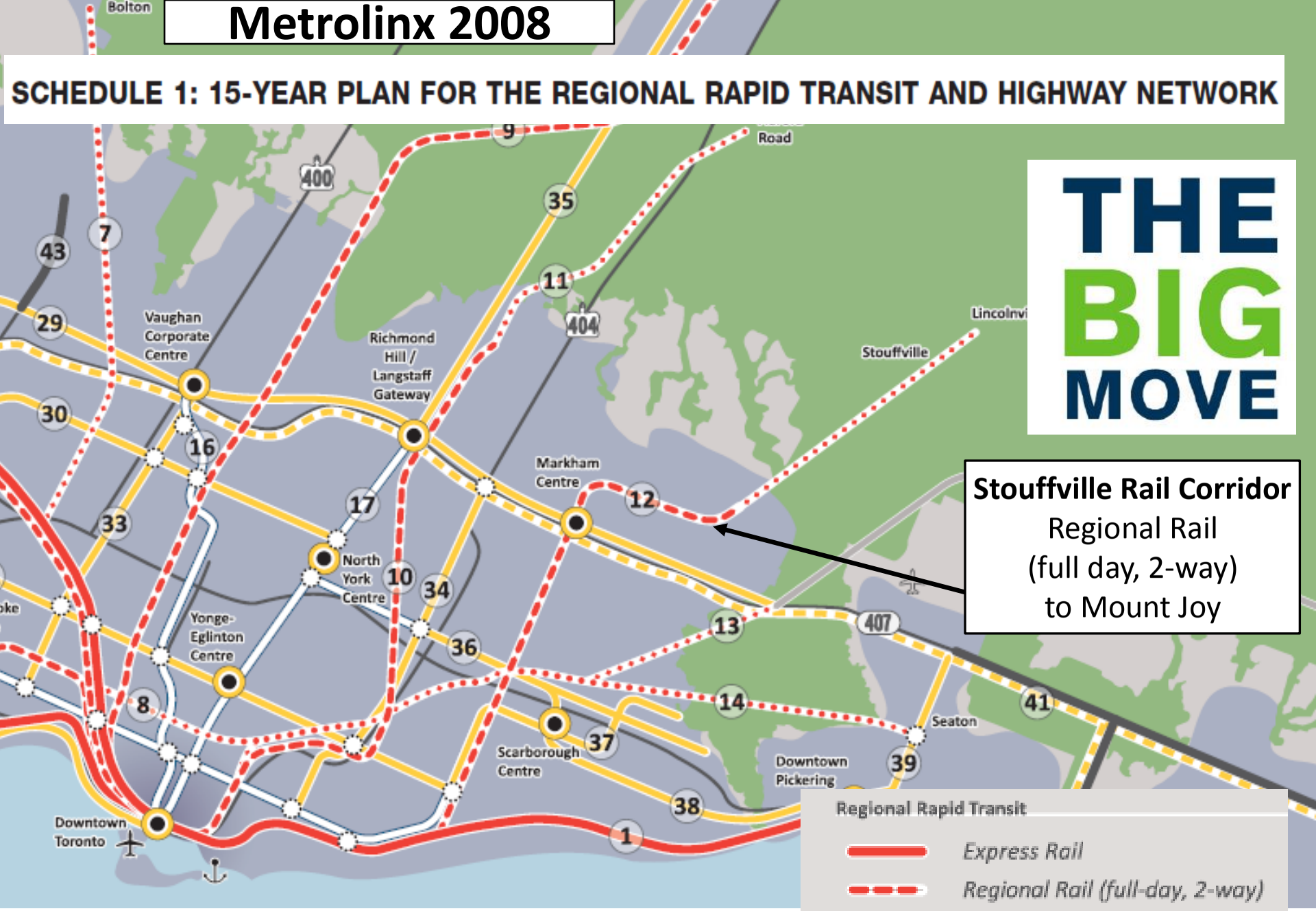
Development Services Committee

10 September 2013

Presentation Context

Metrolinx 2008

SCHEDULE 1: 15-YEAR PLAN FOR THE REGIONAL RAPID TRANSIT AND HIGHWAY NETWORK



THE BIG MOVE

Stouffville Rail Corridor
Regional Rail
(full day, 2-way)
to Mount Joy

The Big Move Objectives

	Today	The Big Move
Average daily commute	82 increasing to 119 minutes	77 minutes
Trips to work by transit	17%	33%
People living within 2 km of rapid transit	42%	81%
Rapid transit system length	500 km	1,725 km
Greenhouse gas emissions	2.4 tonnes per person per year	1.7 tonnes

NOTICE OF STUDY COMMENCEMENT

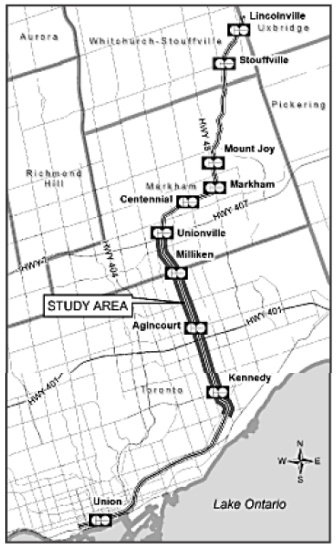
STOUFFVILLE RAILWAY CORRIDOR EXPANSION

Metrolinx, an agency of the Province of Ontario, is helping transform the way the region moves by championing and delivering mobility solutions for the Greater Toronto and Hamilton Area (GTHA) through its regional transportation plan, *The Big Move*. Our GO Transit division continues to expand and improve its services to provide more choices for travel across the GTHA, meet increasing customer demand and attract more transit users in the future.

In November 2012 Metrolinx announced that we had selected expansion of GO's Stouffville line as part of the next wave of Big Move projects to be funded by our forthcoming Investment Strategy. We are now moving forward with the necessary steps to prepare this important project for implementation once funding has been identified.

THE STUDY

GO Transit is undertaking a Class Environmental Assessment (EA) and Preliminary Design for the Stouffville railway corridor from just south of Kennedy GO Station in Toronto to Unionville GO Station in Markham. The study will identify the appropriate infrastructure improvements of the corridor needed to improve the quality of service offered to customers and provide new transit options in the eastern GTHA.



THE PROCESS

The project will be carried out as a Group 'B' undertaking as outlined in the GO Transit - *Class Environmental Assessment* (as amended in August, 2005) with the opportunity for public involvement. Consultation will take place during the study with municipalities, review agencies and through public information centres.

An Environmental Study Report (ESR) documenting the preliminary design work, the results of the EA process, anticipated environmental effects of the project and commitments to mitigation measures will be filed for public and agency review at the completion of the study. Notices of viewing locations will be published at that time.

COMMENTS INVITED

Your participation is an important part of the process and we welcome your input. Any groups or individuals wishing to comment on or be involved in the study or wish to be added to the study's master mailing list, must indicate their interest preferably in writing, to:

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Communications Specialist
GO Transit – A Division of Metrolinx
20 Bay Street, Suite 600
Toronto, ON M5J 2W3
tel: 416-869-3600 ext. 5719
fax: 416-869-9342
e-mail: Georgina.Collymore@metrolinx.com

Comments and information regarding this study are being collected to assist in meeting the requirements of the *Environmental Assessment Act*. The material will be maintained on file for use during the study and may be included in study documentation. With the exception of personal information, all comments will become part of the public record.

Pour plus de renseignements, veuillez composer le (416) 869-3200 or le 1 888 GET ON GO (438-6646).

Metrolinx is working to provide residents and businesses in the GTHA with a transportation system that is modern, efficient and integrated. Find out more about *The Big Move*, Metrolinx's Regional Transportation Plan for the GTHA at **www.bigmove.ca**. Find out more about GO Transit, PRESTO, and Union Pearson Express, divisions of Metrolinx, at **www.metrolinx.com**.

A Division of METROLINX

Scope

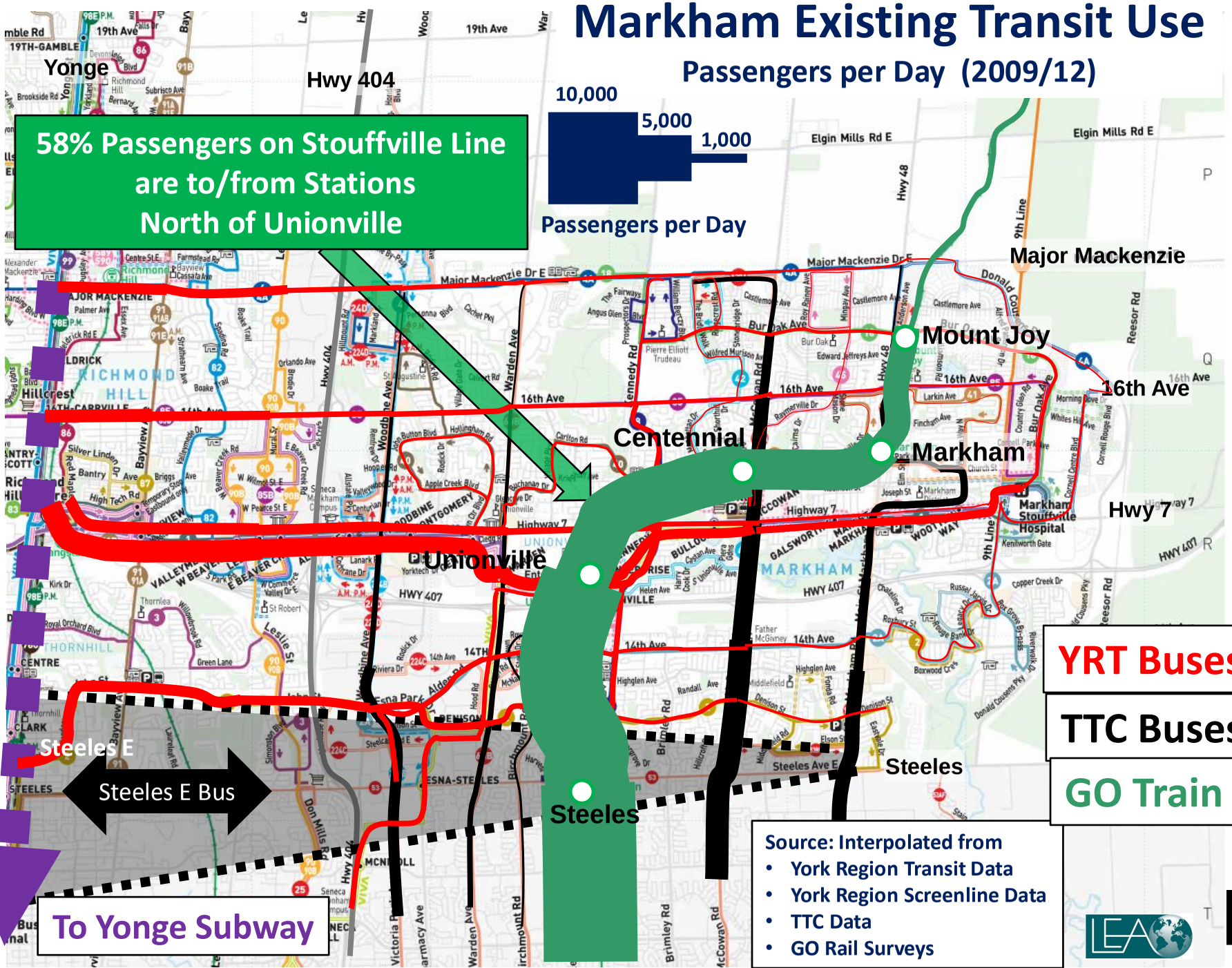
- **Limited to Rail Corridor Lakeshore to Unionville**
- **10 year Time Horizon**
- **No Additional Stations**
- **Focused on Expanding GO Train Service**
- **Acknowledges Train Capacity Issues on Lakeshore Corridor**

Metrolinx Stouffville Corridor Benefit Cost Analysis June 2010

Capital Cost of Double Tracking
Stouffville Line
Lakeshore to Unionville
$ 441 million
(Inc. $121m Structures
$128m Rolling Stock)

Markham Existing Transit Use

Passengers per Day (2009/12)



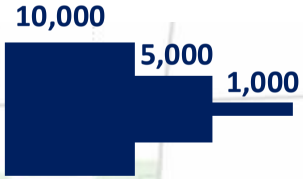
Source: Interpolated from

- York Region Transit Data
- York Region Screenline Data
- TTC Data
- GO Rail Surveys

Stouffville Corridor Rail Service Expansion
Class Environmental Assessment

Metrolinx 2015 Transit Forecast

Stouffville Line Passengers per Day



Yonge
Hwy 404
Bernard Terminal
Elgin Mills Rd E
Major Mackenzie Dr E
Major Mackenzie
Mount Joy
16th Ave
Centennial
Markham
Hwy 7
Unionville
Steeles
HWY 407
Steeles E Bus
To Yonge Subway

YRT Buses
TTC Buses
GO Train

Metrolinx
2015 Forecast
30 min Two-Way
Off Peak Service

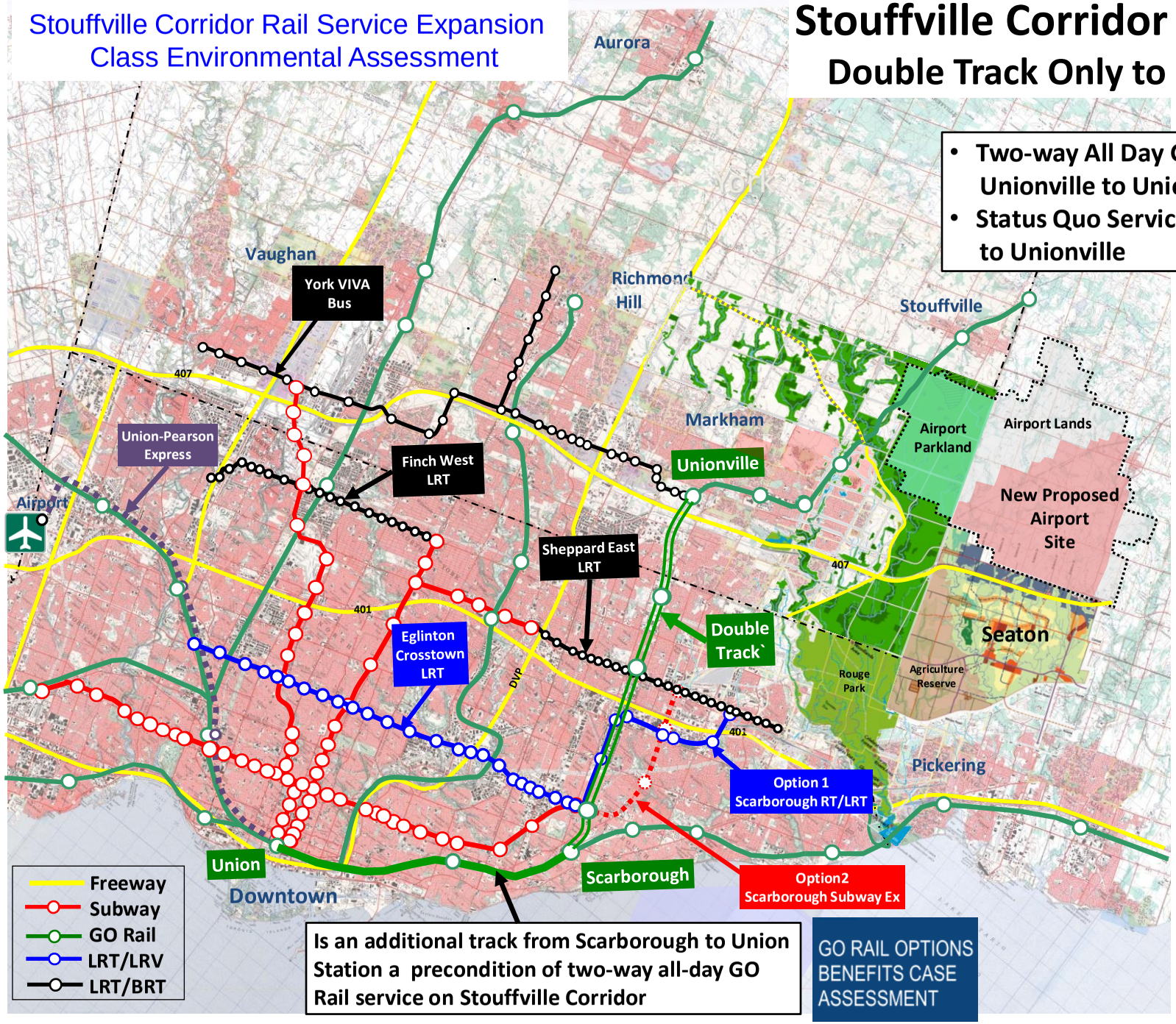
Major Mackenzie & 48 Land Owners Group

Stouffville Corridor
Rail Service Expansion
Class Environmental Assessment

Stouffville Rail Corridor Options Suggested for Consideration in EA

Stouffville Corridor Rail Service Expansion
Class Environmental Assessment

Stouffville Corridor Concept 1
Double Track Only to Unionville



- Two-way All Day GO Train Service Unionville to Union Station
- Status Quo Service Lincolnville to Unionville

Is an additional track from Scarborough to Union Station a precondition of two-way all-day GO Rail service on Stouffville Corridor

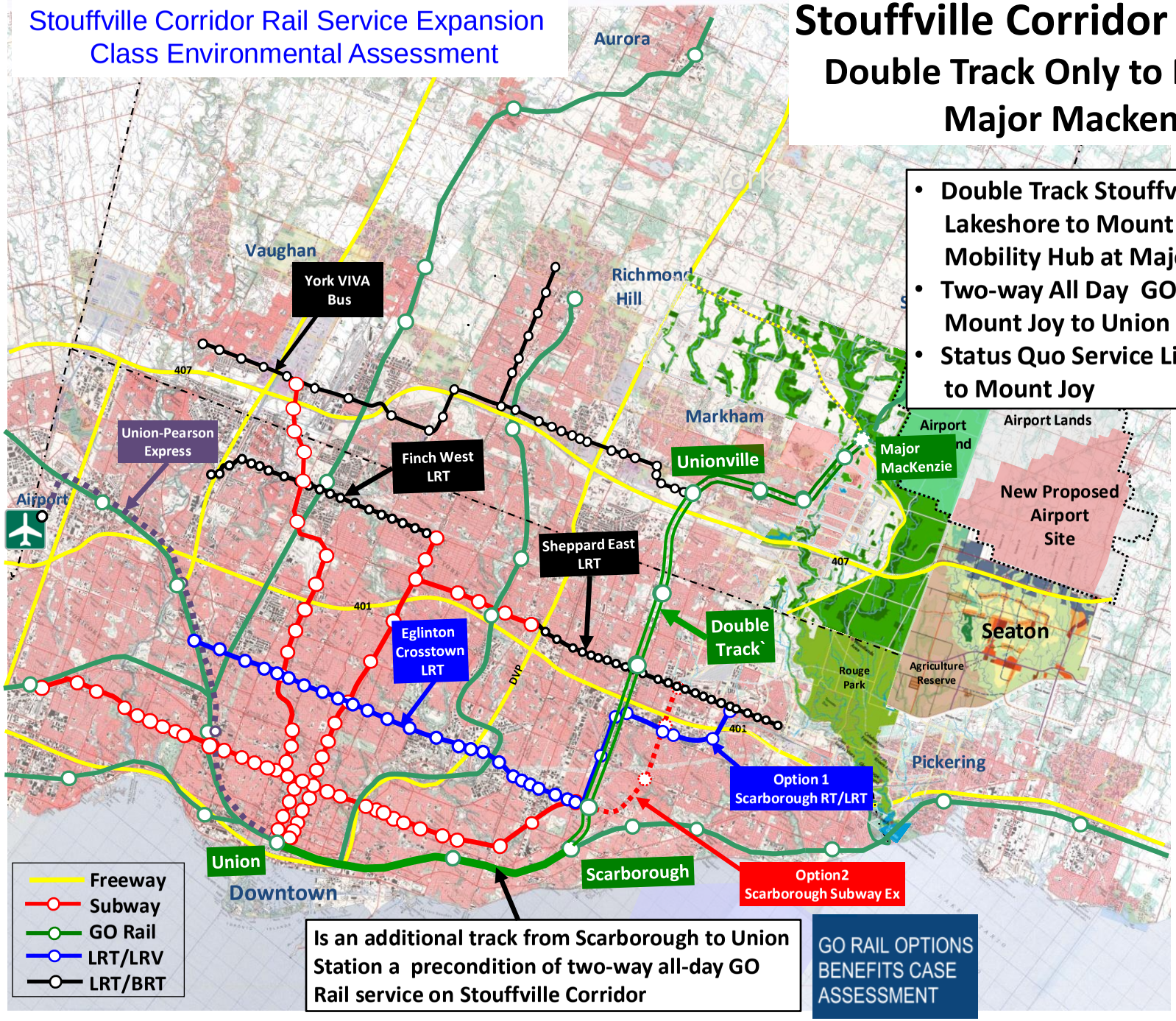
GO RAIL OPTIONS BENEFITS CASE ASSESSMENT

Stouffville Corridor Rail Service Expansion
Class Environmental Assessment

Stouffville Corridor Concept 2

Double Track Only to Mount Joy Major Mackenzie

- Double Track Stouffville Corridor Lakeshore to Mount Joy or New Mobility Hub at Major Mackenzie
- Two-way All Day GO Train Service Mount Joy to Union Station
- Status Quo Service Lincolnville to Mount Joy



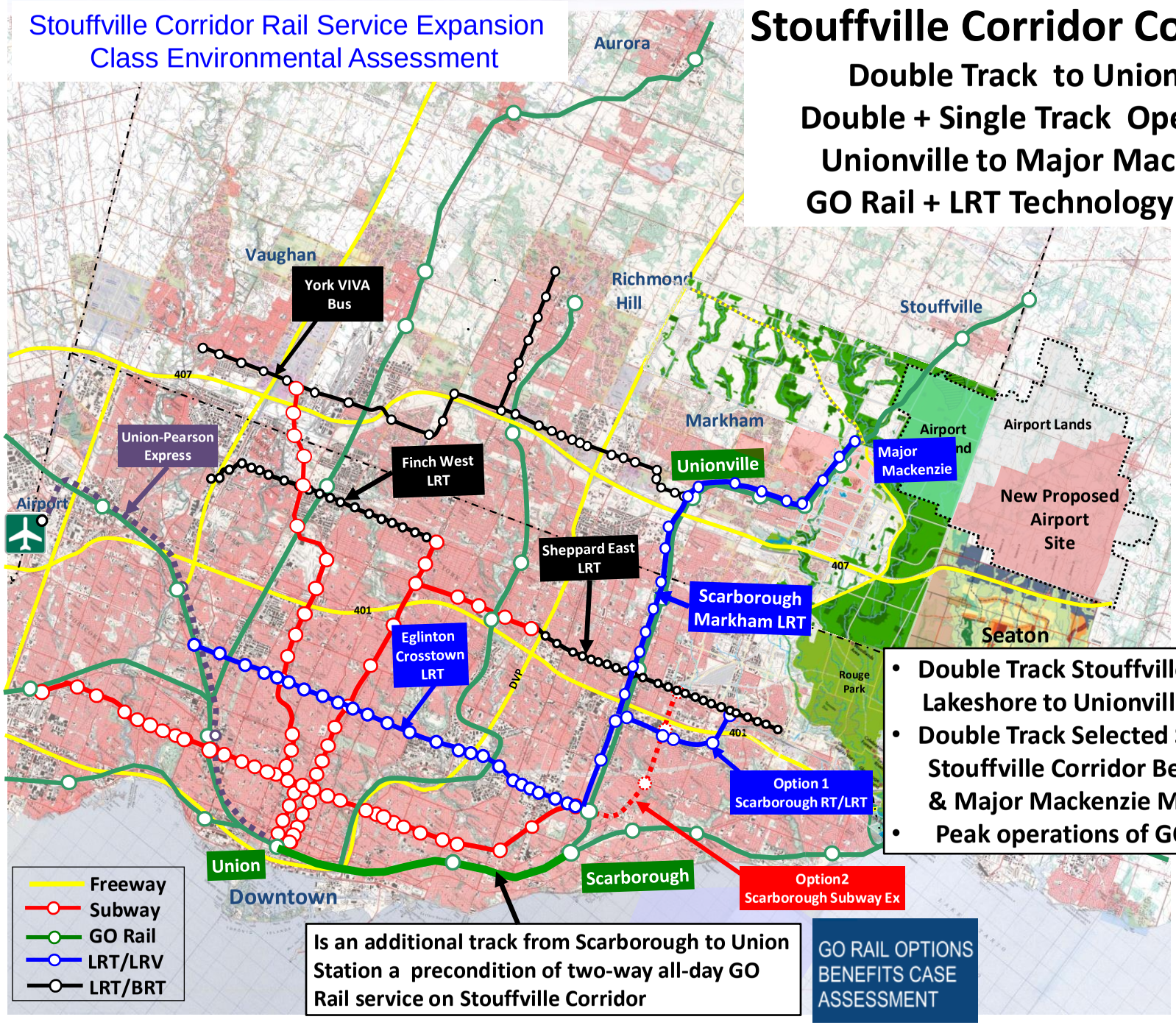
Is an additional track from Scarborough to Union Station a precondition of two-way all-day GO Rail service on Stouffville Corridor

GO RAIL OPTIONS BENEFITS CASE ASSESSMENT

Stouffville Corridor Rail Service Expansion
Class Environmental Assessment

Stouffville Corridor Concept 3

Double Track to Unionville
Double + Single Track Operations
Unionville to Major Mackenzie
GO Rail + LRT Technology Option



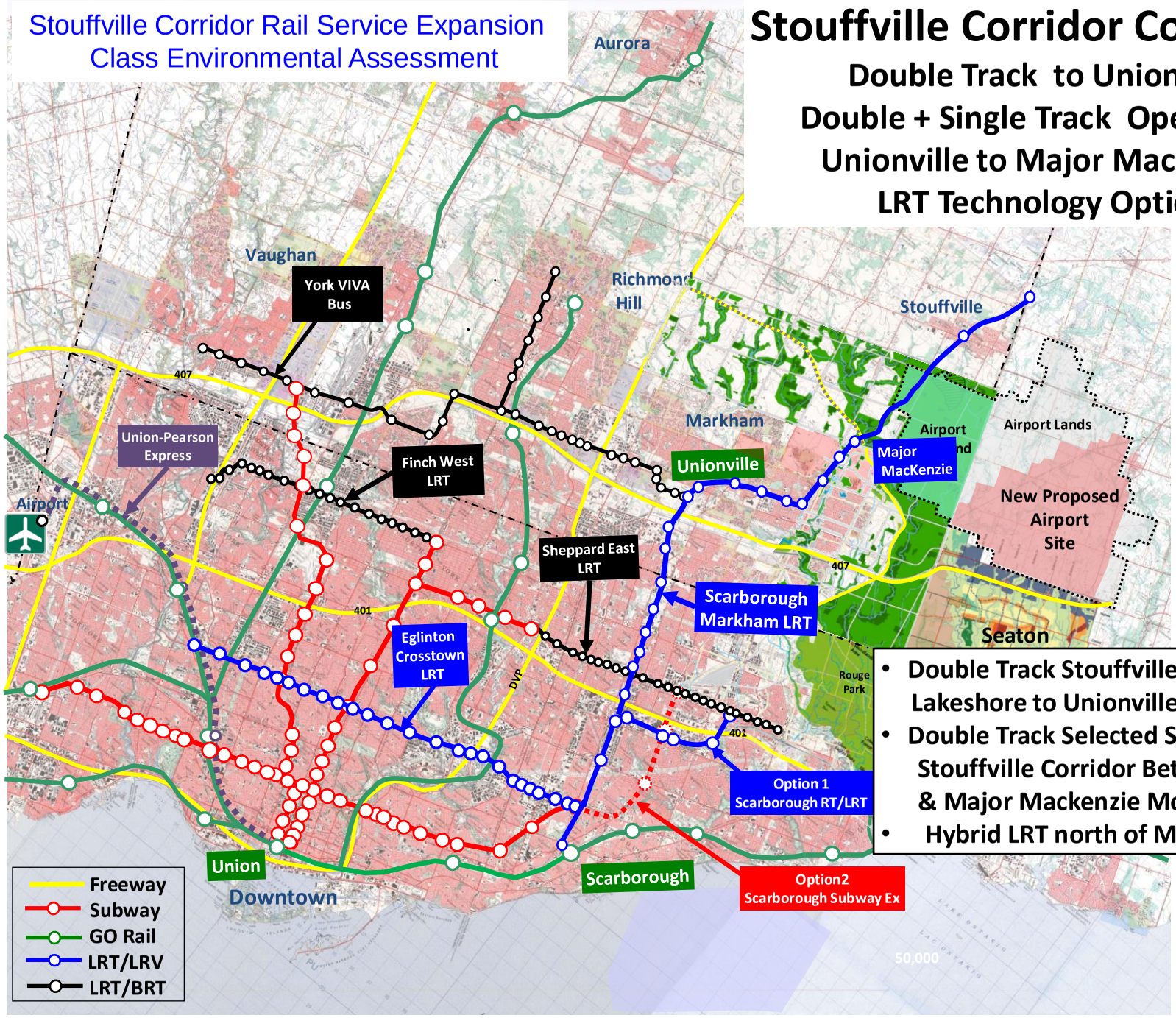
- Double Track Stouffville Corridor Lakeshore to Unionville
- Double Track Selected Sections Stouffville Corridor Between Unionville & Major Mackenzie Mobility Hub
- Peak operations of GO Rail only

Is an additional track from Scarborough to Union Station a precondition of two-way all-day GO Rail service on Stouffville Corridor

GO RAIL OPTIONS BENEFITS CASE ASSESSMENT

Stouffville Corridor Concept 4

Double Track to Unionville
Double + Single Track Operations
Unionville to Major Mackenzie
LRT Technology Option

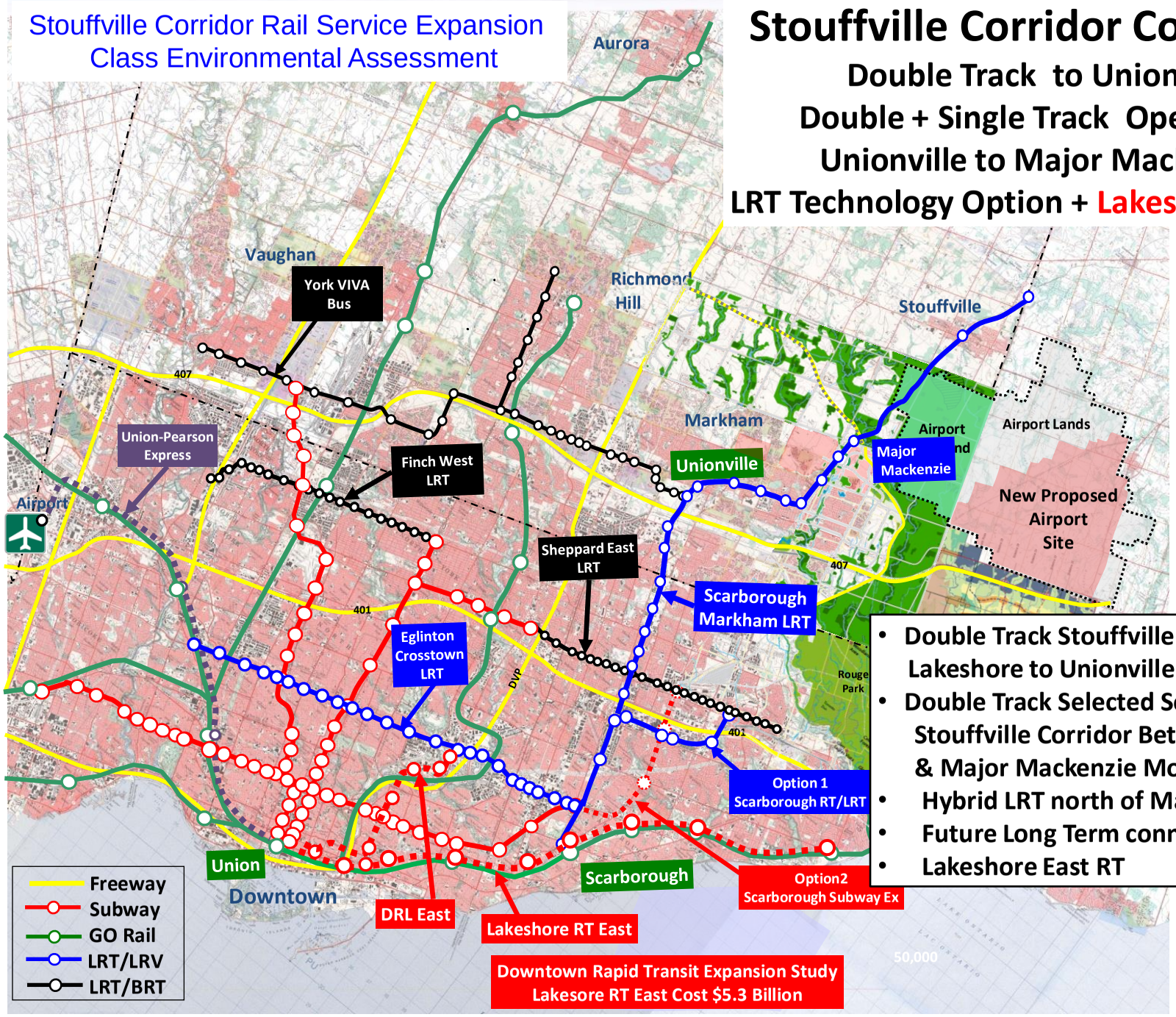


- Double Track Stouffville Corridor Lakeshore to Unionville
- Double Track Selected Sections Stouffville Corridor Between Unionville & Major Mackenzie Mobility Hub
- Hybrid LRT north of Major Mackenzie

Stouffville Corridor Rail Service Expansion
Class Environmental Assessment

Stouffville Corridor Concept 5

Double Track to Unionville
Double + Single Track Operations
Unionville to Major Mackenzie
LRT Technology Option + Lakeshore East RT



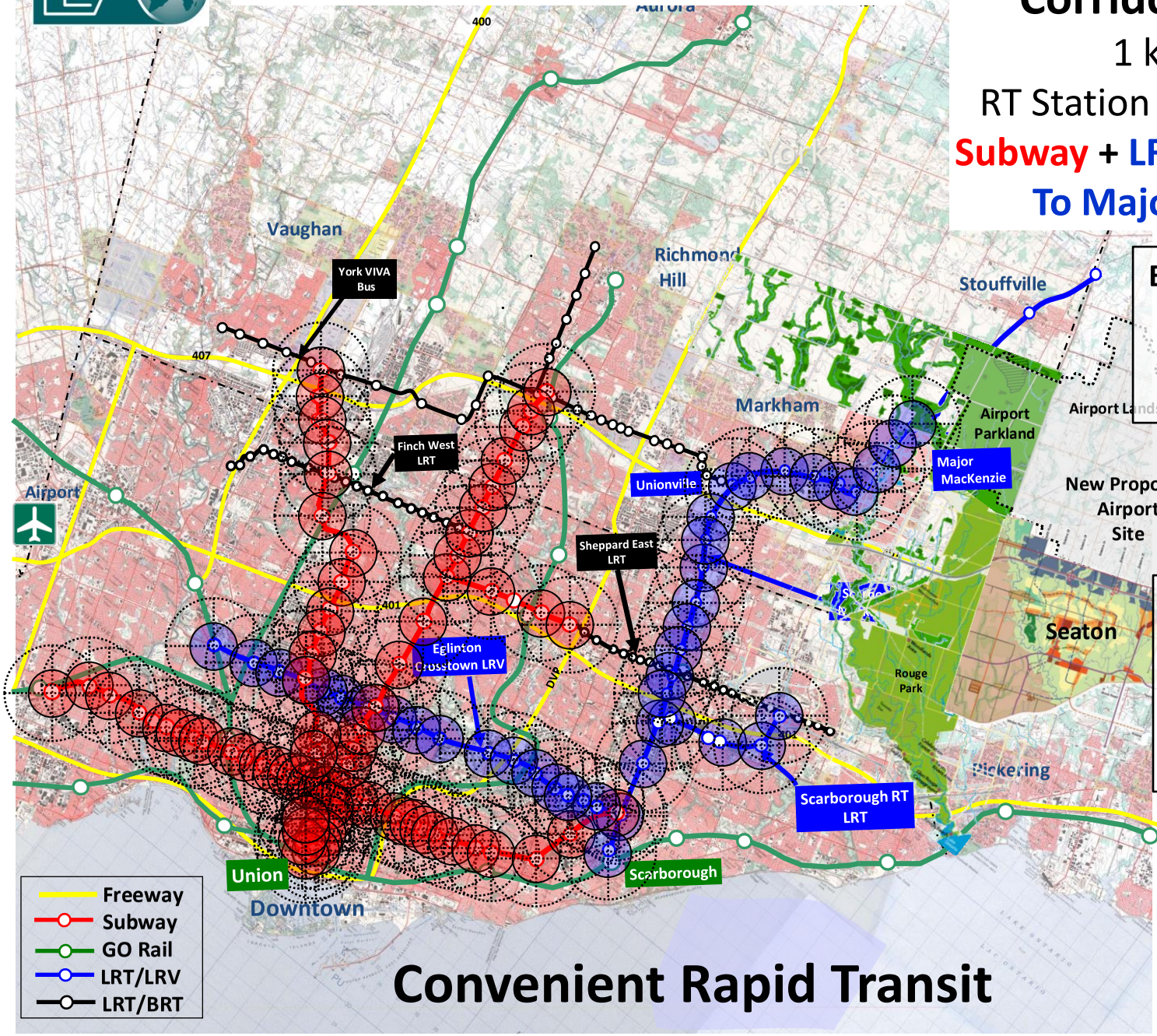
- Double Track Stouffville Corridor Lakeshore to Unionville
- Double Track Selected Sections Stouffville Corridor Between Unionville & Major Mackenzie Mobility Hub
- Hybrid LRT north of Major Mackenzie
- Future Long Term connectivity to
- Lakeshore East RT

Corridor Concept 4

1 km & 2km

RT Station Catchment Areas

Subway + LRT (Inc. Stoufffville To Major MacKenzie)



Big Move Objective
81% People Should Live Within 2 km of Rapid Transit Station

Note:
40% RT Riders Living 1 km from a RT Station Walk to Station

Convenient Rapid Transit

Major Mackenzie & 48 Land Owners Group

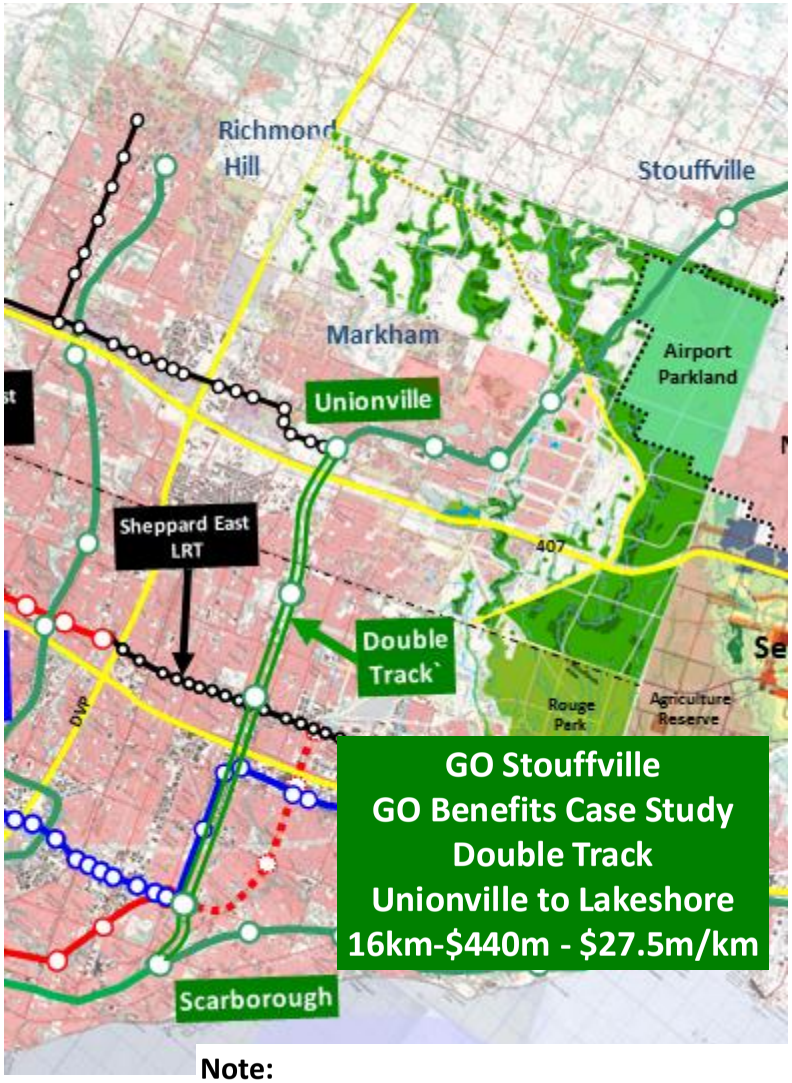
Stouffville Rail Corridor Expansion
Class EA

Preliminary Comparison of Capital Costs

Stouffville Corridor Options

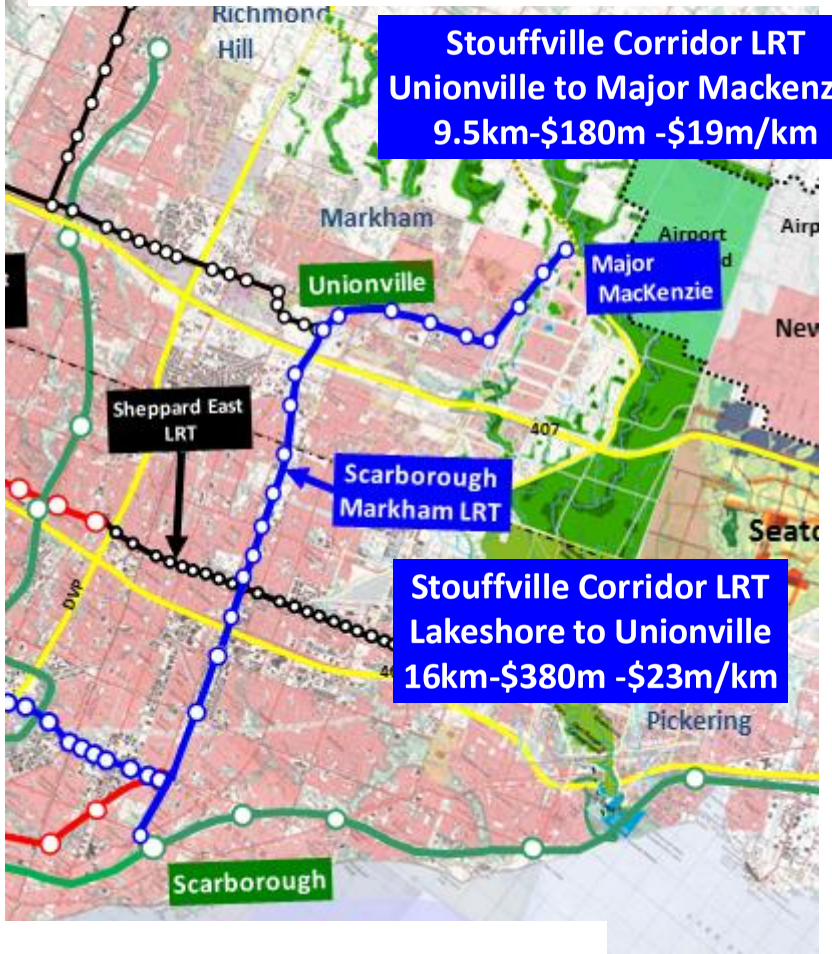
Stouffville Corridor Concept 1

Double Track Only to Unionville



Stouffville Corridor Concept 4

Double Track to Unionville
Double + Single Track Operations
Unionville to Major MacKenzie
LRT Technology Option



Note:

Capital cost estimates shown above are order of magnitude costs for comparison purposes only and are subject to more detailed planning and engineering analysis for confirmation.

The LRT Concept 4 includes provision for electrification , additional stations and LRT vehicles.

The cost for Concept 4 (GO Trains) does not include for electrification or additional stations

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Stouffville Rail Corridor Expansion
Class EA

Transit Technology Options

METROLINX

New Metrolinx LRV

Bombardier LRT Vehicle Contract
$770 million
182 vehicles

Max. speed ±80kph
Operating speed depends on:
- **station spacing**
- **boarding and alighting times**
- **permitted cruising speed**
- **track exclusivity and design geometry**

Same as Railway

Application	Light Rail Transit
In-service date	2014
Fleet size	182
Length	31 m
Width	2.65 m
Articulated modules	5
Floor height	100% low floor
Wheelchair Accessibility	Yes; level with platform, using automated load-levelling technology
Doors	8 (4 on each side)
Operator positions	2
Operational mode	Bidirectional
Power supply	Overhead pantograph 750 V
Track gauge	1.435 m (standard gauge)
Maximum grade	5-6%
Turning radius	25 m
Capable of multicar train operation?	Yes, up to 3
Capable of automated running?	Yes, on segregated tracks. Eglinton and Scarborough LRVs equipped.
Manufacturer	Bombardier
Canadian content	Minimum 25%

Source:
Abstracted from Metrolinx data sheet.
Additional comments by LEA

Heavy Rail - GO Train
Diesel Locomotive
Rate of Acceleration /Braking
0.4m/sec²

Advantages
High train capacity lower labour costs
Utilizes available railway corridor capacity
Comfortable for longer distance commuter travel
Disadvantages
Not compatible with corridors having close (1 km) station spacing
Difficult to match capacity/demand for all day two-way urban transit
Corridor noise impacts (locomotive and whistles)

Heavy Rail - DMU/EMU
Diesel or Electrical Multiple Unit
Rate of Acceleration /Braking
0.7m/sec²

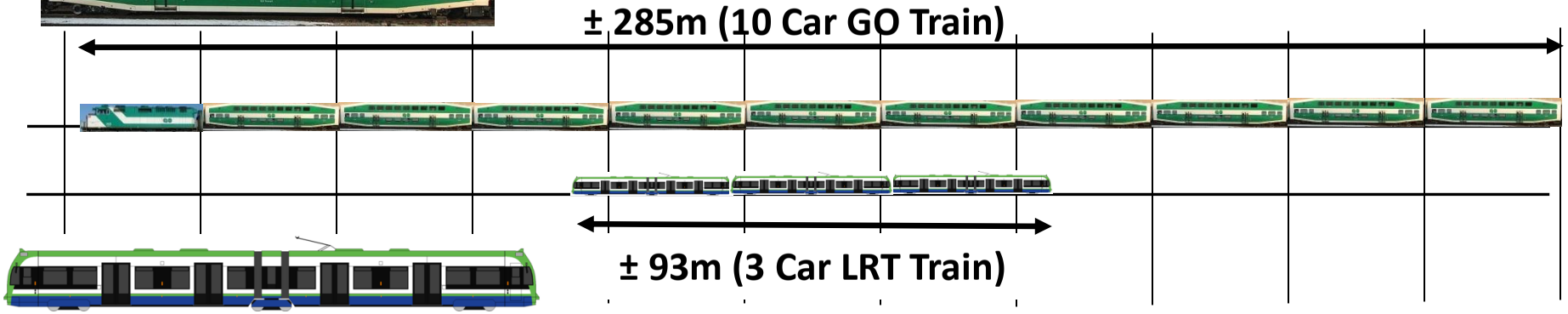
Light Rail - LRT/LRV
Electrical
Rate of Acceleration /Braking
1.3m/sec²
Three times as fast as GO Trains

Advantages
Higher rates of acceleration/braking supports closer station spacings
Utilizes available railway corridor capacity
Accommodates medium and longer distance commuter travel
Reduced corridor noise impacts
Readily resized to provide efficient all day two-way urban transit
Potential to avoid costly road/rail grade separations
Disadvantages
Lower capacity trains means higher labour costs but better than buses

Transit Technology Comparisons

GO Train

Train Every
20 min
4800 pass./hr



Train Every
6 min
4800 pass./hr

LRT

Major Mackenzie & 48 Land Owners Group

Proposals for Consideration by Council

- City Council has passed a resolution to formerly request that GO Transit should expand the scope and terms of reference of the Stouffville Rail Corridor EA (June 26 2013)

- The Land Owners Group (as an interested stakeholder) has also made a formal submission to GO Transit to expand the geographical and technical scope of the EA Study (July 18 2013), to comply with the requirements of the EA process and the stated goals and objectives of Metrolinx

Major Mackenzie & 48 Land Owners Group

Proposals for Consideration by Council

- It is in the best interests of the City of Markham and affected Stakeholders to promote the optimum use of the Stouffville Rail Corridor for Urban Rapid Transit since it should planned as a strategic component of an Integrated & Comprehensive GTA wide Urban Rapid Transit Network

- The Major Mackenzie & 48 Land Owners Group are prepared to provide cooperative technical and transportation planning expertise to jointly pursue the above objectives with Metrolinx/GO Transit

Major Mackenzie & 48 Land Owners Group

Proposals for Consideration by Council

- Council consider holding a separate working session to review the planning, economic and environmental benefits that have been developed in support of the alternative corridor concepts as outlined in this presentation