



**407 TRANSITWAY
FROM EAST OF HIGHWAY 400 TO KENNEDY ROAD**

GWP 252-96-00

Planning & Preliminary Design

Public Information Centre #1

The purpose of the study is to:

- Design a high-speed cross-regional transit facility to be constructed on a separate right-of-way that parallels Highway 407 ETR. The facility is to include:
 - Transit runningways;
 - Stations with platforms/enclosures including amenities such as Passenger Pick Up/Drop Off (PPUDO), bus transfer bays, park-and-ride areas, passenger information and fare collection systems;
 - An Operations and Maintenance Facility to accommodate an initial bus rapid transit (BRT) fleet with provision for future conversion to light rail transit (LRT); and,
 - Local car and bus access to and egress from the stations.

- Develop a cost-effective, safe and innovative preliminary design and construction staging for the Transitway, for BRT service to standards permitting conversion to LRT;

- Recommend a phased implementation strategy for this first section of the bus Transitway; and,

- Obtain environmental approval to allow construction of the facility including any mitigation required to address impacts of the facility.

Background:

Since the early 1970s, the Ministry of Transportation (MTO) has made commitments to protect a transportation corridor to accommodate a fully grade separated Transitway facility in a separate right-of-way in the Parkway Belt West Plan area. This facility has been further defined by later studies in terms of location within the Parkway Belt West (from Hamilton to Highway 48 in Markham), its extent, type of technology and service.

Policy Context

Provincial Policy Statement

Ontario's Provincial Policy Statement (2005) promotes the efficient use of existing and planned infrastructure and connectivity within and among transportation systems and modes which cross jurisdictional boundaries.

In addition, it states that the land use pattern, density and mix of uses should be promoted that minimize the length and number of vehicle trips and support the development of viable choices and plans for public transit and other alternative transportation modes, including commuter rail and bus.

"Places to Grow" -Growth Plan for the Greater Golden Horseshoe

Ontario's Growth Plan for the Greater Golden Horseshoe (The Growth Plan) (2006) under the Places to Grow Act, 2005 presents a vision for managing growth in the region to the year 2031. The Plan provides the framework investment in the GGH so that existing infrastructure and future investment are optimized to serve growth.

The policy directions for intensification and compact urban form identify public transit as a first priority for transportation infrastructure planning and to reduce reliance on any single mode by encouraging the most financially and environmentally appropriate mode for trip-making; multi-modal access to job, housing, schools, cultural and recreation opportunities, and goods and services; and provision for the safety of system users.

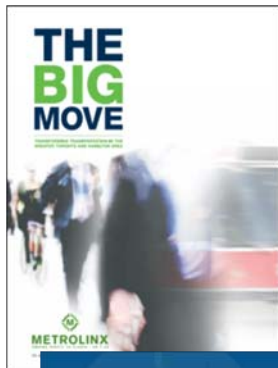


Background & Policy Context

MoveOntario 2020

In 2007, the Province of Ontario announced “MoveOntario 2020”, a provincial plan to fund 52 transit projects in the Greater Toronto Area (GTA) and Hamilton over a 12-year period starting in 2008.

Its primary goal is to create a modern rapid transit system that moves people and goods quickly and efficiently by improving the transit services of Southern Ontario’s largest transit providers. The province identified Highway 407 as one of its priority corridors for new rapid transit initiatives in the GTA.



The Big Move: Transforming Transportation in the Greater Toronto and Hamilton Area (GTHA)

On November 28, 2008, the Metrolinx Board of Directors adopted this Regional Transportation Plan (RTP).

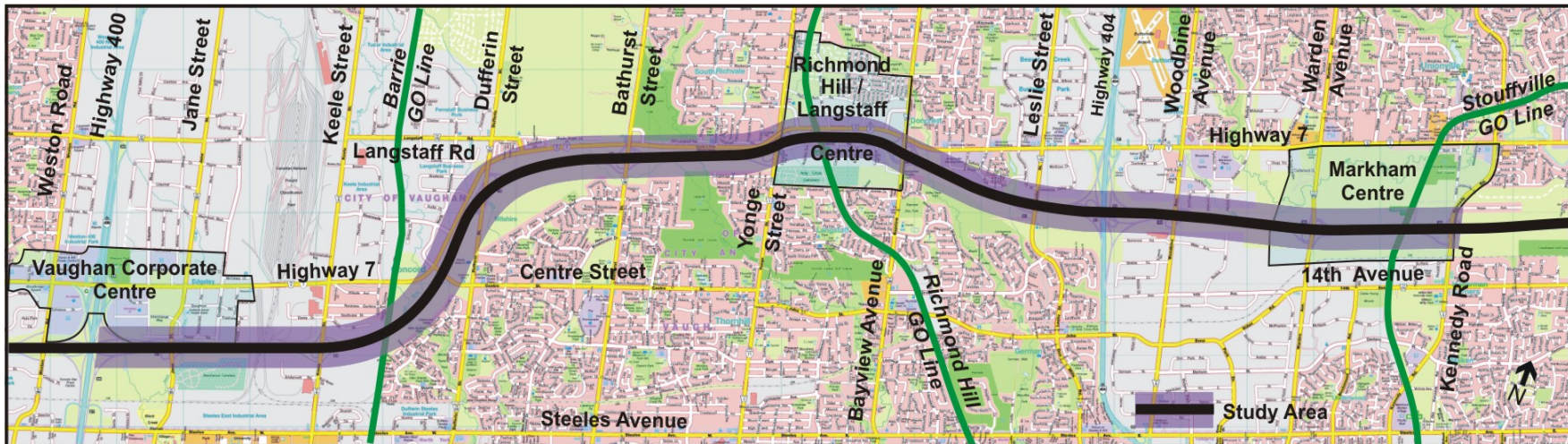
The Big Move recommends the construction of over 1,200 km of rapid transit — more than triple what exists now — so that over 80 percent of residents in the region will live within two kilometres of rapid transit, with an emphasis on areas with large senior and low-income populations who rely on transit to get around daily.

It has identified the 407 Transitway from Pearson Airport to Kennedy Road in Phase Three of its investment plan to be completed between 2023 and 2033.



Study Area

The study area extends for 23 kilometres through York Region along the Highway 407 corridor from east of Highway 400 in the City of Vaughan, through the Town of Richmond Hill, to Kennedy Road in the Town of Markham. The area is located within the Parkway Belt West Plan limits, a multi-purpose corridor providing rights-of-way for freeways, regional transit, electric power transmission lines, utilities and public open space.



Key Plan of Study Area

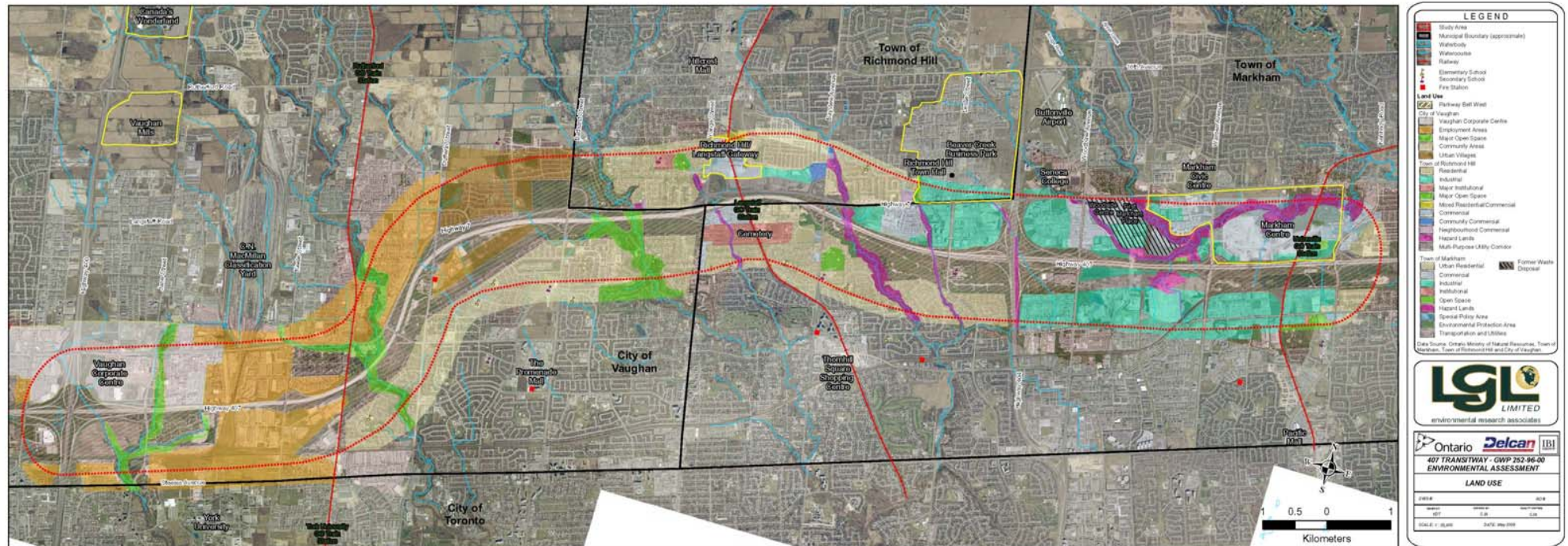
This segment has been selected as the priority section of the 150 km long overall corridor from Burlington to Highway 35/115, because it:

- supports and connects the newly developed Markham, Richmond Hill/ Langstaff and Vaughan Corporate centres (Urban Growth Centres)
- provides connections with three GO rail lines; Barrie , Richmond Hill and Stouffville
- attracts higher potential ridership and therefore a higher chance for early success
- has high walk-in potential given the land use at Bayview, Leslie, Warden, Kennedy and the 404 Business Park
- is long enough to make it a viable, stand alone section
- connects with YRT, Viva and the future Spadina and Yonge Subways
- can connect with Highways 400 and 404.

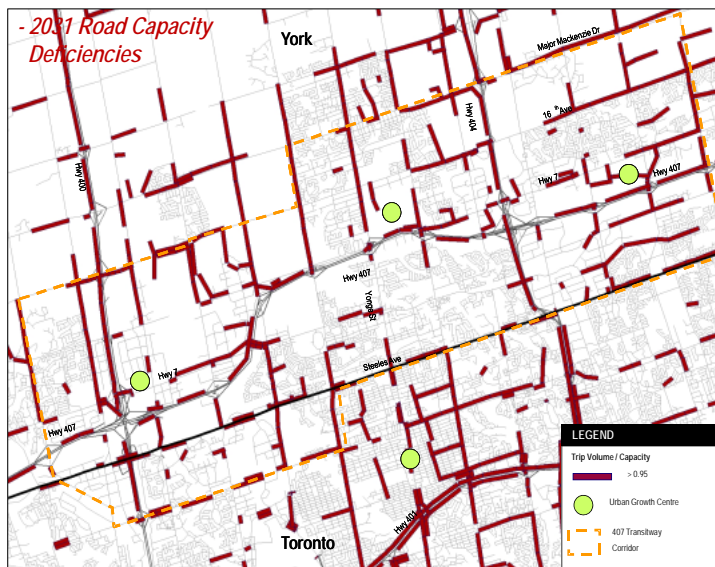
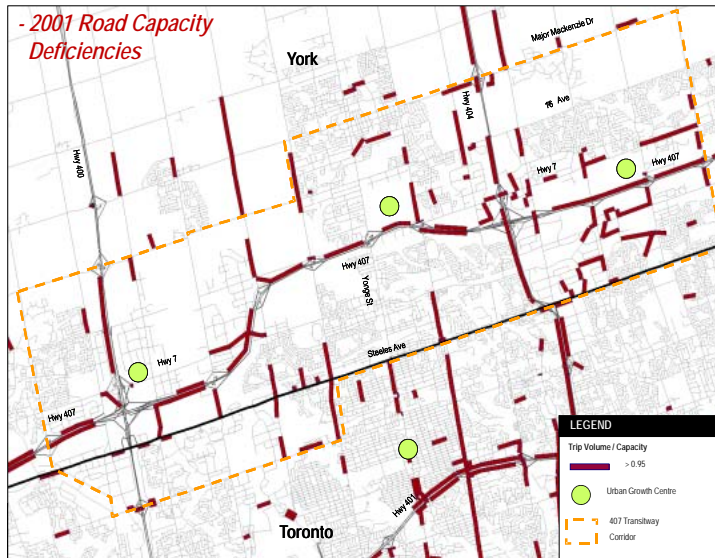
Existing Conditions – Natural Features



Existing Conditions – Land Use



Transportation Needs



- The study area's relatively low density automobile-oriented development results in severe traffic congestion leading to increasing delays, air pollution, greenhouse gas emissions and socio-economic impacts. By 2031, future travel demand is expected to increase by almost 50%.
- High-order transit is an integral element of the Greater Golden Horseshoe Growth Plan developed to support social, economic and environmental objectives for this area. Land use intensification recommended by the Growth Plan assumes an improved transit alternative in the 407 corridor.
- As a response, a 407 Transitway offers the opportunity to enhance east-west cross-regional mobility and alter commuting patterns across the Greater Toronto Area.
- In the short-term, a 407 Transitway will integrate with the existing/planned transportation network, and in the long-term, will change travel patterns thus supporting local and provincial planning objectives.
- In its final form, a 407 Transitway would transform the existing, predominantly radial system of high-order regional transit facilities into a network configuration, thereby expanding travel choices as well as reinforcing the utilization of the existing transit system.

Transportation Alternatives Considered

A. Do Nothing –Base Case Scenario

Assumes committed improvements have been implemented (VIVA BRT, MoveOntario 2020)

B. Additional Transit Improvements: Operational Improvements

1. Increase frequency of service, number and capacity of vehicles, origins/destinations served, etc.

Operational & Infrastructure Improvements

1. Improvements to existing running ways, stations, maintenance and storage facilities (i.e. GO Transit, VIVA, TTC, etc.)

C. New Transit Facility

Construct New Transit System along 407 Corridor

1. High speed transit facility that is fully grade-separated
2. Partially grade-separated transit facility (includes at-grade and mixed operations)

D. Transit Infrastructure Addition Along

Other Arterial Corridors (e.g. Steeles & Major Mackenzie)

1. High speed transit facility that is generally grade-separated
2. Transit facility that is partially grade-separated and includes at-grade and mixed operations

Highway 7

1. High speed transit facility that is fully grade-separated
2. Transit facility that is partially grade-separated and includes at-grade and mixed operations



Transportation Solution Objectives



Transportation

- Enhance east-west cross-regional mobility >5-10 km
- Offer a faster, safer and more efficient way of moving people
- Maximize utilization of protected 407 Corridor
- Improve integration with regional transportation network
- Ability to increase capacity to meet additional travel demand



Land Use

- Improve accessibility to existing/planned major urban centres/nodes
- Increase support for a more compact urban structure



Natural and Social Environments

- Minimize adverse effects on the natural environment
- Minimize adverse effects on the social environment
- Reduce reliance on energy resources, reduce automobile dependence and gas emissions

Costs

- Increased cost-effectiveness of moving people in corridor

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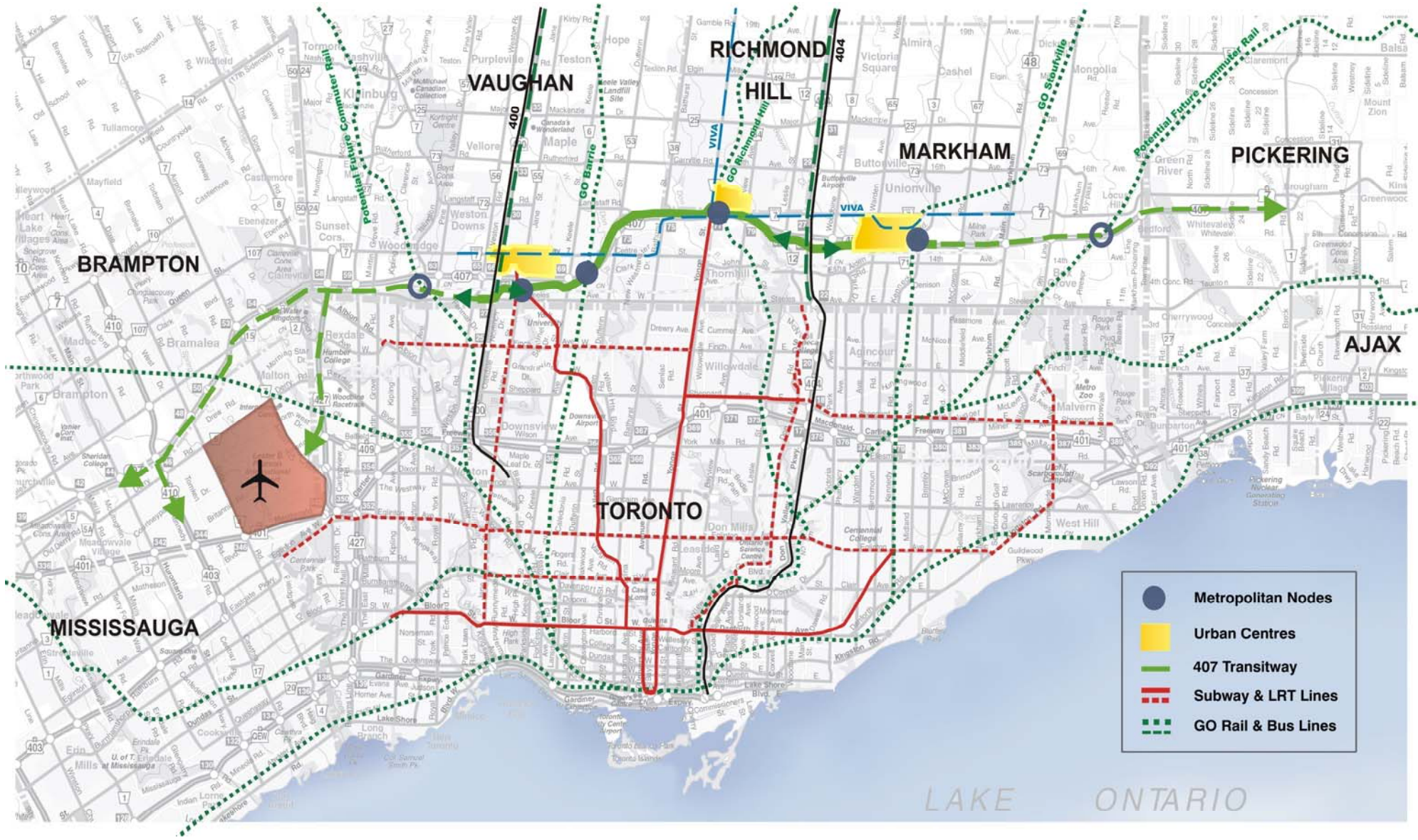


Recommendation - A 407 Transitway

A new high-speed, fully grade-separated transit facility (Transitway) along Highway 407 is recommended because it is the transportation alternative most responsive to the evaluation objectives:

- It enhances east-west cross-regional mobility for trips longer than 5-10 km
- It offers a faster, safer and more efficient way of moving people
- It maximizes utilization of the protected 407 corridor
- It can be integrated well with the regional transportation network
- It is able to increase capacity to meet additional travel demand
- It will provide improved accessibility to existing and planned urban growth centres
- It has high potential to reduce congestion growth and thus enhance community access and quality of life
- It has the potential to significantly reduce single-occupancy vehicle use
- It minimizes adverse effects on the social and natural environments

Role of 407 Transitway in the GTA



How Station Locations and Route Alternatives Were Identified

Station nodes were defined as:

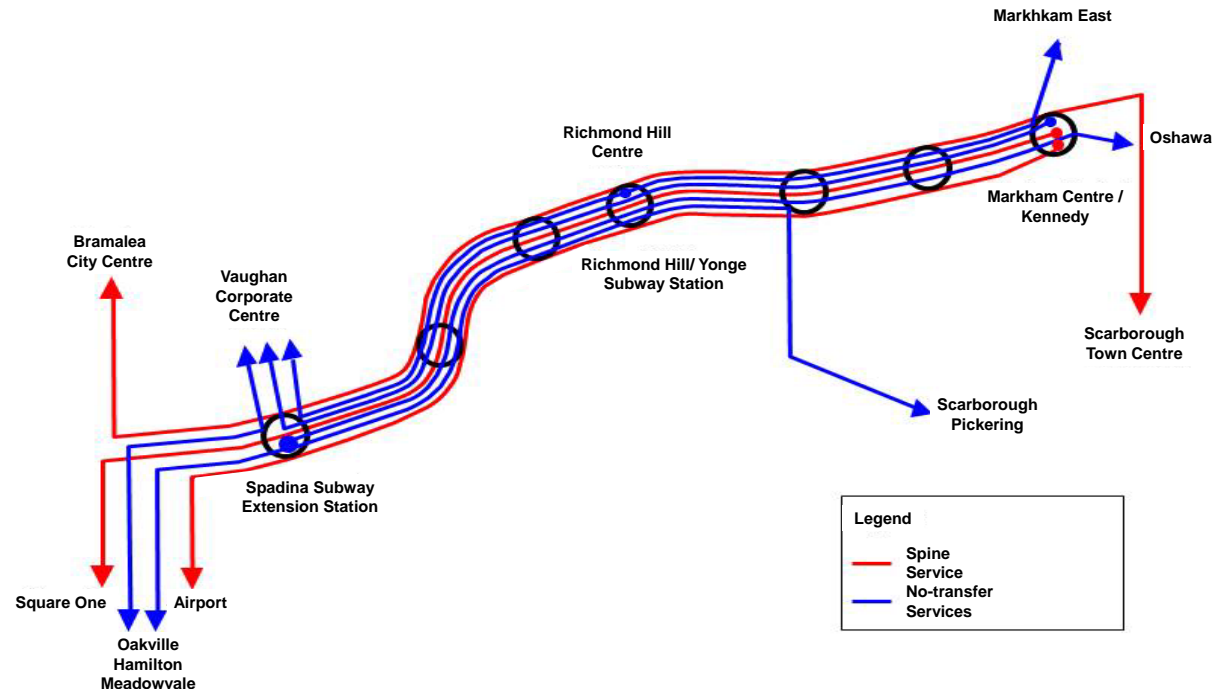
- locations within 500 m of an urban centre
- connections to existing and future inter-regional transit networks; and
- crossings of major north-south arterial roads

Initially, eleven station nodes were identified and assessed against the Transitway objectives. A sensitivity analysis (modeling) indicated that seven stations within the central segment of the 407 Transitway will achieve the 407 Transitway objectives.

SELECTED STATION NODES	FUNCTION
➤ Jane Street	Connects with TTC Spadina Subway and serves the Vaughan Corporate Centre
➤ GO-Barrie	Connects with future GO Commuter Railway Line
➤ Bathurst Street	Provides 'park and ride' capacity near the Yonge Street mobility hub
➤ Yonge Street - Richmond Hill / Langstaff Centre	Connects with the TTC Yonge Street Subway and Richmond Hill GO Line
➤ Leslie Street	Serves the Beaver Creek Business Park
➤ Woodbine Avenue/Rodick Road	Provides 'park and ride' , more uniform station spacing and access to the West Markham Centre
➤ Kennedy Road – Markham Centre	Connects with the Stouffville GO Railway Line and serves the Markham Centre

Transitway Ridership Forecasting Method

- The Greater Golden Horseshoe Travel Demand Model developed in 2008 for MTO was used;
- Transitway Service Characteristics Assumed For Ridership Forecasting:
 - Bus-based technology will be operated initially to provide routing flexibility;
 - Two primary types of service will be offered:
 1. A base spine service – Services that operate exclusively on the Transitway, including some express services
 2. One-seat ride (No-transfer) services – Direct services between major nodes or residential areas and other major employment nodes or intermodal stations. Routes comprised of portions both on and off of the Transitway and include both express and all-stop service along the Transitway (i.e., interlining)



- The Transitway infrastructure design will allow buses to achieve an average speed of 65 km/hour including station stop time;

Transitway Ridership Forecasting Results (7 stations)

<ul style="list-style-type: none"> •2031 Weekday Trips A.M. peak hour 	<p>70,000-80,000 13,800 boardings</p>
<ul style="list-style-type: none"> •2031 Peak hour ridership at peak load point (immediately east of Yonge Street) in peak direction(WB) 	<p>5,400</p>
<ul style="list-style-type: none"> •Riders from 407 Transitway transferring to: 	
<ul style="list-style-type: none"> ➤Yonge Subway in AM peak period i.e., 30% of all subway boardings at Yonge/RHC station 	<p>4,600 (over 80% of 407TW arrivals)</p>
<ul style="list-style-type: none"> ➤GO Richmond Hill Line 	<p>200 (approx. 20% of GO boardings at RHC)</p>
<ul style="list-style-type: none"> •Riders from 407 Transitway transferring to: 	
<ul style="list-style-type: none"> ➤Spadina Subway in AM peak period i.e., 50% of all subway boardings at Jane/407 station 	<p>3,300 (over 90% of 407TW arrivals)</p>

•AM Peak-hour, Peak Point, Peak Direction Passenger Volumes by Segment:

- Markham Centre (Kennedy Road) to Yonge Street
WB: **4,500-5,400**
- Jane Street (Spadina Subway) to Yonge Street
WB: **2,200-2,500**
- West of Jane Street (Spadina Subway)
1,400-2,200
- East of Kennedy Road (Markham Centre)
1,300-3,900

- Proportion of riders accessing Transitway by:
 - Other transit: **81%** - Walk-in: **7%**
 - Park-and-ride : **12%**

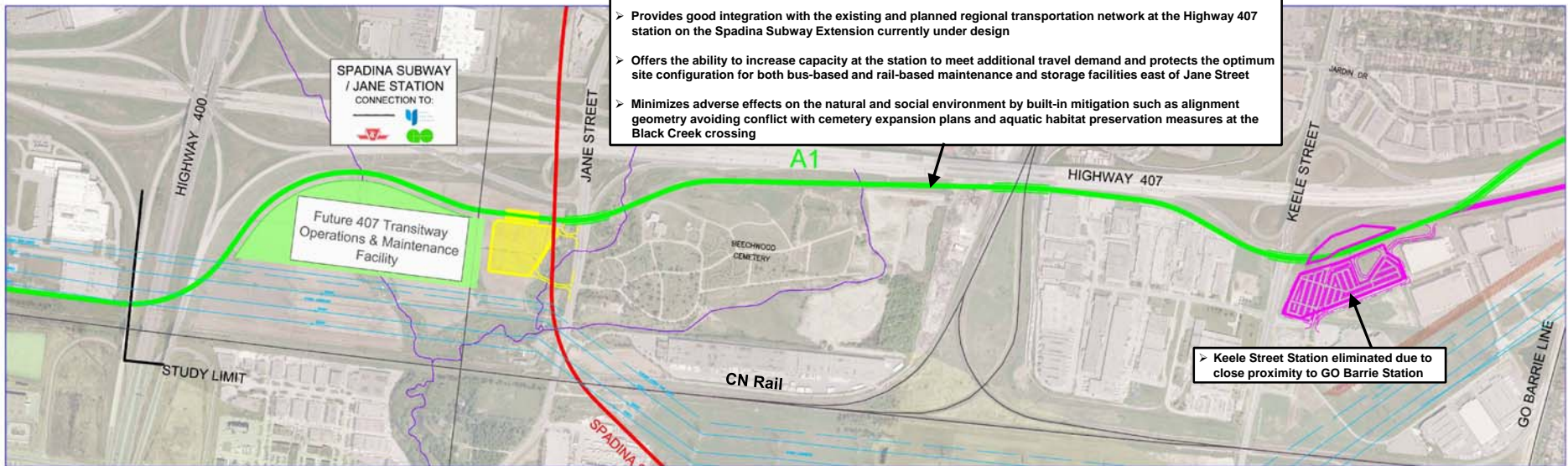


2031 AM Peak hour passenger volumes by segment

Route and Station Alternatives (1 of 3)

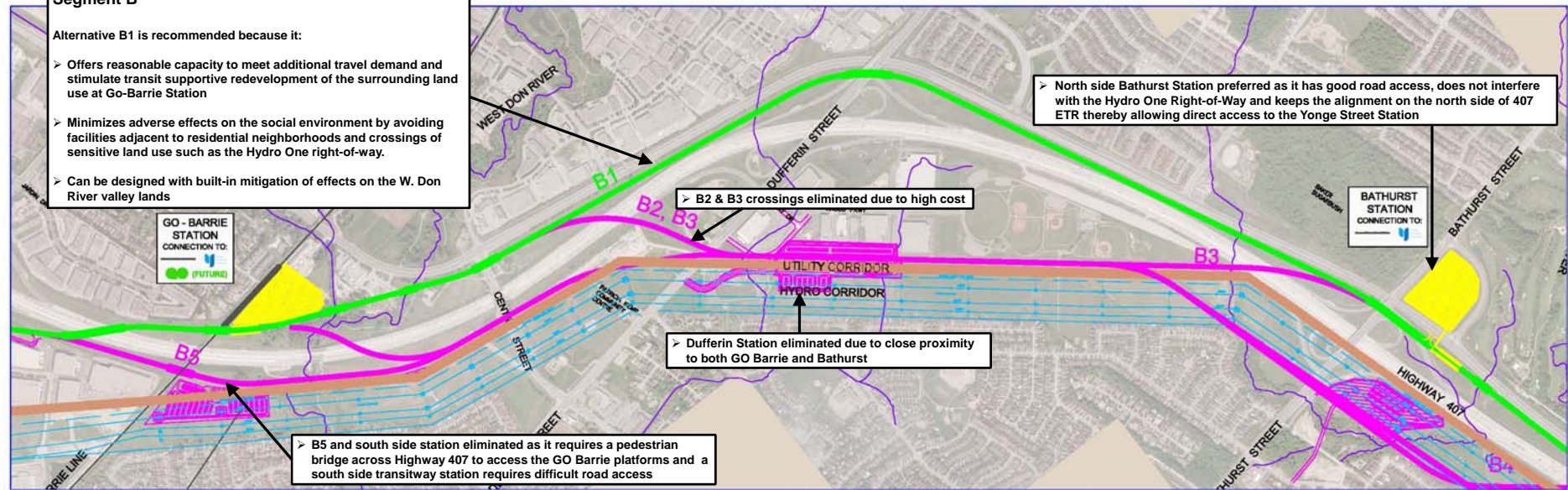
Segment A
 The only candidate route alternative, A1 is recommended because it:

- > Provides good integration with the existing and planned regional transportation network at the Highway 407 station on the Spadina Subway Extension currently under design
- > Offers the ability to increase capacity at the station to meet additional travel demand and protects the optimum site configuration for both bus-based and rail-based maintenance and storage facilities east of Jane Street
- > Minimizes adverse effects on the natural and social environment by built-in mitigation such as alignment geometry avoiding conflict with cemetery expansion plans and aquatic habitat preservation measures at the Black Creek crossing

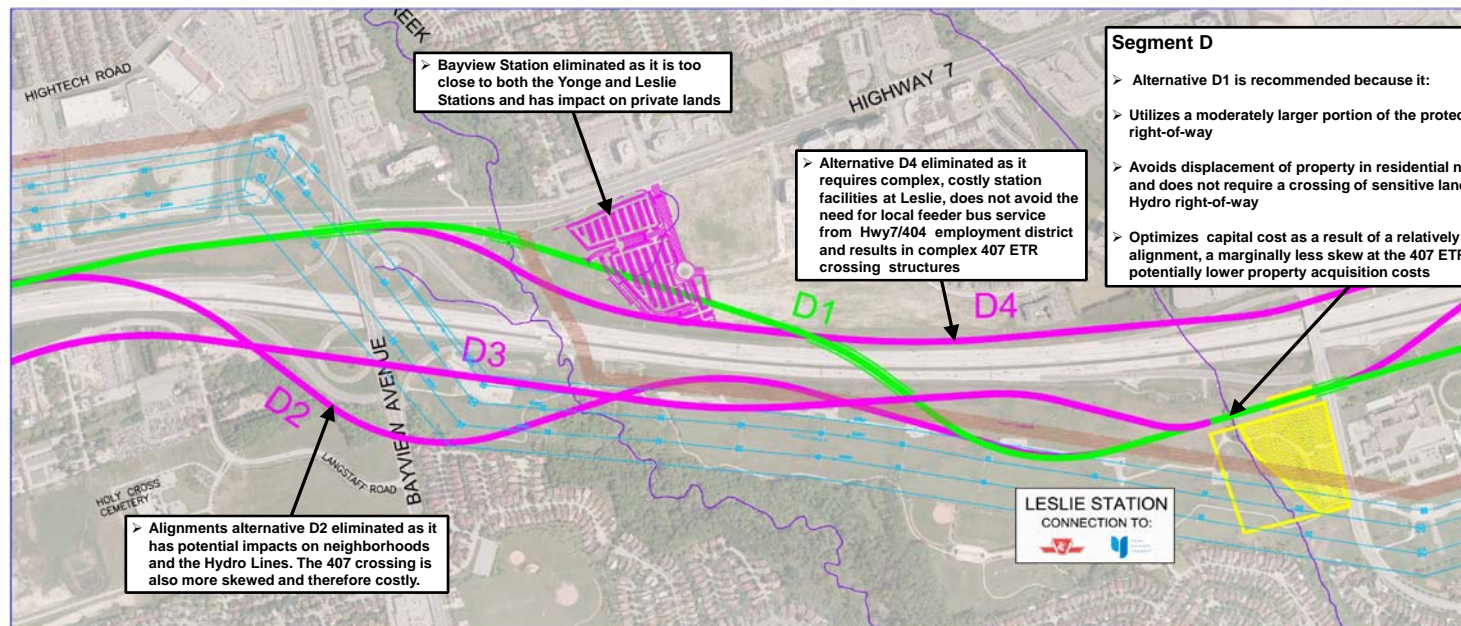
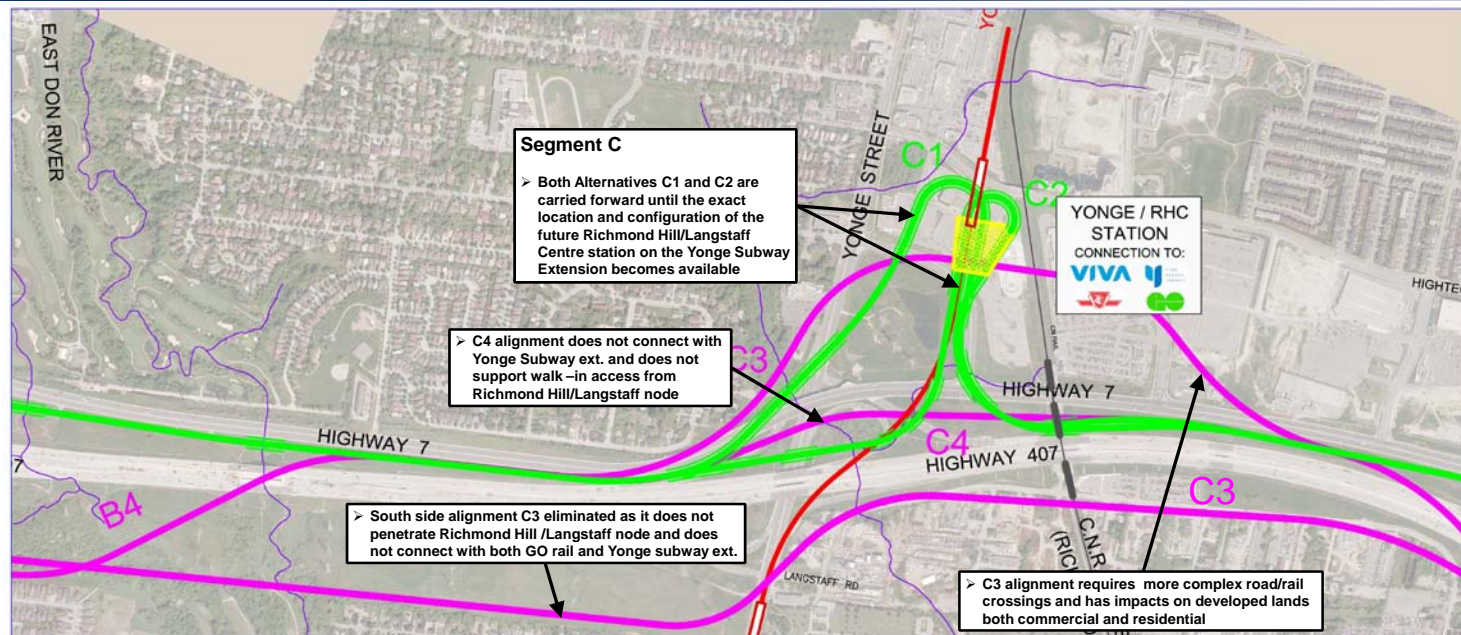


Segment B
 Alternative B1 is recommended because it:

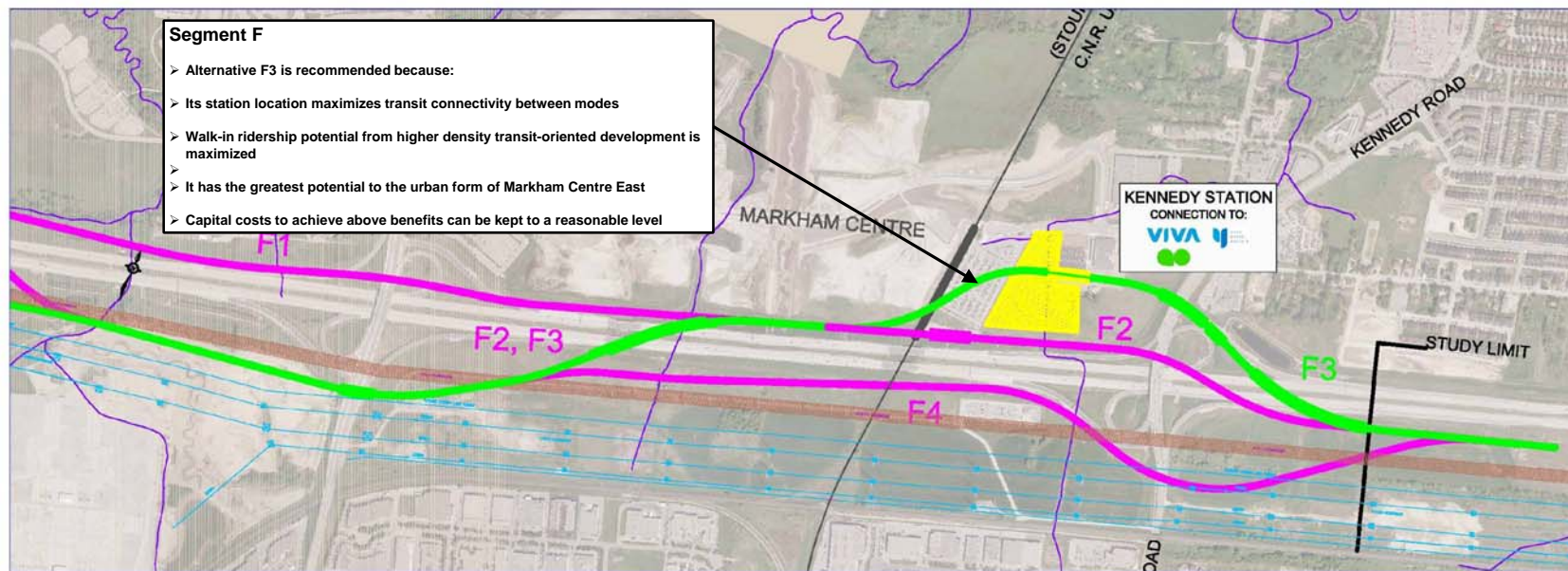
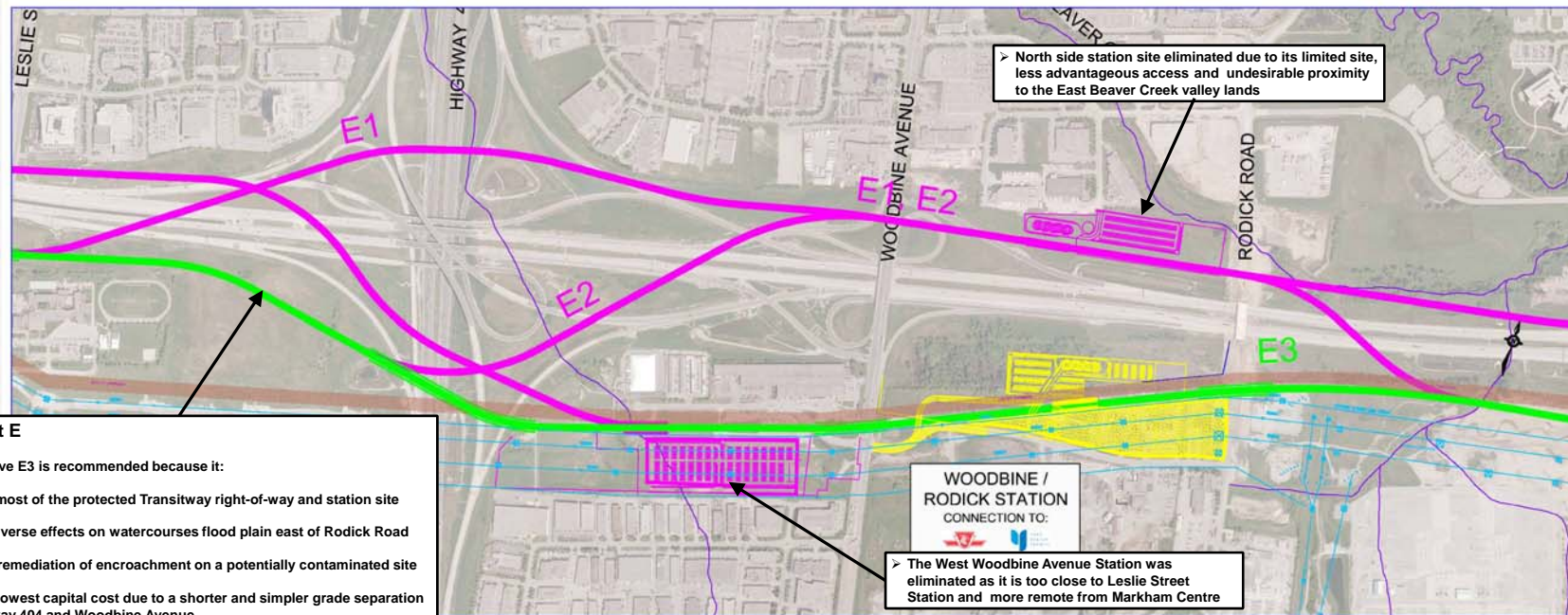
- > Offers reasonable capacity to meet additional travel demand and stimulate transit supportive redevelopment of the surrounding land use at Go-Barrie Station
- > Minimizes adverse effects on the social environment by avoiding facilities adjacent to residential neighborhoods and crossings of sensitive land use such as the Hydro One right-of-way.
- > Can be designed with built-in mitigation of effects on the W. Don River valley lands



Route and Station Alternatives (2 of 3)

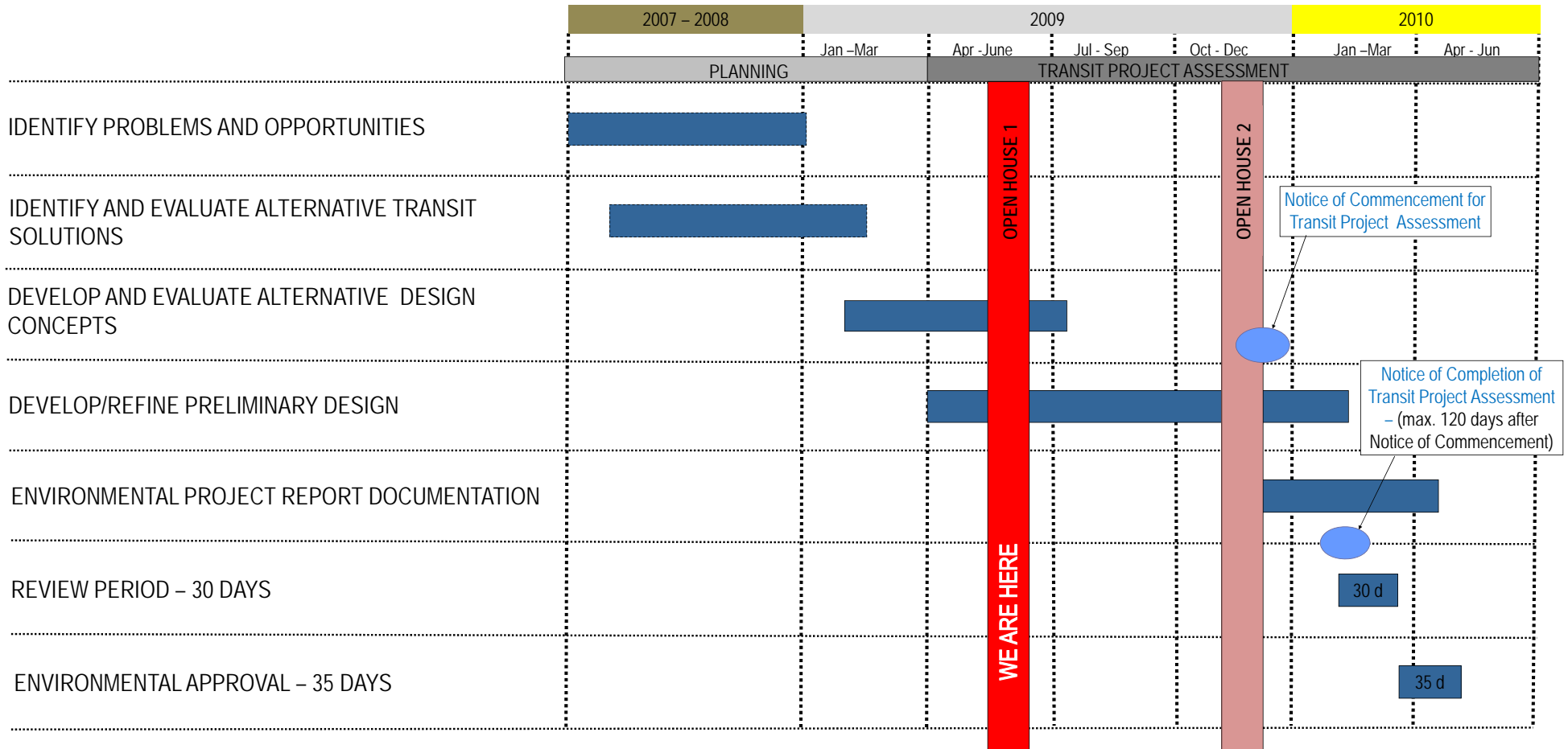


Route and Station Alternatives (3 of 3)



Study Schedule/Process

MTO is carrying out pre-planning activities for the 407 Transitway under the Transit Projects Regulation as per the *Transit Projects and Greater Toronto Transportation Authority Undertakings Regulation, Ontario Regulation 231/08* (Transit Projects Regulation), June 2008.



Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act.

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

You are encouraged to contact the project team if you have questions or concerns regarding this study.

Next Steps

Input received at PIC #1 will be reviewed and incorporated into the study, as appropriate.

The technically preferred route(s) and station sites will be used to generate alternative horizontal and vertical alignments and station configurations for evaluation. A preliminary design will be prepared for the preferred alignment and station configuration.

At the completion of preliminary design, a Environmental Project Report (EPR) will be prepared and made available for a 30-day review period. The EPR review locations will be published in the Toronto Star, Vaughan Citizen, Markham Economist and Sun, and The Liberal (Richmond Hill) newspaper.

Your input is important. We invite you to complete the **comment form** provided and return it to us by: **June 29, 2009**. If you wish to be added to our mailing list, require further information, or wish to provide input to this project, please contact one of the following project team members:

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Thank you for your participation in this project.