

407 TRANSITWAY

FROM EAST OF HIGHWAY 400 TO KENNEDY ROAD

GWP 252-96-00

Planning & Preliminary Design

**Town of Markham
Development Services Committee**

Tuesday, September 21, 2010

407 Transitway Background

- MTO has protected a ROW from Burlington to the Highway 35/115 interchange – 150 km;
- The protection includes space for runningway, stations, park and ride and transit interface facilities;
- The protected ROW provides for either BRT or LRT operation;
- A technology assessment determined, that high speed rail & subway were not compatible/appropriate (due to physical corridor constraints and the need to serve regional travel demand in the corridor) and that the technology would be BRT with possible conversion to LRT in the future;
- Previous studies identified Highway 400 to Kennedy as the initial priority section.

407 Transitway Objectives



Land Use

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



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



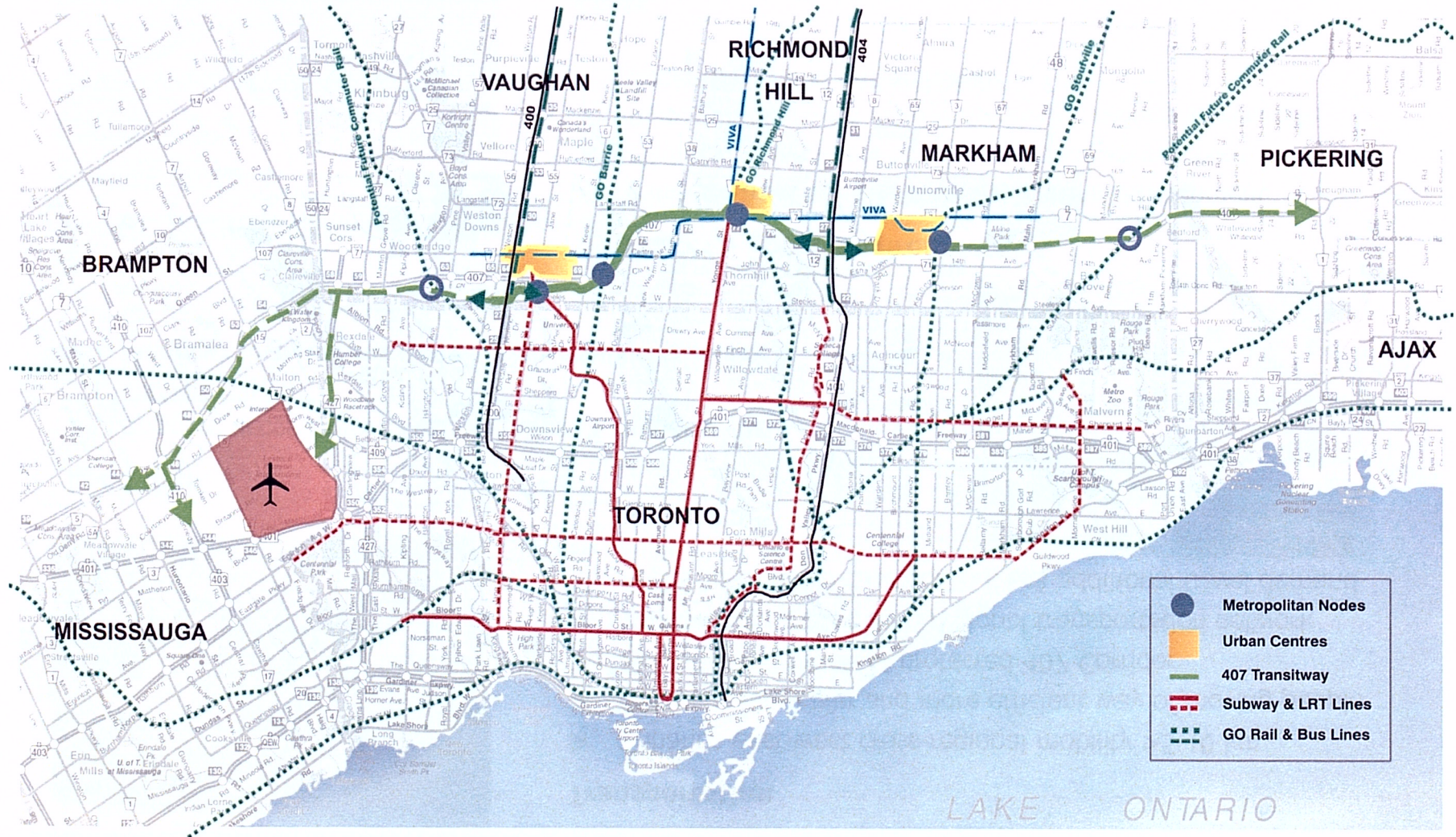
Natural and Social Environments

- 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

- Increase cost-effectiveness of moving people in corridor

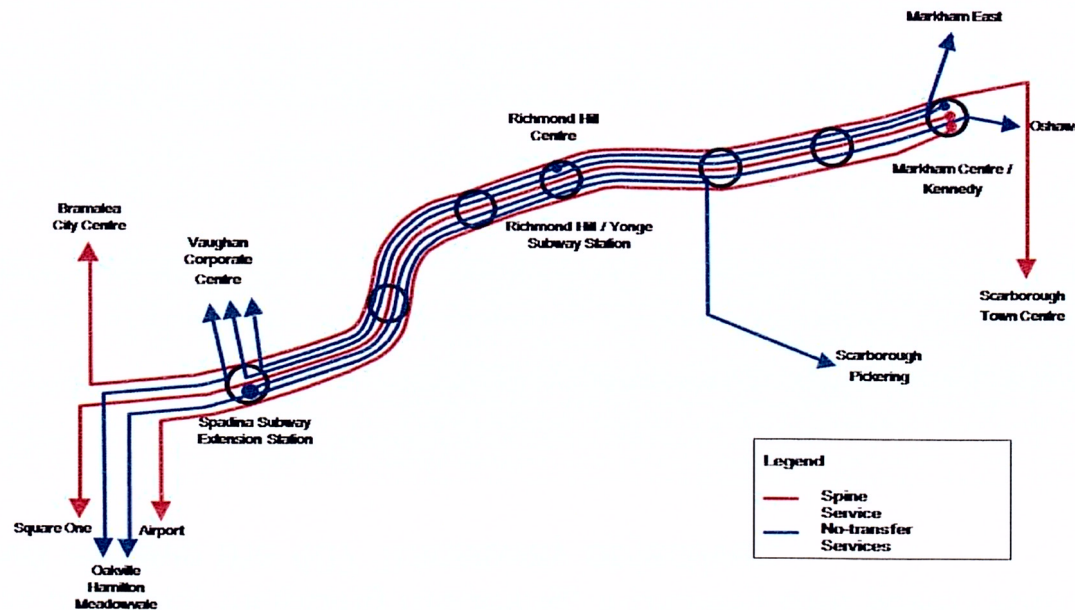
Role of 407 Transitway in the GTA



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)



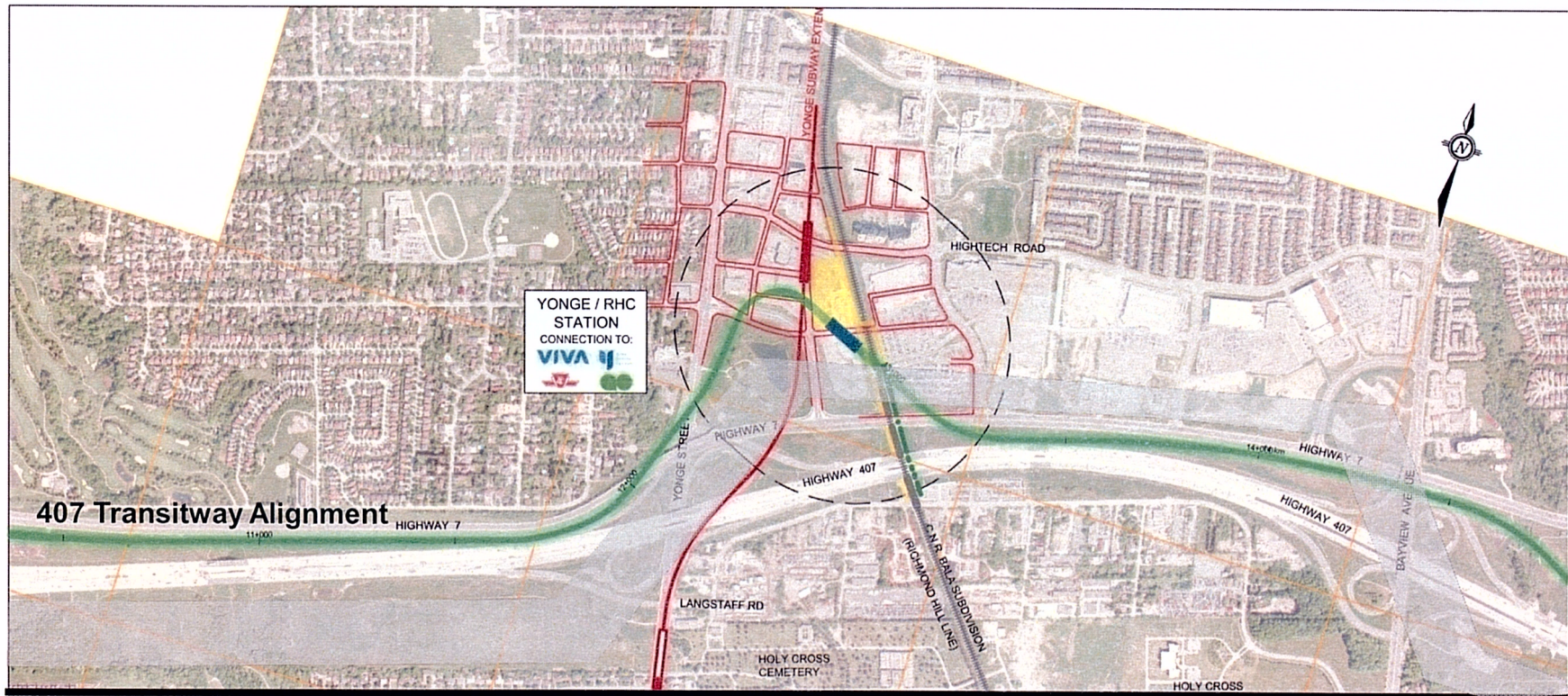
- The Transitway infrastructure design will allow buses to achieve a speed of 100 km/hr between stations and an average speed of 65 km/hour including station stop time;

How Station Locations were identified

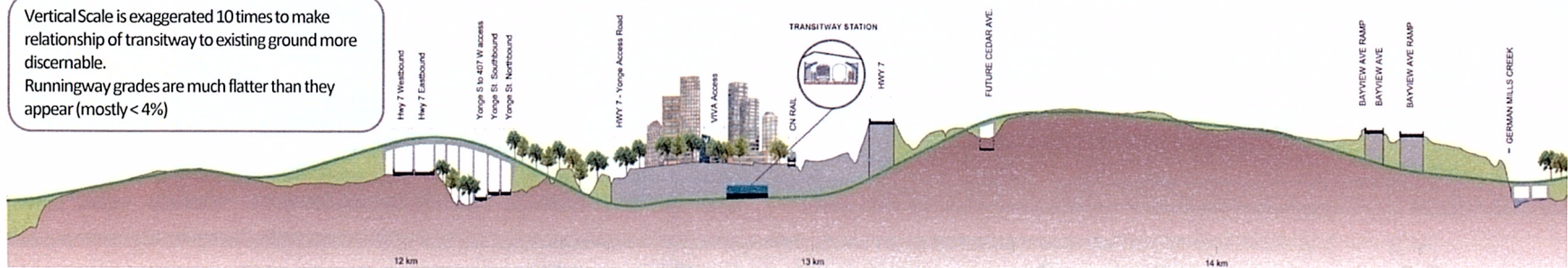
A functional needs analysis, including modeling, indicated that seven stations within the central segment will achieve the 407 Transitway objectives.

SELECTED STATION NODES	FUNCTION
➤ Jane Street	Connects with TTC Spadina Subway and serves the Vaughan Metropolitan Centre
➤ GO-Barrie (Concord)	Connects with GO Rail Line
➤ Bathurst Street	Serves Vaughan and Richmond Hill residential growth areas and 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 Rail GO Line at the Richmond Hill Regional Centre
➤ Leslie Street	Serves the Beaver Creek and Commerce Valley Business Parks and connection to City of Toronto LRT
➤ Woodbine Avenue/Rodick Road	Provides 'park and ride' from Markham residential growth area and access to the West Markham Centre and the Woodbine/404 Business Park
➤ Kennedy Road – Markham Centre	Connects with the Stouffville GO Rail Line and serves the Markham Regional Centre

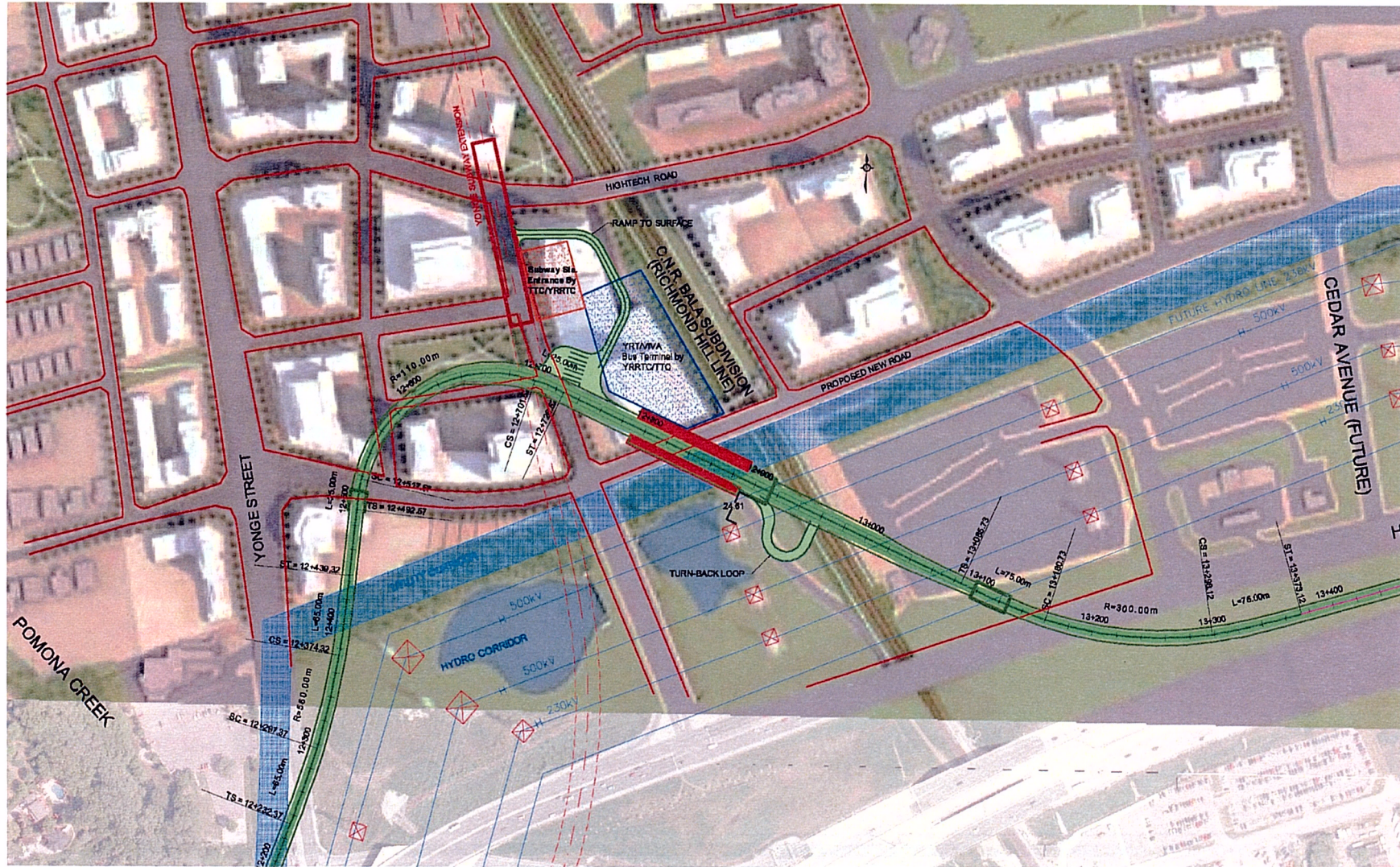
Preferred 407 Alignment & Station Location (4 of 7)



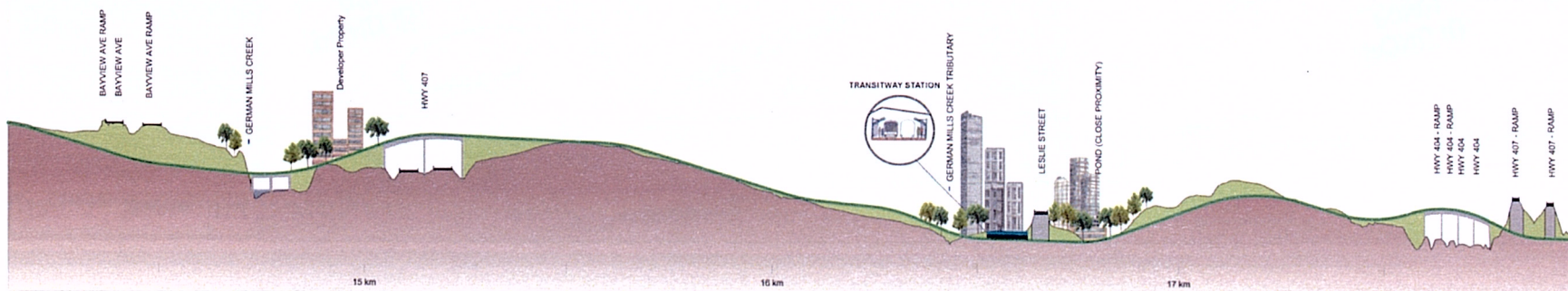
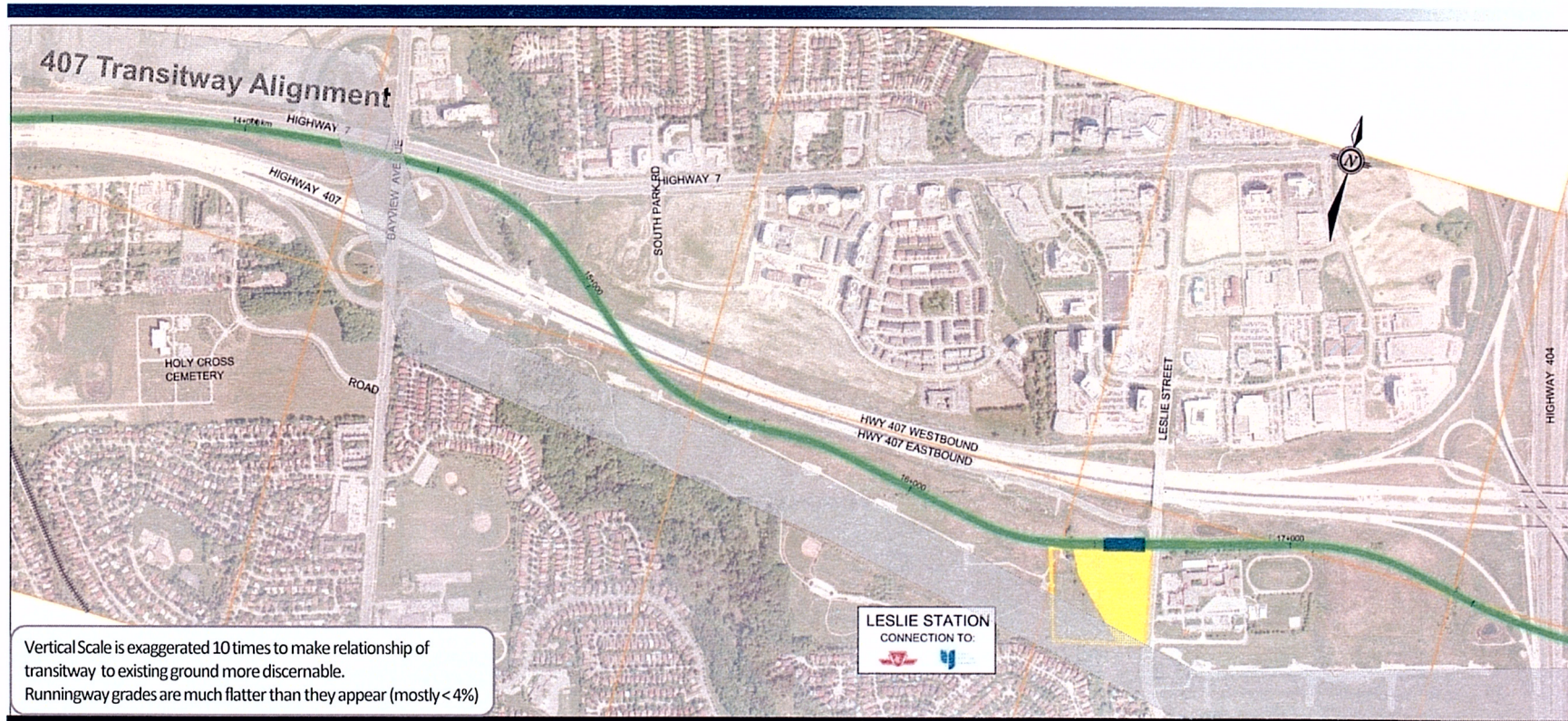
Vertical Scale is exaggerated 10 times to make relationship of transitway to existing ground more discernable.
Runningway grades are much flatter than they appear (mostly < 4%)



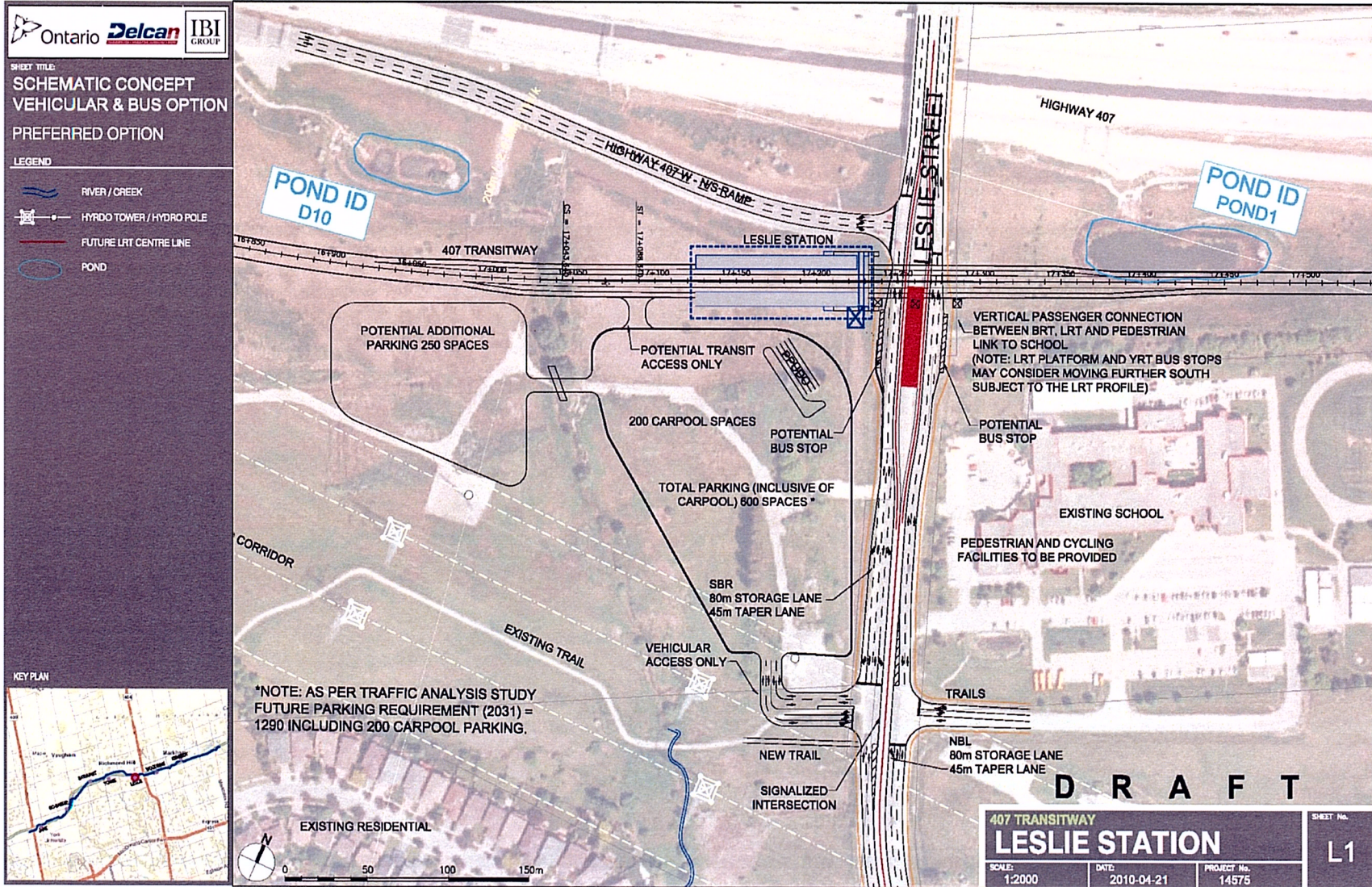
Richmond Hill Centre/Langstaff Station (Yonge Subway) Ontario



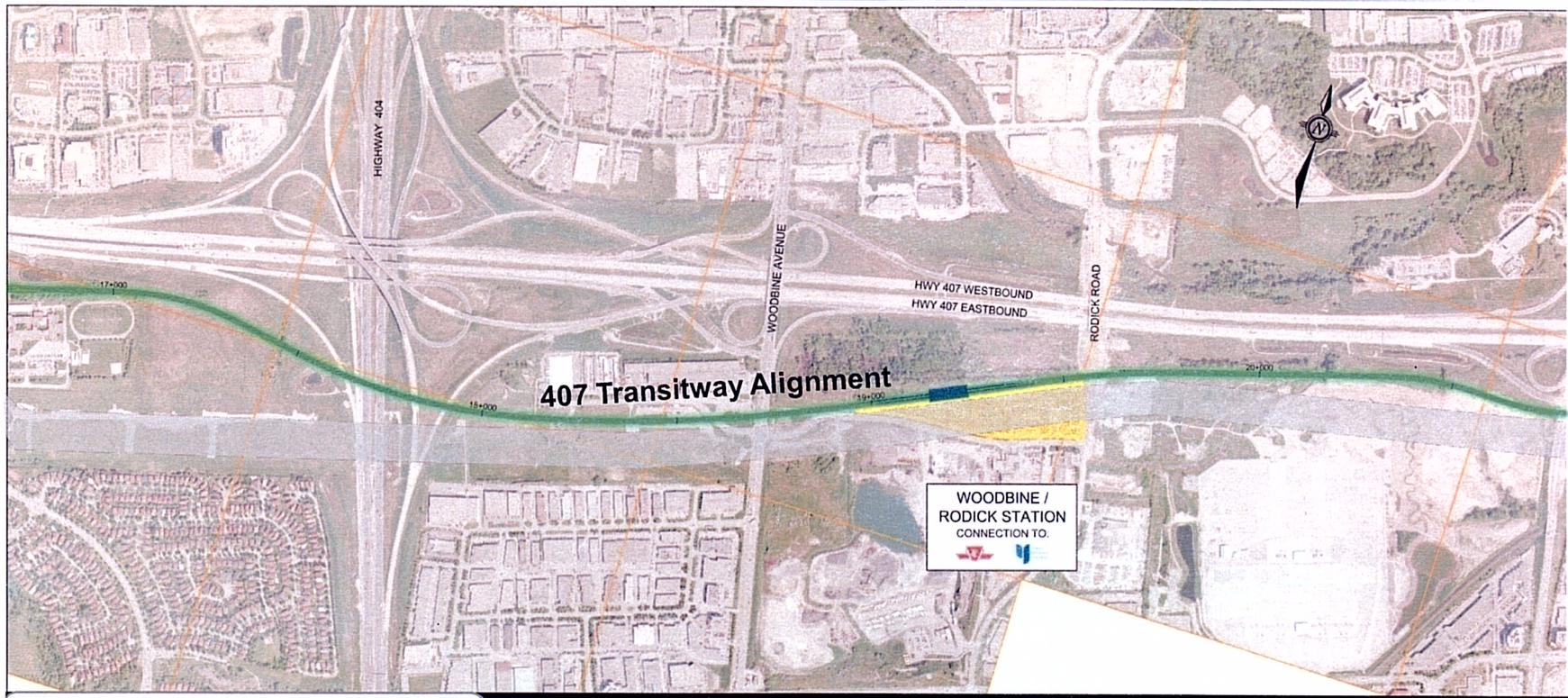
Preferred 407 Alignment & Station Location (5 of 7)



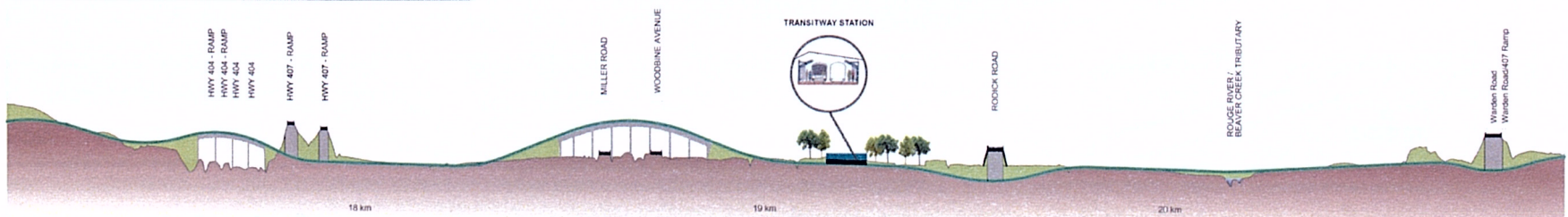
Leslie Station



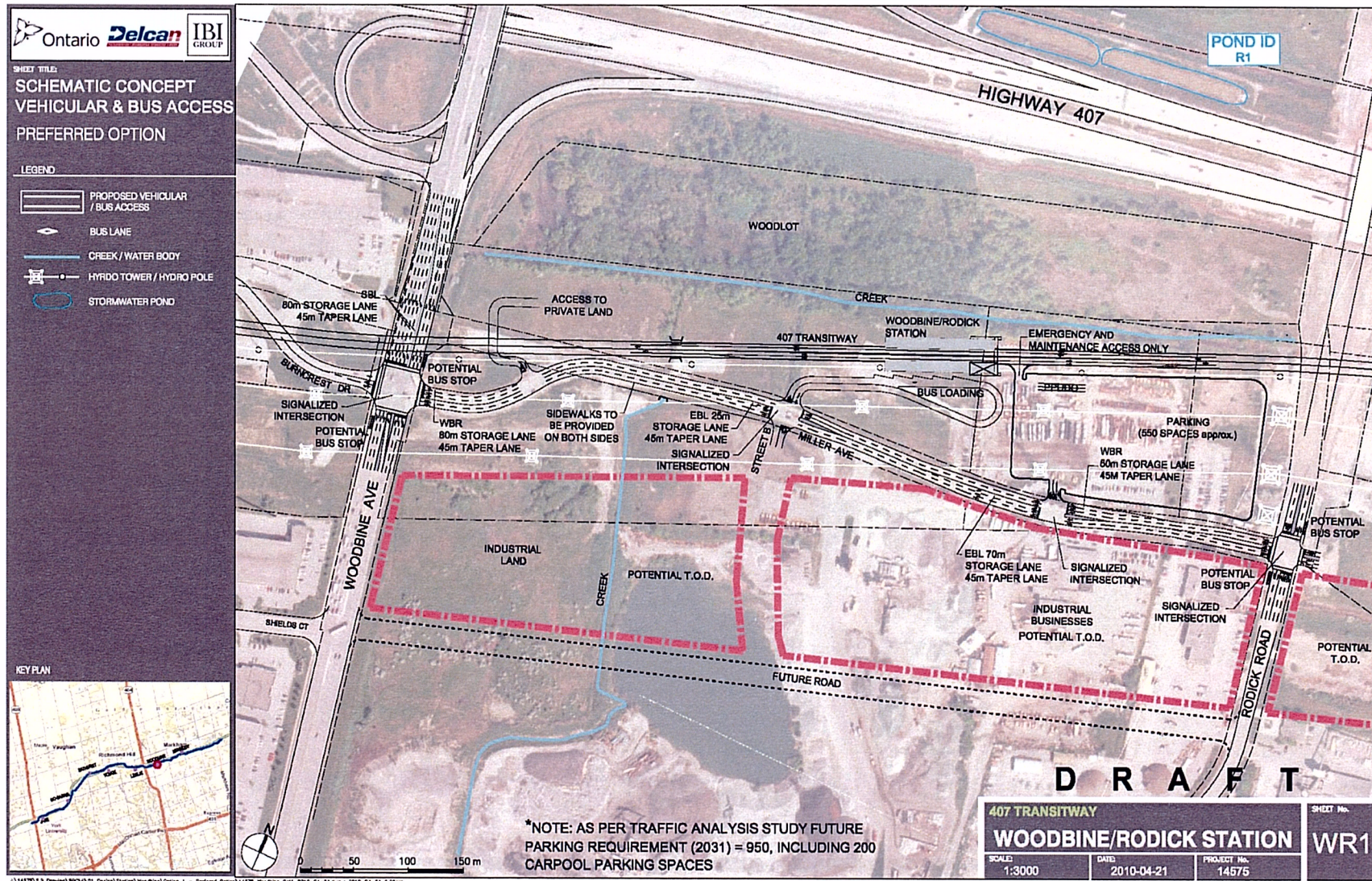
Preferred 407 Alignment & Station Location (6 of 7)



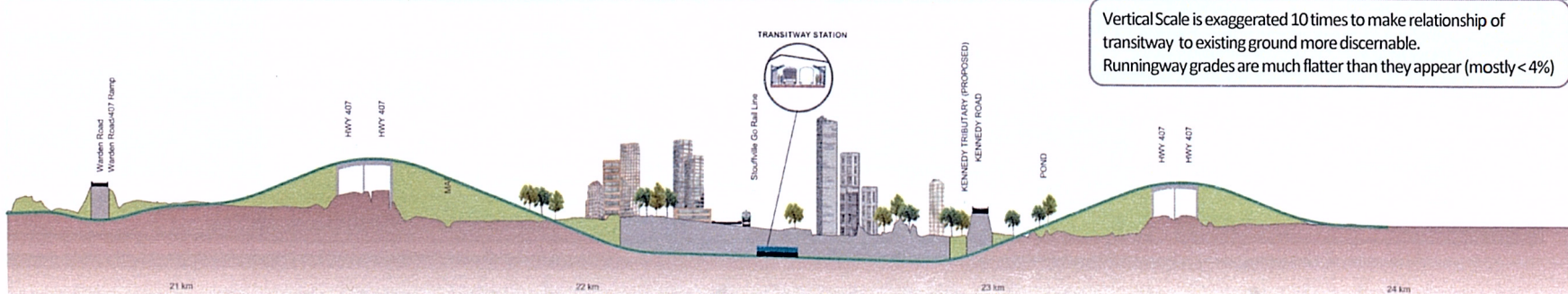
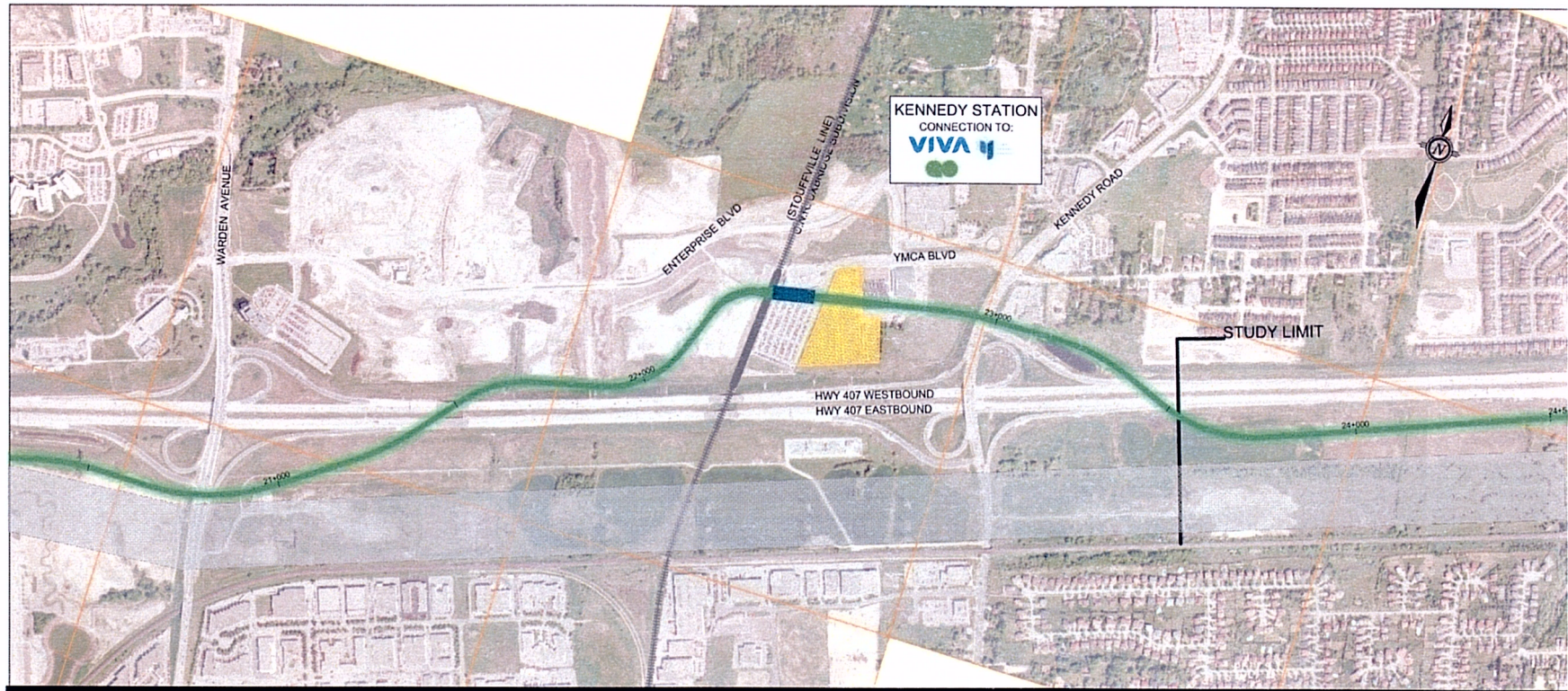
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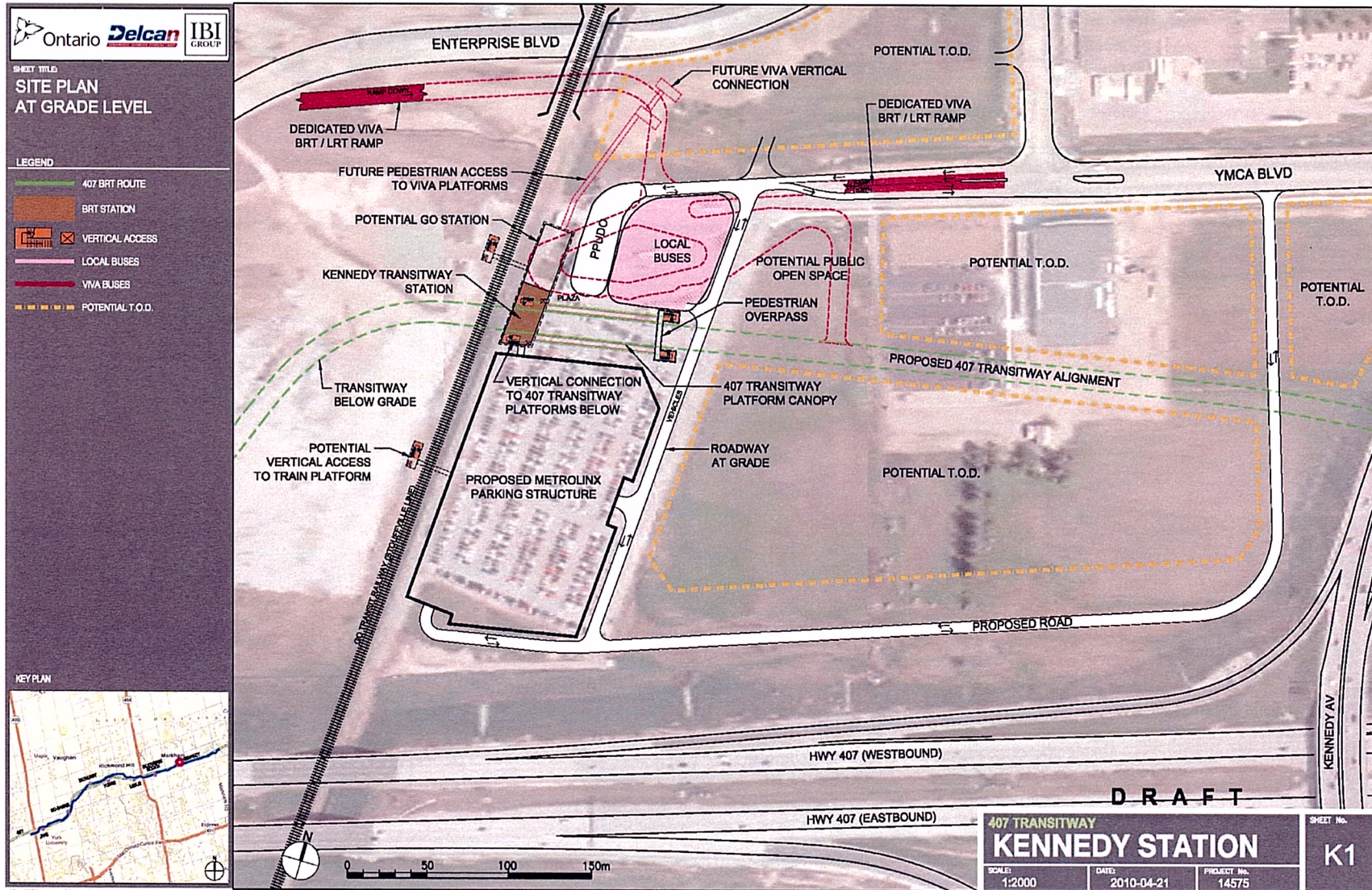
Woodbine/Rodick Station



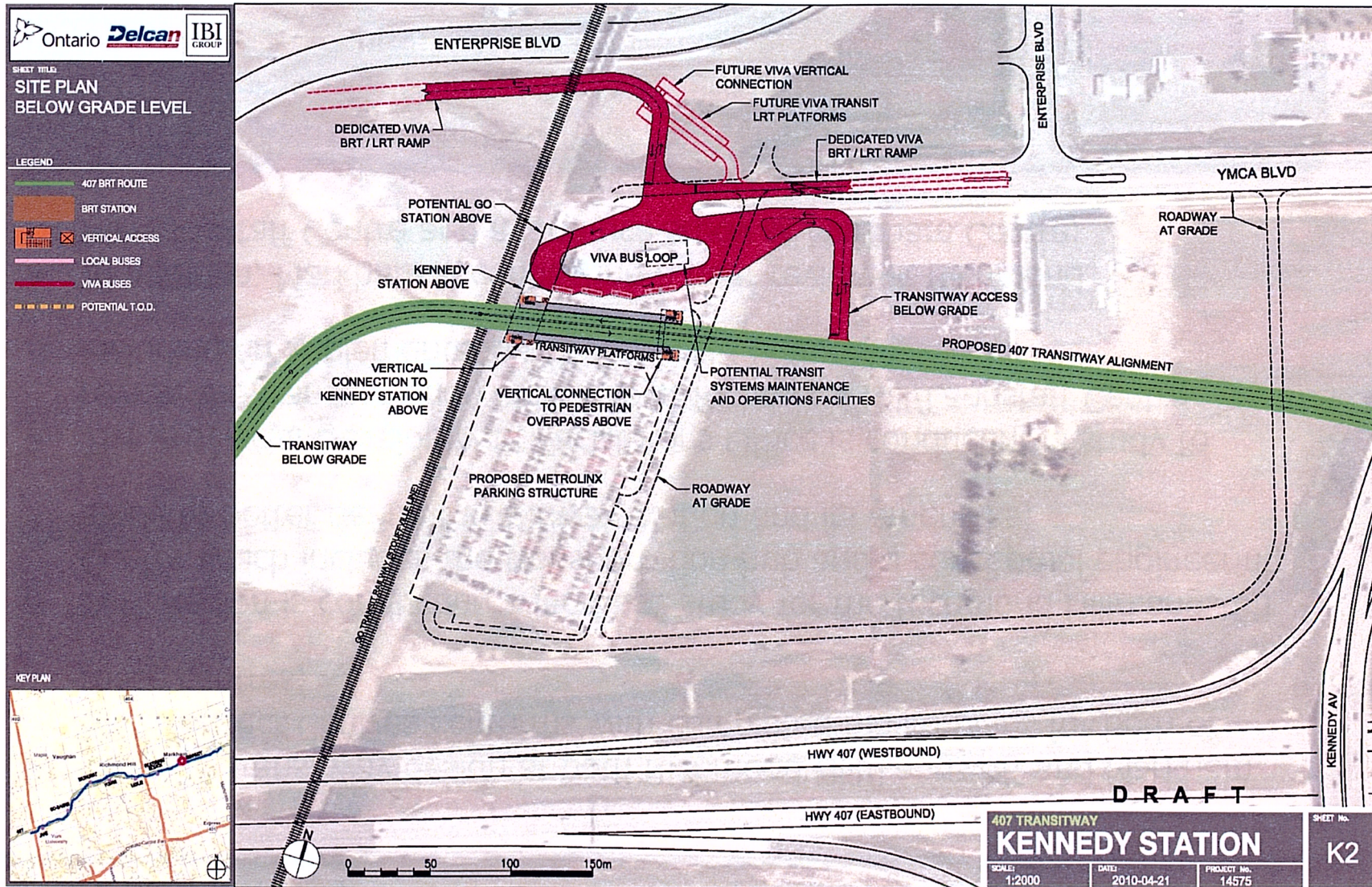
Preferred 407 Alignment & Station Location (7 of 7)



Markham Centre Station (GO Stouffville Line)



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Richmond Hill/Langstaff & Markham Centre Planning Issues



- The 407 Transitway design at both Richmond Hill/Langstaff and Markham East Precinct Centres conforms with completed masterplans for both of these centres;
- York Region is conducting a land use study for the Richmond Hill/Langstaff Centre which includes the transportation hub and a conceptual engineering study to better define the subway station and its amenities;
- The Provincial Development Facilitator's Office is conducting a study to review the transportation elements at Richmond Hill/Langstaff Centre including an implementation strategy;
- In addition, Markham is conducting a peer review at Richmond Hill/Langstaff Centre and a land use study at Markham Centre;

Following approval of the 407 Transitway EA, should ongoing studies determine that changes to the transportation alignment/hubs are warranted which all parties agree to, the EA would be modified as required.

Next Steps



Preliminary Design Phase:	Timeline
Develop Preliminary Design	Spring – Summer 2010
2 nd PIC	June 2010
Notice of Commencement of EA (120 days)	August 26, 2010
Draft Environmental Project Report Circulated to Agencies	September 27, 2010
Environmental Project Report Filed	December 2010
Environmental Approval (30+35 days)	February 2011
Implementation (Airport to Kennedy)	Timeline
Current RTP Plan (Earliest Operation)	2023