

# CONNECTING THE REGION

MARY PROC, VICE PRESIDENT, CUSTOMER SERVICE DELIVERY, METROLINX

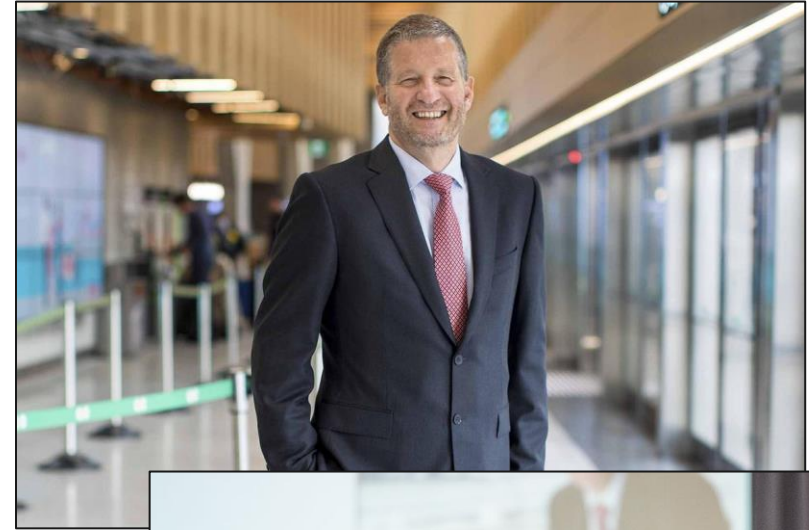
NATIONAL RAILWAY DAY

NOVEMBER 7, 2017

# OUR NEW CEO - PHIL VERSTER

*"I am very excited about joining the team of dedicated women and men at Metrolinx, and to be part of one of the most exciting transit transformations taking place anywhere in the world. I believe Ontario is the place to be. Not just because of the very large scale of investment being made in transit, but because of the dynamism, optimism and quality of life that has made this region so envied all over the world."*

*"At the end of the day, it's important to remember that all the investment, all the construction, all the new trains and services are not an end in themselves. They're about improving the experience of passengers, contributing to communities and to the economy."*





- Metrolinx was created in 2006 by the Province of Ontario to improve the coordination and integration of all modes of transportation in the Greater Toronto and Hamilton Area.
- Guided by its Regional Transportation Plan, Metrolinx has worked to plan, design and build a regional transportation network that aims to enhance the quality of life, the environment and the prosperity of area residents.







# METROLINX'S GEOGRAPHIC MANDATE:

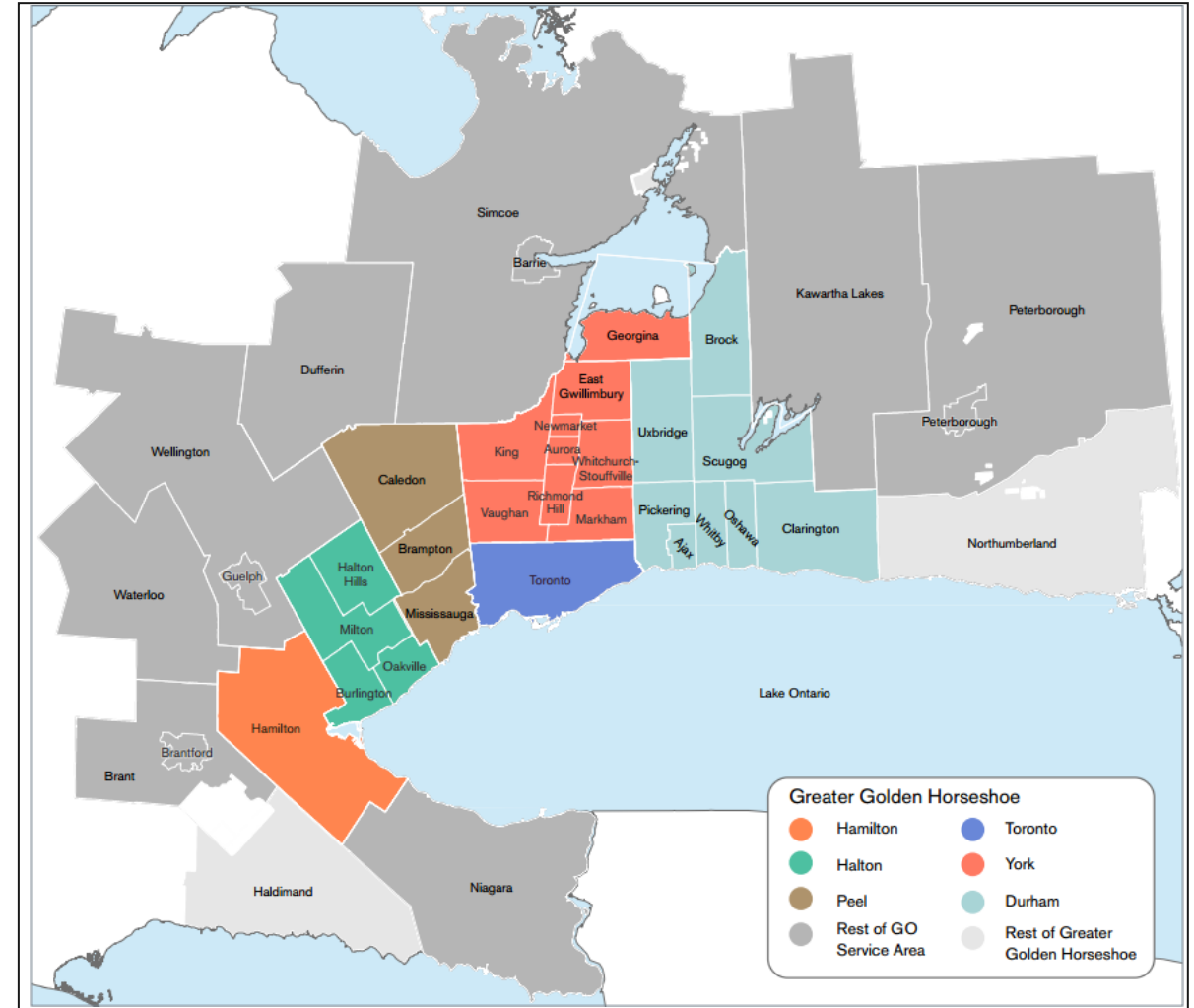
## THE GREATER TORONTO AND HAMILTON AREA

### Expansive

8,242 km<sup>2</sup> –urban, suburban and rural land use

### Complex

Working with thirty municipalities, four levels of government and nine transit agencies



# OUR MANDATE

## PLAN



## BUILD



## OPERATE





# THE BIG MOVE

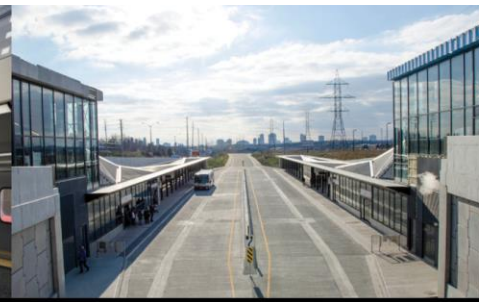
**OVER \$30  
BILLION IN  
INFRASTRUCTURE  
INVESTMENT**



GO Regional Express Rail



Toronto-York Spadina Subway Extension



Mississauga Transitway



Eglinton Crosstown LRT



Sheppard East LRT



Finch West LRT



Scarborough Subway



Hamilton B-Line LRT



Highway 7 West BRT



Hurontario LRT



Yonge BRT (North)



Yonge BRT (South)



Bloomington GO Extension



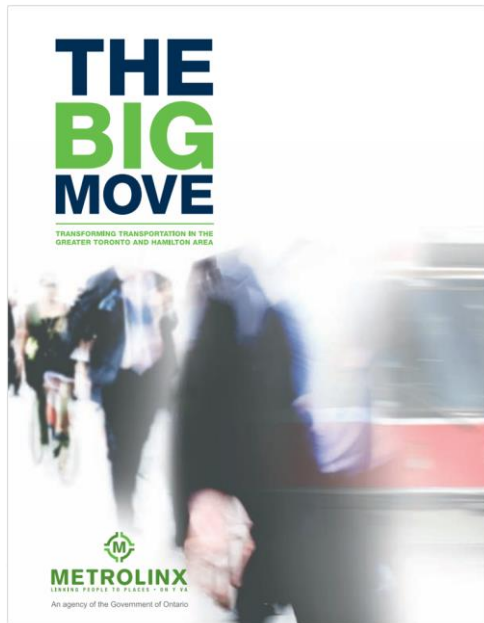
Bowmanville GO Extension



Confederation GO Extension



Niagara GO Service



# THE BIG MOVE - RECORD INVESTMENT

**The Big Move has shaped a record investment in new infrastructure and transit services:**

**Over \$30B in investment in the GTHA's rapid transit network currently being planned, procured and constructed.**

- **GO Expansion**
  - Introduction of new service on Barrie, Stouffville, Kitchener, Richmond Hill and Milton lines.
  - 6 New Stations plus planning work underway for an additional 24 stations.
  - Lakeshore Lines - 30 minute service.
  - Over 60% more train trips on multiple lines, including Milton, Lakeshore East/West and Kitchener.
- **Bus Rapid Transit** (partially or fully in service)
  - York Region VIVA BRT, Mississauga Transitway.
- **Light Rail Transit** (under construction or in planning & design)
  - Eglinton Crosstown, Finch West LRT, Hurontario LRT, Hamilton LRT.



**Expanded GO  
train service**



**Bus rapid  
transit projects**



**Light rail  
projects**



# GO REGIONAL EXPRESS RAIL

# GO RAIL EXPANSION





# TRANSFORMING THE GO TRAIN NETWORK



**52 New Train Sets**  
faster service



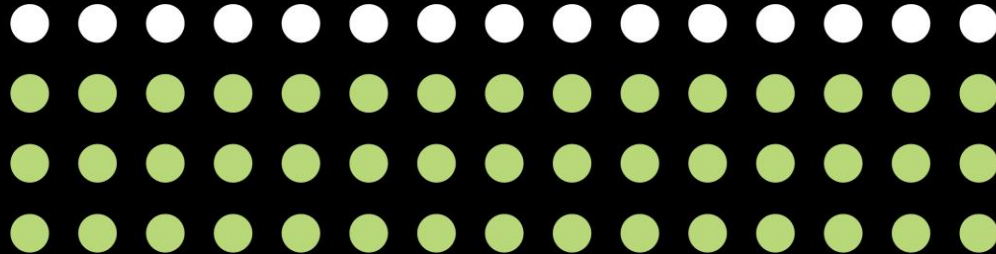
**New GO Tracks**  
150 km



**22 New Stations**  
32 upgraded



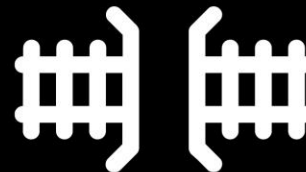
**Bridge Upgrades**  
45+



**6000 Trips / Day; 300% increase**



**15 Minute Service**  
or better



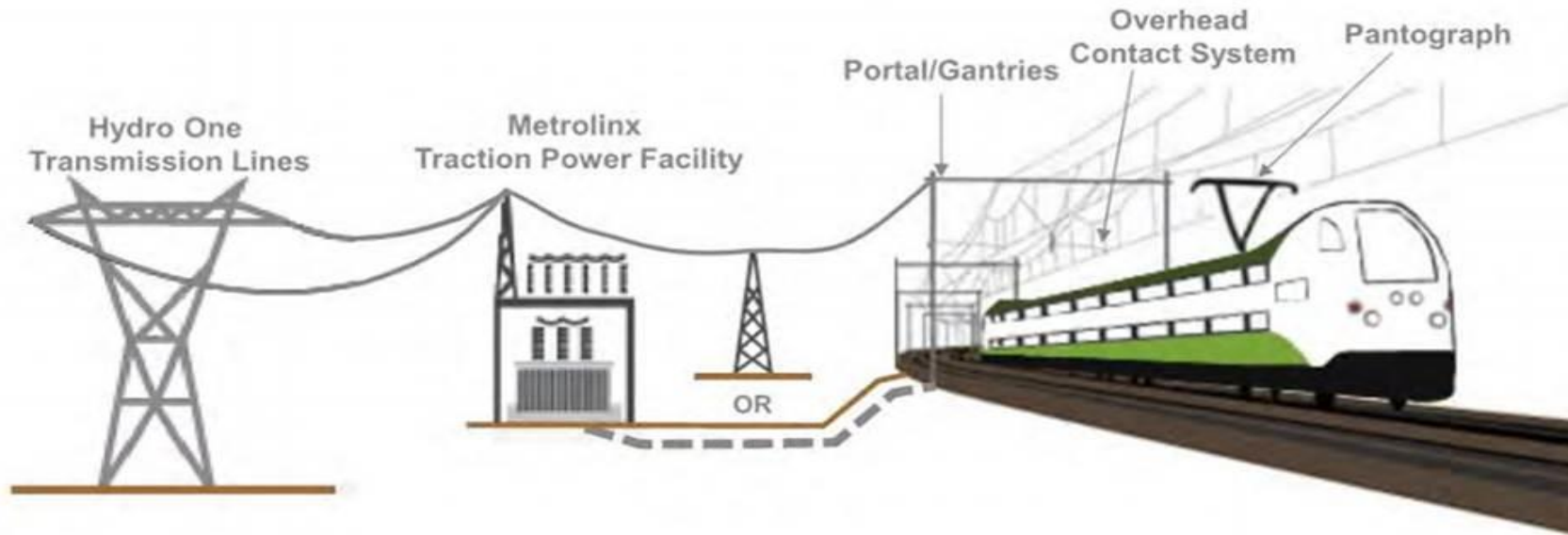
**10 rail/road grade separations**  
1 rail/rail grade separation



**263 km**  
of electrified service  
or signal enhancements

# ELECTRIFICATION

- In order to electrify, we need to build infrastructure including:
  - traction power substations to transform voltage from 230kV to 25kV AC
  - switching stations and paralleling stations to ensure reliable power
  - overhead contact systems and various safety modifications to distribute power



- Concurrently, we are conducting a feasibility study on the use of hydrogen fuel cells (HFC) as an alternative technology for electrifying GO rail service
- Metrolinx and the Ministry of Transportation will bring industry leaders together at a symposium on November 16, which will explore potential applications of hydrogen fuel cell technology



# HYDRAIL

- Concurrently, we are conducting a feasibility study on the use of hydrogen fuel cells (HFC) as an alternative technology for electrifying GO rail service.
- Hydrail refers to rail vehicles powered by hydrogen fuel cell (HFC) technology. In Ontario context, Hydrail has several potential benefits including:
  - Supports Ontario's climate change goals if hydrogen is produced using Ontario's decarbonized electricity system;
  - Potential to use electricity surpluses for hydrogen production;
  - Could mitigate the significant capital outlay and eliminate deployment challenges associated with installing overhead catenary wires on live railway corridors;
  - Could allow for the electrification of sections of the GO network that cannot be electrified by traditional means; and
  - Could position Ontario to be a global leader in hydrogen technology and kick start the hydrogen economy.
- Metrolinx and the Ministry of Transportation will bring industry leaders together at a symposium on November 16, which will explore potential applications of hydrogen fuel cell technology

# PROCUREMENT FOR REGIONAL EXPRESS RAIL

In June 2016, the Metrolinx Board of Directors approved the GO RER Procurement Strategy Framework. This approach organizes all RER works into three clear conceptual packages, leveraging the Ontario Government's Alternative Financing and Procurement (AFP) methodology as appropriate to drive faster delivery with better private sector risk transfer and to produce a more coordinated approach to construction and execution of strategy.

**Package 1** (currently underway) includes enabling works to be delivered through design-bid-build (DBB), design-build (DB) and design-build-finance (DBF) procurements. These works are necessary to de-risk the overall program by completing early projects before handover to Package 2 and 3.

- The enabling works program will advance a number of projects, including 14 projects that will be delivered using the AFP approach.
- AFP projects include station upgrades, grade separations, track work and a rail tunnel at Highway 401.
- Many projects continue to be delivered through traditional procurement contracts.

**Package 2** includes new and renovated stations to accommodate increased passenger volumes as a result of RER.

- Proposed off-corridor work includes parking, accessibility improvements, and other station modernizations.
- Proposed on-corridor work includes track work, rail platforms, elevators and pedestrian tunnels.
- Package 2 also includes the design and construction of 12 new stations (including six SMART Track stations) on the Barrie, Kitchener, Stouffville and Lakeshore East corridors.



# PROCUREMENT FOR REGIONAL EXPRESS RAIL

**Package 3** is envisioned to be the design, build, financing, and possibly maintenance and operation of railway equipment. This includes:

- fleet: new electric locomotive and electric multiple units (EMUS);
- civil works: bridges, retaining walls, track etc. that were not completed as part of Package 1;
- systems: all train control and communication systems;
- commissioning: test and commission all new services;
- Union Station: changing the platform and track configurations;
- electrification of core Metrolinx-owned rail network; and
- work block planning: coordination of construction activities in each corridor.

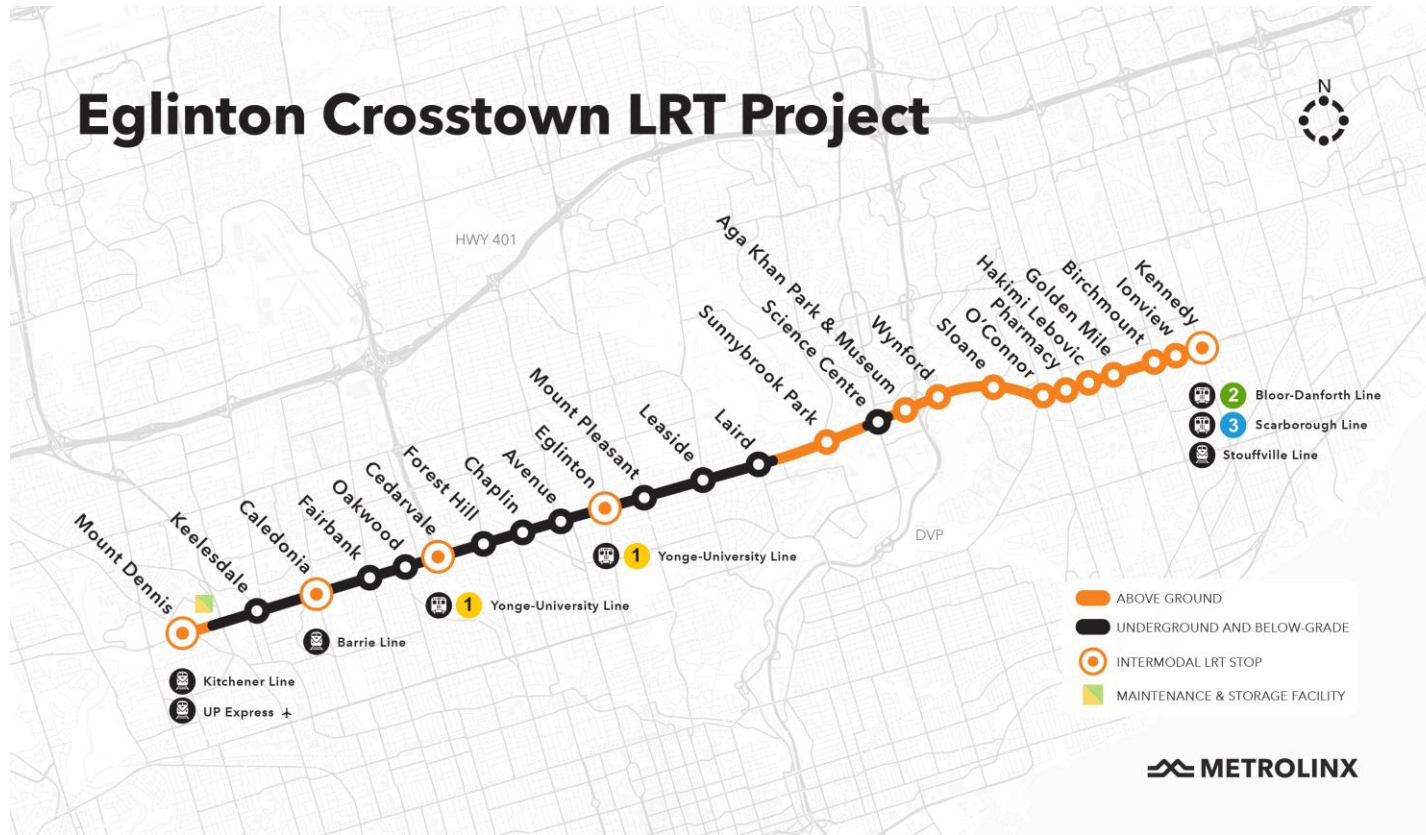
It is envisaged that the preferred proponent will consist of an experienced consortium, including an operator, a railway equipment supplier, a construction company, a service provider, and financial investors, and can operate the GO Rail system while progressively upgrading it to RER.

Metrolinx is currently evaluating how best to incorporate the Kitchener Expansion, the Niagara and Bowmanville Extensions, and SmartTrack stations into the procurement plan.

Package 2 and 3 procurements using the AFP process will be awarded in 2019.

# **RAPID TRANSIT EXPANSION**

# Eglinton Crosstown LRT Project

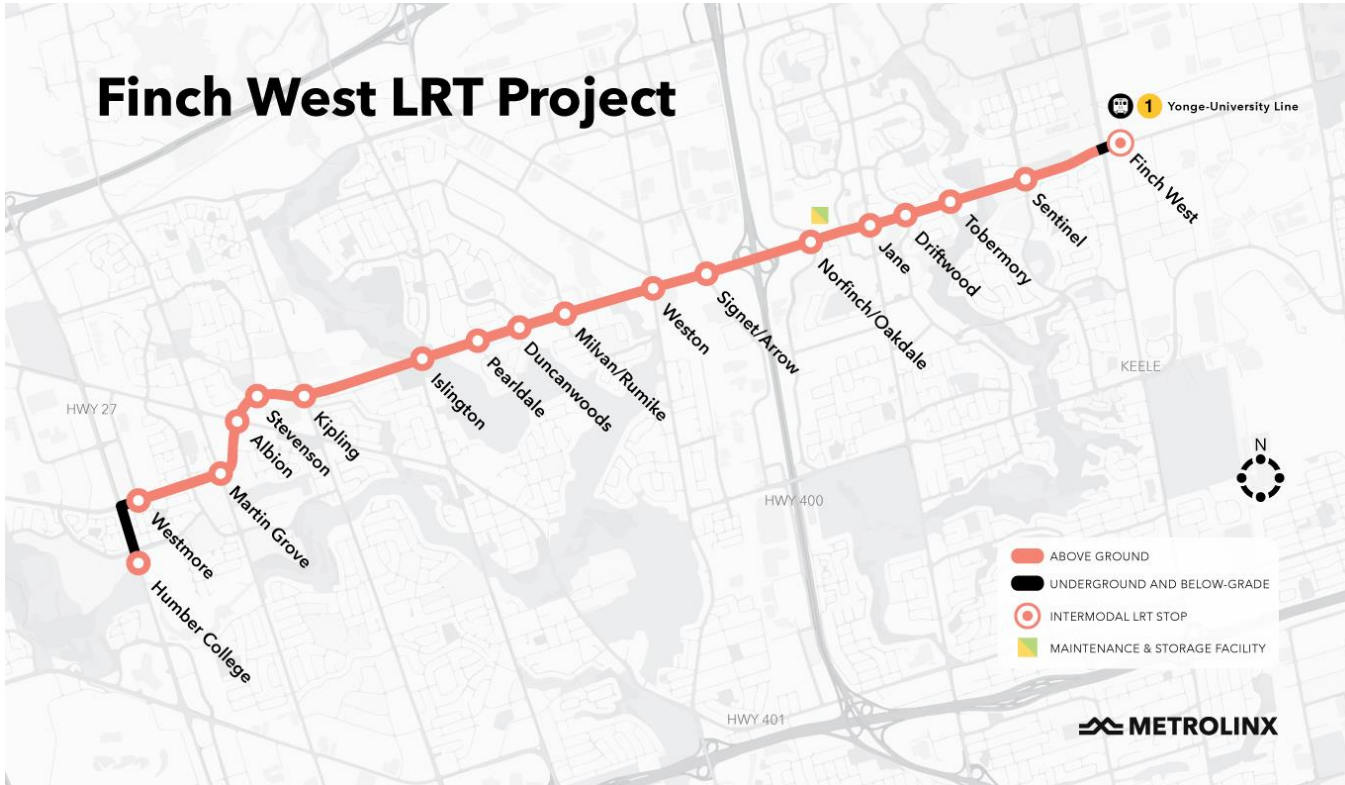


**"Year of the Dig" continues**  
**15 stations under construction**  
**11 cut-and-cover and 3 mined**  
**Expected completion date: 2021**

\* Mining method requires 24-hour work under the surface and noise mitigation





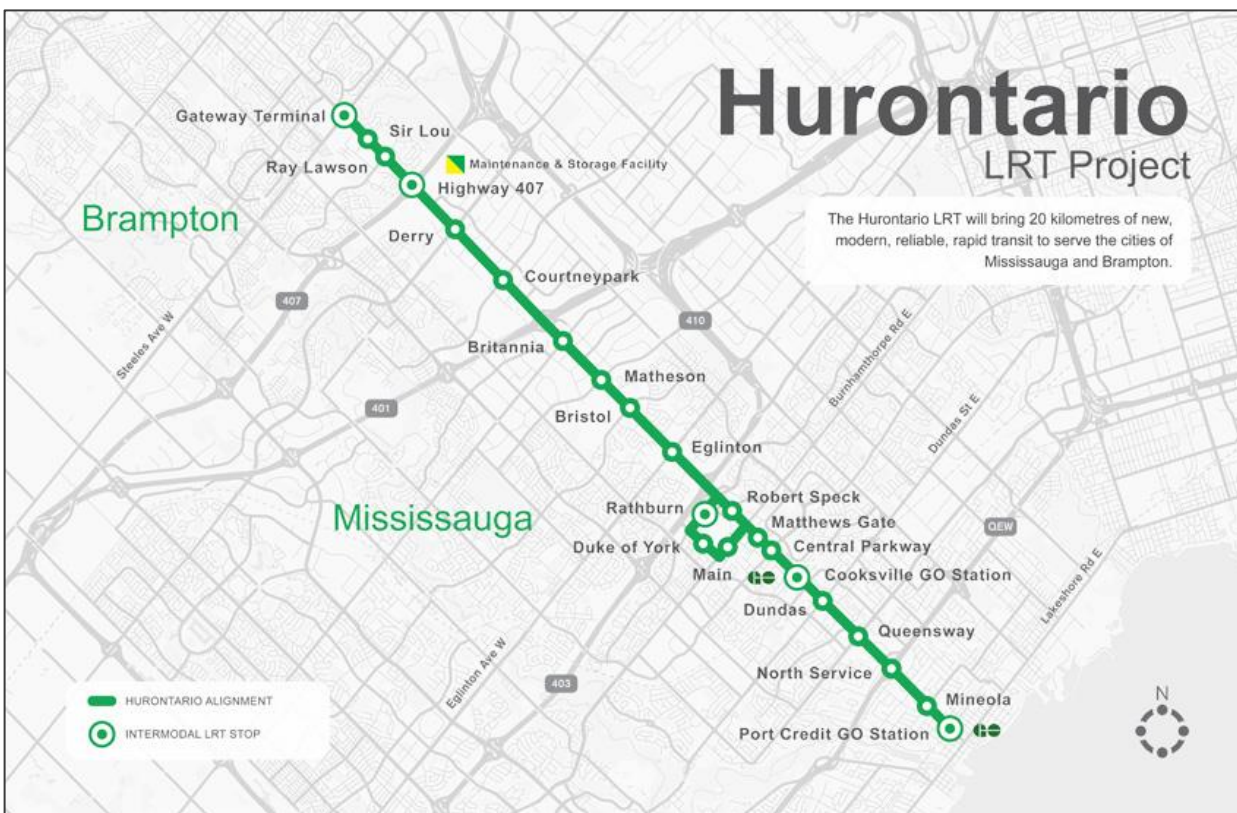


**Utility relocations taking place**  
**Community office opening Fall 2017**  
**Construction to begin in 2018**  
**Estimated completion date: 2022**





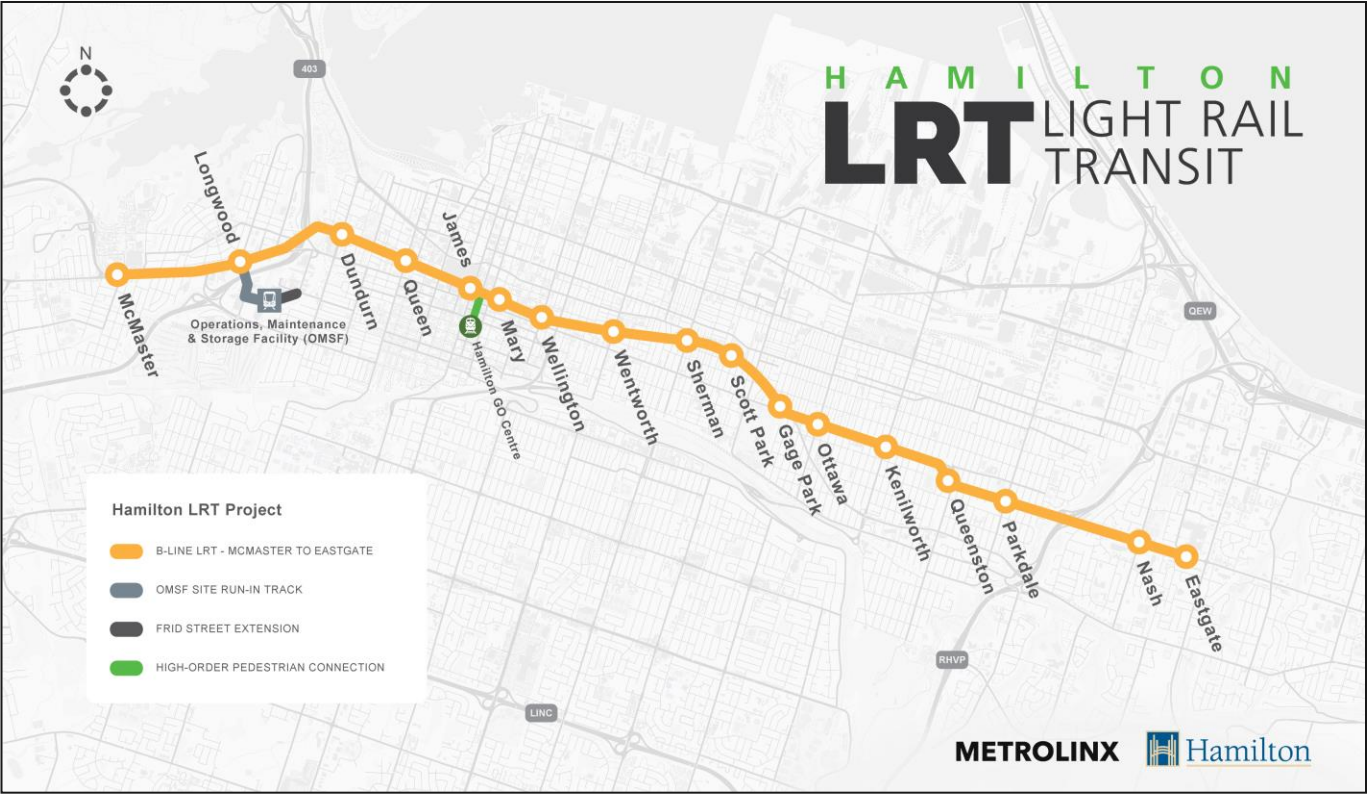
# HURONTARIO LRT



In service date: 2022



# HAMILTON LRT



In service date: 2024



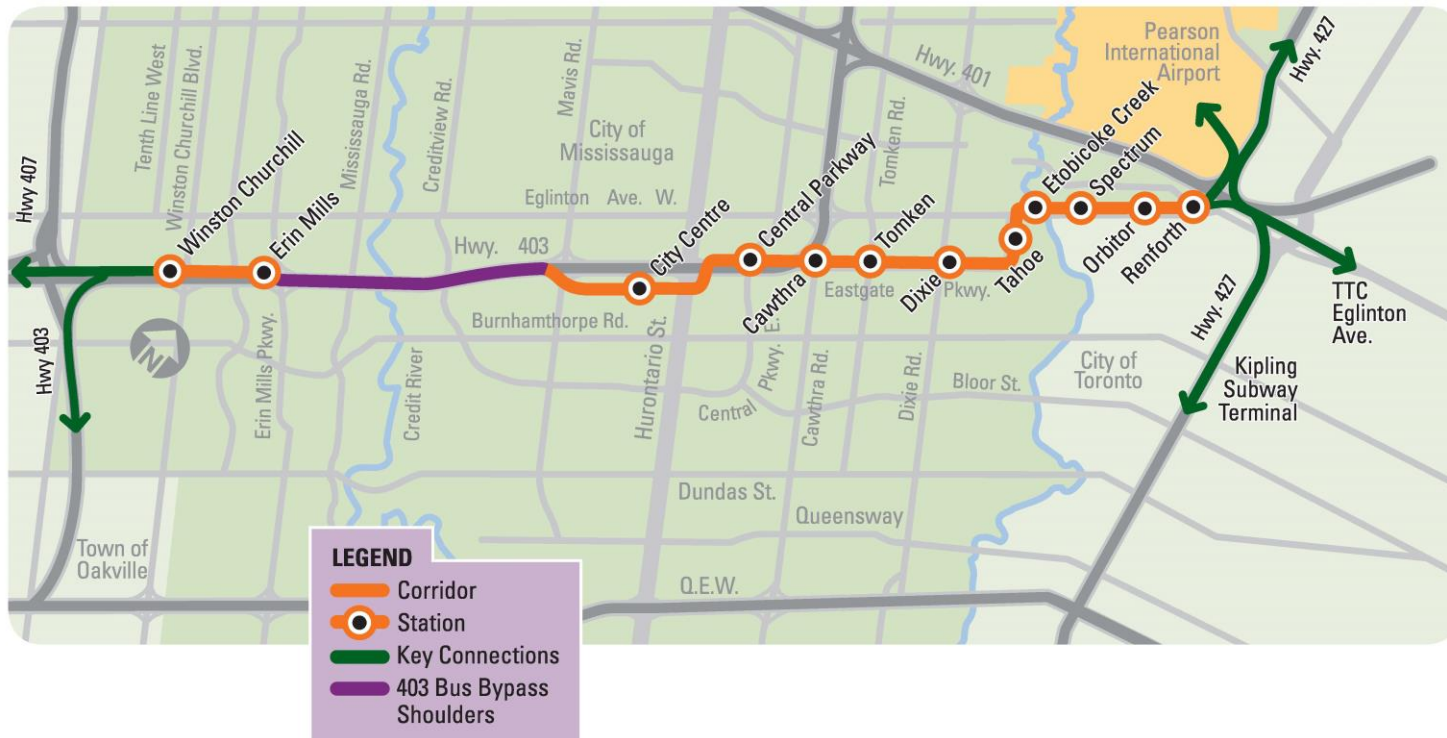
# YORK VIVA BRT



Partially in service: full completion in 2021



# MISSISSAUGA TRANSITWAY



**18-kilometre separate corridor for buses**  
**Renforth Station completion November 2017**  
**GO, MiWay and TTC access to Pearson Airport**








# **PLANNING FOR THE NEXT WAVE OF TRANSIT INVESTMENTS**


# FUTURE SUBWAY EXPANSION


**LEGEND**

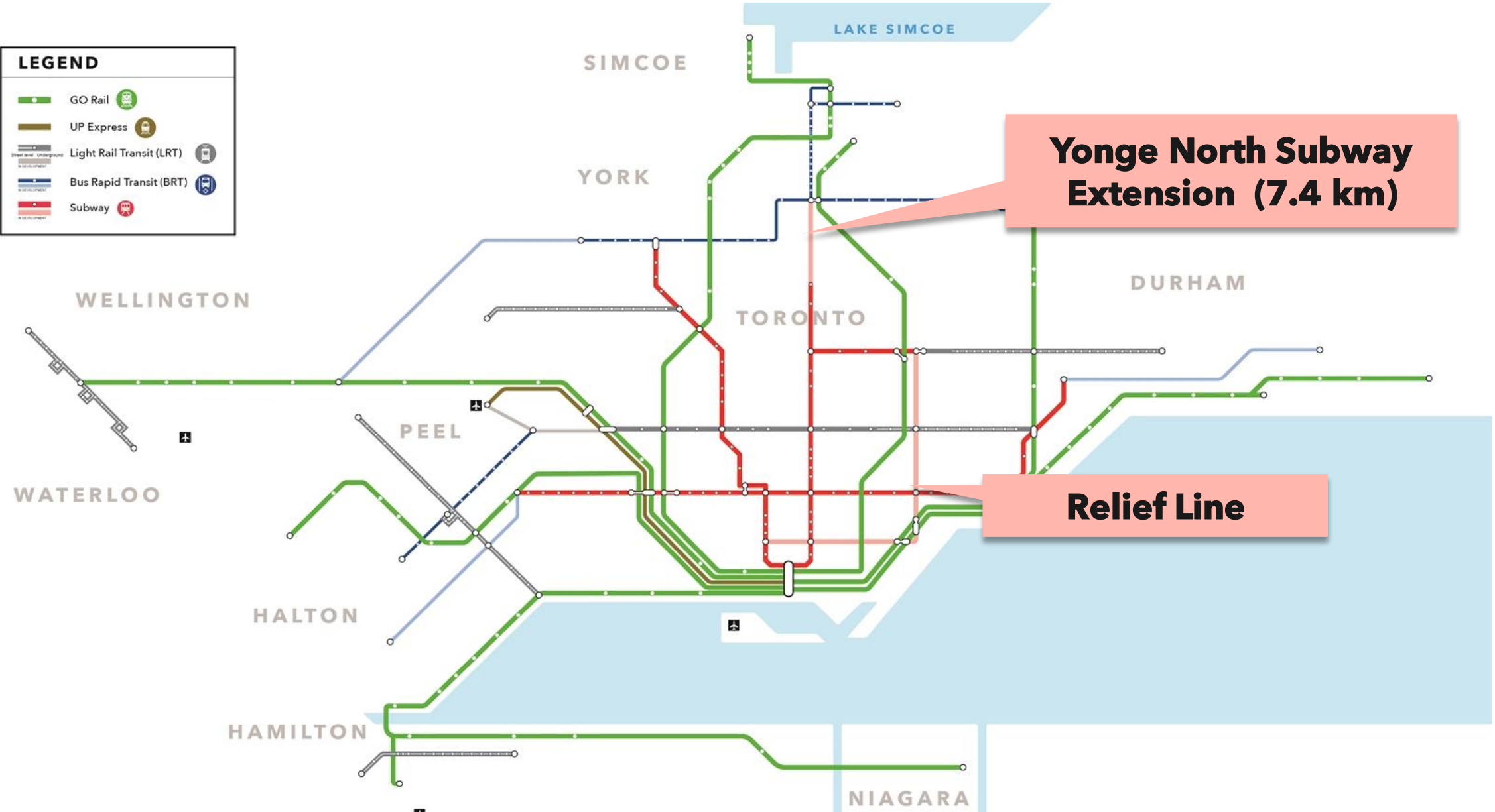
 GO Rail

 UP Express

 Light Rail Transit (LRT)

 Bus Rapid Transit (BRT)

 Subway



# FUTURE RAPID TRANSIT

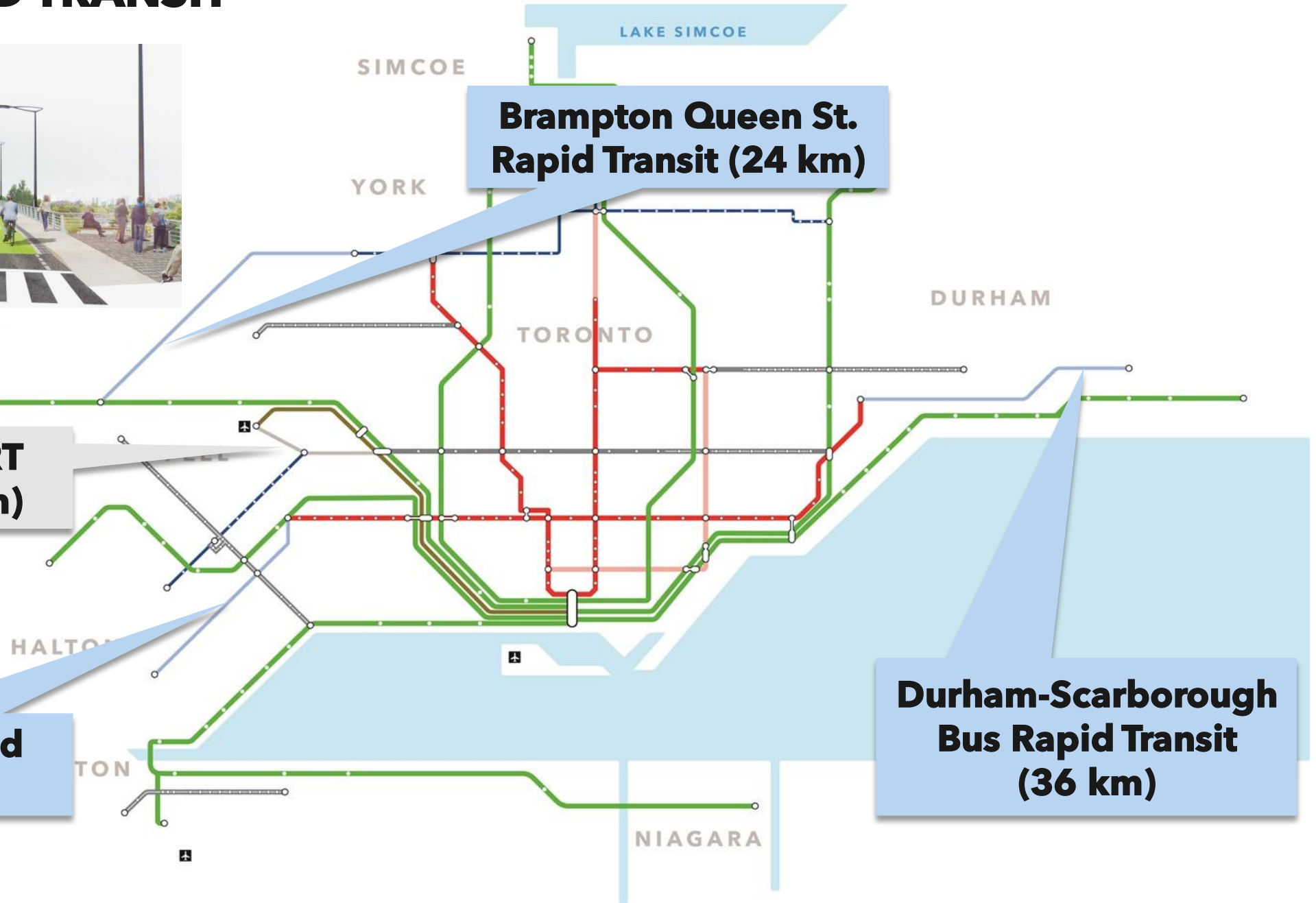


**Eglinton West LRT  
Extension (14 km)**

**Dundas Bus Rapid  
Transit (40 km)**

**Brampton Queen St.  
Rapid Transit (24 km)**

**Durham-Scarborough  
Bus Rapid Transit  
(36 km)**



# DESIGN EXCELLENCE



# DESIGN EXCELLENCE IS ABOUT THE USER EXPERIENCE





# DESIGN EXCELLENCE AT METROLINX



GO Transit Train Shed Roof at Union Station - Winner of a 2012 Canadian Architect Award of Excellence

- Our goal is to integrate design excellence into Metrolinx capital investments, building on existing work.
- Focus on areas of architecture, landscape architecture, urban design, public realm and customer experience.
- Use transportation dollars to do more than simply deliver transit; Be true city builders across the GTHA.

# DESIGN PRINCIPLES AND REQUIREMENTS

- The guiding design principles for the visual, physical, and experiential elements that define our brand are outlined in a series of policies and design guidelines developed by Metrolinx staff.
  1. For the **Light Rail Transit (LRT) projects**, these guiding design principles are set out in a series of Design Excellence Principles and Requirements documents.
  2. For the **Regional Express Rail (RER) program**, the guiding design principles are set out in the GO Transit Design Excellence Guidelines for off-corridor urban, architecture and landscape design.
  3. For the **Bus Rapid Transit (BRT) projects** our objective is to run a process similar to what is being done for RER.

# LEARN MORE, GET INVOLVED

Metrolinx has just released its Draft 2041 Regional Plan which outlines how people and goods will move across our great region.

Curious about what's in the Draft 2041 Plan?

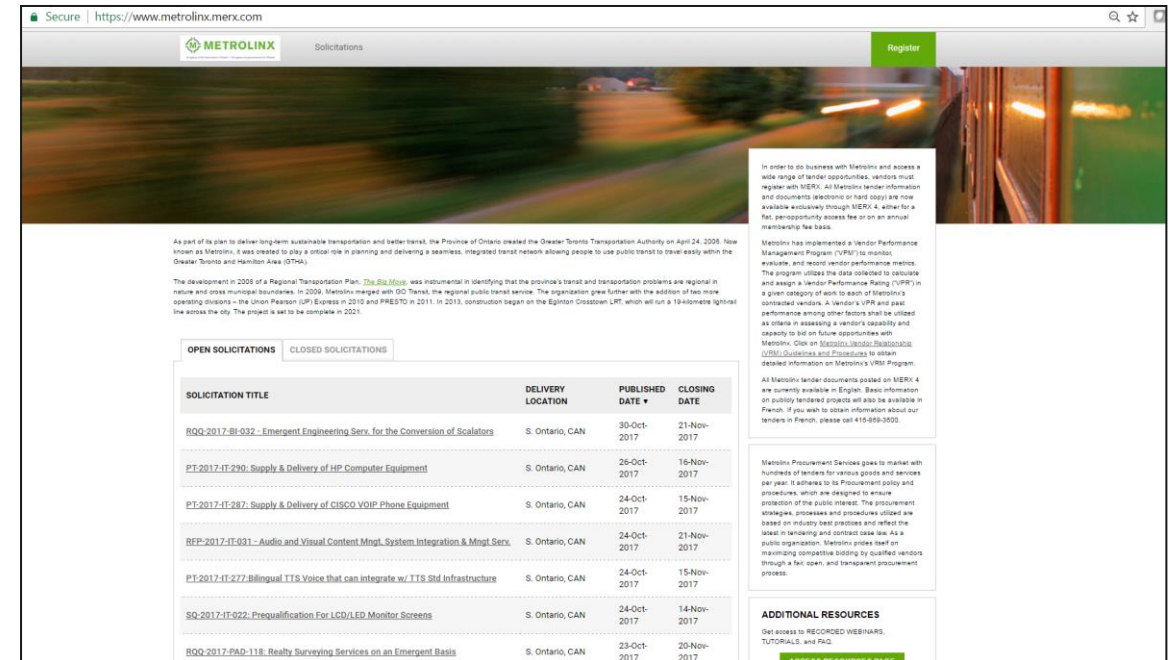
You can review and comment on the plan at [metrolinx.com/theplan](https://metrolinx.com/theplan) and join us for one of our roundtable discussions, where you can share your views on the future of regional mobility.





# WWW.METROLINX.MERX.COM

- Metrolinx Procurement Services goes to market with hundreds of tenders for various goods and services per year.
- The procurement strategies, processes and procedures utilized are based on industry best practices and reflect the latest in tendering and contract case law.
- We encourage you to visit MERX for potential opportunities.



The screenshot shows the Metrolinx MERX website interface. At the top, there's a navigation bar with the Metrolinx logo and a 'Register' button. Below the header is a large banner image of a train. To the right of the banner, there's a text box explaining the Metrolinx Vendor Performance Program (VPP). Below the banner, there's a section titled 'OPEN SOLICITATIONS' with a table of current tenders. The table has columns for Solicitation Title, Delivery Location, Published Date, and Closing Date. To the right of the table, there's a section titled 'ADDITIONAL RESOURCES' with links to 'Get access to RECORDED WEBINARS, TUTORIALS, and P&G' and 'ACCESS RE-SOURCE PAGE'.

SOLICITATION TITLE	DELIVERY LOCATION	PUBLISHED DATE	CLOSING DATE
RQ-2017-BI-032 - Emergent Engineering Serv. for the Conversion of Scalators	S. Ontario, CAN	30-Oct-2017	21-Nov-2017
PT-2017-IT-230: Supply & Delivery of HP Computer Equipment	S. Ontario, CAN	26-Oct-2017	16-Nov-2017
PT-2017-IT-287: Supply & Delivery of CISCO VOIP Phone Equipment	S. Ontario, CAN	24-Oct-2017	15-Nov-2017
RFP-2017-IT-031 - Audio and Visual Content Mngt. System Integration & Mngt. Serv.	S. Ontario, CAN	24-Oct-2017	21-Nov-2017
PT-2017-IT-277: Bilingual TTS Voice that can integrate w/ TTS Std Infrastructure	S. Ontario, CAN	24-Oct-2017	15-Nov-2017
RQ-2017-IT-022: Prequalification For LCD/LED Monitor Screens	S. Ontario, CAN	24-Oct-2017	14-Nov-2017
RQ-2017-PAD-118: Realty Surveying Services on an Emergent Basis	S. Ontario, CAN	23-Oct-2017	20-Nov-2017

