

**To:** Metrolinx Board of Directors

**From:** Peter M. Zuk  
*Chief Capital Officer, Capital Projects Group*

**Date:** September 13, 2018

**Re:** **Capital Projects Group Quarterly Report**

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## **Recommendation**

That this report is received for information.

## **Executive Summary**

Since the last quarterly update in March 2018, the Capital Projects Group (CPG) continues to advance a large program, involving signature projects in the GO Expansion program as well as light rail transit (LRT) and bus projects.

CPG is pleased to report the following accomplishments this quarter:

- construction of the Eglinton Maintenance and Storage Facility is nearing completion;
- the Lower Galt Track Realignment and Reinstatement project (on the Milton Corridor) was completed in June;
- the construction contract for the Lincolnville layover facility was awarded to Dagmar Construction Inc. in July;
- construction of the bus terminal and station as part of the Kipling Station Bus Terminal began in July and August
- the Request for Qualifications (RFQ) for New Stations Outside of Toronto closed on July 16, 2018;
- the contract for technical advisory services for the Niagara stations and layovers designs was awarded to Wood Canada on July 19, 2018;
- the construction tender for the rehabilitation of the Richmond Hill GO Station was released to market on July 20, 2018;
- the Renforth Station on the Mississauga Transitway reached total completion in August;
- construction began on the Courtice Road/Highway 401 Park and Ride lot in August;
- the Request for Proposals (RFP) for the Rutherford GO Station AFP project closed on August 2, 2018;

- utility and early works began on the Stouffville Stations and Grade Separation project;
- the RFP for the Early Stations Improvement project closed on August 24, 2018;
- the Notice of Completion for the Environmental Assessment (EA) for tracks, bridges and retaining structures for the Union Station East Track Enhancement Project was issued on August 16, 2018;
- a number of projects are also in construction including the Cooksville GO Station, the Kipling Station Bus Terminal, the Highway 401/409 Tunnel and the Bramalea Parking Structure.

A summary of Metrolinx’s major capital project status is shown in Table 1.

**Table 1: Program Overview**

Corridor	Project Stage	Approved Budget for Capital Construction	In-Service Date <sup>1</sup>
<b>Rapid Transit Program</b>			
Eglinton Crosstown LRT	Construction	\$5,300,000,000 <sup>2</sup>	2021
Finch West LRT	Procurement	\$1,000,000,000 <sup>2</sup>	2023
Hurontario LRT	Procurement	\$1,400,000,000 <sup>3</sup>	2022
Hamilton LRT	Procurement & Planning	\$1,000,000,000 <sup>3</sup>	2024
Viva BRT	Various	\$1,400,000,000 <sup>2</sup>	Various
Bus Infrastructure	Various	\$429,660,000	Various
<b>GO Expansion</b>			
Barrie	Design	\$1,506,000,000	2025
Kitchener	Design	\$1,534,000,000	2025
Lakeshore East	Design	\$735,000,000	2025
Lakeshore West	Design	\$401,000,000	2025
Milton	Design	\$4,000,000	2025
Stouffville	Design/Construction	\$581,000,000	2025
USRC	Design	\$682,000,000	2025
Network Infrastructure <sup>5</sup>	Design	\$4,493,000,000	2025
Vehicles	Design/Study	\$2,583,000,000	2025
Parking, Access & Property	Design/Study	\$981,000,000	Various
<b>Extensions</b>			
Bowmanville Extension	EA and Design	\$550,000,000 <sup>3</sup>	2024
Kitchener Extension	EA and Design	\$2,250,000,000 <sup>6</sup>	2024
Niagara Extension	EA and Design	\$160,000,000 <sup>3</sup>	2023

<sup>1</sup> Actual in-services dates are subject to schedules submitted by the successful AFP bidders. 2025 indicates the announced timeline of '2024/25'.

<sup>2</sup> 2010\$

<sup>3</sup> 2014\$

<sup>4</sup> RER project budgets have been updated to reflect the current budget baseline.

<sup>5</sup> Includes Electrification and Signals.

<sup>6</sup> 2016\$

## **Project Updates**

### **RAPID TRANSIT: LRT UPDATE**

#### **Eglinton Crosstown LRT**

Crosslinx, the consortium delivering the project, continues with construction at the Maintenance and Storage Facility, all stations and along the at-grade portion of the guideway.

Construction of the Maintenance and Storage Facility is nearly complete, with facility testing and commissioning underway. The yard trackwork is partially complete in preparation for the storage of the Light Rail Vehicles (LRVs) being delivered later this fall.

Construction at all underground stations is progressing with support of excavation (shoring) work in progress at all stations and permanent station infrastructure being built at Mount Dennis, Keele, Forest Hill, Chaplin and Science Centre stations. At Mount Dennis Station, structural, mechanical and electrical work continues and the new Photography Drive bridge spanning Eglinton Avenue West to access the bus terminal and passenger pickup and drop off is complete. Construction of the guideway over Black Creek Drive continues with the piers, abutments and girder placement. Crosslinx has started foundation work for TTC's tunnel ventilation facilities at the south end of Eglinton Station.

Concrete pours in the tunnels to provide a flat base for the track, a tunnel walk way and duct bank, are nearly complete. Along the at-grade portion of the guideway, bridge rehabilitation work at Celestica, East Don and Wynford has begun and utility relocations, road widening and intersection work continues. At Kennedy station, utility relocations and piling are ongoing.

#### **Finch West LRT**

The Finch West LRT achieved Financial Close on May 7, 2018. Mosaic Transit Group (Mosaic), the consortium delivering the project, submitted the first 10% design package in August. Geotechnical investigations on the Maintenance and Storage Facility (MSF) property started in August.

#### **Hurontario LRT**

The RFP for the Hurontario LRT is in-market. Utility and telecom relocations continue along the corridor. Enbridge has completed relocations at Longside Drive and Kingsway Drive and along the corridor. Additional work started at Courtney Park and Topflight Drive in July, 2018. In June 2018, Bell Canada completed the drilling and duct work at Cooksville GO Station and the civil work at Port Credit GO Station.

Alectra began their preparatory works at Rathburn Road in July 2018. Metrolinx started a series of meetings with the Cities of Mississauga and Brampton regarding the establishment of a Master Agreement using the executed MOUs as the starting point, and will further include discussions on operations and maintenance roles and responsibilities.

## **Hamilton LRT**

The RFP for the Hamilton LRT is in-market.

Planning work is underway for the relocation of a major Hydro One transmission line. Potential opportunities for utility relocation early works are being discussed with utility companies.

## **RAPID TRANSIT: BUS UPDATE**

### **VivaNext BRT**

#### *Yonge Street - Richmond Hill to Newmarket*

Utility relocation and road widening work is ongoing along segments in the Town of Richmond Hill. Temporary traffic signals, median removal and median paving were completed. Construction continues at the Mulock Station while concrete and asphalt removals were completed on Eagle Street in Newmarket.

#### *Highway 7 - Vaughan to Richmond Hill*

Construction continues on the BRT station stops at several locations. Utility relocations are almost fully complete, with the exception of remaining Alectra relocations in the Hwy 400 area.

Highway 400 bridge work continues, including construction of the new bridge deck widening, and preparation work for retaining walls throughout the Ministry of Transportation (MTO) limits. Storm sewer installation and road widening works continue throughout the remainder of the project segments.

#### *Highway 7 - Vaughan Metropolitan Centre*

Construction is completed with the exception of some minor warranty and deficiency work.

## **Mississauga Bus Rapid Transit**

Erin Mills, Winston Churchill and Renforth stations on the Mississauga Transitway were completed this summer.

## **GO Bus Infrastructure**

Multiple park-and-ride (P&R) lots across the GTHA are in various stages of planning, design, procurement and construction. Construction of the Confederation GO Bus P&R, the interim P&R in Oshawa and the Courtice Road/Highway 401 P&R started this summer.

## **REGIONAL EXPRESS RAIL (RER)**

### ***RER AFP - Early Works Update***

## **Cooksville GO Station**

Construction is ongoing at Cooksville GO Station, which includes a new parking structure, a new station building, new bus facility and other site amenities to enhance the use of active transportation modes. The construction of the parking structure is now underway. The extension of the west pedestrian tunnel entrance and the excavation works within the railway corridor are on-going.

## **Milton/Meadowvale/Stations Operations West**

This design, build and finance project includes the implementation of required infrastructure upgrades at Milton and Meadowvale GO Stations and a new Station Operations West facility at Argentia Road. The RFP to design, build and finance the Milton Corridor project was issued on April 3, 2018 to three prequalified teams and is currently in the in-market phase. The RFP is anticipated to close in the fall.

## **Kipling Station Bus Terminal**

EllisDon Transit Infrastructure began construction of the bus terminal and station in July and August, respectively. EllisDon is working on the installation of the storm tank, sewers and bioswales on the terminal land and station parking. Crews are also on site doing the layout for the light pole bases required in the parking lot. EllisDon has been coordinating with Toronto Hydro for the duct bank relocation works.

## **Davenport Diamond Grade Separation**

The Davenport Diamond RFP is currently in the in-market period and includes the grade separation work required to facilitate increased service on the corridor. The RFP is anticipated to close this fall. Specifically, the construction will eliminate the at-grade crossing of two CP tracks by elevating the Barrie corridor over the CP corridor.

The project also includes extensive public realm and public art initiatives and a future connection to the West Toronto Railpath.

### **Lakeshore East - Central Corridor**

The Lakeshore East - Central Corridor RFP was released on April 9, 2018. The overall detailed design of this project was completed in June. This project includes two grade separations and grading, drainage and retaining walls to accommodate the expansion of the rail corridor for a third track between Beechgrove Drive and Galloway Road in Scarborough. This project will eliminate the at-grade crossings at Morningside Avenue and Scarborough Golf Club Road.

### **Lakeshore East - East Corridor**

The Lakeshore East - East Corridor RFP is currently in the in-market phase and is anticipated to close in October 2018. This project includes the expansion of Highland Creek and Rouge River bridges for additional track, grading, drainage, retaining walls and the expansion of the Petticoat Creek arch culvert to accommodate the expansion of the rail corridor for a third track between Durham Junction in Pickering and Beechgrove Drive in Scarborough.

### **Lakeshore East - West Corridor**

The Lakeshore East - West Corridor Request for Qualifications (RFQ) was released on February 28, 2018. This project includes rehabilitation of the Danforth GO Station, bridge expansions at Woodbine Avenue, Warden Avenue and Danforth Avenue, modifications to the Birchmount Road bridge, and grading works to accommodate the expansion of the rail corridor for a fourth track between the Eastern Avenue and Scarborough Junction.

### **Rutherford Station**

The RFP for the Rutherford GO Station project was released in November 2017 and submissions were provided on August 2, 2018. The project scope includes a new multi-level parking structure, overhead pedestrian bridge, surface parking, kiss and ride, bus loop, station rehabilitation, and grade separation of Rutherford Road.

### **Lakeshore West**

The RFP for the Lakeshore West Infrastructure Improvements project was released on April 26, 2018 and the proponents are now preparing their submissions. The scope of work for this project involves infrastructure improvements at nine different locations across the Lakeshore West Corridor, including five station rehabilitations/improvements, two grade separations and one overhead pedestrian bridge replacement.

## **Highway 401/409 Tunnel**

The Highway 401/409 project is currently in the implementation phase and the design is nearing 60% completion. The project will deliver tunnel infrastructure needed to facilitate future service increases. Specifically, the project includes the construction of a new 180m twin tunnel beneath Highway 401/409, located directly to the north of the existing tunnel, which will house tracks 1 and 2 after expansion of the Kitchener Corridor and electrification. Tracks 3 and 4 will remain in the existing tunnel. Track work is not included in this project scope and will be delivered in a future package.

## **Stouffville Stations and Grade Separation**

The Stouffville Stations and Steeles Avenue Grade Separation AFP project reached Financial Close on March 7, 2018. Detailed design has begun and EllisDon Transit Infrastructure is working collaboratively with Metrolinx in advancing the design. Both internal and external stakeholders are engaged in design reviews. Utility and early works will begin in September.

## **Whitby Rail Maintenance Facility**

The Whitby Rail Maintenance Facility reached substantial completion on March 14, 2018. Plenary Infrastructure ERMF is now working on any outstanding minor deficiencies while Metrolinx starts to mobilize operations. Work on the mainline track and signals is on-going. The West end access to and from the mainline to the facility was signalized in June.

### **RER Non-AFP Early Works Update**

#### **Barrie Corridor- Non-AFP**

The Barrie Corridor non-AFP work includes three large contracts. The RFP for the first contract will close this fall and includes grading for a second track, noise walls, retaining walls, culvert extensions, utility relocations, bridge widening at Sheppard Avenue and a new platform at Downsview GO Station.

The RFP release for the second and third contracts is expected in Fall 2018.

The East Gwillimbury GO Parking Lot Expansion is in construction and is expected to be complete and in service by the end of 2018.

#### **Kitchener Corridor- Non-AFP**

Work is underway on the Bramalea Multilevel Parking Structure project. The design is now 75% complete and the construction of the island platform, side platform and west pedestrian tunnel is underway.

### **Lakeshore East Corridor- Non-AFP**

Preliminary design of the Rouge Hill GO Station project, which includes a new station building, new tunnel, existing platform rehabilitation work, bus loop modifications and electrification enabling works has begun.

The Pickering Pedestrian Bridge is nearing completion of the Kalzip cladding installation on the north and south stair terminals.

### **Milton Corridor - Non-AFP**

The Lower Galt Track Realignment and Reinstatement project was completed as of June 2018. The project included utility relocation, existing track realignment, new track and switch supply and installation, and signal upgrades to a century-old rail corridor.

### **Richmond Hill - Non-AFP**

The new Bloomington Station is currently under construction, with most of the foundation work completed.

The detailed design of the rehabilitation of the Richmond Hill GO Station is now complete and the tender for the construction contract was released to the market on July 20, 2018. Construction is anticipated to begin in fall 2018.

### **Stouffville Corridor - Non-AFP**

The contract to construct the Lincolville layover facility was awarded in July to Dagmar Construction Inc. The detailed design for the new Lincolville GO Station which is being relocated south of existing station and Bethesda Road is now underway.

Construction of the Stouffville Rail Corridor Expansion project is underway. This project involves adding a second track to segments of the corridor, grading work, the realignment of the existing rail tracks and various improvements along the corridor.

### **New Stations and Off-Corridor Infrastructure Update**

The RFQ for New Stations Toronto closed on June 19, 2018. This project consists of constructing five new SmartTrack station stops and two new GO Station stops with associated access and customer amenities, on the GO rail system within the City of Toronto. The TPAP Environmental Assessment Notice of Completion for the Smart Track Stations was completed in July.

The RFQ for New Stations Outside of Toronto closed on July 16 2018. This project consists of construction four new GO station stops with associated access and

customer amenities on the GO rail system outside the City of Toronto. The Environmental Assessment (EA) notice of commencement was issued in August. The Concept Design will be complete in the fall.

The RFP for the design-build contract for the Early Stations Improvement project closed on August 24, 2018.

### **Corridor Maintenance and Extensions Update**

#### **Corridor Maintenance**

The Corridor Maintenance team supports Transit Operations on all the GO network corridors by managing track, signals, bridge and communications maintenance projects.

#### **Kitchener Bypass**

The Qualification-Based Selection (QBS) document for the purpose of selecting a technical advisor to deliver options analysis, EA studies and approvals, a feasibility study, preliminary design for the preferred option, and develop appropriate procurement documentation for the Kitchener Corridor expansion work and closed on June 29, 2018. The qualifications of the submitted bidders are being reviewed and rated. This work will help confirm the appropriate option for a future Kitchener freight bypass required to allow for more frequent passenger service on the Kitchener Corridor.

#### **Niagara**

A contract for technical advisory services for the stations and layovers designs was awarded to Wood Canada on July 19, 2018. The initial focus of the design assignment will be the advancement of the Grimsby station design. The Environmental Assessment early works for Grimsby station were completed in August.

#### **Network Operations Centre**

The construction of the Network Operation Centre (NOC) at Oakville reached substantial completion on May 10, 2018, two months ahead of schedule. The facility will provide space for various functions of rail and bus operations under a single organizational control and authority structure.

### **Network Integration Update**

#### **On-Corridor**

The RFQ for the Design-Build-Finance-Operate-Maintain (DBFOM) contract is anticipated to close in September 2018. The project team is preparing to submit the

stage 2 application to Treasury Board as the next step prior to the release of the RFP. The stage 2 Treasury Board submission will include revised cost estimates based on a refined Reference Concept Design that includes a train service plan, fleet strategy and infrastructure configuration. The Reference Concept Design proves that at least one solution exists and bidding teams will be required to develop their own solution to meet the defined service requirements.

### **Network Signals and Communication**

The USRC Signalling System Project achieved System Final Design Review to begin testing for East Zone in July 2018. The achievement is a major milestone for the project and allows testing to begin at the factory. Construction of all aspects of the Signalling System is proceeding.

The GO Transit Train Control System final design review milestone is planned for October 2018 with 90% of submittals complete by the end of August. The installation of communications equipment has begun in the field.

### **Union Station Rail Corridor**

The Union Station enabling works project is ongoing with two tracks closed for each stage until summer 2019.

The RFP for the Union Station Enhancement Project Phase 1, South Platform and Concourse was released on April 10, 2018 and will close in the fall.

The Notice of Completion for the Environmental Assessment for tracks, bridges and retaining structures for the East Track Enhancement Project was issued on August 16, 2018. Stakeholder and community consultation is planned to continue over the next several months.

Construction of the new Union Station Bus terminal continues to progress well and has reached ground level with the concrete slab pour and perimeter walls for level 1 now underway and the building core up to level 3. The overbuild structure will be largely completed by late 2018. The new bus terminal will replace and double the capacity of the current terminal.

Respectfully submitted,

Peter M. Zuk  
*Chief Capital Officer, Capital Projects Group*