

To: Metrolinx Board of Directors
From: Gerry Chaput
Chief Capital Officer (Acting), Capital Projects Group
Date: June 28, 2017
Re: **Capital Projects Group Quarterly Report: June 2017**

Recommendation

That this report is received for information.

Executive Summary

The Capital Projects Group (CPG) is advancing a large and growing program, involving signature projects like the Regional Express Rail (RER) program, the Eglinton Crosstown Light Rail Transit (LRT), Finch West LRT, Hurontario LRT, Hamilton LRT and Bus Rapid Transit.

CPG has made progress in the advancement of RER enabling works using the Alternative Financing and Procurement (AFP) model with the assistance of Infrastructure Ontario (IO). Rapid Transit (RT) projects are also moving forward with continued construction on the Eglinton Crosstown LRT and the recent decision from the City of Hamilton Council to approve the Hamilton LRT project and submit an updated environmental assessment (EA) for a 3 kilometre extension from Queenston Circle to Eastgate.

Work continues on the management of the RER program's scope, schedule and budget by introducing new systems, controls and processes and transitioning the program documentation to centralized, system-based record keeping. These systems will be leveraged by all CPG programs and are expected to improve reporting, provide for timely and fact based decision making and better coordinate messaging with stakeholders.

CPG is also pleased to report the following accomplishments this quarter:

- the introduction of all-day GO Train Service to the Stouffville GO Line to help manage congestion and improve commutes in Scarborough and York Region;
- the announcement of the three shortlisted teams to design, build, finance, operate and maintain the Hurontario Light Rail Transit (LRT) project; and
- breaking ground on the Downtown Bus Terminal project which will be designed to LEED Platinum standards and connect to Union Station and to the PATH system.

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

Table 1: Project Status

Corridor	Project Stage	Approved Budget for Capital Construction	In-Service Date ¹
Eglinton Crosstown LRT	Construction	\$5,300,000,000 ²	2021
Finch West LRT	Procurement	\$1,000,000,000 ²	2021
Hurontario LRT	Procurement	\$1,400,000,000 ³	2022
Hamilton LRT	Procurement and Planning	\$1,000,000,000 ⁴	2024
Viva BRT	Various	\$1,400,000,000 ²	Various
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 ⁶	Design	\$4,493,000,000	2025
Vehicles	Design/Study	\$2,583,000,000	2025
Parking, Access & Property	Design/Study	\$981,000,000	Various
Total RER		\$13,500,000,000³	
Bowmanville Extension	Design	\$550,000,000 ³	2024
Kitchener Extension	Design	\$2,250,000,000 ⁷	2024
Niagara Extension	Design	\$160,000,000 ³	2023
Total Extensions		\$2,960,000,000	

¹ Actual in-services dates are subject to schedules submitted by the successful AFP bidders.

² 2010\$

³ 2014\$

⁴ 2015\$.

⁵ RER project budgets have been updated to reflect the current budget baseline.

⁶ Includes Electrification and Signals.

⁷ 2016\$

Background

RAPID TRANSIT

LRT Update

Eglinton Crosstown LRT

Crosslinx Transit Solutions, the consortia delivering the design-build-finance-maintain (DBFM) contract for the Eglinton Crosstown LRT project, is nearly finished their design.

In March 2017, the two tunnel boring machines were extracted. Utility relocations and traffic diversions are in progress throughout the project. Foundation work is approaching completion and buildings are being built at the Eglinton Maintenance and

Storage Facility. Preparation for excavation (shoring) continues and excavation has started at many of the 15 underground stations. Keele station is the furthest advanced with deep excavation in progress. Mount Denis Station foundations are nearing completion. Crosslinx is preparing to start mining activities at Laird Station, which will be the first of the four stations to be constructed using the mining method. Mining operations are completed underground and the only surface work is removal of the material that is excavated. The bottom portion of the tunnel is being filled with concrete to provide a flat base where the track will be installed. This work is progressing west of Yonge.

Finch West LRT

In May 2017, Alstom was confirmed as the new vehicle supplier for Finch West LRT and the Request for Proposal (RFP) for the Design Build Finance Maintain (DBFM) contract for the Finch West LRT project has resumed.

Utility works are now underway on various sections of the corridor.

Hurontario LRT

The Request for Qualifications (RFQ) for interested parties to design-build-finance-operate-maintain the Hurontario LRT project closed on January 26, 2017 and the evaluation process for the submissions completed in April. In June 2017, Metrolinx and IO announced the three shortlisted teams from the RFQ. The technical advisor (TA) for the Hurontario LRT project has completed the technical documents that will be part of the RFP, which will be released in summer 2017. Alstom vehicles will be supplied by Metrolinx for this project.

Hamilton LRT

The RFQ for the design-build-finance-operate-maintain contract for the Hamilton LRT project was released in February 2017 and closed in March 2017.

As co-proponents, Metrolinx and the City of Hamilton submitted in May 2017 an addendum to the 2011 Environmental Project Report (EPR) to the Ministry of Environment and Climate Change.

Bus Rapid Transit (BRT) Update

VivaNext BRT

Yonge Street - Viva Bundle - Richmond Hill to Newmarket

The final design and field investigations are ongoing and utility relocations continue in all three segments of the line.

Highway 7 - Vaughan to Richmond Hill (H2)

Construction and utility activities continue for the Centre Street water main replacement works, and commissioning has been advanced to July.

Highway 7 - Vaughan Metropolitan Centre (H2 VMC)

Construction of the Highway 7 VMC BRT is advancing. Substantial completion and handover of the section east of Jane Street was obtained on February 24, 2017. The welding of the major structural components of the VMC station canopy was completed in March 2017 and the temporary structure was removed.

Mississauga Transitway

Renforth station is currently under construction.

Bus Infrastructure

Construction on the Kitchener bus maintenance and storage facility continues. The park-and-ride program continues with 10 new or expanded locations and is in various stages of planning, design, procurement and construction. The construction contract for the expansion of the Milton park-and-ride lot was approved in April 2017.

REGIONAL EXPRESS RAIL

Milton Station was added to the list of projects to be delivered through the AFP model, increasing the number of AFP procurements in this package to 14. The Stouffville Stations, Highway 401/409 Rail Tunnel, Cooksville Station, and Kipling Bus Terminal projects lead the way and have entered the RFP stage while the Rutherford Station, Lakeshore East Corridor grading and bridge work, and Union Station Revitalization projects have released their RFQs and continue to move through the various stages of procurement.

A new VP of RER Implementation position has been created in CPG to lead a transition from planning to 'building' in order to advance delivery of the capital program.

Off Corridor Infrastructure Update

The Off Corridor procurement package continues to develop. The off corridor work consists of construction of up to 12 new stations and upgrades at over 35 existing stations.

Corridor Infrastructure Update

Barrie Corridor

Pre-installation of pedestrian tunnel sections under the track of the Aurora GO station and the design of the Barrie South Station parking expansion were substantially completed in March 2017, while pre-installation of pedestrian tunnel sections under the track of the Maple Station was substantially complete in May 2017.

To support train service in both directions, work continues on the EA to add an additional track to the corridor and train layover facility in Bradford. The draft Environmental Process Report (EPR) was circulated to external stakeholders, including

review agencies, in March 2017 and the Notice of Commencement was issued in May 2017.

The Rutherford Station RFQ was released on May 2, 2017.

The third Davenport Diamond Community Advisory Committee meeting was held on April 5, 2017 as a Public Design Workshop.

Kitchener Corridor

The official grand opening of Guelph Station took place in March 2017, with the ribbon cutting ceremony in April 2017.

The Bramalea Station multi-level parking structure and master plan tender closed in April 2017. To offset impacts to parking, temporary parking in the vicinity is being pursued.

The contract for the design of the new platform at Weston Station was awarded in April 2017.

The contract for the construction of the fourth track from Nickle to Highway 427 was awarded in spring 2017 and is anticipated to begin in July 2017.

Lakeshore East Corridor

The Notice of Commencement for the EA that documents the corridor expansion between the Union Station Rail Corridor (USRC) and the Scarborough Junction was issued in May 2017. Comments from the City of Toronto and review agencies on the draft EPR were received and addressed prior to issuing the Notice of Commencement. Public meetings for this EA were held in June 2017.

The detailed design contract for Danforth Station began in March 2017.

The RFQ for the Central Corridor Expansion Build-Finance contract was issued in spring 2017.

The RFQ for the East Corridor Expansion build-finance contract was issued in March 2017.

The Request to Qualify and Quote for TA services for the Bowmanville Extension was issued in May 2017.

Lakeshore West Corridor

The new Lewis Road Layover Facility was substantially completed in January 2017 and GO Transit began using the facility in April 2017.

Phase 1 work at Bronte Station involving platform and parking improvements was substantially completed in April 2017.

The EA for the Burloak Drive grade separation is progressing. A public meeting was held in Oakville on March 30, 2017 to introduce the project to the public.

Milton Corridor

The RFP for the Cooksville parking structure and new station building project was released in January 2017 and the in-market period closed in May 2017.

The RFP for the new bus terminal at Kipling station was released in early April 2017. The detailed design for utility relocation work related to the project was completed in early March 2017.

The construction of Phases 2 and 3 of the Streetsville Station parking lot expansion began in March 2017 and May 2017, respectively.

The Milton Corridor Capacity Study was completed in mid-May.

Richmond Hill Corridor

Construction on the new Bloomington Station began in January 2017 with the shoring wall and site grading at the station site. Utility work also commenced in February 2017.

The tender for the design of the Oriole Temporary Station relocation was released in April 2017.

Stouffville

The Stouffville Community Office was opened in May 2017, replacing the interim office.

Construction on the Stouffville Corridor second track is underway.

The Steeles Avenue grade separation EA Notice of Completion was issued by the City of Toronto in April 2017.

Design work on a new Lincolnville Station was initiated in early 2017.

Union Station Rail Corridor

Award of the Vertical Access contract required for the opening of the Bay Concourse was approved in April 2017.

Rail simulation work was completed by Rail Operations in February.

Preliminary design for the West Track Enhancement project was completed in March 2017. The preliminary design for tracks, bridges, and retaining structures for the East

Track Enhancement Project was also finalized in June 2017 and the EA is well underway. The first Public Information Centre was held in June 2017.

Downtown Bus Terminal

The new Downtown Bus Terminal project broke ground in June 2017.

Network Infrastructure Update

Network Signals and Communication

The TA for the signalling program is currently developing the Project Specific Output Specifications for all signalling work related to on corridor infrastructure.

Cable trough installation has continued on-site in both the east and west zones.

Toronto Hydro connections to the three USRC signalling Power Distribution Modules began in January 2017. Site Acceptance Testing was conducted during April and May 2017.

Renovations of the Don Yard Business Resumption Center (BRC) began in February 2017.

Network Facilities

Construction of the new control centre in Oakville, the Network Operations Centre, is progressing well, has been registered to obtain Leadership in Energy and Environmental Design (LEED) Gold certification.

Construction on the fuel system upgrade at the Willowbrook Maintenance Facility in Etobicoke began in August. The RFQ for the design-build of the new crew centre was also issued in March 2017.

Construction of the new East Rail Maintenance Facility (ERMF) is progressing well and has been registered to obtain LEED Gold certification. Construction to connect mainline track to the ERMF has begun with the west connection completed in April 2017.

Electrification

The electrification project team continues to develop the procurement documents to ensure alignment with procurement strategies and timelines for the RER program. As part of the Electrification EA, Metrolinx is preparing the final draft of the EPR

Respectfully submitted,

Gerry Chaput

Chief Capital Officer (Acting), Capital Projects Group