
TO: MAYOR J. LEHMAN AND MEMBERS OF COUNCIL

FROM: R. SUTTON, P. ENG., DIRECTOR OF ENGINEERING

D. FRIARY, DIRECTOR OF ROADS, PARKS AND FLEET

NOTED: R. FORWARD, MBA, M.SC., P. ENG., GENERAL MANAGER OF INFRASTRUCTURE AND GROWTH MANAGEMENT

M. PROWSE, CHIEF ADMINISTRATIVE OFFICER

RE: METROLINX GO RAIL NETWORK ELECTRIFICATION – TRANSIT PROJECT ASSESSMENT PROCESS – ENVIRONMENTAL PROJECT REPORT
(FILE: T03-GO)

DATE: NOVEMBER 20, 2017

The purpose of this memorandum is to brief members of Council on the Metrolinx GO Rail Network Electrification – Environmental Project Report. Metrolinx advertised the Notice of Study Completion on October 11, 2017, initiating a 30-day public review period. Details on the project can be found on the Metrolinx website at: <http://www.gotransit.com/electrification/en/default.aspx>.

Background

As noted in the memorandum dated September 18, 2017, briefing Council on the Metrolinx Barrie Rail Corridor Expansion, Metrolinx has been concurrently completing a study to evaluate the environmental effects of electrifying the GO rail network (Union Station Rail Corridor, Lakeshore West Corridor, Kitchener Corridor, Barrie Corridor, Stouffville Corridor, Lakeshore East Corridor) in accordance with the Transit Project Assessment Process.

Proposed infrastructure specific to the Barrie Corridor within the City limits include the following components:

- Hydro One tap location at the Barrie Transformer Station located at 306 Tiffin Street (or alternate site at 16 Patterson Road). This is the primary connection to the Hydro One transmission grid.
- Traction Power Station (TPS) at 323 and 329 Tiffin Street. The TPS transforms the 115kV Hydro One grid voltage to 25kV for distribution to the trains via the Overhead Contact System (OCS).
- Two (2) 25kV Transmission Feeders between the TPS and Allandale Waterfront GO Station via the Barrie Collingwood Railway (BCRY) corridor. Two (2) 25kv aerial pole lines routed on both sides of the BCRY corridor provide a connection between the TPS and the OCS located at the Allandale Waterfront GO Station.
- OCS is the aerial supply system that delivers traction power to the trains along the rail corridor. The OCS will consist of a cantilever structure supported by poles along the rail corridor and portals within the station and layover facility.
- Bridge Barriers – Solid barriers are required where roads cross over the rail corridor to prevent the public from coming in contact with the OCS. Bridge barriers will be required at the existing Big Bay Point Road and proposed Lockhart Road grade separated rail crossings.

Pending completion of the 30-day review period; Metrolinx has provided the following implementation schedule:

- Procurement/Design – 2017 to 2019
- Construction – 2020 to 2025

The following sections provide a brief overview of the primary effects the GO Rail Network Electrification Project will have on the City of Barrie (herein referred to as the "City").

1. Connection to the Hydro One 115kV grid and TPS

Metrolinx is proposing to connect to the Hydro One grid at the Barrie Transformer Station, and construct a TPS at 323 and 329 Tiffin Street. Metrolinx is presently negotiating with land owners to acquire these privately owned parcels.

2. Two (2) 25kV Aerial Feeders routed within the BCRY Corridor

Metrolinx is proposing to route two (2) 25kv aerial feeders within the BCRY corridor, from the TPS (located west of Patterson Road) to the Allandale Waterfront GO Station. The aerial feeder would consist of two (2) pole lines, one (1) on each side of the rail corridor (please refer to Appendix "A" for an illustration of the feeder route). The option of an underground installation was discussed, specifically from Innisfil Street to Essa Road within the City's urban growth centre. Metrolinx has noted that an underground installation is not preferred due to significant additional capital costs and reduced system reliability. A final decision on the installation method will be made during detailed design. It is anticipated that an underground installation would likely only be pursued by Metrolinx to mitigate operational impacts to BCRY (if, through detailed design, it is determined that the aerial installation would unduly impact BCRY operations).

Metrolinx is requesting the development of an agreement to allow routing of the feeder within the BCRY corridor.

3. BCRY Corridor Agreement

Legal Services is leading discussions to develop a draft agreement with Metrolinx for shared use of the BCRY corridor for the feeder route. The Engineering and Roads, Parks & Fleet departments are providing technical support.

The objective of the agreement is to provide Metrolinx with permanent, sustainable, and uninterrupted right to occupy the BCRY corridor, but also ensures that any day-to-day operations and any additional effort to operate, maintain, and complete capital improvements within the BCRY corridor will occur at no additional cost or burden to the City.

Metrolinx has not been able to quantify how the feeder route will impact BCRY operations until detailed design, but have acknowledged through meetings with the City that rail operations on the BCRY will be able to continue. Given that operational impacts and mitigation measures are not known; staff will work with Metrolinx to develop a draft agreement that addresses the objectives of both the City and Metrolinx. When detailed design progresses sufficiently to provide all required information to develop a final draft agreement; a staff report will be prepared seeking Council endorsement.

4. BCRY Operations at the Allandale Waterfront GO Station and Barrie Layover Facility

Presently, BCRY operates on an isolated yard track through the Allandale Waterfront GO Station and Barrie layover facility connecting the Meaford spur and Beeton spur. Isolation of this track allows BCRY to schedule train trips to and from the Utopia yard without any restrictions due to Metrolinx rail traffic. As part of the Metrolinx Barrie Rail Corridor Expansion project, the previously isolated yard track through the Allandale South Station and Barrie layover facility will need to be shared with Metrolinx to accommodate all day two-way service. The City has requested further discussions with Metrolinx to develop operational procedures that will seek to reduce the anticipated significant operational impact. Electrification may introduce additional operational procedures for BCRY operations; Metrolinx has not been able to quantify operational impacts.

Metrolinx has noted that the OCS will allow regular rail stock up to Plate F dimensions to operate on the electrified corridor. Plate F includes Metrolinx BiLevel commuter rail cars and standard freight cars, but precludes double-stack and Autorack freight cars (Plate H dimension). Staff have requested that the track

used by BCRY maintain the ability to transport Plate H dimensional freight on the shared line within the Allandale Waterfront GO Station and layover facility.

5. Rail Crossing Structures

Electrification of the rail corridor network will require additional infrastructure considerations at crossing structures. Agreements will need to be completed with Metrolinx to address operations and maintenance on crossing structures. Concerns exist on how the City will operate and maintain the roads over rail crossings, as the OCS will present a significant impedance to completing bridge rehabilitation works. Staff will be seeking an agreement that does not unduly increase the City's burden of maintaining this infrastructure.

6. Utility Crossings

Both overhead and underground utilities may be in conflict with proposed Metrolinx electrification infrastructure.

The extent of City infrastructure impacted by the OCS project is not fully quantified. As part of detailed design, Metrolinx will confirm conflicts and implement mitigation measures. Staff time will be required to review Metrolinx design submissions and oversee implementation of mitigation measures.

7. Next Steps

Metrolinx published the Notice of Completion on October 11, 2017, initiating a 30-day public review period. Although outstanding concerns and details of agreements between the City and Metrolinx remain to be addressed/completed, Metrolinx have noted they are committed to reaching amicable solutions. Given the importance of this initiative, coupled with the Barrie Rail Corridor Expansion project to provide increased commuter train service on the Barrie Corridor, the City will work collaboratively with Metrolinx during detailed design to resolve and mitigate these issues.

If there are any questions, please contact Brett Gratrix at extension 5117, or by email brett.gratrix@barrie.ca.

APPENDIX "A"
BCRY 25kV Feeder Route

