



Update on the City's Transit Expansion Projects – Fourth Quarter 2020

Date: November 26, 2020

To: Executive Committee

From: Chief Planner and Executive Director, City Planning and Executive Director, Transit Expansion Office

Wards: All

SUMMARY

The purpose of this report is to provide updates on components of the City of Toronto's priority transit expansion projects, namely the Eglinton East Light Rail Transit (EELRT) and the Waterfront Transit Network (WTN).

In April 2019, City Council confirmed the preferred design for the EELRT, per agenda item 2019.EX4.1. The EELRT is a 15 km extension of the Eglinton Crosstown LRT from Kennedy Station to Malvern, with up to 21 stops and three connections to GO Transit. Recent changes to transit plans in Scarborough due to the Province's Subway Program required the City to update the scope of the EELRT project. This report recommends City Council approve the updated design to further advance the project, and direct staff to report back on the project costs, schedule and phasing approach prior to the 2022 Budget process.

As part of 2019.EX4.1, City Council also approved the streetcar option as the preferred technology for the Union Station to Queens Quay Link as part of the WTN, and directed staff to undertake the preliminary design and engineering phase of the extension of streetcar service to the East Bayfront. This work is well under way, as a joint effort and partnership between the City, TTC and Waterfront Toronto. This report recommends City Council direct staff to report back on the recommended schedule and funding requirements for the Union Station to Queens Quay Link and the East Bayfront LRT section of the WTN, including phasing options and an updated business case, prior to the 2022 Budget process.

RECOMMENDATIONS

The Chief Planner and Executive Director, City Planning and the Executive Director, Transit Expansion Office recommend that:

Eglinton East Light Rail Transit

1. City Council approve the updated design for the Eglinton East Light Rail Transit project as described in Attachment 1, and direct the Chief Planner and Executive Director, City Planning and the Executive Director, Transit Expansion Office to update the business case and advance the Transit Project Assessment Process accordingly.
2. City Council direct the Chief Planner and Executive Director, City Planning and the Executive Director, Transit Expansion Office to report back on updated business case analysis for the Eglinton East Light Rail Transit project, including project costs, recommended schedule and a phasing approach, prior to the 2022 Budget process.

Waterfront Transit Network

3. City Council direct the Chief Planner and Executive Director, City Planning and the Executive Director, Transit Expansion Office to report back on the recommended schedule and funding requirements for the Union Station to Queens Quay Link and the East Bayfront Light Rail Transit section of the Waterfront Transit Network, including phasing options and an updated business case, as part of an update on Waterfront Transit Network priorities prior to the 2022 Budget process.

General

4. City Council forward this report to the Toronto Transit Commission Board for its information.

FINANCIAL IMPACT

There are no financial implications resulting from the adoption of recommendations in this report. Previously approved budgets will support the current planning and design work on the EELRT and WTN projects. City staff will report back to City Council with cost estimates and recommended schedules for these projects prior to the City's 2022 Budget process.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

EQUITY IMPACT STATEMENT

Improving transit service, reliability and speed, and reducing transit crowding in neighbourhoods with vulnerable populations, including low income households, women, youth and racialized groups, have the potential to improve access to employment, education, community and government services, food, health services and recreation opportunities.

The EELRT would serve historically underserved communities in the City. The EELRT would travel through or adjacent to seven Neighbourhood Improvement Areas, and would bring higher-order transit to within walking distance of an additional 49,000 people, including an equity-weighted population of 30,000.

DECISION HISTORY

In January 2018, City Council considered the report *EX30.1 Waterfront Transit Network Plan*, and endorsed the overall Waterfront Transit Network Plan, including identification of priority segments. Council directed staff to complete a focused feasibility study of light rail and automated funicular technology options for connecting transit below grade between Union Station and Queens Quay.

Link: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2018.EX30.1>

In May 2018, City Council considered item *EX34.1 Eglinton East Light Rail Transit Project Update and Next Steps*, which provided an update on the Eglinton East Light Rail Transit project.

Link: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2018.EX34.1>

In April 2019, City Council considered item *EX4.1 Toronto's Transit Expansion Program - Update and Next Steps*, and approved the alignment and next steps to advance the Eglinton East Light Rail Transit, and components of the Waterfront Transit Network, including the Union Station to Queens Quay and East Bayfront Light Rail Transit projects.

Link: <http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.EX4.1>

In February 2020, City Council considered item *PH13.3 Official Plan Review: Transportation - Recommended Official Plan Amendment*, and approved changes to strengthen existing transit and transportation policies. The changes include the expansion and protection of higher-order transit and enhanced surface transit networks that include the Eglinton East LRT, and the Waterfront Transit Network, captured on Map 4: Higher-Order Transit Corridors and Map 5: Enhanced Surface Transit Network.

Link: <https://www.toronto.ca/legdocs/mmis/2020/ph/bgrd/backgroundfile-145675.pdf>

COMMENTS

Eglinton East Light Rail Transit

In April 2019, City Council approved an alignment for the Eglinton East Light Rail Transit (EELRT) that would extend the Eglinton Crosstown LRT from Kennedy Station through the University of Toronto Scarborough (UTSC) to Malvern. City staff were directed to continue the planning and design work for the project, and to report back to Council with a plan, schedule, cost and funding requirements.

More recently, roles and responsibilities related to transit expansion have changed, per the terms of the Ontario-Toronto Transit Partnership authorized by City Council in October 2019, per agenda item 2019.EX9.1. The subsequent Preliminary Agreement¹ signed by the parties in February 2020 formalized the roles and responsibilities of the Province and the City in implementing major transit initiatives in Toronto. As a result of updated transit expansion plans in Scarborough (Figure 1) and Provincial design changes to the Scarborough Subway Extension (SSE) in particular, City staff have had to update the design and cost estimates for the EELRT.



Figure 1. Scarborough transit expansion plans.

Kennedy Station Connection

As part of the updated SSE design, a third subway track for service reliability improvements has been introduced under Eglinton Avenue East near Midland Avenue, and the depth of the SSE tunnel east of Kennedy Station has been modified. These

¹ <http://www.mto.gov.on.ca/english/transit/ontario-toronto-transit-partnership.shtml>

infrastructure changes preclude the previously developed tunnel design for the interface of the SSE and EELRT. Accordingly, City staff have assessed seven potential alignments for the EELRT to connect at Kennedy Station (see details in Attachment 1).

The preferred and recommended option for advancing design work is a tunneled option. This option maintains EELRT through-service connectivity with the Eglinton Crosstown, which attracts higher levels of ridership and is consistent with the original project objectives. It would require a longer tunnel into Kennedy station, with an underground station at Midland Avenue and the potential for market-driven transit-oriented development above the station.

The tunneled option mitigates potential pedestrian and cycling conflicts at Eglinton Avenue and Midland Avenue, and supports active transportation close to key transit modes. It also mitigates operational and design concerns at the eastern end of the Eglinton Avenue overpass. Further design of this option will need to address any potential property impacts within the subject area to optimize the benefits to the community.

Morningside Bridge

The EELRT alignment requires the use of the Morningside Bridge over Highway 401. The Ministry of Transportation of Ontario (MTO) will advance the rehabilitation of this bridge over the next few years, presenting an opportunity to coordinate some of the work required for the EELRT. Additional technical work was required to update the cost estimates of EELRT works on the Morningside Bridge to reflect discussions with MTO about the scope of the bridge rehabilitation project.

Sheppard Avenue East Transit Plans

The EELRT design presented to City Council in 2019 was based on the expectation that the Sheppard East LRT (SELRT) would be constructed before the EELRT would be in service. The design of the EELRT north of UTSC to Malvern assumed that some of the SELRT infrastructure, including the Maintenance and Storage Facility (MSF), would also serve the EELRT.

As part of the 2019 Ontario Budget, the Province announced its intention to extend the Sheppard Subway (Line 4) east to McCowan Road, following the construction of the SSE. Given the Province's new plans for rapid transit along Sheppard Avenue East, the EELRT design and cost estimates have been updated to include additional infrastructure as part of the EELRT project that was not previously contemplated. The updated EELRT project plan now recommends the option to locate an MSF to the north of UTSC.

Cost Estimate Update

The EELRT project cost estimates were updated to address the new design requirements discussed above (i.e., Kennedy Station connection, Morningside Bridge work and the MSF) and to apply recent TTC and market experience with the design and

construction of comparable transit infrastructure projects in the City and GTHA. The updated project cost estimates are presented in Table 1.

Table 1. Preliminary updated cost estimates.

Updated Cost Estimate	Baseline Cost Estimate	Variance
\$4.0-4.4 billion	\$2.3 billion	\$1.7-2.1 billion

Notes:

1. Cost estimates are Class 4, except for elements related to the Morningside Bridge work. Those costs will be confirmed through design work to be undertaken by the Ministry of Transportation as part of the Morningside Bridge rehabilitation project.
2. Class 4 estimates are considered accurate within a range of -30% to +50%
3. Costs include the full cost of the MSF. Earlier reported cost estimates did not include MSF costs, as the sharing of the costs with the SELRT had not been determined.
4. Estimates exclude costs associated with procurement, escalation, lifecycle maintenance, and operations and maintenance.

As part of the next phase of design work, City staff will further refine the cost estimate, including the identification of ways to contain costs. Opportunities for savings through potential project delivery models and partnerships in Transit Oriented Developments may help to offset some project costs.

Phasing

Staff have examined opportunities for the phasing of the EELRT project. As a first phase, the EELRT could be constructed from Kennedy Station to UTSC, including the MSF, which would allow operations to begin while the final phase of the project to Malvern is completed. MTO work on the Morningside Bridge may allow the City to advance early works for the EELRT. Further details on phasing will be included in future reports to City Council.

Next Steps

It is recommended that City Council authorize staff to update the business case for the project and advance the EELRT Transit Project Assessment Process (TPAP) for the EELRT based on the updated design described in this report. It is also recommended that City staff report back on the updated business case, including project costs, recommended schedule and a phasing approach, prior to the 2022 Budget process.

As the TPAP and design work for the EELRT progress, City staff will work with UTSC to align with their expansion plans. The EELRT would run along a realigned Military Trail through the UTSC campus as an important transit connection to and through the campus. A Secondary Plan is currently under development to guide the future of the campus, and UTSC is actively advancing planning, design and construction of several new buildings. To ensure that the University's construction program continues to protect for the provision of EELRT infrastructure along a realigned Military Trail, the City

and UTSC will work together to coordinate the planning, design, approvals and construction of these related ongoing initiatives.

City Planning has undertaken some initial planning analysis along the EELRT corridor to coordinate future growth with the transit investment. This work will continue to ensure the planning framework along the corridor supports suitable transit oriented development.

City Council and TTC Board recently approved a bus priority corridor along the route of the EELRT from Kennedy Station to UTSC. The introduction of the bus priority corridor acts as an interim step to address current and growing demand for transit in the corridor, and will not preclude the future introduction of the EELRT.

Further discussions with the Provincial government and Metrolinx will focus on outstanding questions on the design of the EELRT, including technical and commercial details related to establishing a through-connection to the Eglinton Crosstown at Kennedy Station.

Waterfront Transit Network

Work on Waterfront Transit Network priority projects—the Union Station to Queens Quay Link and the East Bayfront LRT—is currently well underway with the 30% design and Class 3 cost estimate being developed as directed by City Council. The scope of the projects runs from Union Station to the foot of Bay Street, and along Queens Quay to the Cherry Street loop (see Figure 2). The projects are a coordinated effort between the City, the TTC and Waterfront Toronto, and would provide new and improved infrastructure to operate additional streetcar services to the East Bayfront development area.

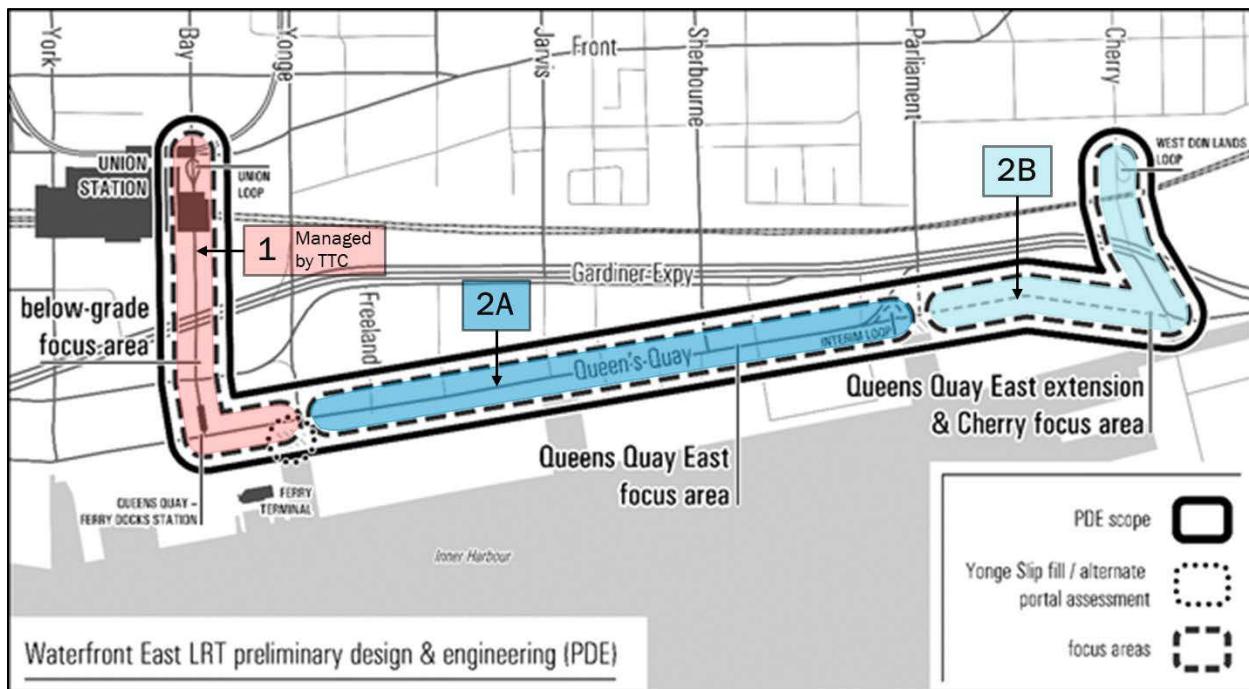


Figure 2. Waterfront Transit Network priority projects.

The project team is currently focused on creating a plan to phase the implementation of transit improvements at Union Station and on Queens Quay, per City Council direction. The team is also comparing options for a new portal location on Queens Quay east of Bay Street to transition streetcars from the underground section to the at-grade reserved right-of-way, information on which will be presented to the public during upcoming consultations this fall.

The City, TTC and Waterfront Toronto are currently reviewing 10% design drawings for Queens Quay from Yonge Street to east of Parliament Street, while the TTC is focused on producing a 15% design for the underground section from Union Station to a portal on Queens Quay East. Design work on the section between the East Bayfront and Cherry Street will commence shortly. A TPAP will be undertaken that will incorporate and assess an updated project scope.

Next Steps

The Notice of Completion under the TPAP and completion of the 30% preliminary design and engineering phase of the Union Station-Queens Quay Link and East Bayfront LRT to Cherry Street is anticipated for late 2021. This work will be followed by a report to Council on the preferred design and a recommended implementation schedule prior to the 2022 Budget process. That report will also make recommendations and identify associated costs for potential phased implementation of transit improvements.

City and TTC staff are also reviewing other aspects of the Waterfront Transit Network that may require revisions as a result of updates to other transit expansion projects. For example, the Ontario Line and updated GO Expansion plans have impacts on the Exhibition Place portion of the Waterfront Transit Network. Staff will report to City Council as required once updates are available. More information about the Waterfront Transit Network is available in Attachment 1.

CONTACT

James Perttula, Director, Transit and Transportation Planning, City Planning
James.Perttula@toronto.ca; 416-392-4744

Shalin Yeboah, Director, Program Management and Planning, Transit Expansion Office
Shalin.Yeboah@toronto.ca; 416-397-7358

SIGNATURE

Gregg Lintern, MCIP RPP
Chief Planner and Executive Director, City Planning

Derrick Toigo
Executive Director, Transit Expansion Office

ATTACHMENTS

Attachment 1 – Eglinton East Light Rail Transit and the Waterfront Transit Network