For Action



Transit Network Expansion Update

Date:April 16, 2025To:TTC BoardFrom:Chief Capital Officer

Summary

As a leading transit operator carrying close to 420 million trips in 2024 and with more than 100 years of institutional knowledge, the TTC is contributing its considerable expertise to expand the public transit network, while placing TTC customers at the centre of all its services.

Promoting sustainable transportation modes through seamless connections is a key objective (3.2) in the TTC's 2024-2028 Corporate Plan, and the work outlined in this report supports the advancement of rapid transit expansion projects being led by Metrolinx and the City of Toronto (Action 3.2.2). Initiatives being led by the TTC to build network capacity to support growth long-term (Line 1 and Line 2 Capacity Enhancement programs, etc.), also complement rapid transit expansion projects underway. Managing the interface between new expansion projects and base systems needs is central to the work being led by the TTC.

The TTC is working across operations, maintenance, engineering, communications, and planning disciplines with the City of Toronto and Metrolinx to develop the expanded services for Toronto's transit system: an integrated, accessible, safe transit network seamlessly interfacing with the existing network and connecting TTC customers with all of the mobility options within the city and neighbouring municipalities.

The highlights of this Transit Network Expansion Update report include:

- Line 2 Extension The TTC is actively collaborating with Metrolinx on the Scarborough Subway Extension (SSE), exploring the option to include the SSE as part of the existing Line 2 ATC procurement. This opportunity will maximize the benefit from the ATC system and the New Subway Trains for the entire Line 2 service on the opening day of SSE and beyond.
- Line 1 Extension and Capacity Enhancement The TTC and the City are updating the future ridership demand model for the transit network up to 2051. Meanwhile, Metrolinx is delivering the Yonge North Subway Extension (YNSE) from Finch Station to Vaughan, Markham and Richmond Hill. Investment in future capacity enhancement of Line 1 through additional growth trains and a train maintenance and storage facility are being planned, and will require future funding. There are ongoing discussions between the TTC and Metrolinx to refine

the capacity requirements and interdependencies for both the new fleet and additional facilities for the future state of the extended Line 1.

- Ontario Line Subject to the New Deal negotiation between the City and the Province, the TTC is working with Metrolinx to confirm the details of the TTC's roles and responsibilities for the operations of the Ontario Line, including revenue protection, safety and security, customer interfacing, and the network control centre.
- Eglinton East LRT (EELRT) The EELRT is one of the City's Priority Transit Projects. The TTC is supporting the City by providing planning, engineering, vehicle, operations, and maintenance expertise for the project. Please note that the TTC is working closely with the City and other stakeholders to refine the project scope as well as the roles and responsibilities for this project.
- Waterfront East LRT (WELRT) The WELRT is another of the City's Priority Transit Projects. The TTC led the planning and design work for Segment 1 of this project (Union Station to Queens Quay) and is supporting the City and Waterfront Toronto for the ongoing design work for Segment 2 and Segment 3.

Recommendations

It is recommended that the TTC Board:

- 1. Receive this report as a general update on transit expansion projects.
- 2. Endorse the Line 1 Growth Trains and a new Line 1 Train Maintenance and Storage Facility as priority projects for funding under the Canada Public Transit Fund and direct the Chief Executive Officer, Toronto Transit Commission to work with the City Manager, City of Toronto on a complete submission and prioritization of transit projects for funding through future funding streams of the Canada Public Transit Fund.

Financial Summary

Provincial Light Rail Transit Program

The Ontario-Toronto New Deal Agreement, approved by City Council on December 13, 2023, included the financial support provided from the Province to the City under the terms of the New Deal for Operating Support (\$330 million over three years) for the provincially owned Line 5 (Eglinton Crosstown LRT) and Line 6 (Finch West LRT). Funding will support mobilization activities leading up to the revenue service date as well as operating and maintenance costs once the lines enter revenue service, which includes labour costs for staff to operate the lines and non-labour costs, such as traction power, utilities, and maintenance through a third-party contract. This Agreement provides provincial funding support for a three-year term commencing in Q1 2024 through to Q1 2027. Future funding for transit operations of these lines will be discussed in the next round of the New Deal discussions with the Province.

Provincial Priority Subways Program

Service Disruption Policy and the Recovery of Additional Operating Costs

As construction activities associated with the subway expansion program increase, some regular TTC services will be disrupted by required streetcar track and/or subway closures. On these routes, the TTC will require additional vehicles or bus replacement services to maintain service levels for customers, which will result in additional operating costs. Metrolinx and TTC staff are finalizing the details for the policy that will outline processes and eligible costs for reimbursement. At this time, the TTC expects that service disruption costs will be funded by Metrolinx.

City Priority Expansion Projects – Eglinton East LRT and Waterfront East LRT

Eglinton East LRT (EELRT)

The Eglinton East LRT project is led by the City of Toronto in partnership with the TTC, and there is no approved full funding for the construction of this project. With the 10% design completed in 2023 and TRPAP completed in 2024, the City has moved on to start the 30% design and advance it through 2025 to 2027. The initial phase of the work for 2025 is expected to focus on intersection and roadway design. Additional staff resources, to be funded by the City, are required to support this phase of the work.

Waterfront East LRT (WELRT)

The TTC's 2025-2034 Capital Budget and Plan only includes funds for the Preliminary Design and Engineering (PDE) phase (30% Design) of the WELRT Segment 1 component of the project. The total approved budget for the TTC's current scope of work for the WELRT project is \$27 million, of which approximately \$23.2 million has been spent to date.

City Council approved the report, <u>Advancing Waterfront East Light Rail Transit</u>, on November 8, 2023, advancing the 60% Design for the WELRT project along Queens Quay East from Yonge Street to Villiers Loop by Waterfront Toronto; this includes all Segment 2 and 3 components as well as the Yonge Street Infill and Queens Quay East Extension early works. The report did not include any additional funds to advance WELRT Segment 1 to be delivered by the TTC.

The TTC is currently not advancing the scope of work for the Segment 1 component, which provides the required capacity and operational improvements to the Union Station Loop, pending further funding commitment and approval, as the procurement strategy for Segment 1 will require full funding commitment for this segment to proceed.

RapidTO

The current RapidTO program, funded in the TTC's 2025-2034 Capital Budget and Plan, will deliver service-enhancing transit priority measures on five of the busiest bus routes in the city. In addition to the already delivered Eglinton East corridor, this includes: Jane Street (from Eglinton Avenue West to Steeles Avenue West); Dufferin Street (from Dufferin Gate to Wilson Avenue); Steeles Avenue West (from Yonge Street to Pioneer Village Station); Finch Avenue East (from Yonge Street to McCowan Road); and Lawrence Avenue East (between Don Mills Road and the Rouge Hill GO Train Station).

Due to the 2026 FIFA World Cup, the implementation of a section of Dufferin Street (from Dufferin Gate to Eglinton Avenue West) and Bathurst Street (from Lake Shore Boulevard to Eglinton Avenue West) will be accelerated to support improved transit operations during the event.

Funding of \$33.2 million, of which \$3.7 million has been spent to date, is included in the TTC's 2025-2034 Capital Budget and Plan to implement this part of the RapidTO program. This funding allows for the completion of five corridors (Jane Street, Dufferin Street, Steeles Avenue West, Finch Avenue East, and Bathurst Street), as noted above. As part of the broader study with the City through the Surface Transit Network Plan, approximately \$98.2 million is unfunded to apply RapidTO treatment on other busy routes in the Plan, including Lawrence Avenue East.

Funding of \$9.71 million is also included in the City's 2025-2034 approved Capital Budget and Plan to continue with feasibility studies and designs of the Surface Transit Network Plan priority roadways. The proposed total funding allotment is estimated to be sufficient to study and design approximately 10-to-11 roadways.

As progress on the Surface Transit Network Plan advances, subsequent funding requests will be made in future capital submissions by the City of Toronto Transportation Services and the TTC to study, design, and implement additional priority roadways.

The Executive Director – Finance has reviewed this report and agrees with the financial impact information.

Equity/Accessibility Matters

As a proud leader in providing accessible and reliable public transit to the residents in Toronto and surrounding municipalities, the TTC believes that all customers should enjoy the freedom, independence, and flexibility to travel anywhere on its transit system. Expanding the TTC's transit network through this program will reduce travel times and create greater transit equity, contributing to wider access to jobs, education, healthcare, community services, and other opportunities.

Upon the completion of the projects described in this report, all of the city's Neighbourhood Improvement Areas (NIAs) will be within walking distance or a short bus/streetcar ride to connect to rapid transit.

All new stations, including interchange stations and connections to existing TTC facilities, will be designed to be accessible and in accordance with the Accessibility for

Ontarians with Disabilities Act, 2005 (AODA) and the Ontario Building Code. All rapid transit stations will also be designed to provide connectivity with Wheel-Trans, broadening the Family of Services.

As requested by the Board, Metrolinx has committed to conduct meaningful consultation with the TTC's Advisory Committee on Accessible Transit (ACAT) as part of the Project Specific Output Specification (PSOS) review and design review for all projects within the provincial programs. This process began in August 2021 when ACAT's Design Review Subcommittee was consulted on the subway program accessibility requirements to be included in each subway project PSOS as well as specific requirements and early concept designs for the stations to be built as part of the Ontario Line project. Over the past three years, additional consultations have been held on various other Metrolinx rapid transit projects, and ACAT consultation is expected for other projects over the coming year.

The TTC will continue to ensure ACAT receives briefings on issues of the concept of operations and accessibility as the projects progress. The TTC is committed to ensuring ACAT is fully aware and consulted on issues of accessibility, and that the consultation is provided to Metrolinx to help inform planning and delivery.

Innovation and Sustainability Matters

The TTC's Innovation and Sustainability Group is working closely with Metrolinx and the City to identify future-proofing requirements to be included in the design for all the newbuild Transit Expansion projects. Specifically, requirements include electrification infrastructure provisions for eBuses and maintenance vehicles that would enable onroute charging and/or backup charging locations at a minimum. More broadly, the City's TransformTO Net Zero Strategy has been cited as a source for requirements among Metrolinx and peer agencies to ensure these projects contribute to the goal of achieving net-zero, community-wide greenhouse gas emissions in Toronto by 2040.

Decision History

The following links contain the detailed transit network expansion updates that were presented to the TTC Board at its meetings on February 10, 2021, September 15, 2021, February 10, 2022, July 14, 2022, February 28, 2023, November 22, 2023, and July 17, 2024, respectively:

February 10, 2021 – Transit Network Expansion Update September 15, 2021 – Transit Network Expansion Update February 10, 2022 – Transit Network Expansion Update July 14, 2022 – Transit Network Expansion Update February 28, 2023 – Transit Network Expansion Update November 22, 2023 – Transit Network Expansion Update July 17, 2024 – Transit Network Expansion Update

On February 22, 2024, the TTC received a <u>City Council Transmittal – CC13.2 Ontario-</u> <u>New Deal Agreement</u>, and the TTC Board adopted the recommendations and directed the implementation of the City's commitments in the New Deal Term Sheet as it relates to the TTC, and directed TTC staff to engage in negotiations with respect to future transit commitments, including operations and maintenance funding, the subway agreement in principle, and continued use of the Provincial fare card system, at the appropriate time, to achieve terms that are acceptable and in the best interests of the City of Toronto and the TTC. <u>Decision Link</u>.

Issue Background

The TTC continues to work with key partners, including Metrolinx, Infrastructure Ontario, York Region, and key divisions in the City to advance the transit expansion projects outlined in the report that will grow Toronto's transit network in the next decade. As the network operator, the TTC is responsible for customer experience and a seamless endto-end customer journey during transit expansion project delivery and once the new transit lines open for service.

Transit expansion programs, such as the Provincial Priority Subway Program and Provincial LRT Program, are governed by a Toronto-Ontario Governance Framework, which includes a Toronto Transit Executive Committee with executive-level representation from the TTC, City of Toronto, Metrolinx, Infrastructure Ontario, and the Ministry of Transportation. Program and project-level steering committees have also been established to provide co-ordination and oversight of the work. The TTC uses these forums to advance the interests of the TTC in accordance with the Board's direction.

Comments

Toronto Rapid Transit Network Expansion

Major expansion and capacity improvements to the TTC network are underway. Key programs and projects are highlighted in Table 2 and Figure 1 below:

Program	Project	TTC Line	Current Phase	Anticipated In-Service	TTC's Role	Comment
Provincial LRT Program	Eglinton Crosstown LRT	Line 5 Eglinton	Testing and Commissioning	2025*	Operator	Province OwnerTTC to Operate
	Finch West LRT	Line 6 Finch West	Testing and Commissioning	TBD*	Operator	Province OwnerTTC to Operate
Provincial Priority Subway Program	Ontario Line	Future Line 3	Procurement/Design /Construction	2031*	Operator**	Province OwnerTTC to Operate**
	Scarborough Subway Extension	Line 2 Bloor- Danforth	Advance Tunnel Contract: Construction; Stations/Rail/Systems: Progress Design Build Contract Awarded January 2025.	2030*	Operator/ Maintainer	 Province Owner TTC to Operate and maintain(L1/L2) Interdependencies: Line 2 ATC, New Subway Trains
	Yonge North Subway Extension	Line 1 Yonge- University	Advanced Tunnels Contract: Procurement Stations/Rail/Systems: Planning	TBD*	Operator/ Maintainer	 Province Owner TTC to Operate and maintain(L1/L2) Interdependencies: Line 1 ATC, New Subway Trains, Line 1 TMSF Recommeded CPTF Funding Request for Line 1 Trains and TMSF

Table 2: Rapid Transit Network Expansion Programs and Projects

Program	Project	TTC Line	Current Phase	Anticipated In-Service	TTC's Role	Comment
	Eglinton Crosstown West Extension	Line 5 Eglinton	1st Advance Tunnel Contract: Construction; 2nd Advance Tunnel Contract: Construction; Elevated Guideway Contract: Procurement Stations/Rail/Systems, Planning	2030-2031*	Operator	Province OwnerTTC to Operate
Provincial Subway Program	Line 4 Sheppard Subway Extension	Line 4 Sheppard	Initial Business Case development	TBD*	TBD**	IBC led by Province
Eglinton East LRT		Line 7 Eglinton East	Planning/Preliminary Design	TBD	Assets Owner/ Operator/ Maintainer	 CPTF Funding Request Advance to 30% Design Update cost estimate Alternate MSF location Risk with SSE/EELRT Procurement/Delivery Option Analysis
Waterfront Transit	Waterfront Transit – Waterfront East	Various streetcar routes	Preliminary Design and Engineering	2030-2031	Assets Owner/ Operator/ Maintainer	 CPTF Funding Request Advance Segments 2/3 to 60% Design Assessing Opportunity to advance Segment 1

Program	Project	TTC Line	Current Phase	Anticipated In-Service	TTC's Role	Comment
	Waterfront Transit – Exhibition Loop- Dufferin Gate Loop	Various streetcar routes	Preliminary Design	TBD	Assets Owner/ Operator/ Maintainer	 Project on hold pending evaluation of Ontario Line impact
Bus Rapid Transit (BRT)	Durham- Scarborough BRT	Various TTC and regional bus routes	Preliminary Design	TBD	Stakeholder***	No advancementNo funding
	Dundas BRT	Various TTC and regional bus routes	Concept Definition	TBD	Stakeholder***	No advancementNo funding

*Based on information provided by Province/Metrolinx. **Scope to be discussed and finalized with Metrolinx.

***Metrolinx is leading the BRT projects, and the TTC is one of the major stakeholders.



Figure 1: Rapid Transit Network Expansion Programs and Projects

The detailed information for each of the expansion projects is included in the Appendix of this report.

- Appendix A. Provincial LRT Program Update
- Appendix B. Provincial Priority Subway Program Update
- Appendix C. City Priority Transit Projects

Appendix D. Line 3 Bus Replace Program and Sheppard Extension

Next Steps

The TTC continues to work collaboratively with partners to advance the transit expansion projects outlined in this report.

Staff will continue to report to the Board on the progress of the transit expansion activities with a program update in fall 2025.

Contact

Yan He, Chief Project Manager – Expansion and ATC 416-590-6888 yan.he@ttc.ca

Signature

Stephanie Davies Chief Capital Officer

Attachments

Appendix A. Provincial LRT Program Update Appendix B. Provincial Priority Subway Program Update Appendix C. City Priority Transit Projects Appendix D. Line 3 Bus Replace Program and Sheppard Extension

03090-167160529-27

Appendix A. Provincial LRT Program Update

Line 5 Eglinton

The TTC continues its operational readiness planning for revenue service, and is in active conversations with Metrolinx to refine the actual opening date. The TTC's operational readiness continues to be on track with training of the various positions that are required to support the operations of Line 5 Eglinton.

The TTC is working closely with Crosslinx Transit Solution (CTS) to assist with line operation testing and stability. Due to the TTC Instructors' in-depth operational knowledge and experience, significant feedback has been and continues to be provided to project partners to improve the readiness of the line and the readiness of the training programs for Instructors and Operators.

As the ECLRT project progresses, the TTC's supporting effort to the project has increased in order to prepare TTC operating staff for the system's eventual revenue service operation. Part of the effort involved is working collaboratively with Metrolinx and CTS to perform due diligence reviews of testing and commissioning reports and safety documentation to ensure the system's readiness and safety for the TTC's Instructor and Operator training activities. This work enabled the TTC to initiate Operator training in Q3 2024, with additional training commenced in Q1 2025 in advance of Revenue Service Demonstration which is currently planned to commence in May.

The TTC is continuing to work closely with Metrolinx and CTS as commissioning and testing progresses. As of March 2025, more than 99% of the post-installation check outs (PICO) completed, and 94% of site acceptance tests (SAT) completed. Site integration testing (SIT) has been progressing as well, with more than 95% of the SIT having been completed for the facilities and 95% completed for systems. The TTC is also working closely with Metrolinx and CTS on the safety certification process.

The TTC and Metrolinx are currently undertaking a review of the Train Operating and Funding Agreement (TOFA), in light of the signing of the Train Operating and Services Agreement (TOSA) for Line 6, to ensure that new concepts negotiated in the TOSA are included as amendments in the TOFA to ensure consistency among both agreements prior to commencement of revenue service.

Line 6 Finch West

The TTC has initiated mobilization efforts to integrate Line 6 Finch West into the TTC network, and is in active conversations with Metrolinx to refine the actual opening date. The TTC has been extensively involved in activities, such as design reviews and operational planning.

The TTC is currently working closely with Metrolinx to ensure the TTC's operational readiness activities are integrated into the overall project schedule developed by Mosaic Transit Group (MTG).

The TTC was instrumental in assisting the Project Company (Project Co) with the development and approval of the Line 6 Rule Book. In its efforts to assist with moving Line 6 forward, the TTC also agreed to develop the Operator training program to assist project partners; this development work continued throughout 2024, and at the end of 2024, the TTC's dedicated Instructor staff for Line 6 were able to operate the Light Rail Vehicles for the first time on the mainline, under safety restrictions. Mainline operation is a precursor to formally exercise the TTC-developed training program in situ, and is required before approval of the training program. The training itself is in the process of being rolled out and commenced in early April..

Additional operational readiness activities that the TTC is actively engaged with include:

- Dedicated Instructor and supervisory staff for Line 6 who are assisting with vehicle testing and commissioning.
- TTC staff leading the development and validation of the Operator training program for Line 6 to assist project partners.
- Participating in Engineering Technical reviews as it relates to operating systems and operating environment.
- Assisting Project Co with the development of SOPs and Concept of Operations for Line 6.

The TTC, City of Toronto, and Metrolinx successfully completed negotiations of the Train Operating and Services Agreement (TOSA) for Line 6 Finch West, which was officially signed off and executed by all three parties in May 2024. The executed Line 6 TOSA forms the basis of the TTC's obligations as the "Operator" of Line 6, and will be administered for the TTC by the LRT Operations Department, and is being used as the basis for renegotiating the TOFA to ensure consistency between the two lines.

Appendix B. Provincial Priority Subway Program Update

In April 2019, the Province of Ontario announced a new priority subway plan that includes four projects, collectively known as the Provincial Priority Subway Program:

- Yonge North Subway Extension (YNSE) project (Line 1 Yonge Extension);
- Scarborough Subway Extension (SSE) project (Line 2 East Extension);
- Ontario Line (OL) project (which will become the new Line 3); and
- Eglinton Crosstown West Extension (ECWE) project (Line 5 Eglinton West Extension).

As the network operator, the TTC must provide a seamless and reliable customer journey. This will include a consistent fare payment experience as well as wayfinding, and an overall seamless customer experience that is consistent across the TTC network.

Interdependencies: Line 1 Capital Investment Requirements and YNSE

As previously reported, the TTC requires approximately 25 new subway trains for Line 1 to meet mid-2030s service needs with the opening of the YNSE project, and as a result, a new Train Maintenance and Storage Facility (TMSF) to accommodate an increased fleet size of 122 trains forecasted for 2041. The addition of a TMSF for Line 1 will enable fleeting to occur on both legs of Line 1, improving operational resilience and reducing operational costs due to deadheading (vehicles are out of service and running without passengers).

In the absence of growth trains and a new TMSF for Line 1, there is the risk of crowding and delays due to increased dwell times (time at a stop without moving), and the inability to provide sufficient capacity to meet demand. This will result in peak point crowding greater than 110% on various points on Line 1, and operational measures would need to be put in place to manage passenger volumes on trains and at stations during peak periods. The TTC is working closely with Metrolinx and other partners to update demand projections and incorporate the latest information as the YNSE and Line 1 Capacity Enhancement projects progress.

As previously reported, and outlined in the 2025 TTC Budget, the priority for Line 1 capacity is the procurement of an additional 25 new subway trains. For 2025, this investment is estimated at \$1.01 billion and requires matching funding from other orders of government. Final cost will be determined through the competitive procurement process.

The TMSF is predominantly unfunded in the TTC's 10-Year Capital Plan. A preliminary rough order-of-magnitude estimate is approximately \$3.672 billion.

The TTC continues to work with Metrolinx and other government partners to evaluate how best to meet the full maintenance and storage needs for Line 1, with consideration for the various site constraints that exist for the location of a TMSF. The TTC has identified the Line 1 growth trains and the new TMSF as recommended priority projects for funding under the Canada Public Transit Fund (CPTF) and its Metro Region Agreement (MRA) Stream.

The MRA stream is focused on funding projects that support regional integrated networks intended for the long-term development of public transit infrastructure in urban areas, including major growth and expansion projects. The TTC will continue to work collaboratively with the City of Toronto and the Province of Ontario to recommend the above Line 1 requirements be considered under the MRA Stream of the CPTF, alongside other City identified priority projects.

Line 2 ATC and SSE

The TTC is actively collaborating with Metrolinx's Scarborough Subway Extension (SSE), exploring the option to include the SSE as part of the TTC's existing Line 2 ATC procurement. This opportunity will maximize the benefit from the ATC system and the New Subway Trains for the entire Line 2 service on the opening day of SSE and beyond.

Operations and Maintenance Roles and Responsibilities

The TTC and Metrolinx are engaged at the working group level to define roles and responsibilities relevant to the performance of maintenance and operations functions of the Subway Program.

Based on work to date, the TTC will operate and maintain the infrastructure, and the fleet for the SSE and YNSE. The TTC's roles and responsibilities for ECWE is expected to be consistent with Line 5 Eglinton. For the Ontario Line, discussions on operations and maintenance roles and responsibilities are currently taking place at the working group level between the TTC and Metrolinx within the transit expansion governance framework. Subject to the New Deal negotiation between the City and the Province, the TTC is working with Metrolinx to confirm the details of TTC's roles and responsibilities for the operations of the Ontario Line, including revenue protection, safety and security, customer interfacing, and the network control centre.

The outputs of this work will inform the development of detailed Operations and Maintenance Agreements between the TTC and Metrolinx for the lines.

Wayfinding and Branding

In 2012, the TTC introduced its redesigned and updated Signage and Wayfinding Standards. These standards focused on the physical signage in stations, on the TTC surface network, and on vehicles. They incorporated signage best practices for accessibility and universal design for the time, with references to the Accessibility for Ontarians with Disabilities Act, 2005 (AODA) and Ontario Building Code (OBC). The standards also drew guidance from the Canadian Standards Association (CSA) and the International Organization for Standardization (ISO) guidelines.

TTC staff worked closely with internal and external stakeholders to ensure signage met the requirements of TTC customers, regional transit partners, and third-party advertising partners. Since 2012, the TTC has been implementing one consistent signage standard across the entire TTC network. These standards have been made available to expansion project design teams under the guidance of Metrolinx. It is the TTC's expectation that Metrolinx's delivery of future transit expansion to the TTC system must provide an optimum customer experience that is consistent throughout the GTA transit network.

On January 27, 2025, the TTC presented a <u>Proposed Interim Wayfinding Strategy</u> to the TTC Board that focuses on enhancing the customer experience by integrating forward-thinking systems, optimizing existing resources, and building on proven strategies. By embracing new technologies, the TTC aims to adapt to evolving language needs and reflect the diversity of Toronto's population, ensuring inclusivity and accessibility for all.

The Strategy included reviewing third-party digital (Google, transit apps) and third-party physical (developer connections, transit connections, expansion projects, city wayfinding, and points of interest) assets, while addressing the following customer touchpoints:

• Static and digital signage, universal design, maps, accessibility, language, customer support, integration with cityscape, audio, transit partner connections, illumination of pathways, and sustainability.

As we develop an updated strategy, one of the factors that must be considered is the ongoing system expansion in collaboration with Metrolinx.

As more projects get delivered by Metrolinx, they will use the Metrolinx Wayfinding Design Standard (DS-03), introducing an additional wayfinding standard within the TTC network.

The Metrolinx design standards are intended for transit infrastructure under Metrolinx expansion programs, while the balance of the TTC system aligns with the existing TTC Wayfinding and Signage Standards.

Comments on Innovation and Sustainability

The TTC's Innovation and Sustainability Group is working closely with Metrolinx and the City to identify future-proofing requirements to be included in the design for all the newbuild Transit Expansion projects. Specifically, requirements include electrification infrastructure provisions for eBuses and maintenance vehicles that would enable onroute charging and/or backup charging locations at a minimum. More broadly, the City's TransformTO Net Zero Strategy has been cited as a source for requirements that will reduce community-wide greenhouse gas emissions in Toronto to net zero by 2040. The TTC will continue to co-ordinate with Metrolinx and other peer agencies to ensure that innovation and sustainability initiatives will be considered for all Transit Expansion projects.

Ontario Line (OL) Updates

Queen Streetcar Diversions

The construction at Queen Station for the Ontario Line will require the long-term closure of Queen Street, between Bay Street and Yonge Street, and between Yonge Street and Victoria Street. In order to minimize the inconvenience to customers, TTC, City and Metrolinx staff have worked collaboratively to restore streetcar tracks southbound on York Street (between Queen Street and Adelaide Street) and eastbound on Adelaide Street (between Charlotte Street and Victoria Street). This detour allows the TTC to operate a diversion for customers that is as close to Queen Street as possible, while avoiding the need for long-term shuttle buses, and provides the necessary resiliency for streetcar service on King Street. The diversion for the streetcar service on Queen runs westbound via Church, Richmond, York to Queen; and eastbound via York, Adelaide, Church to Queen on the newly restored streetcar tracks. This new detour has been operational since November 2024 and will continue to operate until Queen Street is restored.

The restoration of all the required infrastructure will be funded by Metrolinx, as reported to the Board in the <u>February 10, 2022 Transit Network Expansion Update Report</u>.

Pape Station Advanced Works

The construction of the Ontario Line North Civil works requires alterations to Line 2's Pape Station to accommodate the new interchange station between Line 2 and the Ontario Line. An advanced work contract to demolish a portion of the existing station and to relocate existing utilities was awarded by Metrolinx in Q4 2023. Demolition and utility works have commenced and are expected to be completed by the end of Q2 2025. A bus loop closure at Pape Station has been implemented since March 2024. The two remaining routes are serving passengers on street stops near Pape Station. Metrolinx has requested the bus loop to remain closed until the end of 2025 to accommodate the excavation work described below.

Pape Station Support of Excavation (SOE) Works

The construction of the Pape interchange station requires deep excavations below the existing alignment of Line 2. An SOE contract was awarded by Metrolinx in Q1 2024 to commence installation of the SOE system as well as the excavation required for future construction. The SOE installation works required access to the currently closed Pape Station bus loop.

Osgoode Station Works

The construction of the Osgoode interchange station requires the permanent closure and demolition of the northeast entrance structure. The entrance was closed in May 2024 and is now demolished to accommodate the construction of the Ontario Line station.

Piling works for the SOE for the north shaft adjacent to Osgoode Station commenced in September 2024. Piling work is expected to be completed by Q2 2025.

Queen Station Works

Piling works for the SOE for the two shafts adjacent to Queen Station commenced in June 2024. Piling work is expected to be completed by Q2 2025.

Queen and Osgoode Utility Relocation Works

Metrolinx has awarded a utility relocation contract for the Queen Street corridor, between Victoria Street and University Avenue, and along University Avenue to accommodate future construction of the Queen and Osgoode interchange stations. Utility relocation work is scheduled to be completed by Q2 2025.

Lakeshore East Joint Corridor

Metrolinx awarded an Early Works contract in Q1 2023. The Early Works project involves the expansion of the existing Metrolinx Lakeshore East rail corridor. The project scope includes the widening of the rail corridor for a fourth GO track and two Ontario Line tracks, the replacement of existing GO bridges at Queen Street East, Dundas Street East, and Logan Avenue, and new Ontario Line bridges at Dundas Street East and Logan Avenue. The TTC has worked closely with Metrolinx to undertake the permanent relocation of existing aerial Traction Power Cable (TPC) underground, including the construction of a new duct bank and two chambers at Queen Street Bridge, connection points, post connections, and other work derived from the TPC relocation as well as permanent pole relocations at Queen Street Bridge.

The TTC has been assisting Metrolinx and their Early Works contractor with removal, reinstatement, and temporary and permanent support of the Overhead Contact System (OCS) cables to facilitate bridge works at Queen Street Bridge. This work includes the installation of a new bridge mount for OCS cables to the new bridge on Queen Street. Two Temporary TTC pole relocations, and the removal of existing poles at Gerrard Street Bridge, will also be required.

The Lakeshore East Joint Corridor-related work described above will require periodic short-term and extended shutdowns of the Queen East streetcar tracks. Bus replacement services will be required during the periods when streetcar tracks are non-operational. Co-ordination of the replacement bus service is currently ongoing between the City, Metrolinx, and the TTC.

Scarborough Subway Extension (SSE) Updates

Kennedy Station Works

As part of the Kennedy Enabling Work (KEW) under the SSE project, the construction work is progressing for the new West Ventilation Fan Plant (WVFP) west of Kennedy Station above the existing Line 2 tunnel structure. Early works to relocate the existing infrastructure already started, and construction work for the new infrastructure is in progress with anticipated completion in Q3 2026.

Advanced Tunnelling Work

The tunnel boring machine (TBM) was launched on January 16, 2023 from the launch shaft at Sheppard/McCowan. Approximately 1.1-km of tunnelling was completed at the end of 2024 and 6.9-km remains to be completed as part of the SSE Tunnelling Scope. As per the updated tunnelling schedule, completion is in July 2026.

Station Rail Systems (SRS) Work

The TTC is working closely with Metrolinx and the SRS Contract Development Partner for the implementation phase of the SRS work.

Station Planning

The TTC, City of Toronto, York Region, and Durham Region are working with Metrolinx to design new bus terminals and on-street bus connections at the future Scarborough Centre and Sheppard-McCowan stations.

Scarborough Centre: This station has been planned as part of the Line 2 East Extension as far back as 2013. Over the years, this station has always been identified as a focal point in the transit network and would require an adequately sized bus terminal to accommodate the future transit network plan. This requirement was made clear to Metrolinx since 2019 when the project was uploaded. However, the proposed designs have consistently fallen short of the TTC's requirements. The TTC has made numerous attempts to collaborate with Metrolinx and other stakeholders to achieve an optimized design, from the number of bus bays and layover spots to the design features of the terminal. However, the current station design is still suboptimal for TTC operations.

Guided by projected needs of the future transit network and the TTC's Service Standards and Design Manual, the TTC requested 17 dedicated bus bays at the new Scarborough Centre Station. This will accommodate customer demand and growth, and will support resilient operations at the new bus terminal. Metrolinx, citing site constraints and the need to deliver new development as part of the project ("Transit Oriented Communities" or TOC), is recommending a design that only has 11 bays assigned to the TTC for opening day (this number may change in future years through Metrolinx's Change Management Process). This deficiency will mean multiple bus routes would be forced to share a single bay leading to customer crowding on the bus platforms and slower, less convenient service overall. The limited accesses in the design will mean more circuitous routing and longer travel times for customers and higher operating costs for the TTC.

The TTC and Metrolinx will undertake additional traffic modelling to understand terminal operational constraints, if any. Through this work, and the future Change Management Process, the TTC remains committed to finding a viable solution with Metrolinx to address the terminal deficiencies for opening day and beyond.

Sheppard-McCowan: The design of this station will include a bus terminal that accommodates future TTC, Durham Region Transit, and York Region Transit services. While Metrolinx previously shared a proposal to convert the bus terminal to a non-fare paid terminal, they have since committed to accommodating the TTC's request to keep it as a fare-paid terminal for opening day. A fare-paid terminal will provide an optimal and integrated customer experience since customers transferring from subway to TTC buses would not be required to cross a fare line.

Lawrence East: The design of this station will include a three-bay, TTC-only bus terminal. Given the site, design of the station, and with routes split both in-terminal and on-street, Metrolinx decided Lawrence East Station should operate as an unpaid terminal, which was agreed to by the TTC.

Yonge North Subway Extension (YNSE) Updates

Station Planning

Cummer-Drewry: Currently, there has been no additional funding secured to deliver this station as part of the YNSE project.

Steeles-Yonge: The TTC, City of Toronto, York Region, and the cities of Markham and Vaughan are working with Metrolinx to determine an appropriately sized bus terminal and on-street bus connections at Steeles Station, and protect for future rapid transit services on Steeles Avenue. This is forecasted to be a busy bus terminal with high volumes of customers transferring between the surface bus network and the new subway. It is critical to design this terminal, and on-street facilities, to meet future demand to ensure customers have a seamless, accessible, safe, and convenient experience. In particular, this means designing on-street bus facilities to support current operations, and protect for future operations along the Steeles corridor, which is planned to include a future BRT service.

For the Steeles Avenue bus routes, the City of Toronto, York Region, the cities of Markham and Vaughan, and TTC staff have informed Metrolinx of their preference to include centre-median bus platforms in the project scope to better connect with the high volume of Steeles Avenue buses. Having appropriate on-street facilities will also reduce the number of bays needed at the off-street bus terminal since bus routes could serve on-street instead of needing to loop into a bus terminal. It is the position of TTC staff that the centre-median bus platform is a proven design to best meet customer demand and be compatible with the high volume of buses serving Steeles.

In July 2024, Metrolinx informed stakeholders that the YNSE project will not construct centre-median bus platforms to enable a centre-running BRT. On August 13, 2024, the TTC responded to Metrolinx's letter noting that the centre-running is the optimal design and requested that Metrolinx's YNSE project not preclude this integration after opening day.

Eglinton Crosstown West Extension (ECWE) Updates

Advanced Tunnelling Work

The first tunnel boring machine (TBM) was launched in April 2022 from the launch shaft, and the second TBM was launched in August 2022. Twin tunnels have been completed from Renforth to Royal York. The tunnelling for the first contract was completed in June 2024.

Appendix C. City Priority Transit Projects

Waterfront Transit – Waterfront East LRT (WELRT)

The Waterfront East LRT project is one of the City's priority transit projects. The project will expand the streetcar network from Union Station, along Queens Quay East to Cherry Street and Commissioners Street, to serve the growing East Bayfront and Port Lands neighbourhoods. The latest phase of work has advanced the design of the line to 30%, while completing a constructability review, business case, and associated Class 3 cost estimates. On November 8, 2023, City Council approved the WELRT alignment from Union Station to a new loop on Villiers Island, and further directed staff to advance the design of Segments 2 and 3 to 60%. Advancement on Union Station to expand the streetcar loop is on hold, pending funding availability.

In 2024, the TRPAP was completed for the section from Union Station to Silo Street to update the previously approved 2010 East Bayfront Transit Class Environmental Assessment. The remaining sections of the alignment will be covered by an update letter to the Lower Don Lands Environmental Assessment Master Plan.

On February 5, 2025, City Council approved the report for <u>Advancing the Waterfront</u> <u>East Light Rail Transit</u>, and City staff will report back in Q1 2026 with updates on 60% detailed design progress for Segments 2, 3 and Early Works, including an updated cost estimate and funding requests, and the results of the Phasing and Delivery Plan, including assessing opportunities for early phase transit improvements and for advancing Segment 1 through design and to procurement.

Eglinton East LRT (EELRT)

The Eglinton East LRT project is another of the City's priority transit projects. On December 13, 2023, Council approved the recommendations for the alignment of the EELRT. This included a 10% design of the distinct service concept from Kennedy Station to Sheppard-McCowan Station (on the SSE), with a spur line on Neilson Road to connect to Malvern Town Centre. In 2024, the TRPAP was completed and further work was done to begin identifying alternative sites for the EELRT train maintenance and storage facility. On February 5, 2025, City Council approved the report for Advancing Eglinton East Light Rail Transit. 30% design work will advance with Constructability Assessment to examine project sequencing and identify risks and interface challenges with the Province's Sheppard Subway Extension and Scarborough Subway Extension, as well as cost estimate and procurement and delivery options analysis and recommendations.

RapidTO

Over the years, the TTC has been involved with municipal and provincial partners in planning for bus rapid transit (BRT) projects that would upgrade bus infrastructure to increase the reliability and speed on some of the busiest surface transit routes in the TTC network and to better connect regional transit systems to the TTC network.

The TTC's 5-Year Service Plan & 10-Year Outlook (2019-2024) identified the need to explore priority bus lanes on five roadways in Toronto. The TTC is also working with the City of Toronto to develop a broader program to identify a series of priority roadways and study the application of different options of transit priority measures over the next 10 years. That more expansive program, called RapidTO: Surface Transit Network Plan, was endorsed by City Council in February 2024. As directed by City Council, the TTC is working with the City to undertake additional roadway-specific studies to determine the feasibility, benefits, and impacts of various transit priority measures, similar to what is undertaken for RapidTO: Jane Street.

In advance of the 2026 FIFA World Cup, two transit routes were identified for accelerated implementation plans to facilitate the movement of people during this event. In March 2024, Toronto City Council directed staff to investigate introducing RapidTO on Dufferin Street prior to FIFA, and in July 2024, City Council directed staff to advance a strategy to accelerate the review and design of RapidTO on Bathurst Street, between Eglinton Avenue West and Lake Shore Boulevard. Recommended designs and implementation plans for Dufferin and Bathurst streets are expected to be presented to the TTC Board and City Council for final approval by Q3 2025.

Meanwhile, the TTC and the City have jointly worked to advance the roadways identified in the 5-Year Service Plan & 10-Year Outlook. The first RapidTO roadway, Eglinton Avenue East/Kingston Road/Morningside Avenue, introduced priority bus lanes in 2020. The traffic and transit data monitoring on the corridor has shown improvements to transit travel times (up to five minutes savings in the afternoon peak period) and ridership levels, with minimal impact on general traffic.

Additionally, the TTC and the City have evaluated five design options for transit priority treatments for Jane Street, between Steeles Avenue West and Eglinton Avenue West, the second RapidTO roadway. Public consultations were held in fall 2024 to present the analysis results and recommended design, and to receive public feedback. Staff are incorporating that feedback and will present the final recommended design and implementation plan to the TTC Board and City Council for final approval by Q3 2025.

The last two roadways identified as priorities in the TTC's 5-Year Service Plan & 10-Year Outlook are proposed to be initiated in the near term (2025-2026):

- 1. Lawrence Avenue East between Don Mills Road and the Rouge Hill GO Train Station.
- 2. Steeles Avenue West between Pioneer Village Station and Yonge Street.

Specific study will follow the two-to-three-year project timeline to undertake a feasibility study, design, and community consultation prior to seeking approval for implementation of the recommended design.

Durham-Scarborough BRT (DSBRT)

The Durham-Scarborough Bus Rapid Transit (DSBRT) is a Metrolinx-led project that will advance the study of approximately 36 kilometres of dedicated transit infrastructure that will connect Oshawa, Whitby, Ajax, Pickering, and Toronto. This rapid transit corridor

would be used by TTC buses as well as buses from Durham Regional Transit (DRT) and GO Transit. In 2024, Metrolinx completed the Preliminary Design Business Case for the DSBRT. No further advancement has been made on this project, and there is currently no funding allocated for the implementation of this project within the City of Toronto.

Dundas BRT

The Dundas Bus Rapid Transit (BRT) project is a Metrolinx-led project that will advance the study of approximately 48 kilometres of dedicated transit infrastructure that will connect Hamilton, Burlington, Oakville, Mississauga, and Toronto. The infrastructure will connect McMaster University in Hamilton and the Kipling Transit Hub in Toronto. This rapid transit corridor would be used by TTC buses in Toronto as well as buses from other regional services.

Metrolinx is currently advancing the project through the Preliminary Design Business Case, which will advance the service concepts and define the required infrastructure to support the service concept at the preliminary design stage. The business case is expected to be completed in 2025. There is currently no funding allocated for the implementation of this project within Toronto.

Appendix D. Line 3 Bus Replace Program and Sheppard Extension

Line 3 Bus Replacement Program

The Line 3 Bus Replacement project is planned to be delivered in two phases. Phase 1 of the project is completed, including the work to expand the Scarborough Centre Bus Terminal, constructing a temporary bus terminal in the south commuter parking lot at Kennedy Station, and various transit priority measures for the Line 3 bus replacement service, which includes bus priority lanes, transit signal priority, new and expanded bus stop pads, intersection improvements, and queue jump lanes.

Phase 2 involves converting the at-grade portion of Line 3 right-of-way into a Busway. Buses would operate in the converted Busway between Ellesmere and Kennedy stations and would continue to operate on existing priority lanes on Ellesmere Road, between Ellesmere Station and Scarborough Centre Bus Terminal. Stops for the Busway, between Kennedy Station and Ellesmere Station, are planned at Tara Avenue, Lawrence East Station, and Ellesmere Station.

The Busway will provide customers with faster and more reliable travel times since the majority of their journey will be in a dedicated right-of-way. A trip between Scarborough Centre Bus Terminal and Kennedy Station is projected to consistently take approximately 15 minutes on the Busway in all periods, a savings of up to seven minutes compared to current operations in the bus priority lanes on Kennedy Road and Midland Avenue. More than 118,000 weekly customers are projected to use the Busway.

Work on Phase 2 commenced with the award of an Early Works contract in August 2024 to decommission and remove various wayside equipment from the Line 3 right-ofway, including tracks, power cables, and signal systems. In December 2024, the Early Works construction was completed along with the design of the Busway. TTC staff undertook a Transit and Rail Project Assessment for the Busway, which commenced in August 2024, and received the Notice to Proceed from the Ministry of Environment, Conservation and Parks in December 2024. The Busway contract is expected to be tendered shortly with an anticipated award in Q2 2025.

Sheppard Subway Extension (ShSE)

The Sheppard Subway Extension (ShSE) is a subway expansion project led by Metrolinx, which looks at potentially extending Line 4 east toward Scarborough and west to Sheppard West Station. Metrolinx is currently developing the initial business case (IBC) for this project, which will include an analysis of different alignment options and technology. The IBC is expected to be complete in Q2 2025. There are ongoing discussions between the TTC, City and Metrolinx staff to co-ordinate and identify risks and interface challenges between the Province's Sheppard Subway Extension and the EELRT project. For further details, please see <u>Sheppard Subway Extension (Line 4 Extension) Project Update</u>.



