

# Waterfront East Light Rail Transit Extension

Winter 2021 Community  
Consultation

Discussion Guide

# Land Acknowledgment

We acknowledge the land upon which this work is being undertaken is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples and is now home to many diverse First Nations, Inuit and Métis peoples. We also acknowledge that Toronto is covered by Treaty 13 with the Mississaugas of the Credit.

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# Some Useful Terms

## **TPAP – Transit Priority Assessment Process**

A Transit Project Assessment Process (TPAP) is a streamlined environmental assessment process designed specifically for transit projects.

## **LRT – Light Rail Transit**

Light Rail Transit is a form of urban passenger rail transit utilizing vehicles similar in appearance to streetcars or trams but operating at a higher capacity and/or speed. Light Rail Transit commonly possesses an exclusive or semi-exclusive right-of-way.

## **EPR – Environmental Project Report**

The Environmental Project Report describes the proposed project, including impacts and proposed mitigations, and provides documentation of the stakeholder and public engagement process.

## **PDE – Preliminary Design and Engineering**

Preliminary Design and Engineering is the process of developing design drawings for the project which identify how the project will function and what is required to build it. This process will also refine the estimated capital cost of the project.

# The Purpose of this Discussion Guide

This discussion guide has been developed to provide you with information on the Waterfront East Light Rail Transit (LRT) Extension from Union Station to Cherry Street.

The City of Toronto, in partnership with Waterfront Toronto and the Toronto Transit Commission (TTC), has initiated a study to undertake Council's direction to complete the Preliminary Design and Engineering (PDE) for the extension of the Waterfront Transit Network from Union Station to Parliament Street and ultimately connecting to Cherry Street.

The scope of work for this study also includes a Transit Project Assessment Process (TPAP) to update the existing East Bayfront Transit Environmental Assessment.

This document is organized into eight parts, of which Sections 3-8 will address the six key areas of work related to the Waterfront East LRT Extension:

## **Section 1 - How can I get involved?**

## **Section 2 - Project Team**

## **Section 3 - The Project Overview**

## **Section 4 - Portal Location**

## **Section 5 - Network Phasing**

## **Section 6 - Environmental Approvals: Introducing the Transit Project Assessment Process (TPAP)**

## **Section 7 - Design of Union and Queens Quay-Ferry Docks Stations**

## **Section 8 - Queens Quay East Street Design**

# How Can I get Involved?

You can learn more and provide input through any of the following:

- Watch six short video presentations about the project's key areas of work.
- Read this Discussion Guide to learn more about each of the focus areas of the project.
- Visit the [Waterfront East LRT Extension webpage](#) to learn about our upcoming virtual Community Consultation Meeting and to participate in our online survey.
- Attend the virtual [Community Consultation](#) on February 17, 2021 at 7:00 p.m., to learn about the Waterfront East LRT Extension, ask questions, and provide feedback.
- Complete the **online survey** (available on the project webpage above) following the community consultation, which will be open from February 17 to March 4, 2021.
- Sign-up for the [project mailing list](#) to receive updates from the project team.
- **Call 311** for more information.

You can contact the City Planning Staff with your comments and questions using the contact information below:

**Nigel Tahair**  
**Program Manager**  
**City Planning Division**  
**[WaterfrontTransit@toronto.ca](mailto:WaterfrontTransit@toronto.ca)**  
**416-338-2848**

# Project Team



**City of Toronto** is overseeing all sections of the project, working with Waterfront Toronto and the TTC on project coordination.



**WATERFRONT**Toronto

**Waterfront Toronto** is leading the development of [Areas 2A and 2B](#) along Queens Quay East.



**Toronto Transit Commission (TTC)** is leading the development of [Area 1](#) including the tunnel beneath Bay Street from Union Station to the surface portal at Queens Quay. TTC is also providing program-wide technical, operations, and costing review relating to streetcar infrastructure.



**WOOD**, reporting to TTC, is leading the preliminary design for Area 1.



**ARUP**, reporting to Waterfront Toronto, is leading the Environmental Project Report (EPR) associated with the Transit Priority Assessment Process (TPAP).

**WEST 8 + dtah**



**DTAH and West 8 and WSP**, reporting to Waterfront Toronto, are leading the public realm, streetscape, and configuration of Queens Quay in Area 2A.



**LURA Consulting** is leading the public engagement and consultation process for all sections of the project.



# Project Overview

The City of Toronto is planning the Waterfront Transit Network to service Toronto's waterfront from Long Branch in the west, at the Etobicoke/Mississauga border, to the Leslie Barns Maintenance and Storage Facility in the east, as shown in the map below. Individual projects in the network are in various stages of planning, design, and the environmental approval process. This engagement is focused on the Waterfront East LRT Extension, the portion of the network from Union Station to the Distillery Loop via Queens Quay East and Cherry Street.

The Waterfront East LRT Extension is one of several projects that contribute to the Waterfront Transit Network Plan approved by City Council in January 2018.



You can watch a pre-recorded presentation on the project overview [here](#).



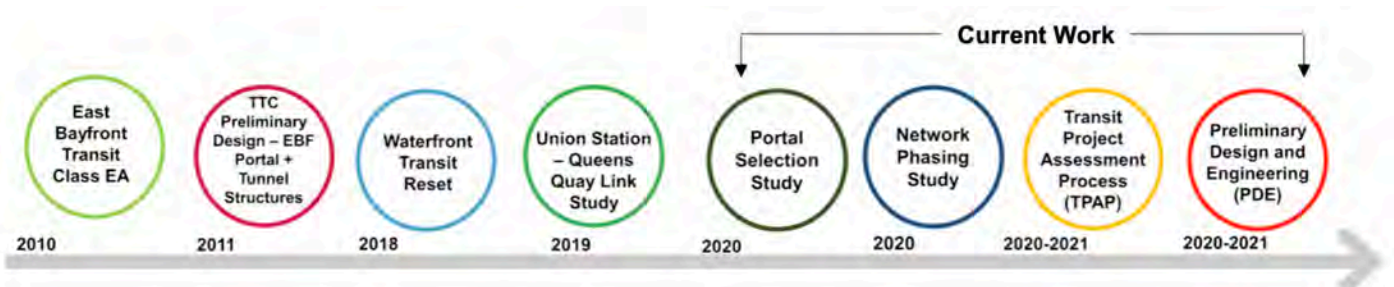
Photo by Toronto Transit Commission.



# What is the Timeline?

In April 2019, City Council directed staff to undertake a Preliminary Design and Engineering study for the Waterfront East LRT Extension, the section of the Waterfront Transit Network from Union Station to Parliament Street, and ultimately connecting to Cherry Street.

The current scope of work for this section includes an assessment of the preferred location for an underground to surface portal on Queens Quay East, opportunities to implement interim transit improvements before the full build-out of the extension, updating of past Environmental Assessment approvals through a Transit Project Assessment Process, and preparing a 30% design, cost estimate, and Business Case.



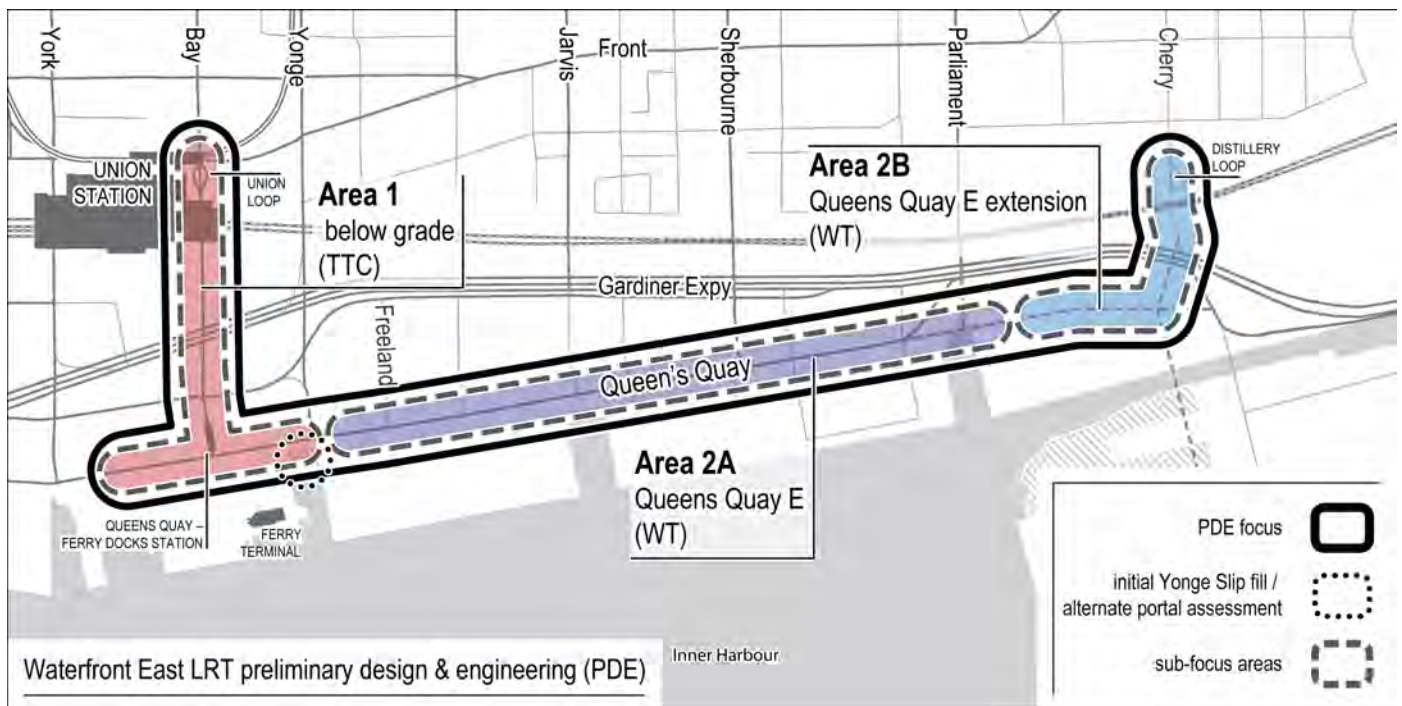
To meet Council’s direction, the team must complete the design, Business Case, and project costing by the fall of 2021 in time for the 2022 budget process.

In parallel with this timeline, an Environmental Project Report (EPR) will also be completed and submitted to the Province for approval as part of the Transit Project Assessment Process.

# How is the Project Organized?

This scope of work has been broken down into three focus areas:

- **Area 1** is the underground section that includes the Union Station Loop, the Queens Quay-Ferry Docks Station, and a new tunnel extension and portal on Queens Quay east of Bay Street.
- **Area 2A** is the existing Queens Quay East to Parliament Street and includes overlapping surface areas with Area 1 at Bay Street. This area includes unique challenges and opportunities presented by the Yonge, Jarvis, and Parliament Street slips.
- **Area 2B** includes the unbuilt portion of Queens Quay between Parliament Street and the future Cherry Street realignment, and finally connecting under the rail corridor to the existing Distillery Loop.



# Portal Location

## What is a Portal?

A streetcar portal is a piece of infrastructure that allows streetcars to transition from street-level (surface) to a below-ground tunnel. This piece of infrastructure is found throughout the city, including on Queens Quay West, west of Bay Street. There will need to be the same type of facility on Queens Quay East to allow streetcars to travel directly from the underground Union Station streetcar loop to the surface on Queens Quay East.

Part of the Waterfront East LRT Extension includes a Portal Selection Study. The purpose of the study was to evaluate two alternative locations for the streetcar portal on Queens Quay East.

You can watch a pre-recorded presentation on the portal location [here](#).



Photo by Wood/SAI.



# What was evaluated?

## Alternative 1: Portal East of Yonge Street

In the first alternative, shown in the figure below, the portal is located on Queens Quay East between Yonge Street and Freeland Street, in front of the Pier 27 Condominium Development. Alternative 1 was the preferred portal location identified in the original Environmental Assessment from 2010. Since that time, the location has been studied further and additional challenges associated with its constructability have been revealed.

### Existing Conditions



### Alternative 1 Proposal



## Alternative 2: Portal West of Yonge Street

In the second alternative, shown in the figure below, the portal is located on Queens Quay East between Bay Street and Yonge Street, in front of the Westin Harbour Castle Hotel. This alternative portal location would block the current driveway along the east side of the hotel and the entrance to the hotel motor court. As such, this alternative includes a partial fill-in of the Yonge Street slip to provide a new access point to the hotel and driveway via the Yonge Street and Queens Quay East intersection.

The portal in this location would also displace five bus bays and three taxi stands that currently operate in this block. The partial fill-in of the Yonge slip would also include five bus bays and a pick-up and a drop-off facility for passenger vehicles to replace those spaces that are removed from the street. In addition to this transportation use, the slip fill would include plaza space, the water's edge promenade, a wave deck, and additional open space connected to the future park to the east of the slip.

### Existing Conditions





### Alternative 2 Proposal








# Evaluation

The following table shows the assessment of the evaluation criteria for each alternative.




 Preferred





 Not Preferred

 Equal Assessment

Criteria	Alternative 1: Portal east ofYonge Street	Assessment of Alternative 1	Alternative 2: Portal west ofYonge Street	Assessment of Alternative 2
Planning Policies	No decision relevant factors	N/A	No decision relevant factors	N/A
Urban Design	Maintains existing unsignalized driveways and loading zones conflicting with Martin Goodman Trail.		Opportunity for <b>additional open space</b> at base of Yonge Street and to create an <b>enhanced arrival experience</b> to the waterfront at the base of Yonge Street.  Removes unsignalized driveways on Martin Goodman Trail, <b>improving trail conditions</b> .	
Transportation	Avoids a signalized intersection for transit atYonge/ Queens Quay.  Maintains a t-intersection at theYonge/Queens Quay intersection.		<b>Brings bus and taxi loading off street</b> , which was conflicting with the Martin Goodman Trail and roadway operations.  The existing unsignalized driveways to the hotel and Jack Layton Ferry Terminal driveway have been identified as a high-risk area for conflicts between vehicles, trail users, and pedestrians. <b>This option would consolidate these movements to the signalized intersection.</b>	



 Preferred       Not Preferred       Equal Assessment

Criteria	Alternative 1: Portal east ofYonge Street	Assessment of Alternative 1	Alternative 2: Portal west ofYonge Street	Assessment of Alternative 2
Socio-Economic	Minimal impact to existing businesses.		Relocation of vehicular entrance to hotel driveway that is not along the building frontage. <b>Requires change in hotel’s existing operations</b> and modifications to the hotel’s motor court.	
Natural and Cultural	No decision relevant factors	N/A	No decision relevant factors	N/A
Cost and Constructability	Longer tunnel section for streetcar  Requires relocation of combined sewer overflow (CSO) and the construction of a new syphon tunnel  \$40-50 million more in project construction cost		Shorter tunnel section for streetcar  Extension of the sewer outfall at foot ofYonge to new edge of slip  <b>\$40-50 million less in project construction cost</b>	

**Overall:** Alternative #2 is the technically preferred alternative due to significant cost savings, public realm benefits, and improvements to transportation safety and curb-side operations.

# Next Steps

The next steps with respect to portal selection include:

- Continued discussions with stakeholders
- Continued discussions with City staff regarding ownership, operations, regulation, and maintenance of the slip fill
- Advancing design work and environmental investigations

# Network Phasing

The purpose of the Network Phasing Study is to identify the timing of the funding and delivery of the first phase of the Waterfront Transit Network.

There are three important items to consider in in the context of the Network Phasing Study.

1. **Ontario Line's impact** on passenger route choice and forecasted passenger demand into the Union Queens Quay link and on Queens Quay.
2. **Development has advanced considerably in East Bayfront** since 2010 and development of the Lower Don Lands will soon follow upon completion of the Port Lands Flood Protection Project in 2024.
3. **City Council's request for staff** to explore a phasing option that would implement a through streetcar service on Queens Quay to East Bayfront in advance of the Union Station construction and implementation phase.

You can watch a pre-recorded presentation on Network Phasing [here](#).

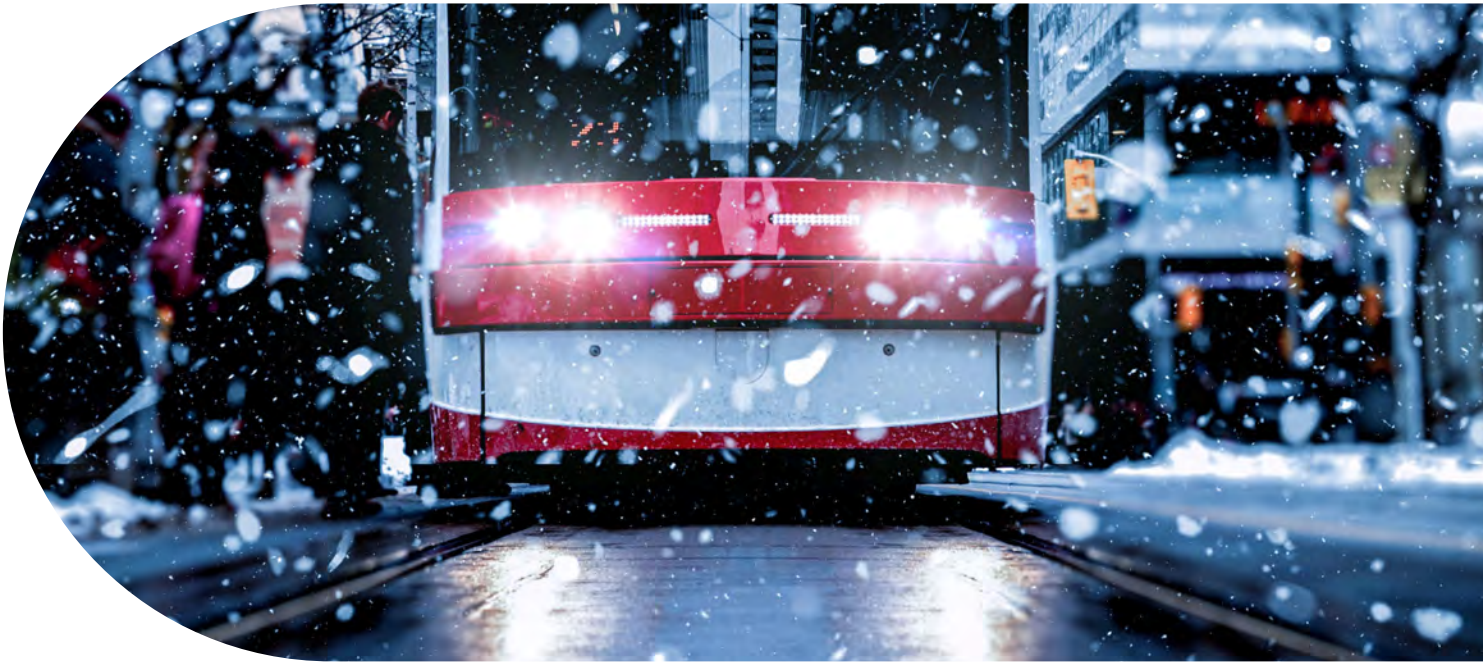


Photo by Andre Furtado on Unsplash.

# How much expansion work is needed in the Union Station Loop (Area 1)?

In 2019, City staff completed the Union to Queens Quay Link (UQQL) Study and City Council approved the recommendation to rebuild the existing streetcar loop at Union Station with four new platforms and to rebuild the Queens Quay-Ferry Docks Station with more capacity.

The forecasted demand for people to travel from Union Station down to Queens Quay East—even considering the impact of the Ontario Line—justifies the full UQQL concept at Union Station and Queens Quay-Ferry Docks Station. There are 3,000+ passengers per hour estimated in the AM peak hour along this line in the year 2041.

There may be opportunities to phase the improvements and build more capacity as demand grows. These phasing opportunities will take into consideration construction impacts, costing savings and operational flexibility.

## How far east should transit extend in Phase 1?

Union Station is a fixed starting point for the Waterfront East LRT Extension, and the ultimate end point is the Leslie Barns Maintenance and Storage Facility. The network will be completed in incremental stages, and the scope of this exercise includes an assessment of the appropriate interim end point in the Cherry Street area. We are exploring these four (4) options:

### Parliament Loop

- Temporary Loop in the vicinity of Queens Quay and Parliament
- Original anticipated terminus for phase 1

### Polson Loop

- Completion to Distillery Loop (above), plus the extension of the streetcar along Cherry Street to the Ship Channel

### Distillery Loop

- Completion of Queens Quay East extension to Cherry Street, with streetcar connecting to the Distillery Loop

### East Harbour

- Completion to Distillery Loop (above), plus the extension of the streetcar along Cherry Street to Commissioners, across Commissioners and up Broadview Extension

# Can East Bayfront transit service be expedited prior to the completion of the Union Station Loop?

## Option 1: Bus to/from Union Station via Yonge Street

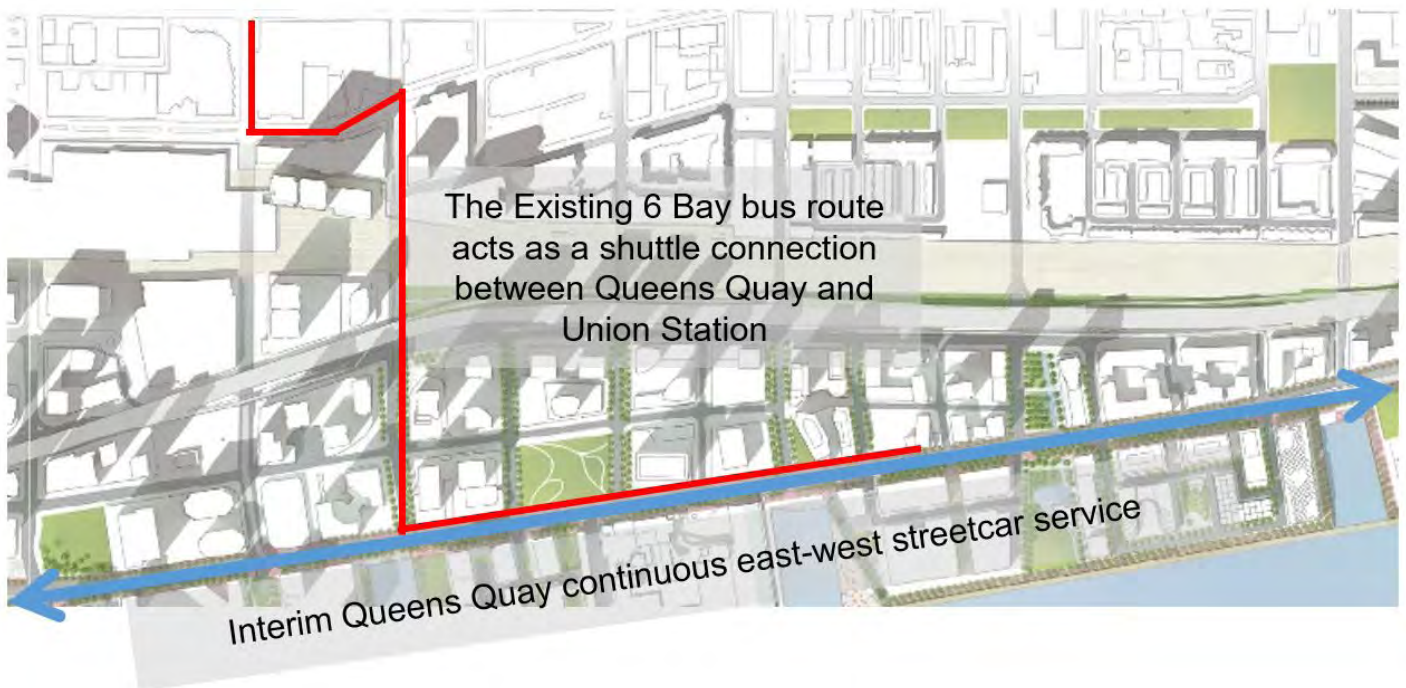
- Completion of Queens Quay East surface works first, then construction on Union Station and Queens Quay-Ferry Docks Station begins.
- While Union Station and Queens Quay Station is under construction, a new 519 bus route operates between Union Station and the eastern waterfront, using the dedicated streetcar tracks on Queens Quay East.
- The existing 6 Bay bus route service remains.
- A bus service on Queens Quay replaces the streetcar service east of Spadina Avenue, providing a direct connection to Union Station via Yonge Street.





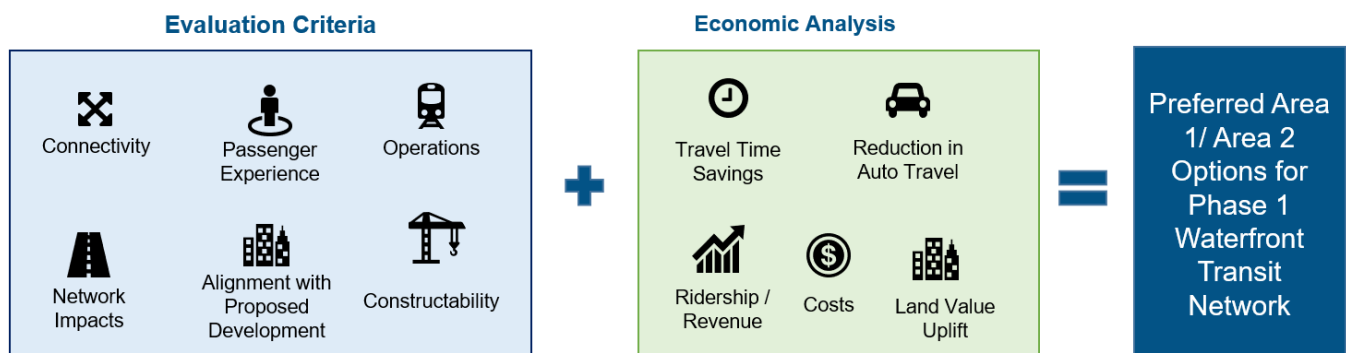
## Option 2: Streetcar Through from Queens Quay West

- Completion of Queens Quay East Surface Works first, then construction on Union Station and Queens Quay-Ferry Docks Station begins.
- Streetcar operates in dedicated lanes from Queens Quay West to East once Queens Quay East is completed, by passing Union Station while it is under construction.
- Existing 6 Bay bus route acts as a shuttle connection between Queens Quay East and Union Station.



## Network Phasing Evaluation

We are assessing phasing options with a set of evaluation criteria and economic analysis.





# Next Steps

The next steps with respect to the Network Phasing Study include:

- Completing the evaluation and analysis by end of Q1 2021.
- Report on study findings and recommendations.

# Environmental Approvals: Introducing the Transit Project Assessment Process

## What is a Transit Project Assessment Process?

A Transit Project Assessment Process (TPAP) is a streamlined environmental assessment process designed specifically for transit projects. Rather than filing amendments to multiple Environmental Assessments (EA), this approach consolidates all of the changes along the corridor, creating an updated transit project to go through the TPAP process.

You can watch a pre-recorded presentation on the TPAP [here](#).



Photo by Toronto Transit Commission.

# How does the TPAP relate to the previous Environmental Assessments?

The figure below shows the project study area in relation to previous Environmental Assessments (EAs). Applied to the Waterfront East LRT Extension, the TPAP will update and consolidate changes to the EAs previously conducted on the eastern waterfront in the past decade, responding to this rapidly evolving area of the city.

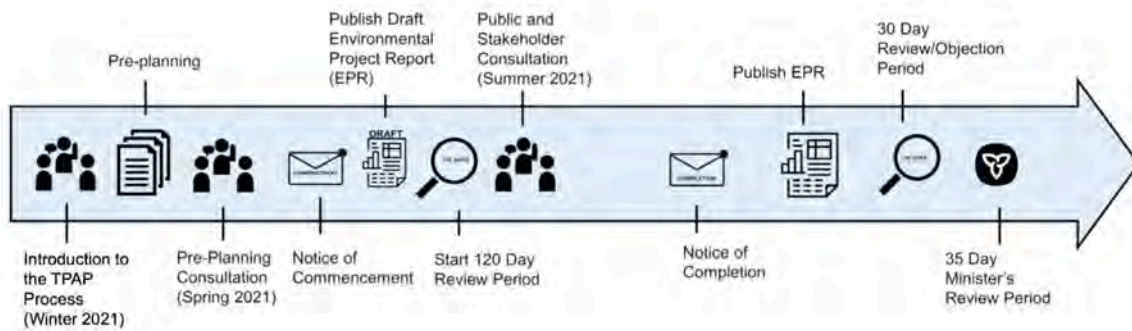


Other important considerations related to the TPAP for this project include that it:

- Has no impact to Preliminary Design and Engineering (PDE) timelines
- Has more reliable timelines than the EA addendum process
- Has a more simplified process for future addendums if required through the design process
- Requires a similar amount of background technical work required to complete as the addendum process
- Considers matters of Provincial importance that relates to the natural environment or cultural heritage and infringement of existing Indigenous Treaty Rights

# What is the timeline for the TPAP and when does it start?

The timeline and process we will follow for the TPAP is shown in the diagram below.



This current community consultation will introduce the community to the TPAP process. The TPAP will officially commence in the summer of 2021 and is initiated with the release of a draft Environmental Project Report (EPR) as well as a notice of commencement for this process.

Please continue to visit the [Waterfront East LRT Extension webpage](#) for engagement opportunities.

## Output of TPAP: Environmental Project Report

The Environmental Project Report (EPR) describes the proposed project, including impacts and proposed mitigations, and documents the stakeholder and public engagement process. The EPR is produced as part of the TPAP and will include the following:

- Transportation Analysis (Updated forecast of multi-modal transportation demand in the study area)
- Cultural Heritage Review
- Noise and Vibration Study
- Air Quality Study
- Socio-Economic Analysis
- Natural Environment Impact
- Implementation Plan (Including Construction Schedule)



# Union and Queens Quay-Ferry Docks Stations

As discussed in the project overview (pages 6-8), Focus Area 1 is the underground section that includes the Union Station Loop, the Queens Quay-Ferry Docks Station, and a new tunnel extension and portal on Queens Quay east of Bay Street.

Existing streetcar infrastructure is comprised of two underground stations, one at Union Station and the other at Queens Quay-Ferry Docks Station. The stations are connected by a running tunnel underneath Bay Street.

To accommodate new streetcar service to the East Bayfront area of the waterfront, the following work is required:

- Significant expansion of the two existing underground stations
- New running tunnel and portal structures along Queens Quay between Bay and Yonge Street
- Track works within the tunnel and portal structures
- Reinstating all roadworks in the affected areas

You can watch a pre-recorded presentation on the design of Union and Queens Quay-Ferry Docks stations [here](#).



Photo by Wood/SAL.

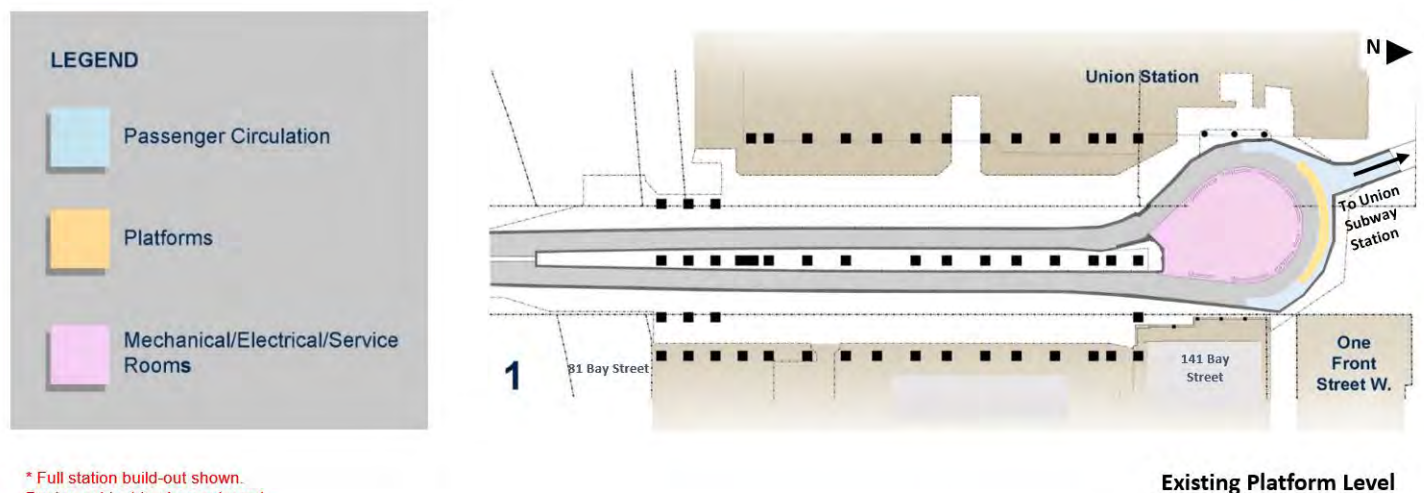
# Union Station

The diagram below shows the existing (top) and proposed (bottom) station configuration for Union Station.

The existing streetcar station has one single curved platform with direct access to the eastbound subway platform area and beyond.

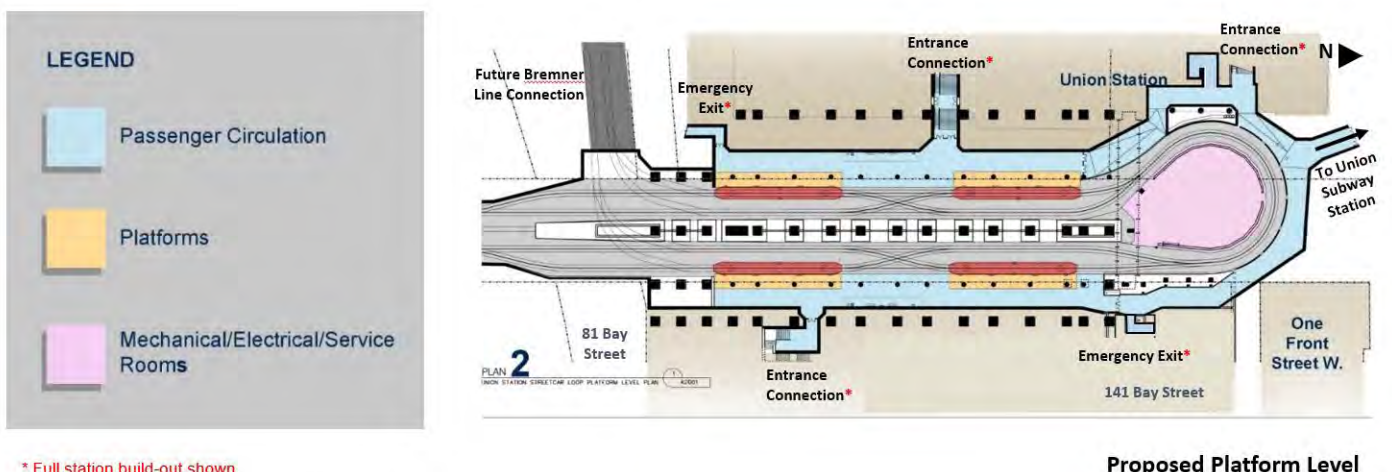
The proposed design for Union Station includes expansion of the existing station to accommodate up to a total of four streetcar platforms and new crossover tracks that allow each platform to operate independently.

## Existing Platform Level



\* Full station build-out shown.  
Design subject to change based  
on results of Phasing Study.

## Proposed Platform Level



\* Full station build-out shown.  
Design subject to change based  
on results of Phasing Study.

\* All new entrance connections and emergency exits subject to change/refinement based on further coordination/discussion with stakeholders.



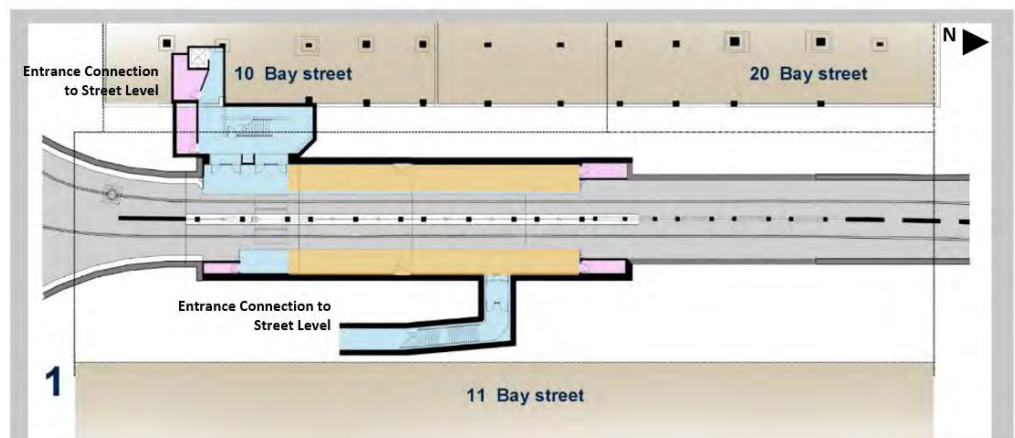
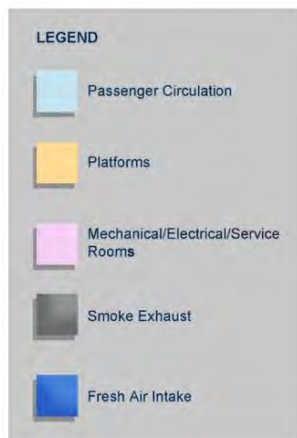
# Queens Quay-Ferry Docks Station

The diagram below shows the existing (top) and proposed (bottom) station configuration for Queens Quay-Ferry Docks Station.

The current station has one platform on each side and associated entrance connections to and from the street level.

The proposed expansion of Queens Quay-Ferry Docks Station includes up to one additional platform on each side, an enhanced entrance on the west side, a proposed underground connection to the active development at 11 Bay Street, and new emergency exit connection requirements.

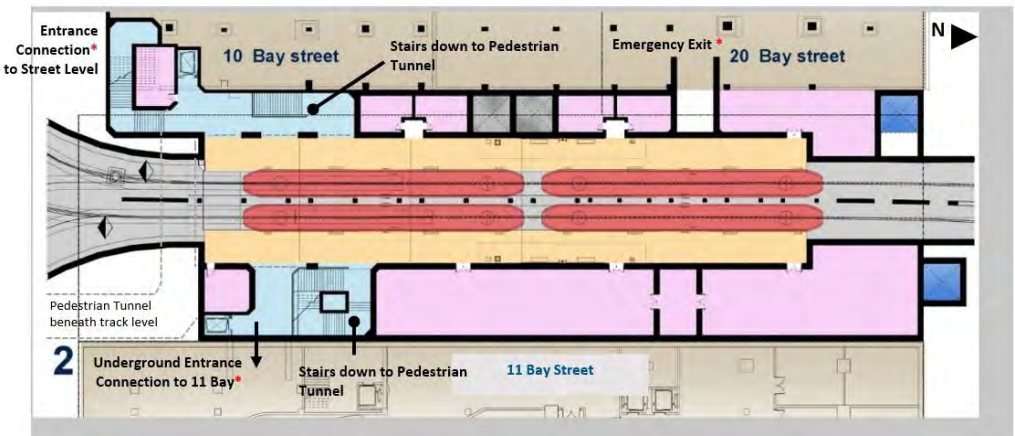
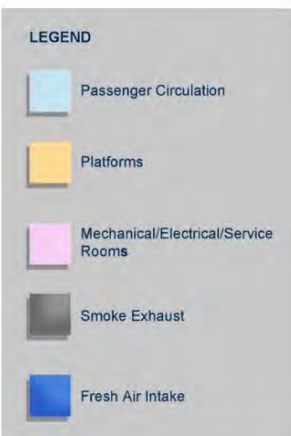
## Existing Platform Level



\* Full station build-out shown.  
Design subject to change based  
on results of Phasing Study.

Existing Platform Level

## Proposed Platform Level



\* Full station build-out shown.  
Design subject to change based  
on results of Phasing Study.

Proposed Platform Level

# Next Steps

The next steps with respect to the design of Union and Queens Quay-Ferry Docks Stations include:

- Finalize concept design in the first quarter of 2021
- Review and implement the results of the Phasing Study
- Assess the potential for east-west streetcar through-service on Queens Quay
- Continue design coordination with Waterfront Toronto
- Complete preliminary design and project costing by end of 2021

# Queens Quay East Street Design

Focus Area 2 is the surface section of Waterfront East LRT Extension. As part of this project the design team has an opportunity to revisit an earlier design for Queens Quay East completed in 2012 which was an extension of the already revitalized street on Queens Quay West. The revised design aims to refine and optimize how the street functions in terms of ecology, mobility, and place-making.

You can watch a pre-recorded presentation on the street design of Queens Quay East [here](#).



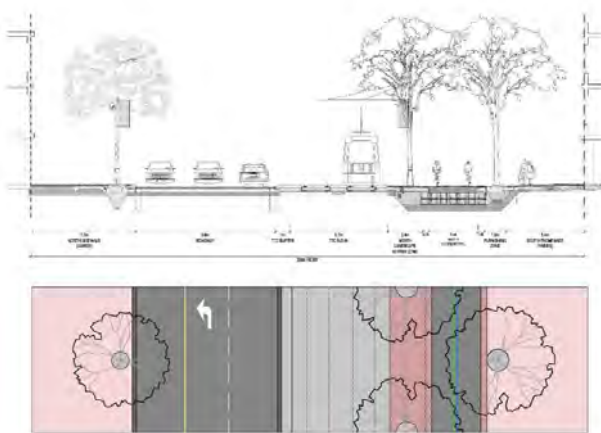
Photo by Kayla Speid on Unsplash

# How could the street be designed?

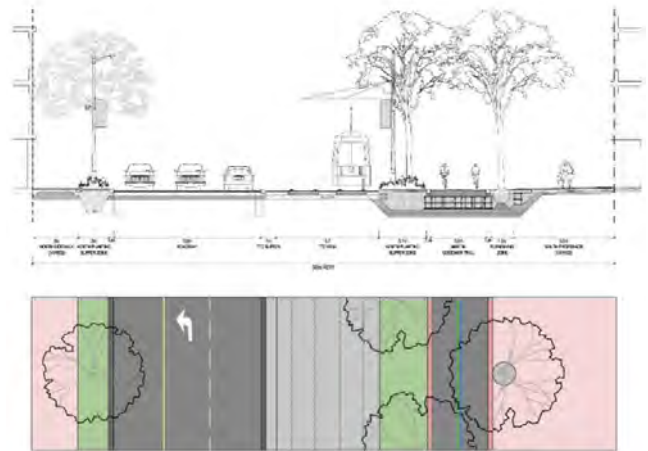
The figure below shows an earlier proposed cross-section for the street design, while the figure on the right shows an updated proposed cross-section for the street design. Design for Queens Quay East from Bay to Parliament was previously taken to 60% design in 2012.

Compared to the 2012 design, the overall arrangement remains the same with the LRT right-of-way along the south side of the vehicular street, then the Martin Goodman Trail framed by a double row of trees, and a generous pedestrian promenade on the south side. The updated design includes the introduction of more ground level planting between the road and sidewalks to enhance the public realm, improve tree health and better delineate different uses of the street. Planted trees will include a range of tree species.

## 2012 - Typical Cross Section



## 2020 - Typical Cross Section - Open Planters



## Lake Levels

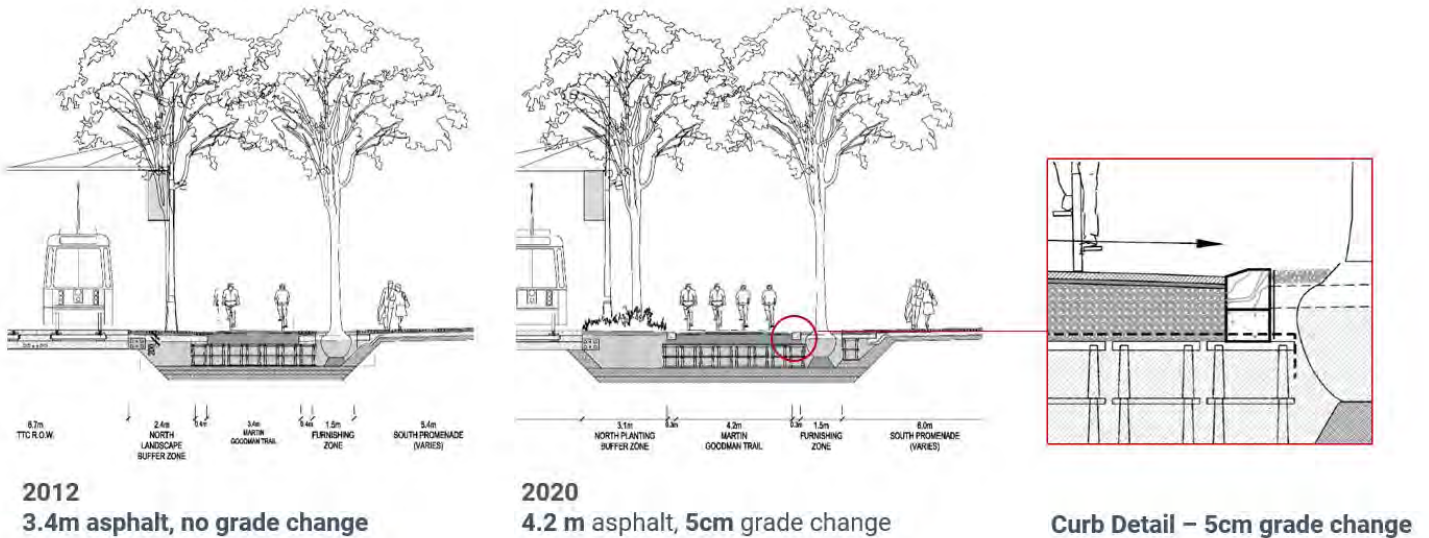
One of the issues we are studying as part of this work is the higher lake levels that we have seen in recent years and its impacts along the waterfront. Because we are so close to Lake Ontario and groundwater levels are directly affected by the fluctuations of the lake level, we will need to consider this impact when designing plantings and green infrastructure. We will be monitoring groundwater levels over the course of the year, studying how to best ensure the survival and health of the trees, including evaluating opportunities for integrated stormwater management and low impact design in the context of fluctuating groundwater levels.



# Martin Goodman Trail

The updated design also includes a widening of the Martin Goodman Trail from 3.4 metres to 4.2 metres. The widening will provide more space for different users given the popularity and heavy use of the trail year-round, but particularly in the summer.

## Martin Goodman Trail - Updated design cross sections



## Typical Intersections

We are also making adjustments and improvements to the design of the intersections. We are proposing changes to the configuration of the corners to organize the space for different users. The left shows the original proposed intersections, while the figure on the right shows the proposed improvements to the intersection design to extend the paved trail to the curb and extend crossings over the trail.

### 2012 Design - Mixing Zone



### 2020 Design - Delineation between cyclists and pedestrians



# Improving the Arrival Experience

Another important aspect of the intersection design is enhancing the experience of arrival to the waterfront from the major downtown streets, where they meet Queens Quay. The streets we are looking at for this include Bay, Yonge, Jarvis, Sherbourne, and Parliament. Each of them has its own identity, character, challenges and opportunities, and adjacent parks and attractions. We are studying how to create something special in each of those places, particularly where they lead to slips and terminate in views of the water.





# Next Steps for Public Consultation

The Transit Project Assessment Process (TPAP) is an expedited Environmental Assessment (EA) process involving a series of public consultations. Consultations for this process starts with the pre-consultation phase followed by a regulated 120-day phase where the environmental effects of the project will be analyzed.

Beyond this consultation, the Project Team will be connecting with the public at several other points throughout this year as the TPAP begins. Upcoming consultations will seek feedback on the following:



## Current - Design Progress Update + Introduction to the TPAP

The current consultation introduces the Transit Project Assessment Process (TPAP) and provides a progress update on design work that has been undertaken since previous consultations (including changes over the 10 years since the East Bayfront Transit EA). This includes the portal selection study, network phasing study, and preliminary design and engineering work.

## Round 2 – Key Elements of Draft Environmental Project Report (EPR)

This round will present key elements of the draft Environmental Project Report (EPR), a key deliverable of the TPAP process, which documents the proposed project, impacts, mitigations and the engagement process.

## Round 3 – Draft Environmental Project Report (EPR)

This round will present the content of the published draft EPR for review and feedback, with public and stakeholders being given time to review the EPR and provide feedback to the project team. Feedback received will feed into revisions to the EPR as it is finalized over a 120-day review period.

## How to participate:

- Visit the project webpage:  
**[www.toronto.ca/waterfronttransit](http://www.toronto.ca/waterfronttransit)**
- Attend the virtual Community Consultation on **February 17, 2021 at 7:00 pm.**
- Complete the online survey between **February 17 to March 4, 2021**
- Call **311** for more information