



Welcome

Waterfront East LRT Extension

Virtual Public Consultation #3
Spring 2023

Land Acknowledgement

City of Toronto, Toronto Transit Commission and Waterfront Toronto acknowledges that the land upon which we are undertaking the Waterfront East LRT Extension is part of the traditional territory of the Mississaugas of the Credit First Nation and that Toronto is covered by Treaty 13 with the Mississaugas of the Credit First Nation (MCFN).

In addition, we acknowledge that Toronto has historically been a gathering place for many Indigenous people, including the Mississaugas of the Credit, the Anishnaabe, the Chippewa, the Haudenosaunee and the Wendat peoples, and is home to many First Nations, Inuit and Métis peoples today.



Agenda

1. Welcome & Land Acknowledgement
2. Opening Remarks
3. Project Video
4. Project Presentations
 - Update and Recap from June 2021 Public Meeting
 - Segment 1 (Underground works and Bay Street)
 - Segment 2 (Queens Quay East)
 - Segment 3 (Cherry Street & Villiers Island)
 - Transit Project Assessment Process
 - Business Case
 - Project Phasing & Implementation
 - Constructability Assessment
 - Other Matters
5. Q&A / Discussion Period
6. Next Steps

Consultation Since June 2021

June 2021 – March 2023

- ✓ June 2021 Virtual Public Meeting – 254 participants
- ✓ Summer 2021 Online Questionnaire – 235 submissions
- ✓ Stakeholder Advisory Group meetings
- ✓ Land Use Advisory Group meetings
- ✓ Focused Stakeholder meetings
- ✓ Meeting with representatives from the Mississaugas of the Credit First Nation

Visit toronto.ca/waterfront-transit-reset to access the full summary of engagement in Round 2

What We Heard – PIC 2, June 2021

Segment 1

- Strive for station designs improving **connections** to neighbouring properties and waterfront destinations, **accessibility**, **wayfinding**, and **high-quality design**
- Prioritize **wider sidewalks**, **enhanced public realm**, **trees and plantings** and **protected cycling infrastructure** on reconstructed Bay Street
- Portal canopy carries potential for **iconic and functional asset to Queens Quay**

Segment 2

- **Programming**, **access to water**, opportunities to **sit and gather**, and references to **local landscape** important for Yonge Slip design
- **Reduce conflicts** between promenade and Martin Goodman Multi-Use Trail
- Concerns identified regarding **pinch points** and **accessibility**

Additional details on how feedback was incorporated into the design updates throughout the presentation

What We Heard – PIC 2, June 2021

Segment 3

- Cherry Tower has **potential to meet public interests** such as washrooms, information, local history, or food/drink opportunities.

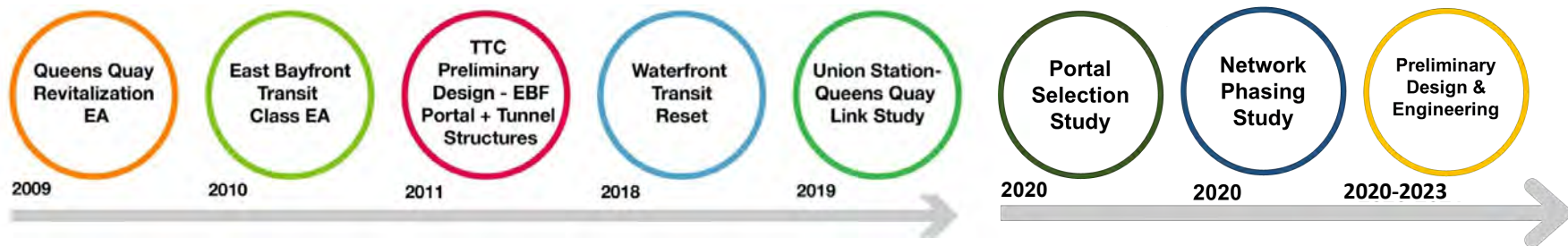
Transit Network

- **Importance of the connection to the Distillery** in the initial build-out emphasized

Additional details on how feedback was incorporated into the design updates throughout the presentation

Project Overview

Timeline







Segment 1

Underground Works

1. Recap & Current Status
2. Optimized Union Station Loop
3. Queens Quay-Ferry Docks Station West Entrance Upgrade
4. Tunnel Portal Design without Canopies

Segment 1

Recap from 2021 Public Meeting

- Design Updates to Union Station Loop and Queens Quay-Ferry Docks Station
- Introduction of the portal canopy design and Bay Street Visioning

2023 Updates

- Due to funding constraints, scope and cost refinement options for Segment 1 were developed. Based on further due diligence work:
 - Union Station Design has been updated which include optimized station and entrance layouts, structural design refinement, and a deferred entrance connection;
 - Queens Quay-Ferry Docks Station expansion is deferred but the west entrance will be upgraded to enhance accessibility;
 - Architectural portal canopies are deferred;
 - Bay Street Visioning scope consideration is deferred.
- Updated 30% Design and Costing nearing completion.

Union Station

141 Bay St

81 Bay St

Yonge St

Queens Quay W

11 Bay St

1 Harbour Square

Bay St

Gardiner Expressway

Lake Shore Blvd W

30 Bay St

Queens Quay Station

- Deferred entire station expansion
- Upgrade of west entrance to improve accessibility

Tunnel Portals

- Deferred portal canopies



Union Station Loop

- Optimized entrance layouts
- Deferred one entrance connection

Scotiabank Arena

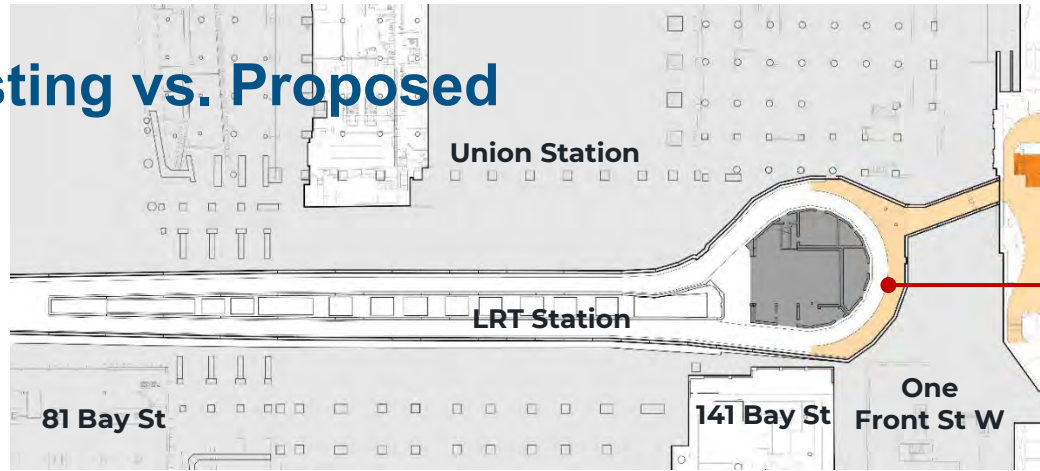
33 Harbour Square

Union Station – Existing vs. Proposed

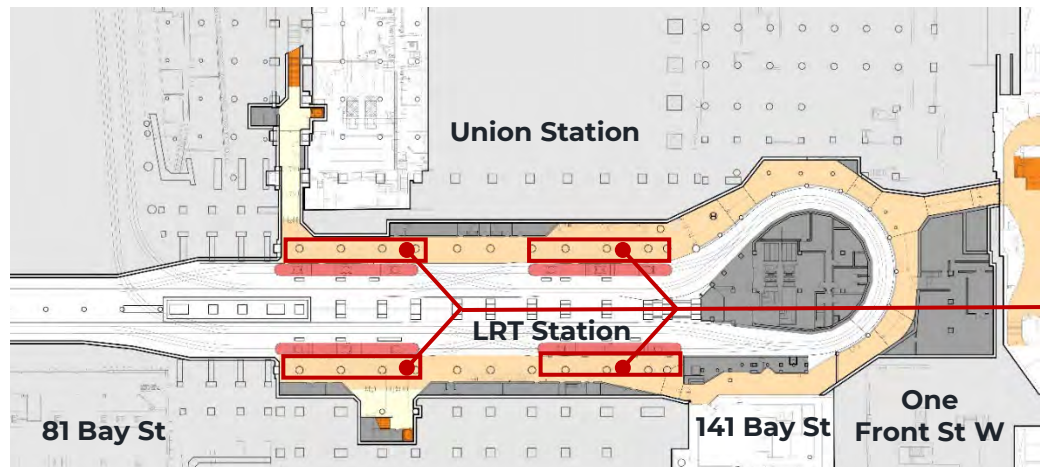
-  Streetcar
-  Paid Area
-  Platform
-  DWA
-  Unpaid Area
-  Entrance and Exit
-  Service



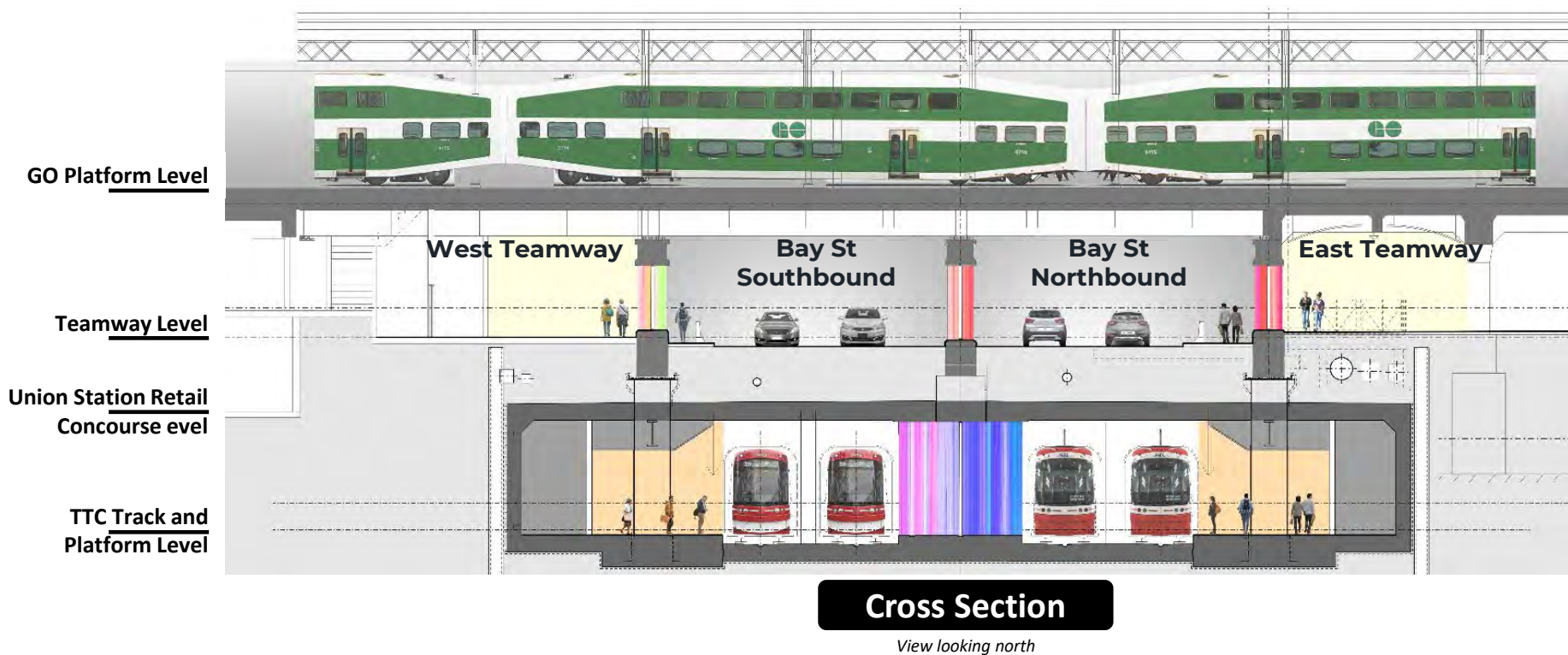
Existing



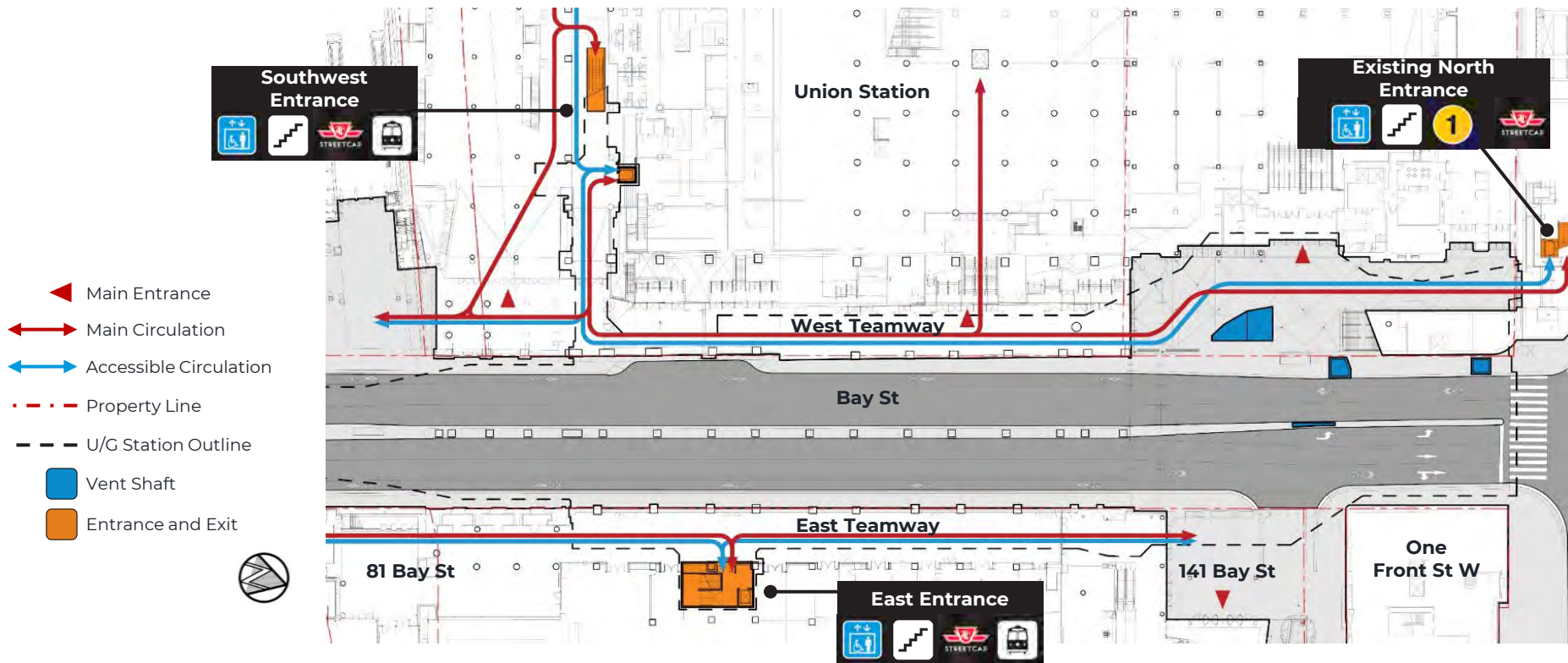
Proposed



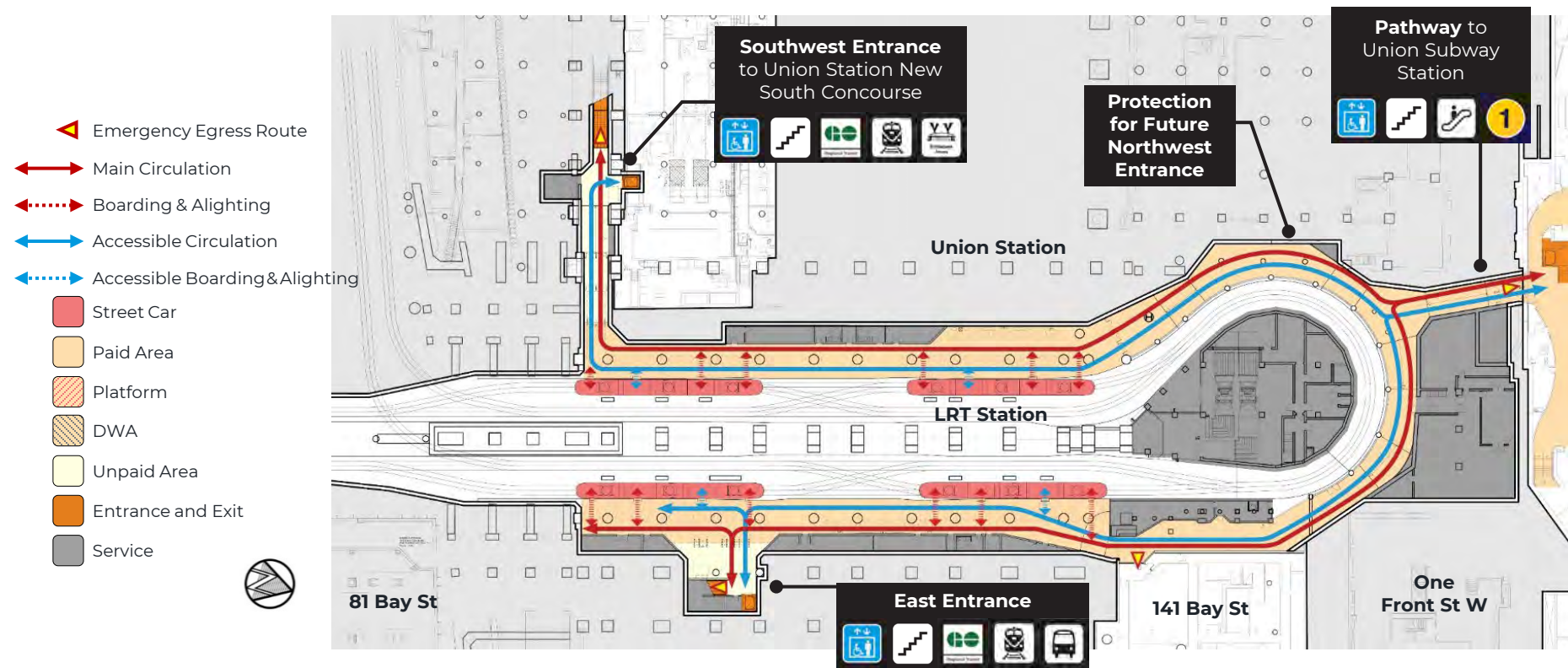
Union Station – Cross Section



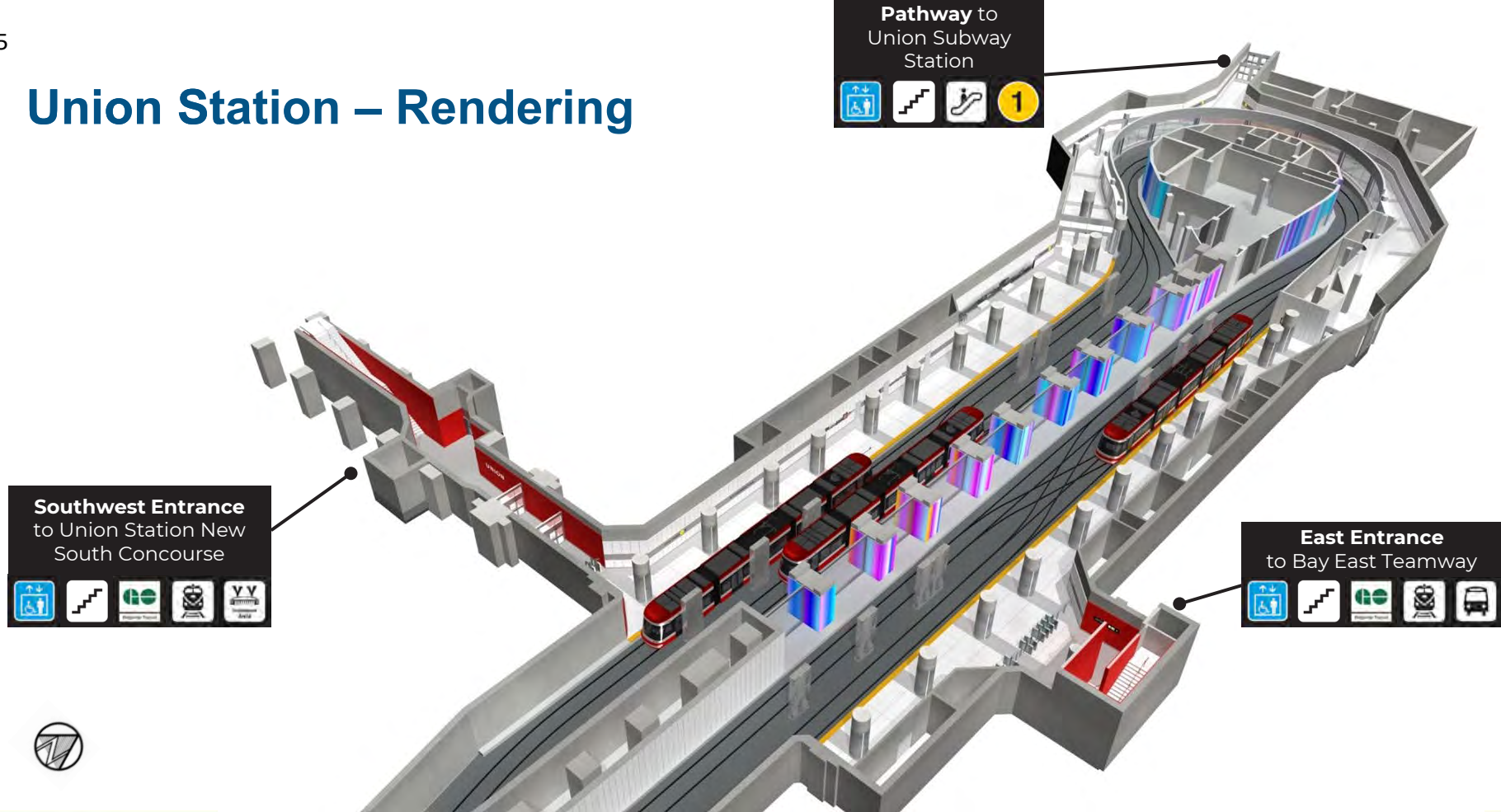
Union Station – Circulation Street Level



Union Station – Circulation Platform Level

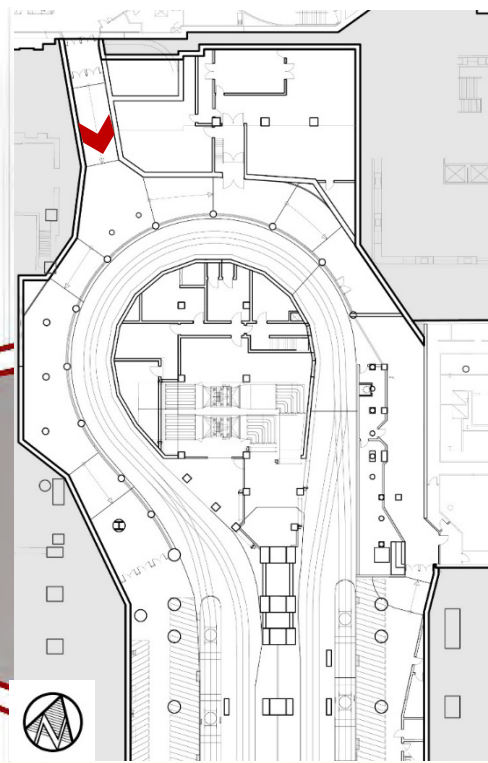


Union Station – Rendering



Union Station – Rendering

Approach from Subway Station



Union Station – Wayfinding

Eastern Approach to Subway Station and West Side Streetcar Platforms



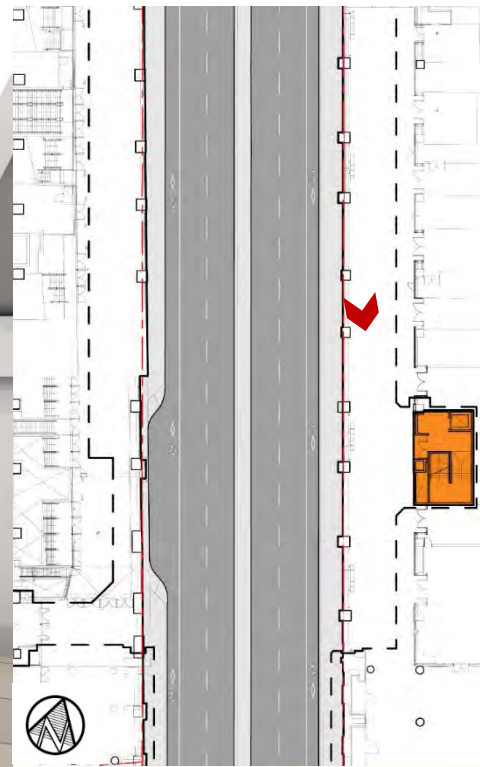
Union Station – Wayfinding

Exit to Bay St. East Teamway



Union Station – Wayfinding

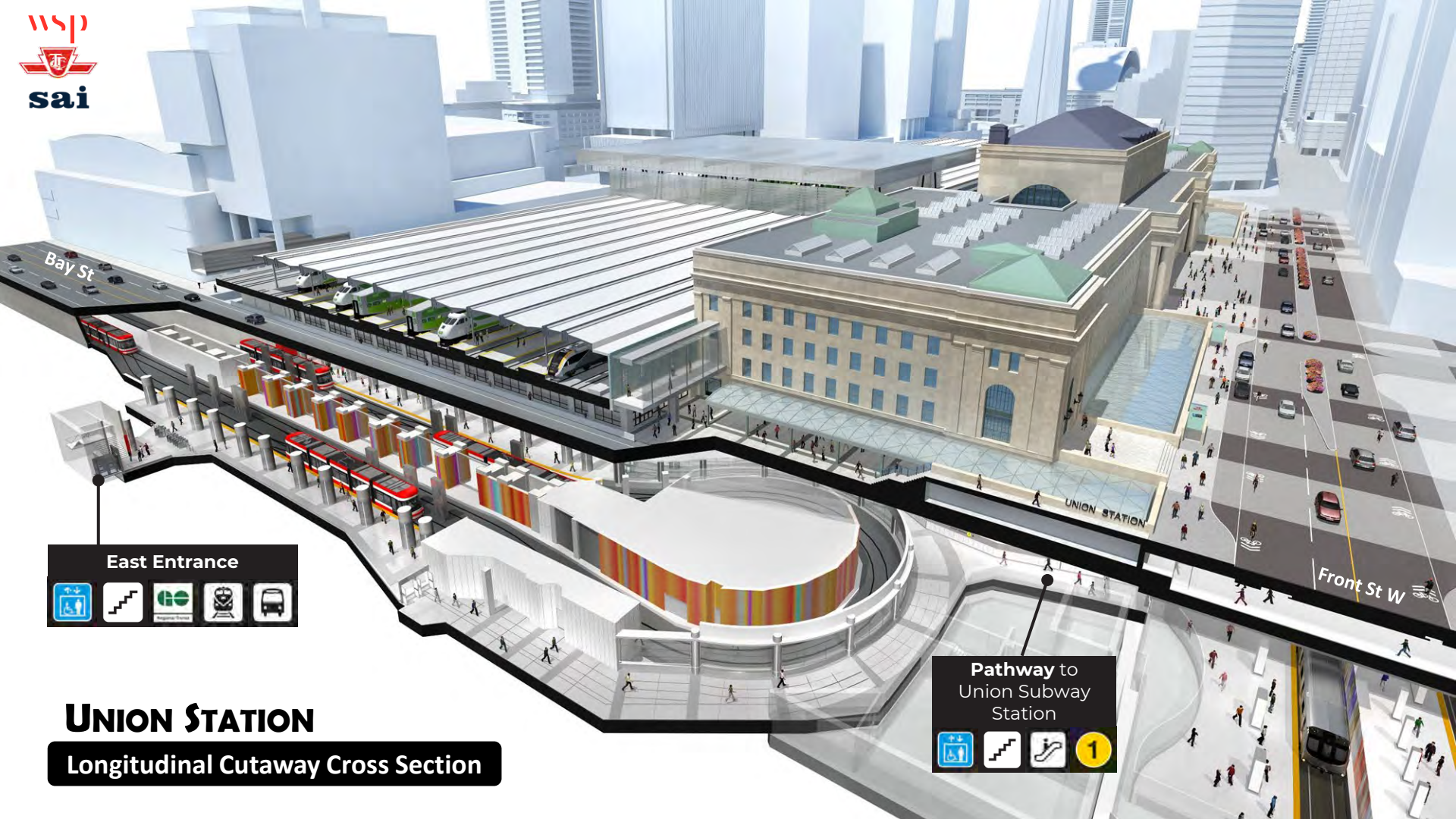
Entrance from Bay St. East Teamway



Union Station – Wayfinding

Entrance from Union Station New South Concourse





East Entrance



UNION STATION

Longitudinal Cutaway Cross Section

Pathway to
Union Subway
Station



Queens Quay-Ferry Docks Station

141 Bay St

81 Bay St

Bay St

11 Bay St

Queens Quay W

Tunnel Portals

- Deferred portal canopies

1 Harbour Square

Union Station Loop

- Optimized entrance layouts
- Deferred one entrance connection

Scotiabank Arena

Gardiner Expressway

30 Bay St






Lake Shore Blvd W

Queens Quay Station

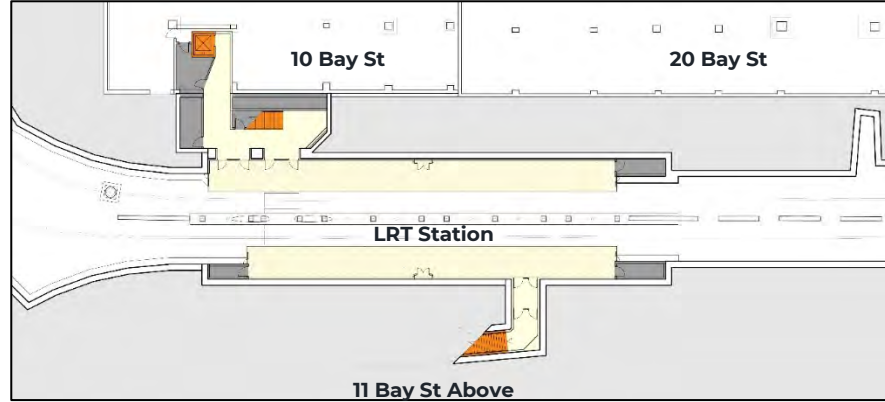
- Deferred entire station expansion
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33 Harbour Square

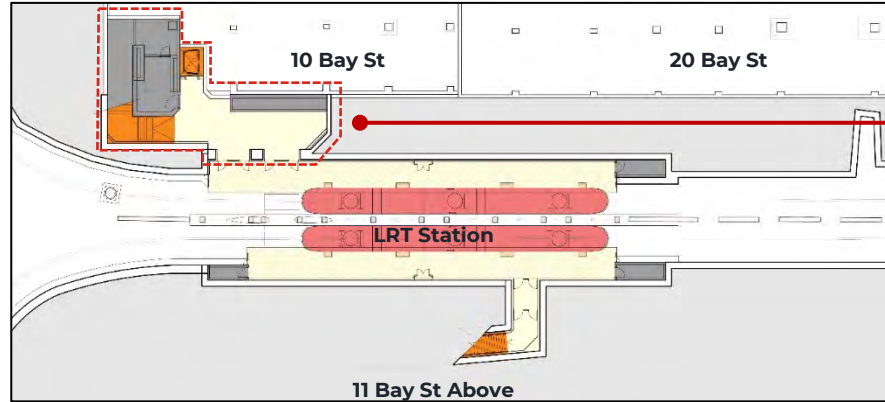
Queens Quay-Ferry Docks Station – Existing vs. Proposed

-  Street Car
-  Paid Area
-  Platform
-  Unpaid Area
-  Entrance and Exit
-  Service

Existing

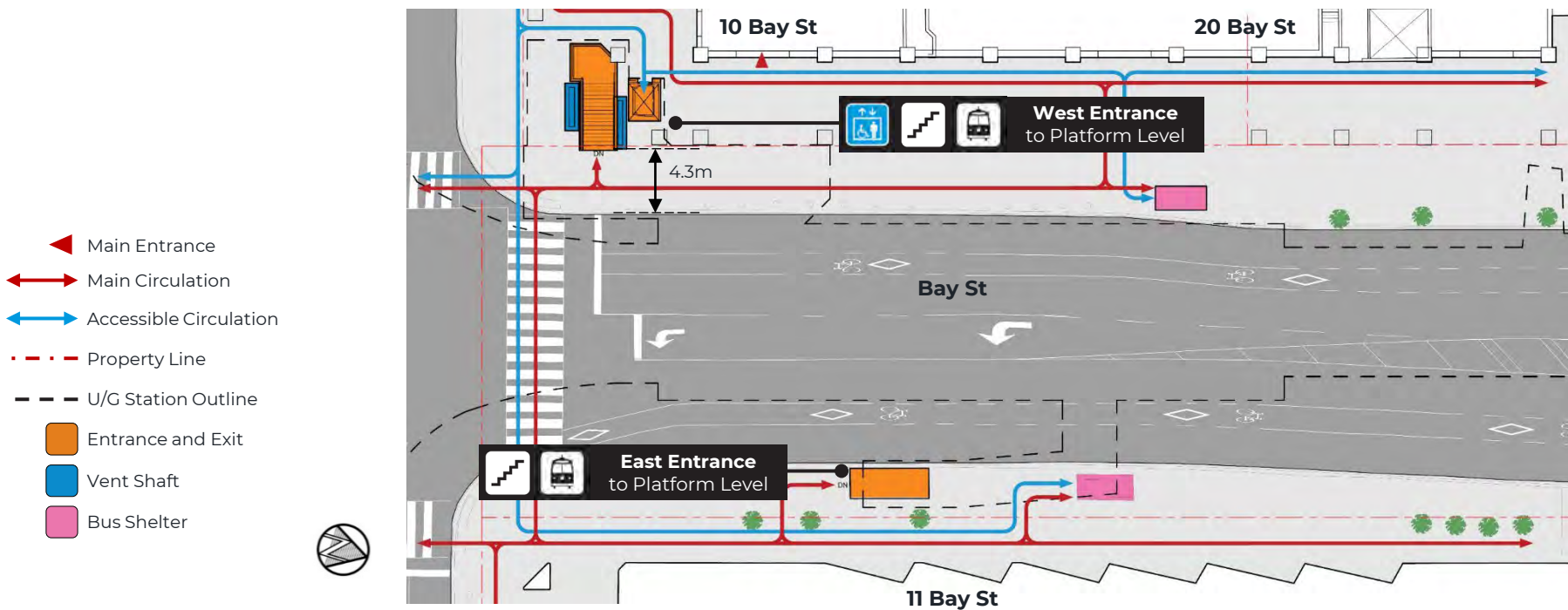


Proposed

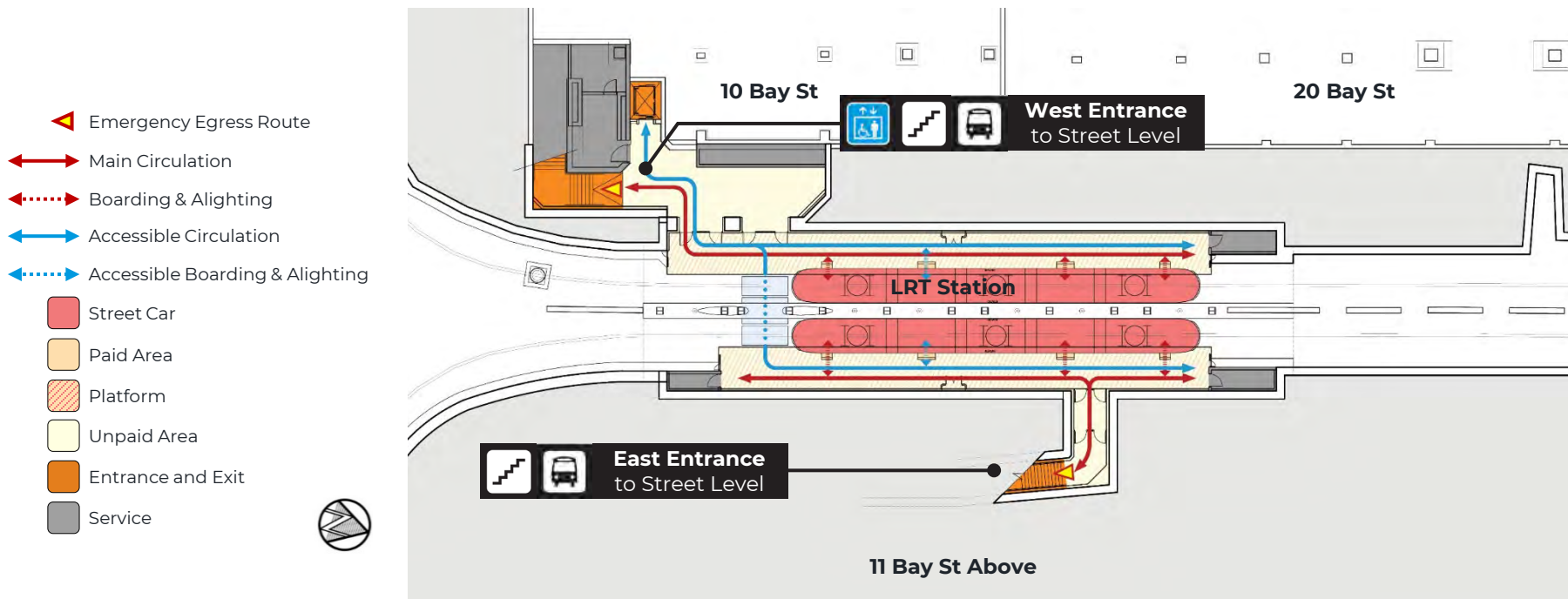


**Area of
Proposed
Alterations**

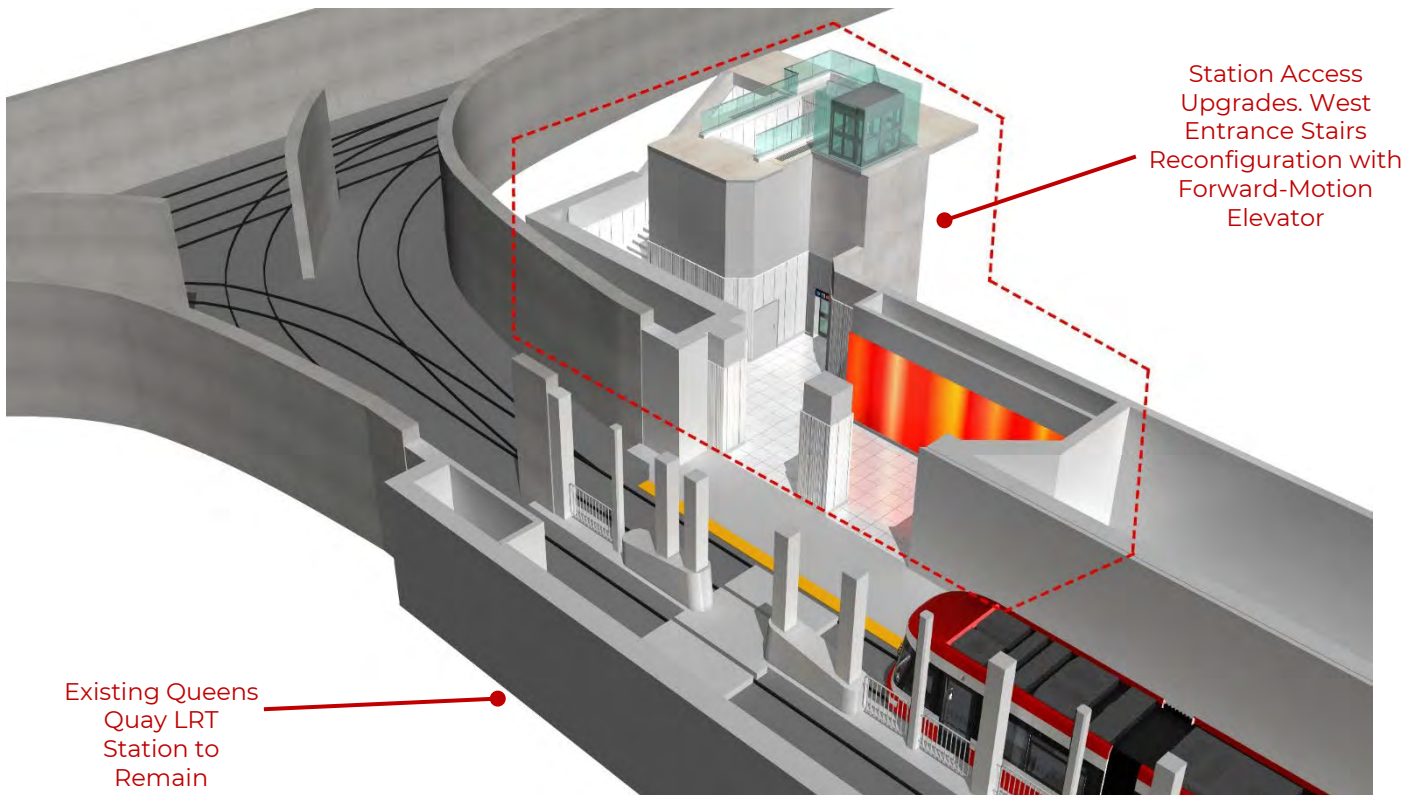
Queens Quay-Ferry Docks Station – Circulation Street Level



Queens Quay-Ferry Docks Station – Circulation Platform Level

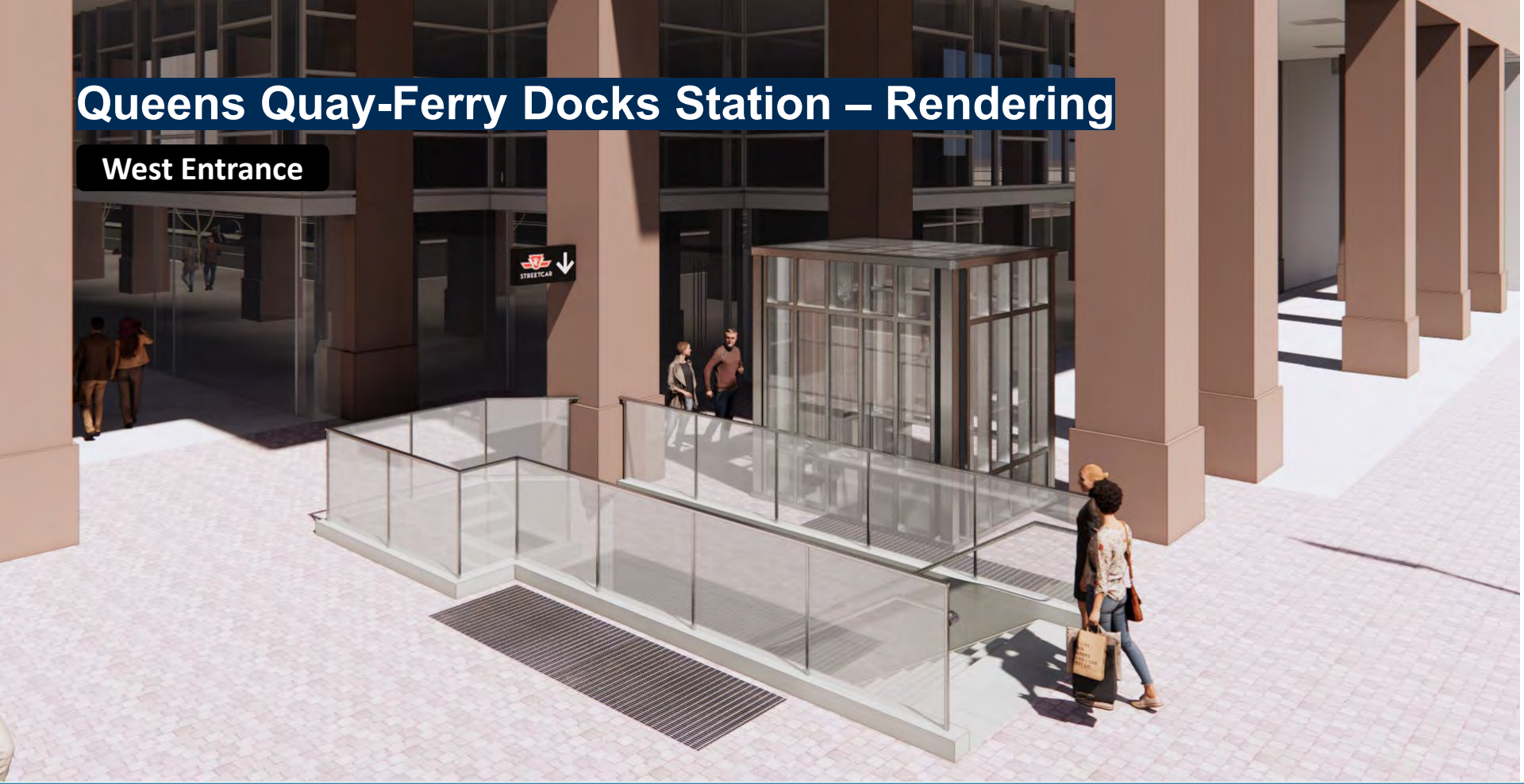


Queens Quay-Ferry Docks Station – Rendering

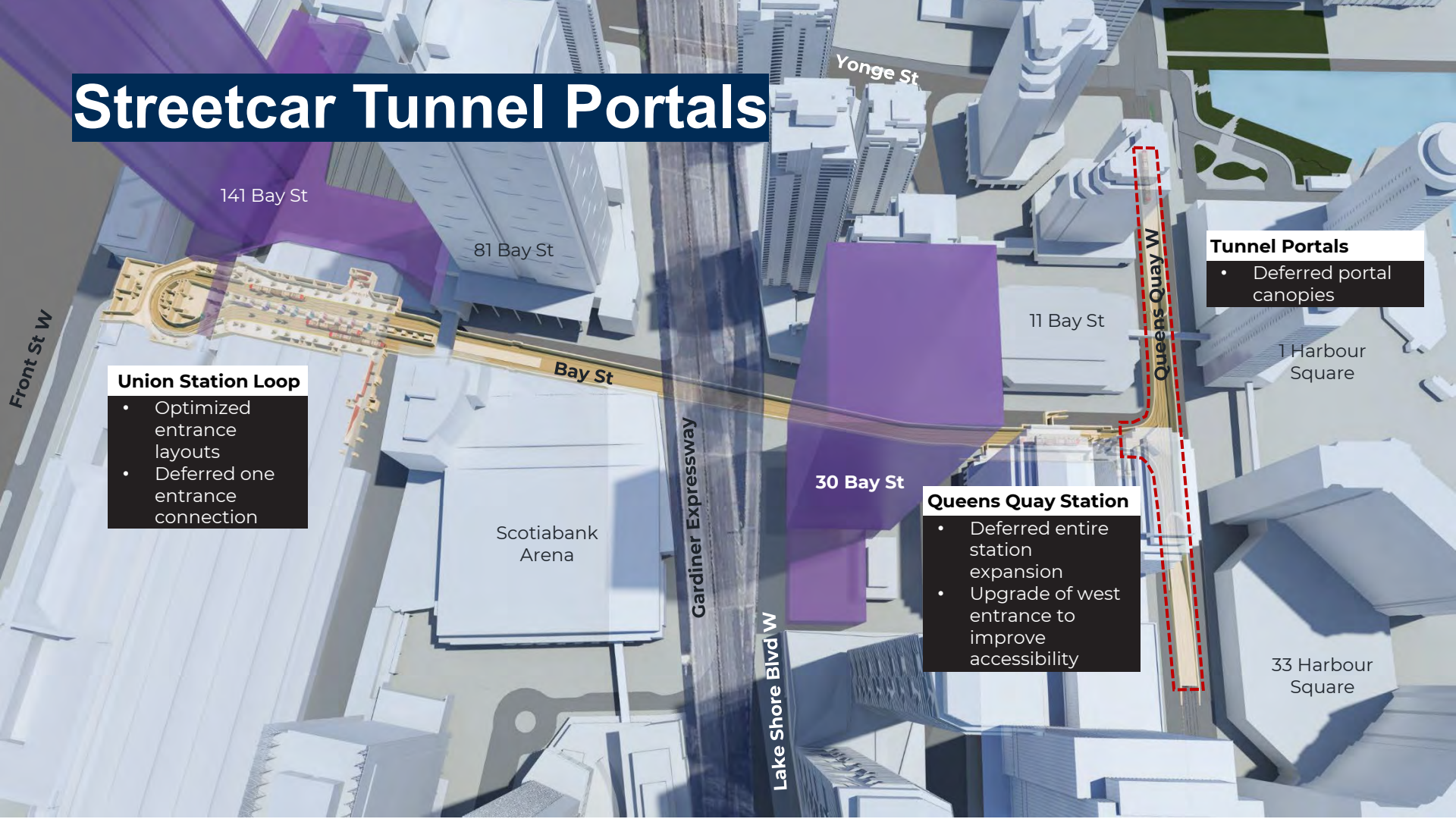


Queens Quay-Ferry Docks Station – Rendering

West Entrance



Streetcar Tunnel Portals



141 Bay St

81 Bay St

Yonge St

11 Bay St

1 Harbour Square

Queens Quay W

Union Station Loop

- Optimized entrance layouts
- Deferred one entrance connection

Scotiabank Arena

Gardiner Expressway

Lake Shore Blvd W

30 Bay St

Queens Quay Station

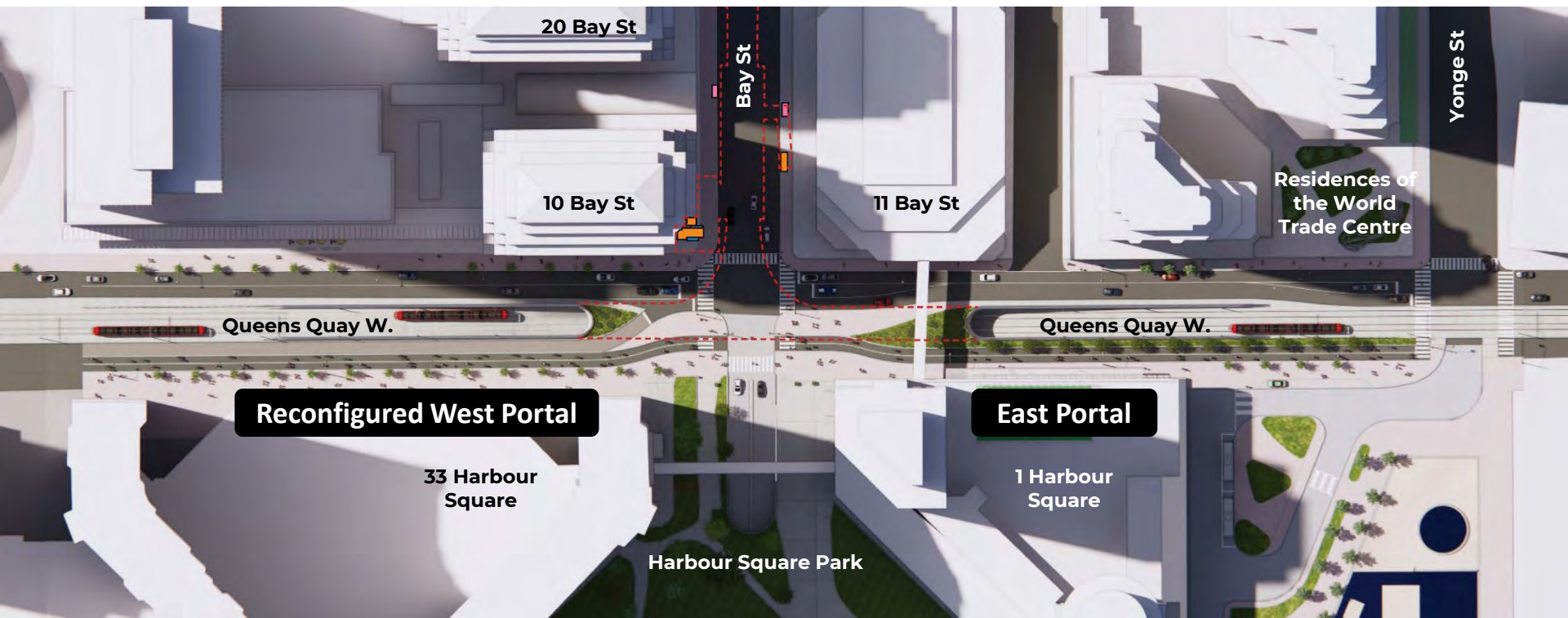
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33 Harbour Square

Tunnel Portals

- Deferred portal canopies

Streetcar Tunnel Portals – Site Plan

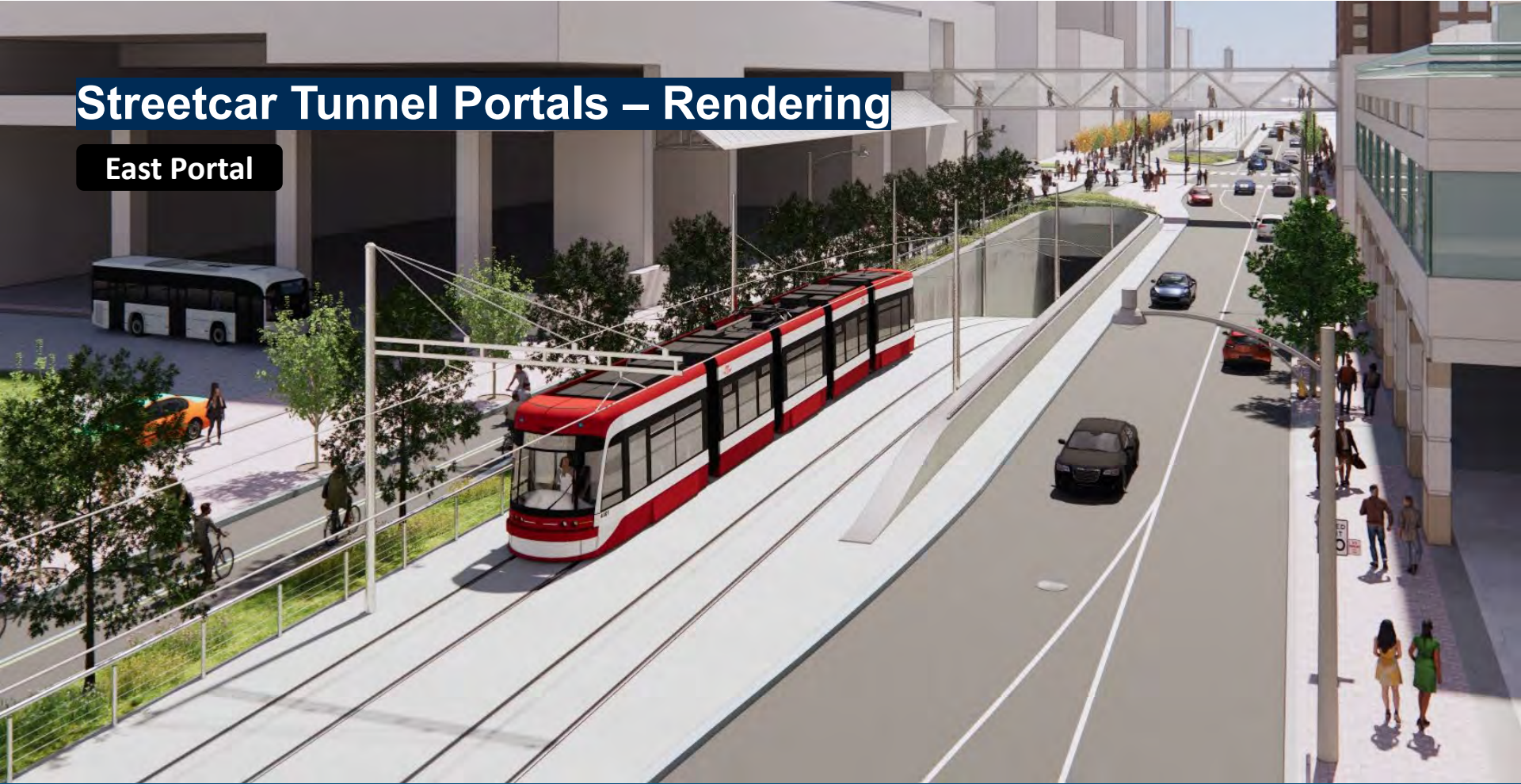


Streetcar Tunnel Portals – Longitudinal Cross Section



Streetcar Tunnel Portals – Rendering

East Portal



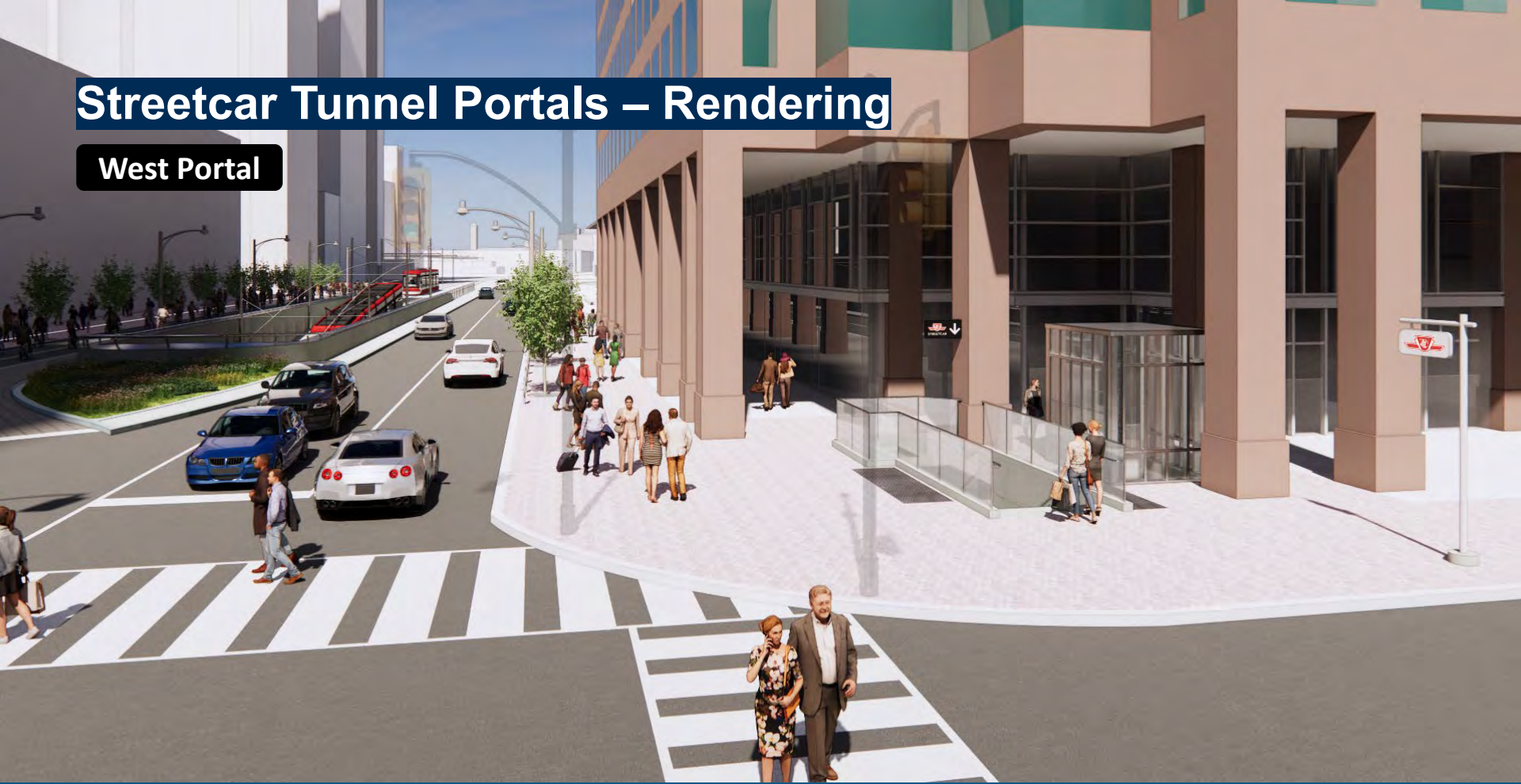
Streetcar Tunnel Portals – Rendering

West Portal



Streetcar Tunnel Portals – Rendering

West Portal





Segment 2

Surface Works – Queens Quay

1. Recap & Current Status
2. 30% Design for East Extension Complete

Segment 2

Recap from 2021 Public Meeting

- Selection of portal Option 2, between Bay Street and Yonge Street
- Yonge Street slip design update
- Greater delineation of the Martin Goodman Multi-Use Trail
- Queens Quay East cross-section design

2023 Updates

- Design remains at 30% completion level
- Queens Quay East extension (Silo St. to Cherry St.) nearing 30% design completion
- Queens Quay East (Bonnycastle to Silo St. Road and Public Realm) advancing to 60% design through Quayside
- Intersection pilot project findings and implications

Segment 2 – Yonge Slip

30% Design completed for Yonge Slip Fill and Public Realm



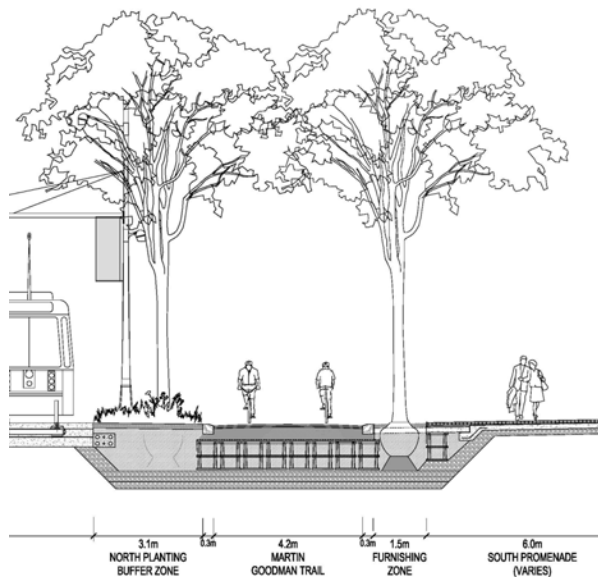
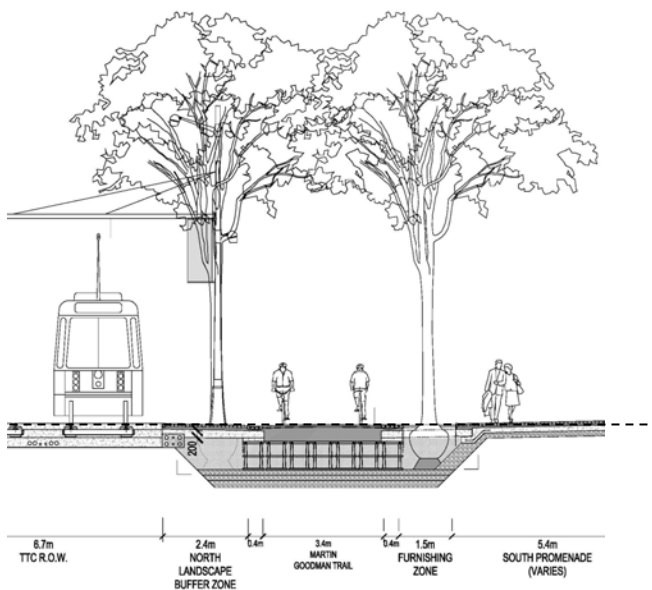
Segment 2 – Queens Quay East

30% Design completed for Queens Quay from Bay to Silo St. (Area 2A)



Segment 2 – Enhanced Martin Goodman Trail

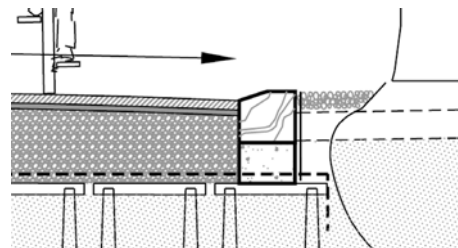
Wider and grade separated



2023

4.2 m asphalt, 5cm grade separation

- Clearer delineation of cycling path, increases accessibility
- Anticipates increased use of MGT
- Gives cyclists small foot rest when stopped



Segment 2 – Queens Quay East

Queens Quay Intersection Pilot Project

Fully delineate movements of pedestrians and Martin Goodman Trail users



Lower Simcoe Intersection: Previous condition

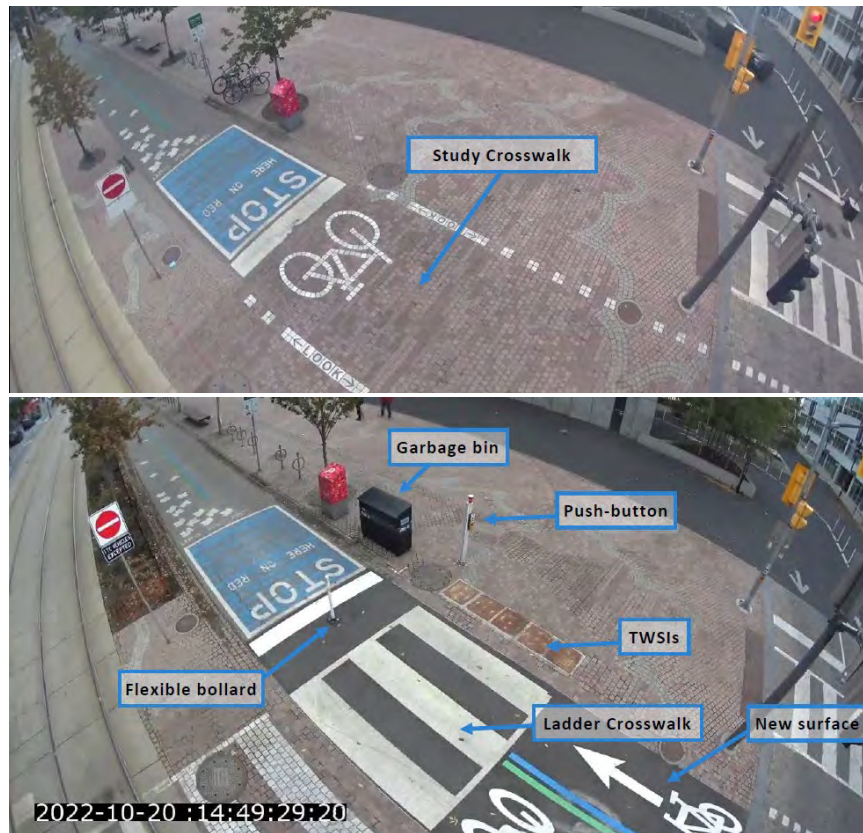


Lower Simcoe Intersection: Improvements

Segment 2 – Queens Quay East

Queens Quay Intersection Pilot Project

- The project, implemented delineated intersections, and planting beds between the TTC guideway and Martin Goodman Trail.
- Preliminary results indicate that the intersection changes reduced pedestrian-cyclist conflicts by 61% at a 95% confidence interval.
- These findings are being used to inform updated intersection designs along Queens Quay East.





Segment 2 – Queens Quay East Extension

30% Design nearing completion for Queens Quay from Silo to Cherry St.



Segment 2 – Queens Quay East Extension

30% Design nearing completion for Queens Quay from Silo to Cherry St.





Segment 3

Surface Works – Cherry St. & Commissioners St.

1. Recap & Current Status
2. Cherry St. Underpass Alignment Confirmed
3. Cherry St. Transitway Design
4. Villiers Loop Study

Segment 3

Recap from 2021 Public Meeting

- Two alignment options were studied for the **Cherry Rail Underpass** to extend transit.
- **Distillery Transit Loop** needed to be decommissioned to accommodate rail underpass connection and a new loop is required in the Port Lands.

2023 Updates

- 30% Design for Segment 3 nearing completion
- Villiers Island loop location has been identified

Segment 3 – Updated Cherry St. Transit Portal

- Cherry North transitway and rail underpass are nearing completion of 30% design
- Cherry Tower to be relocated immediately west, and Distillery Loop to be decommissioned
- Ongoing coordination of design and construction timelines with Metrolinx and Gardiner-Lakeshore East Realignment teams to enable construction of this portal



Segment 3 – Cherry St. Transitway Interim (PLFP)

- Cherry St. Transitway nearing 30% Design, building on Port Land Flood Protection (PLFP) Project road design



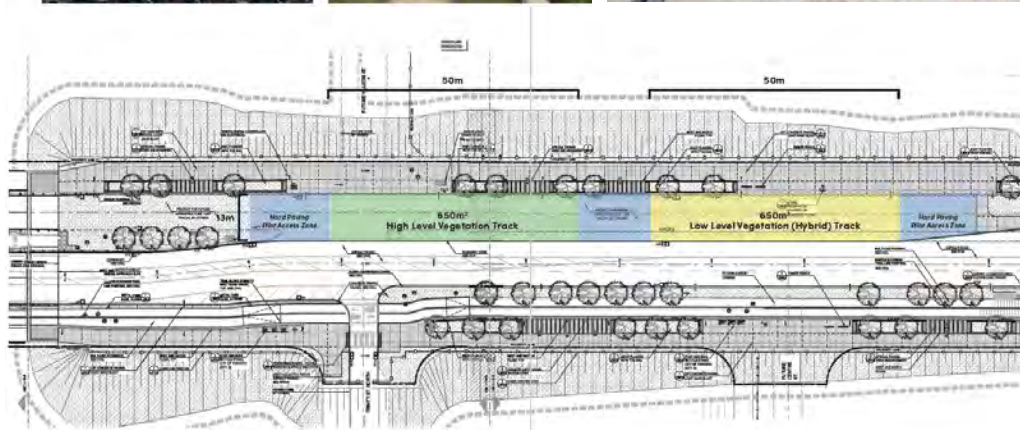
Segment 3 – Cherry St. Transitway Ultimate (WELRT)

- Cherry St. Transitway nearing 30% Design, building on PLFP design



Segment 3 – Green Track Pilot Project

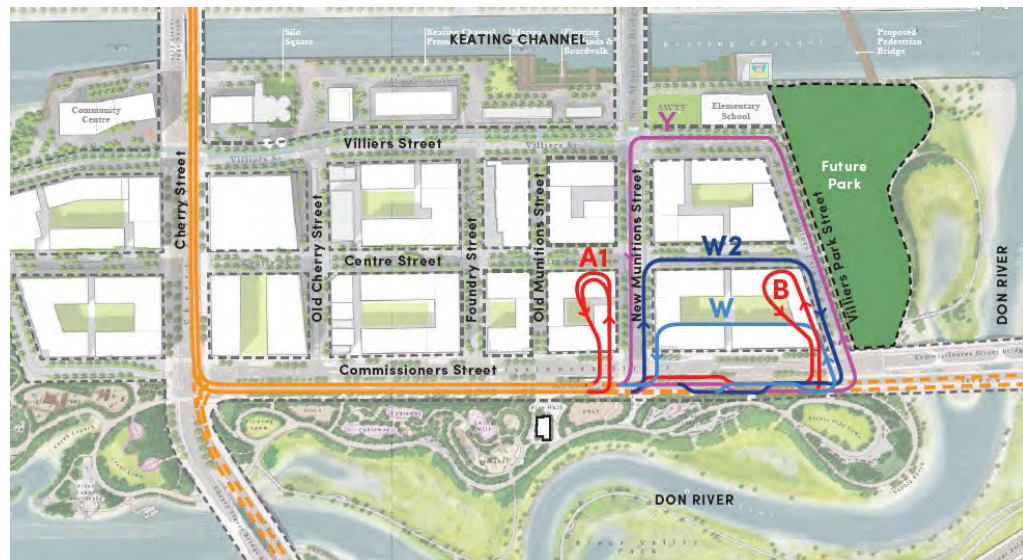
- Currently scoping a pilot project on Cherry St. to assess suitability of Green Track for WELRT



LRT Greenway

Segment 3 – Villiers Loop Alignment Selection

- Loop location was modified from Polson to Villiers Island to improve park access and mitigate construction impacts
- Several alignment options were considered for the Villiers Loop, including on-street and off-street alignments in various configurations
- Two preferred options were identified: Option B (off-street) and Option W2 (on-street)
- Potential alignments were assessed based on review of preliminary functional design drawings and street cross-sections, as well as an evaluation of technical and operational, and development coordination and project delivery implications of each option.
- Option W2 was selected as the preferred alignment to proceed with preliminary design



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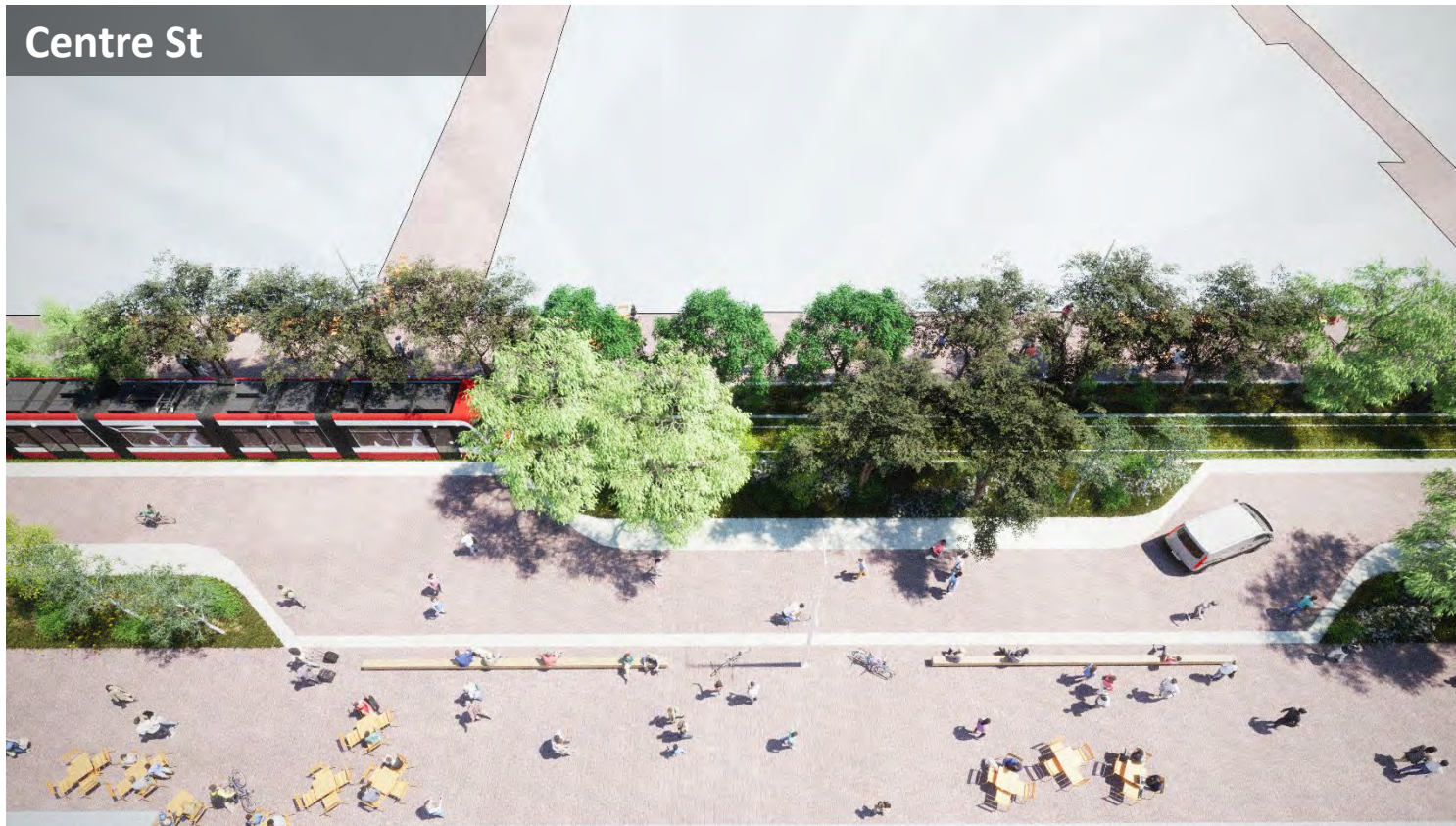


Segment 3 – Villiers Loop Design Concepts



Segment 3 – Villiers Loop Design Concepts

Centre St



Segment 3 – Villiers Loop Design Concepts

Villiers Park St



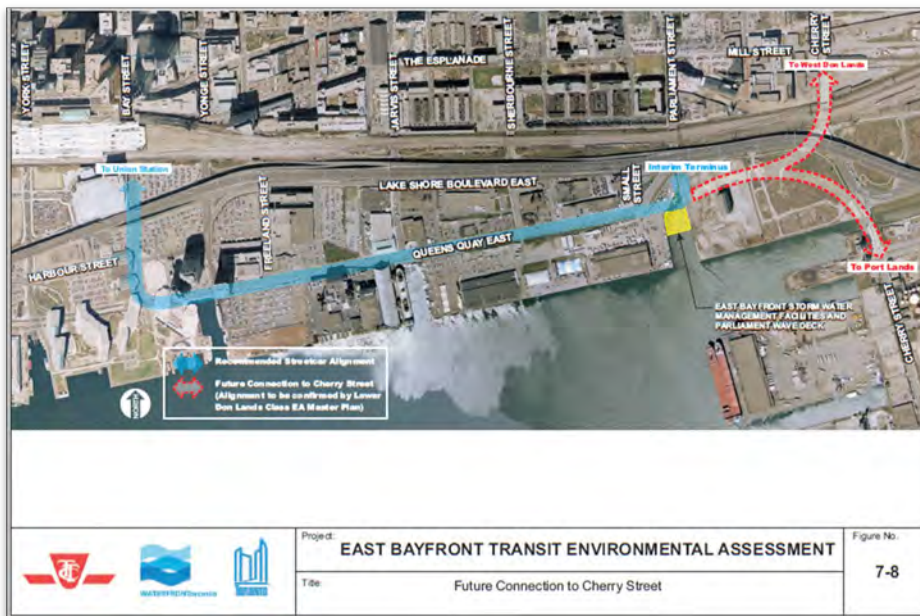
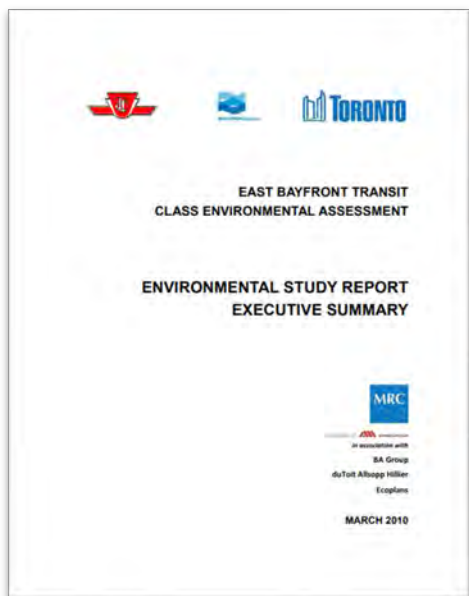


Transit Project Assessment Process (TPAP)

1. Context
2. TPAP Process
3. Preliminary Project Impacts

Background and History

In 2010, the *East Bayfront Transit Class Environmental Assessment* was approved by the Ministry. This Environmental Assessment was focused on extending the existing Queens Quay LRT from Bay Street to Parliament Street. It lapsed as of 2020 because construction had not yet begun. The Waterfront East LRT TPAP is a refresh of the previously approved East Bayfront Transit Class EA.



Main Changes to the Project (since 2010 EA)

1. Queens Quay Portals

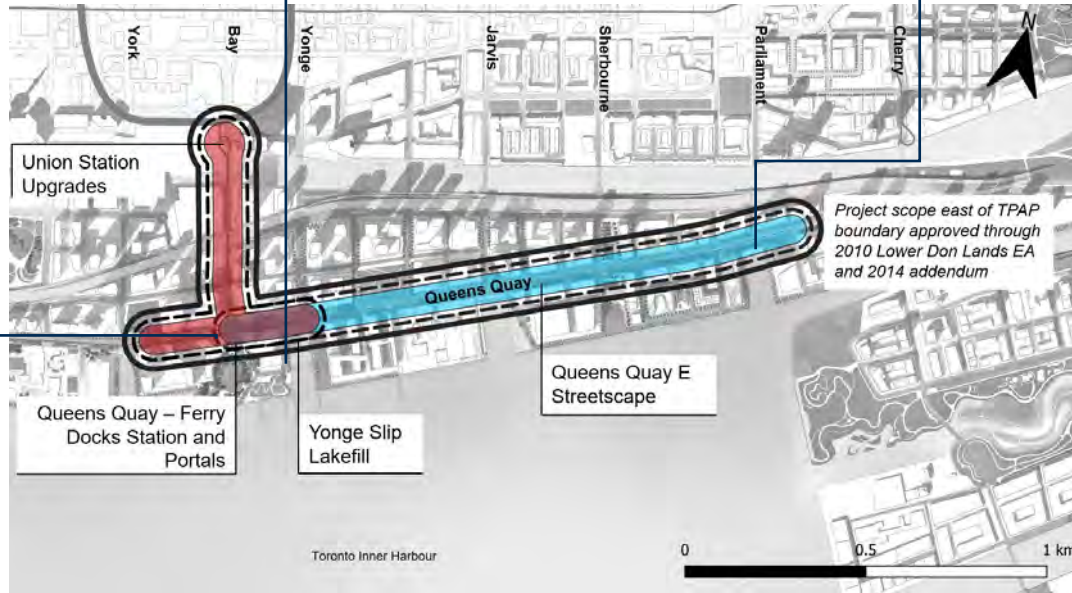
The west portal will be reconfigured to enable east-west streetcar operations, and east portal will be located between Bay St and Yonge St

2. Yonge Slip

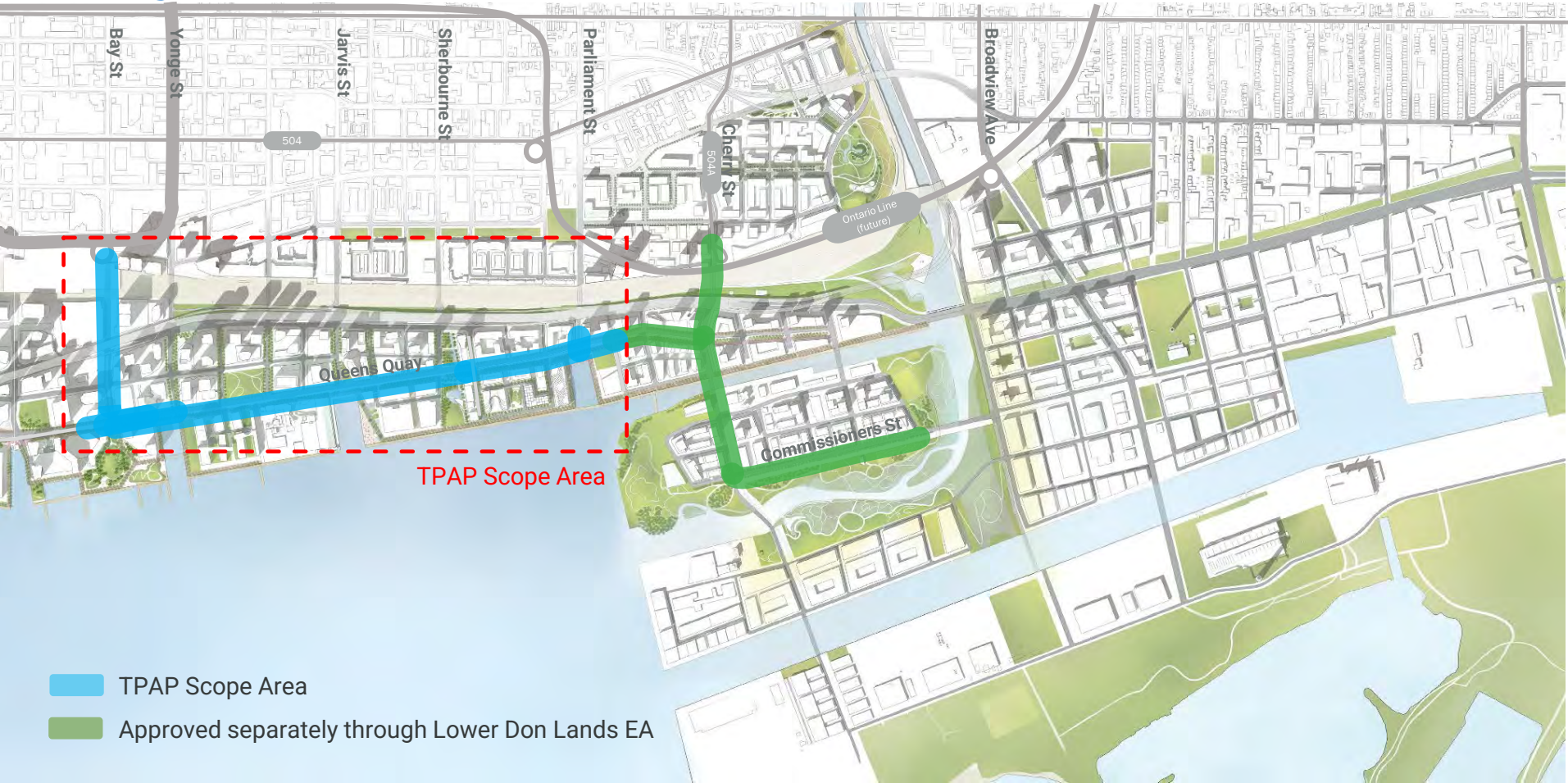
The construction of the Yonge head of slip will mitigate circulation conflicts resulting from the east portal location

3. Parliament St

The turn-around loop at Parliament Street is no longer in the current design



Project Map and Environmental Approvals



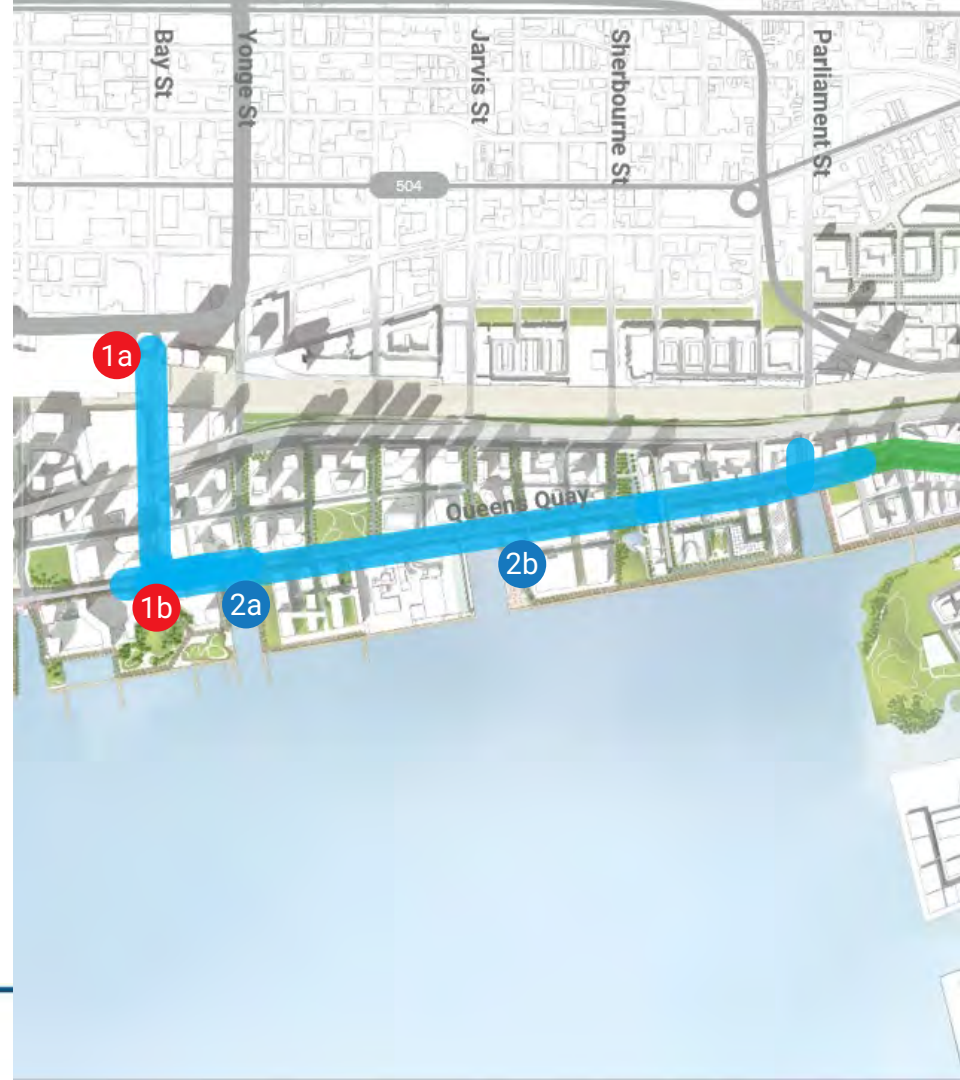
TPAP Scope Highlights

1. Underground Work (TTC)

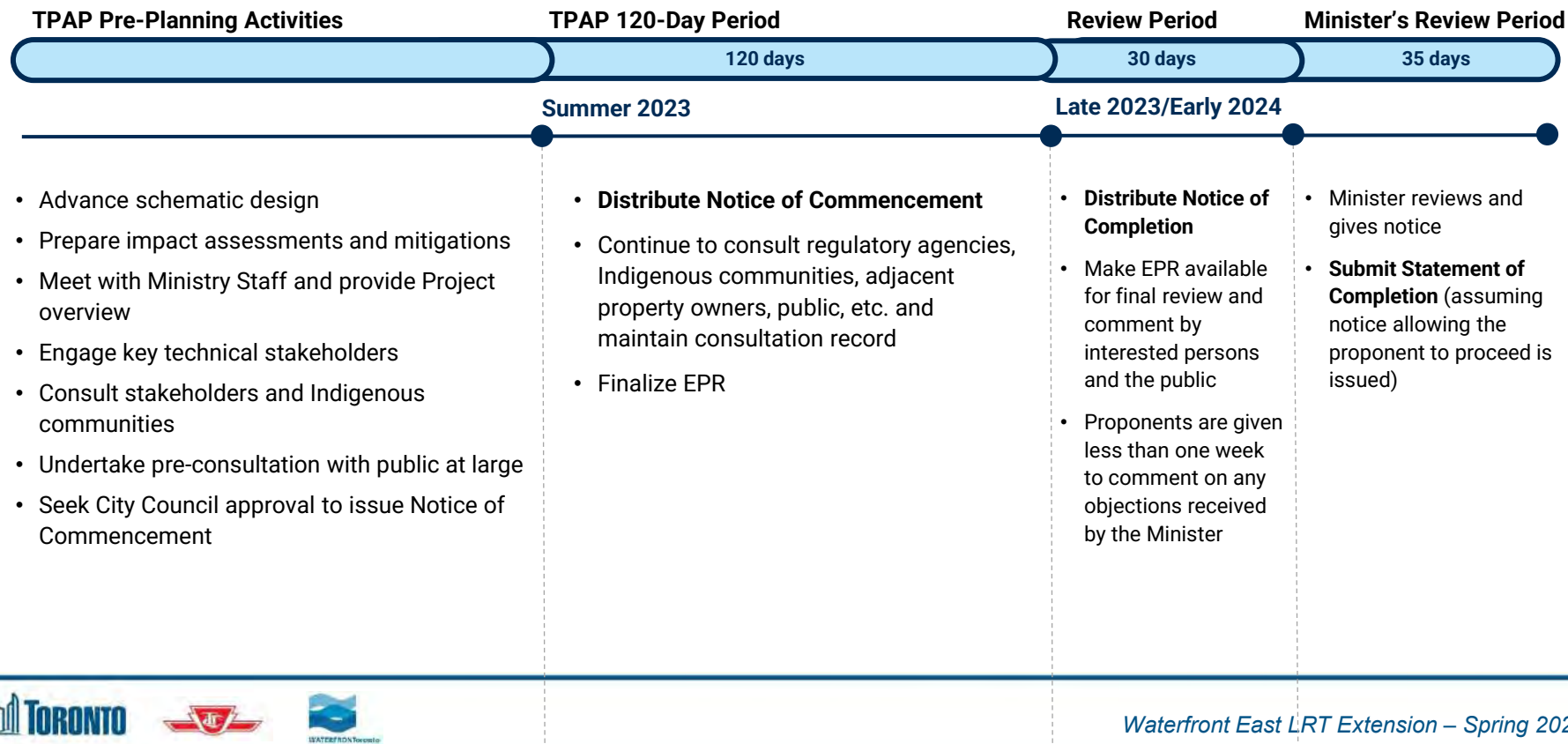
- a) Union Station upgrades
- b) Queens Quay – Ferry Docks Station upgrades and East and West portal construction

2. Above-Ground Work (Waterfront Toronto)

- a) Yonge Street Slip lakefill
- b) Surface along Queens Quay and realignment of Parliament St



TPAP Process Overview



Environmental Project Report (EPR)

The Environmental Project Report is a key part of the TPAP. The EPR describes the proposed project, including impacts and proposed mitigations, and documents the stakeholder and public engagement process.

The EPR will be published online and physical copies will be available near the transit project site. At minimum, it will include the following sections:

- Definition of the proposed project
- Transportation Analysis
- Cultural Heritage and Archeology Review
- Noise and Vibration Study
- Air Quality Study
- Socio-Economic Analysis
- Natural Environment Impact
- Implementation Plan

Key Benefits identified from EPR



Terrestrial environment

- Significant increase of trees in the project area
- Proposed stormwater infrastructure will improve and protect ecological functions



Emissions and contamination

- The transit operation is expected to have a positive effect on air quality, by providing improved options for low-emissions travel.



Population and employment

- Intensive population and employment growth is expected near the project area, increasing the need for the Project.



Transportation

- Increases sustainable transportation capacity by expanding the multi-use Martin Goodman Trail, increasing pedestrian space, and adding dedicated streetcar guideways.

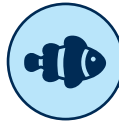
Key Impacts identified from EPR

All impacts of the WELRT are mitigatable. Key highlights include:



Physical environment

- Measures to improve the geotechnical conditions of the soils may be required.
- Dewatering likely required to facilitate some construction activities.
- New portals will be constructed below grade.



Aquatic environment

- Slip infill at the Yonge slip will cause some loss of poor-quality aquatic habitat. A fish habitat off-setting plan will address lost habitat, and is expected to improve overall habitat and increase fish abundance and diversity.



Utilities and municipal infrastructure

- Some utilities and municipal infrastructure will be relocated and/or modified as part of the project.

Key Impacts identified from EPR



Land use

- Some properties around the Project will be impacted. Conversations with impacted stakeholders are ongoing.
- Accommodates tractor and semi-trailer truck access to Redpath Sugar and Loblaws via Yonge Street and Queens Quay East.
- Proposed east portal location blocks access to the Westin Harbour Castle Hotel and the Jack Layton Ferry Terminal. The Yonge Slip infill provides new access points for both.



Archaeological/ Built Heritage/ Cultural Heritage

- No long-term impacts to archaeological resources are expected. In some areas archaeological monitoring through construction is recommended.
- Impacts to built heritage resources and cultural heritage landscapes (including the Union Station Complex, the Dominion Public Building, the Postal Delivery Building, and the Union Station Heritage Conservation District) should be mitigated via site plan approvals, agency reviews, and avoidance of heritage attributes.

Key Impacts identified from EPR



Emissions and contamination

- Expected to meet the noise and vibration criteria set out in the TTC Design Manual.
- The hardscape and other design elements will be environmentally protective for the future use.



Transportation

- Reduces vehicle lanes on Queens Quay East from four lanes to two lanes. New infrastructure for walking, cycling, and transit increase the overall capacity of Queens Quay East.
- During construction, one lane of travel will generally be preserved in both directions on Bay Street, Parliament Street and Queens Quay East.



Business Case Update

1. Overview
2. Components of Business Case

Preliminary Design Business Case

- Articulates the rationale and case for change for the project
- Follows Metrolinx guidance
- Consolidates the analysis of cost and benefits for all sections of the project
- Evaluation of infrastructure, policy, and program benefits adapted to the City's Rapid Transit Evaluation Framework
- Assesses the strategic, economic, financial, and deliverability cases as input to Council decision

Option 1: Union Station to Villiers Loop



Option 2: Union Station to Villiers Loop and Distillery



Business Case Components



Strategic Case

*Assesses the WELRT following the City's Rapid Transit Evaluation Framework:
serve people, strengthen places, and support prosperity.*



Attractive boulevard with sustainable transport options



Reliable higher-order transit option to East Bayfront and the Port Lands



Expands the capacity of critical streetcar infrastructure at Union station



Serves extensive planned affordable housing units



Connects 21.5 acres of new parks in the Port Lands



The growing Waterfront East area is planned to support an estimated 50,000 jobs and 100,000 residents.

Business Case Components



Economic Case

- Assesses the project cost-benefit
- Benefits include WELRT service to Villiers Island, commencing in 2032. This will serve many residents along the eastern waterfront and help to support development on the future Island.
- Portions of the project, such as Segment 1, benefit both eastern and western Waterfront.



Financial Case

- Draft 10-year capital plan reflects standard construction cost curves for each Segment



Deliverability Case

- Summarizes the implementation plan and constructability risks for the project



Project Phasing & Implementation

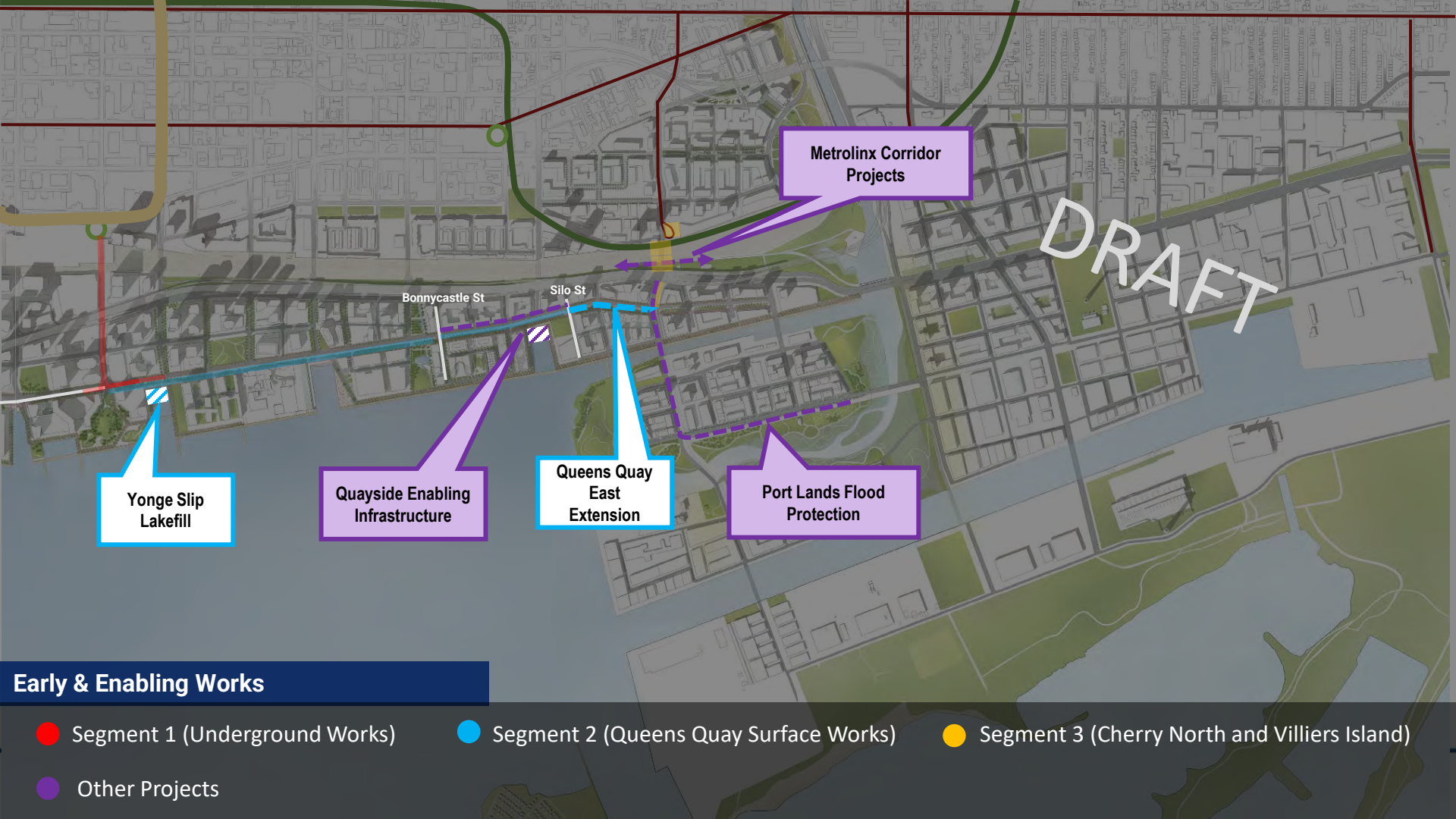
1. Implementation Scenarios
2. Preliminary Implementation Plan

WELRT in Context – reaching the Port Lands



Implementation Scenarios

- **Scenario 1:** Prioritize delivery of the WELRT from Union Station to Villiers Island before the 504A extension from Distillery Loop
- **Scenario 2:** Prioritize delivery of the 504A Extension to Villiers Island before WELRT line from Union Station along Queens Quay
- **Scenario 1 is the preliminary preferred option, because it:**
 - Avoids multiple overlapping projects along Cherry North
 - Serves the rapidly growing East Bayfront neighbourhood
 - Does not rely on capacity from the 504 King streetcar
 - Provides an opportunity for interim East-West through-running service
- **Critical Early Works: Yonge Slip Lakefill, Queens Quay East Extension**
 - With appropriate funding, early works design and construction may be advanced to accelerate overall project delivery
- **Potential Delivery Timelines (preliminary, subject to change as design and coordination progress):**
 - Interim East-West through running: 2030 – 2033
 - Full WELRT Operation: 2032 – 2035



DRAFT

Metrolinx Corridor Projects

Yonge Slip Lakefill

Quayside Enabling Infrastructure

Queens Quay East Extension

Port Lands Flood Protection

Early & Enabling Works

- Segment 1 (Underground Works)
- Segment 2 (Queens Quay Surface Works)
- Segment 3 (Cherry North and Villiers Island)
- Other Projects

Union Station

Queens Quay
Surface Works

Bonnycastle St

Silo St

Gardiner-Lakeshore
East Realignment

Villiers Island
Enabling
Infrastructure

Queens Quay
Portals &
Track

Cherry &
Commissioners
Transitway

509/10

Service Disruption

Portals & Surface Works

● Segment 1 (Underground Works)

● Segment 2 (Queens Quay Surface Works)

● Segment 3 (Cherry North and Villiers Island)

● Other Projects

DRAFT

Union Station

Cherry North
& Portal

Bonnycastle St

Silo St

DRAFT



WELRT



509/10

Interim East-West Through Service

Interim Through-Running



Segment 1 (Underground Works)



Segment 2 (Queens Quay Surface Works)



Segment 3 (Cherry North and Villiers Island)



Other Projects



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Bonnycastle St





Silo St

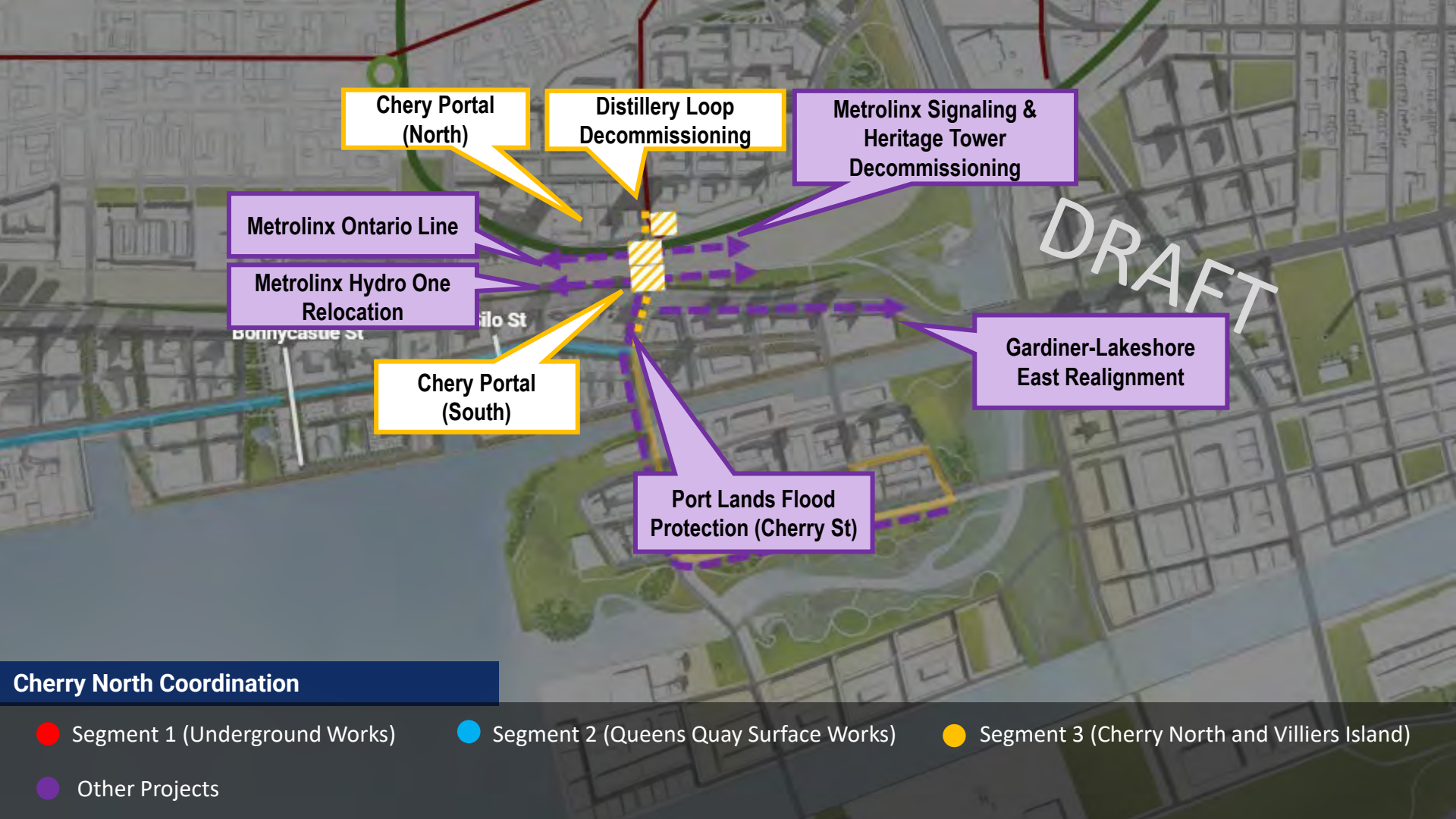

WELRT


509/10

Full Service

Full WELRT Service

-  Segment 1 (Underground Works)
-  Segment 2 (Queens Quay Surface Works)
-  Segment 3 (Cherry North and Villiers Island)
-  Other Projects



Chery Portal
(North)

Distillery Loop
Decommissioning

Metrolinx Signaling &
Heritage Tower
Decommissioning

Metrolinx Ontario Line

Metrolinx Hydro One
Relocation

Chery Portal
(South)

Port Lands Flood
Protection (Cherry St)

Gardiner-Lakeshore
East Realignment

DRAFT

Cherry North Coordination

- Segment 1 (Underground Works)
- Segment 2 (Queens Quay Surface Works)
- Segment 3 (Cherry North and Villiers Island)
- Other Projects

Construction Coordination

Objectives:

- Ensure safety for all modes
- Phase and coordinate work in collaboration with overlapping projects, to reduce overall impacts to residents and businesses
- Coordinate and overlap across project areas to minimize required laydown space
- Leverage early works to provide additional capacity and alternative travel options

Construction will be coordinated through the Lake Shore East and East Harbour Construction Hubs, which:

- Conduct logistical planning of the right-of-way
- Review Construction Management Plans
- Connect travelers with real-time information
- Collaborate with enforcement officers
- Communicate impacts and changes to businesses and communities



Constructability Assessment Update

1. Overview and update

Constructability Assessment

- **Mandate:**

- Constructability Review of the WELRT directed by City Council in the Staff Report EX33.2.

- **Goals:**

- Assess constructability and coordination risks with major infrastructure projects in the vicinity of the Waterfront East Light Rapid Transit alignment.

- **Status:**

- Constructability review underway.
- Completion on May 2023.

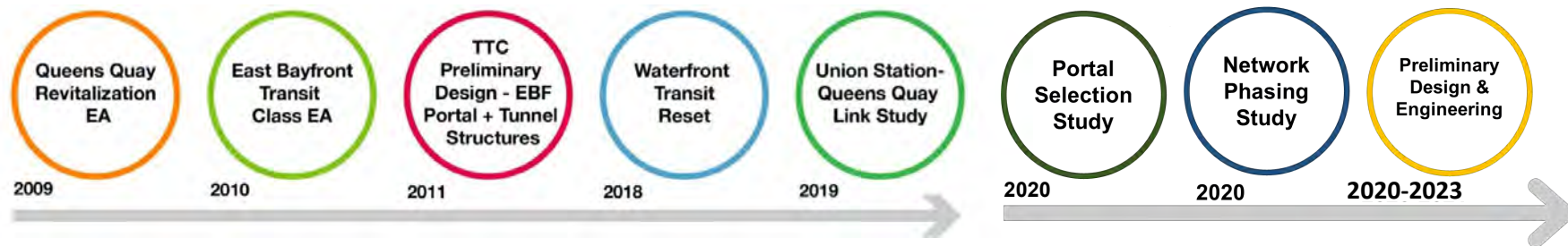


Other Matters

1. Project Overview and Next Steps

Project Overview

Timeline



Next Steps



Public Meeting – April 5, 2023



Feedback Survey – April 5-19, 2023



Q&A Session with Project Team – April 11, 2023



Report to Executive Committee – June 6, 2023



Waterfront Toronto & TTC Board Updates – June 12, 2023



City Council – June 14-16, 2023



Transit Project Assessment Process – July to October 2023

Thank you for joining us!

Please visit
toronto.ca/waterfronttransit

Contact the project team
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