# LOWER YONGE PRECINCT

## Municipal Class Environmental Assessment Study

### Environmental Study Report
### May 2018

**Prepared by WSP for Waterfront Toronto and the City of Toronto**

# LOWER YONGE PRECINCT

## Environmental Study Report

## Municipal Class Environmental Assessment
## Schedule 'C' Project

## Waterfront Toronto and City of Toronto

# THE PUBLIC RECORD

Copies of this document have been submitted to the following offices of the Ministry of the Environment and Climate Change to be placed in the Public Record:

**Ministry of the Environment and Climate Change**
**Toronto District**
**5775 Yonge Street, 8th floor**
**North York ON M2M 4J1**

The report is also available for review during regular business hours at:

**St. Lawrence Library**
171 Front Street East (east of Jarvis Street)
Toronto, ON M5A 4H3

**Toronto City Hall Library**
100 Queen Street West (at Bay Street)
Toronto, ON M5H 2N3

The report is also available for review online at either Waterfront Toronto's or the City's webpages:

https://www.waterfrontoronto.ca/nbe/portal/waterfront/Home/waterfronthome/projects/lower+yonge+precinct+planning

www.toronto.ca/planning/loweryongeprecinct

# EXECUTIVE SUMMARY

Study Process & Objective

Waterfront Toronto and the City of Toronto initiated the Environmental Assessment (EA) Study to identify a long-term vision and area-wide transportation infrastructure improvements to aid with the evaluation of the Lower Yonge Precinct (Precinct) for next long-term planning horizon.

This Environmental Study Report (ESR) has been completed to evaluate and select transportation infrastructure improvements for the Precinct. A Transportation Master Plan (TMP) was completed in 2014 that identified the transportation infrastructure required to support development within the Lower Yonge Precinct Area. The Lower Yonge Transportation Master Plan (LY TMP) addressed the requirements of Phases 1 and 2 of the Municipal Class Environmental Assessment (MCEA) process.

The LY TMP study area used for Phases 1 and 2 has been expanded to 12 ha for Phases 3 and 4 to include a broader area to capture direct and indirect impacts on adjacent properties, including assessment of the configuration of Harbour Street as far west as York Street. This project will fulfill Phases 3 and 4 requirements under Schedule 'C' of the MCEA process, which will define specific road alignments, lane configurations, public realm concept and other technical aspects, such as integrating active transportation.

The MCEA is an approved planning process under the *Ontario Environmental Assessment Act* (1990).

Justification

Current land uses within the Lower Yonge Precinct area include office space, warehouse space, and commercial / retail. Mixed-use residential, office and commercial developments are planned within the area in the future.

It is estimated that the Lower Yonge Precinct will accommodate population and employment of 28,000. A multi-modal transportation network that accommodates pedestrians, cyclists, motorists and transit is critical for the evolution of the Lower Yonge Precinct and its connections to the surrounding areas / neighbourhoods.

Analysis & Evaluation

The study followed a comprehensive process for assessment and evaluation of alternatives for improvements within the study limits. The assessment and evaluation of planning and design alternatives consisted of the following steps:

- Review the preliminary cross sections prepared during Phases 1 and 2 of the MCEA;

- Generate cross section alternatives for each street segment;
- Identification of factors and sub-factors (criteria) to be used in the evaluation of the alternatives;
- Assessment and evaluation of the cross section alternatives for each street segment; and,
- Select the recommended preferred alternatives based on technical assessments.

Consultation / Engagement

Consultation was an important aspect of the planning process, and an extensive stakeholder consultation/engagement program was undertaken to assist in the planning and selection of the preferred transportation infrastructure improvements for this project. Throughout the duration of the study, those engaged included external agencies (Federal, Provincial), municipal staff, interest groups, Indigenous communities, local property owners, adjacent property owners and members of the public.

Opportunities for input from these stakeholders were provided during the study, including an online survey, one Public Information Centre (PIC), Technical Advisory Committee (TAC) meetings, Stakeholder Advisory Committee (SAC) meetings, Landowners and Users Advisory Committee (LUAC), Waterfront Design Review Panel, City of Toronto Public Works and Infrastructure Committee and Council Presentations, newspaper advertisements, notification mail outs, project webpages, and direct contact with the Project Team via mail, email, phone or fax.

**Section 5.0** summarizes all of the consultation/engagement undertaken during the course of this study.

General Description of the Recommended Plan

The Recommended Plan develops a street network that accommodates all modes of transportation (i.e. pedestrians, cyclists, motorists and transit). A more fine-grained road network, improvements to pedestrian and cycling conditions, and changes to the vehicular circulation through the Precinct that balance the local and regional demands is recommended. Specifically, the following key initiatives from the TMP are recommended (see **Exhibit i**), and further described in **Section 7.0**.

1. Convert Harbour Street to two-way operations east of York Street.
2. Elimination of the eastbound Bay Street on-ramp to the Gardiner Expressway to touch down at Yonge Street.
3. Shorten the eastbound Lower Jarvis Street off-ramp from the Gardiner Expressway.
4. Eliminate the Harbour Street S-curve at Yonge Street and normalize the Yonge Street / Harbour Street and Yonge Street / Lake Shore Boulevard intersections.
5. Extend Harbour Street to Lower Jarvis Street.

6. Provide an additional eastbound lane on Lake Shore Boulevard East from Yonge Street to Lower Jarvis Street.
7. Extend Cooper Street to Church Street.
8. Construct a new north-south street between Cooper Street and Lower Jarvis Street that extends from Queens Quay East to Lake Shore Boulevard Eastbound.

Potential Environmental Effects / Proposed Mitigation Measures

**Section 8.0** of this ESR outlines the potential environmental effects associated with the Recommended Plan, proposed mitigation measures and commitments to future work. The identified concerns, proposed mitigation measures and future commitments are summarized in **Exhibit 8-5.**

Other Approval Requirements

To implement the Recommended Plan, additional provincial, federal, municipal and utility approvals / permits are required. A number of approvals / endorsements from the following ministries and government agencies will be necessary for construction of the Recommended Plan:

- Ministry of the Environment and Climate Change
- Utility providers

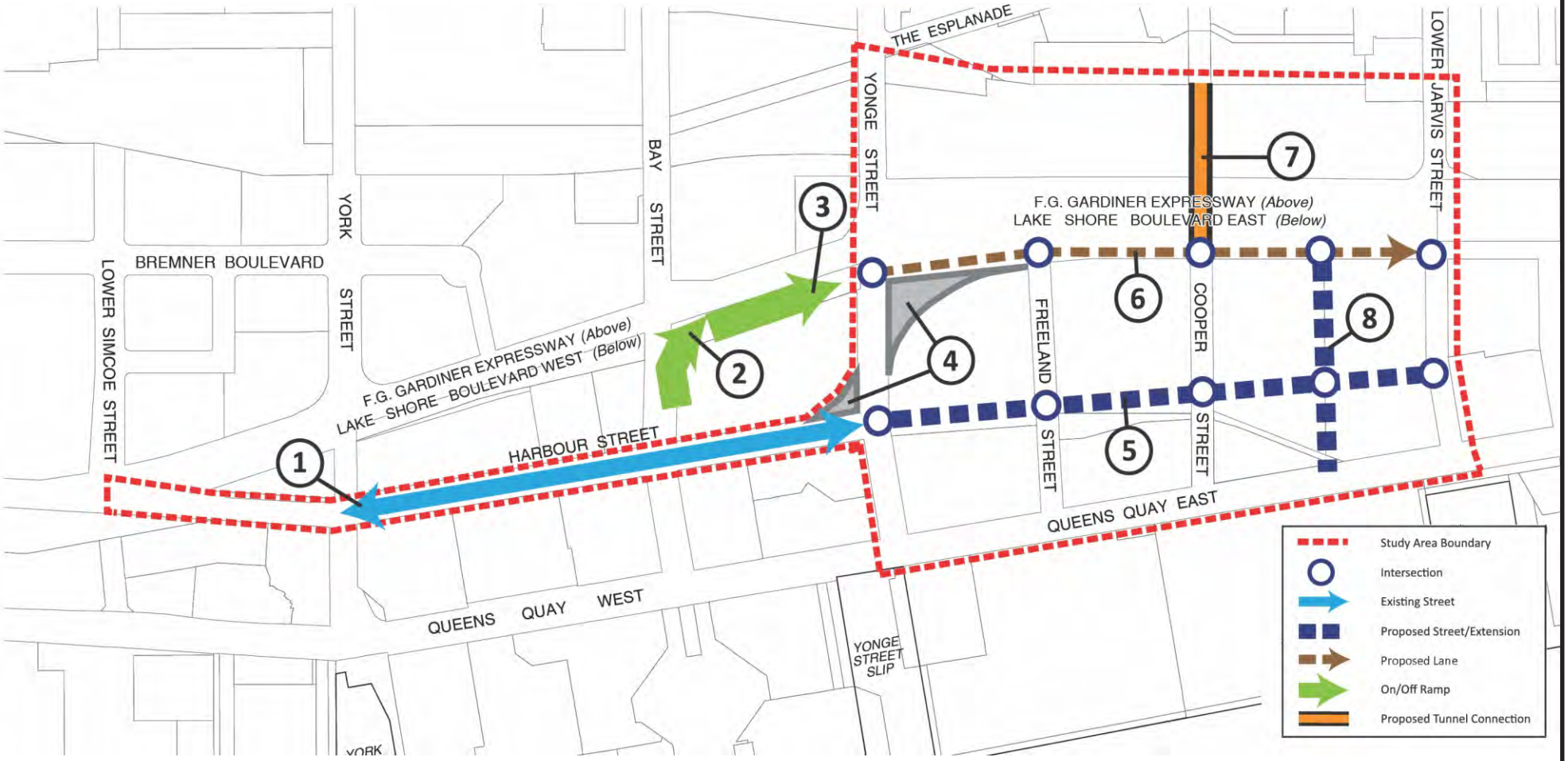
Utility relocations or other provisions will be required to implement the Recommended Plan. During Detail Design, formal notification and consent will be obtained from relevant authorities, and consultation with potentially affected utility providers will be ongoing.

Monitoring

**Section 9.0** provides an overview of the potential minor design modifications that could occur during Detail Design and provides information about monitoring during subsequent EA phases and construction.

Next Steps

Following completion of the public review period for this ESR, if no Part II Order requests are outstanding or granted, the project will then be eligible to proceed to Detail Design as outlined in the *Municipal Class Environmental Assessment Document*.




**Lower Yonge Precinct**
Municipal Class EA Schedule 'C' Project
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# Summary of Transportation Master Plan Recommendations

Exhibit
I

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# LIST OF EXHIBITS

## APPENDICES

# GLOSSARY

| | |
|---|---|
| AAQC | Ambient Air Quality Criteria |
| AANDC | Aboriginal Affairs and Northern Development Canada |
| ANSI | Areas of Natural and Scientific Interest |
| AODA | Accessibility for Ontarians with Disabilities Act |
| APEC | Area of Potential Environmental Concern |
| CEAA | Canadian Environmental Assessment Act |
| COSEWIC | Committee on the Status of Endangered Wildlife in Canada |
| COSSARO | Committee on the Status of Species at Risk in Ontario |
| CSO | Combined Sewer Outlet |
| CWSP | Central Waterfront Secondary Plan |
| Decibel (dB) | A logarithmic unit of measure used for expressing level of sound |
| dBA | Decibels (A-weighted). 'A-weighting' or 'A-scale' are considered to be an accurate approximation of noise perceived by the average human. |
| DRP | Design Review Panel |
| EA Act | Ontario Environmental Assessment Act |
| EMS | Emergency Medical Services |
| ESR | Environmental Study Report |
| GFA | Ground Floor Area |
| GTA | Greater Toronto Area |
| GTHA | Greater Toronto and Hamilton Area |
| LY TMP | Lower Yonge Transportation Master Plan Environmental Assessment |
| LOS | Level of Service |
| LUAC | Landowners Advisory Committee |
| MTCS | Ministry of Tourism, Culture, and Sport |
| MNRF | Ontario Ministry of Natural Resources and Forestry |
| MOECC | Ontario Ministry of the Environment and Climate Change |
| MTO | Ontario Ministry of Transportation |
| NHIC | Natural Heritage Information Centre |
| NSA | Noise Sensitive Area |
| OMB | Ontario Municipal Board |
| OPA | Official Plan Amendment |
| OPSS | Ontario Provincial Standard Specifications |
| OWRA | Ontario Water Resources Act |
| PIC | Public Information Centre |
| POPS | Privately Owned Public Spaces |
| PPS | Provincial Policy Statement |
| PSW | Provincially Significant Wetland |
| PTTW | Permit To Take Water |
| PWIC | Public Works and Infrastructure Committee |
| ROW | Right-of-Way |
| SAC | Stakeholder Advisory Committee |
| SAR | Species at Risk |

| | |
|---|---|
| TAC | Technical Advisory Committee |
| TC | Transport Canada |
| TMP | Transportation Master Plan |
| TPA | Toronto Parking Authority |
| TPLC | Toronto Port Lands Company |
| TTC | Toronto Transit Commission |
| USRC | Union Station Rail Corridor |
| WT | Waterfront Toronto |

# 1.0 PROJECT OVERVIEW

## 1.1 Introduction

Waterfront Toronto and the City of Toronto initiated the Environmental Assessment (EA) Study to identify a long-term vision and area-wide transportation infrastructure improvements to aid the evolution of the Lower Yonge Precinct (Precinct) for next long-term planning horizon (20 to 30 years).

The Lower Yonge Precinct Area includes approximately nine hectares of waterfront land located between Yonge Street and Lower Jarvis Street, south of Lake Shore Boulevard East and north of Queens Quay East. **Exhibit 1-1** displays the Lower Yonge Precinct Area.

## 1.2 Environmental Assessment Process

The Lower Yonge Precinct Environmental Assessment Study is being completed to satisfy the *Municipal Class Environmental Assessment* (MCEA) process. Waterfront Toronto and the City of Toronto have collaborated and coordinated efforts to meet the objectives of the *Ontario Environmental Assessment Act* (1990).

### 1.2.1 Municipal Class Environmental Assessment

This study is being carried out according to the MCEA process for Schedule 'C' projects. This is an approved approach to satisfying requirements of the *Ontario Environmental Assessment Act* (1990) specifically tailored to municipal infrastructure.

A MCEA process consists of the following five (5) Phases:

- Phase 1: Identify the Problem or Opportunity
- Phase 2: Identify and Evaluate Alternative Solutions
- Phase 3: Identify and Evaluate Alternative Design Concepts for the Preferred Solution
- Phase 4: Prepare and File the Environmental Study Report (ESR) for a 30-day public review period
- Phase 5: Project Implementation

The Lower Yonge Precinct Transportation Master Plan (LY TMP) was completed in 2014 that identified the transportation infrastructure required to support development within the Lower Yonge Precinct Plan Area. The LY TMP addressed the requirements of Phases 1 and 2 of the MCEA. The study area used for Phases 1 and 2 has been expanded to 12 ha for Phases 3 and 4 to include a broader area to capture direct and indirect impacts on adjacent properties, hereby referred to as the "Lower Yonge Precinct MCEA Study Area" or the "study area."



## Lower Yonge Precinct Plan Study Area

Exhibit
**1-1**

As mentioned above, the Lower Yonge Precinct MCEA Study Area includes a broader area of 12 ha, and will also assess the configuration of Harbour Street as far west as York Street, as shown in **Exhibit 1-2**.

This project will fulfill Phases 3 and 4 requirements under Schedule 'C' of the MCEA process, which will define specific road alignments, lane configurations, and other technical aspects, such as integrating active transportation, as outlined below and illustrated in **Exhibits 1-3** and **1-4**.

This ESR has been completed to evaluate and select transportation infrastructure improvements. This ESR documents the study process; policy framework; the existing natural, cultural and socio-economic factors; a summary of stakeholder consultation undertaken; generation of alternatives; evaluation and selection of the preferred alternative; potential environmental effects and proposed mitigation measures.

### 1.2.2 ESR Addendum

An addendum may be required if a project is not implemented as described in the ESR, due to unforeseen circumstances. Any significant modification to a project or change to an environmental setting that occurs following the filing of the ESR shall be reviewed and an addendum to the ESR shall be prepared. The addendum would describe the circumstances necessitating the change, environmental implications and mitigation measures that could minimize the impacts. Addendums are made available for a review period, and only the items changed are open for review.

An addendum may also be required if there is a lapse of time and the proposed project and environmental mitigation are no longer valid. If ten (10) years lapsed before the project is implemented, the proponent shall review to ensure the project and mitigation measures are still valid.

## 1.3 The Canadian Environmental Assessment Act

The *Canadian Environmental Assessment Act*, 2012 (CEAA 2012) and associated regulations came into effect on July 6, 2012. Under CEAA 2012, a federal environmental assessment is required for "designated projects." A designated project is one that includes one or more physical activities that are set out in the regulations under CEAA 2012 or by order of the Federal Minister of the Environment and Climate Change.

This MCEA Study was reviewed by the Project Team against the Federal Regulations Designating Physical Activities, and the Project Team determined that the study is not "designated" and therefore will not require a federal environmental assessment.

More information about the *Canadian Environmental Assessment Act* (2012) is available at the following link: http://www.ceaa.gc.ca.


**Lower Yonge Precinct**
Municipal Class EA Schedule 'C' Project
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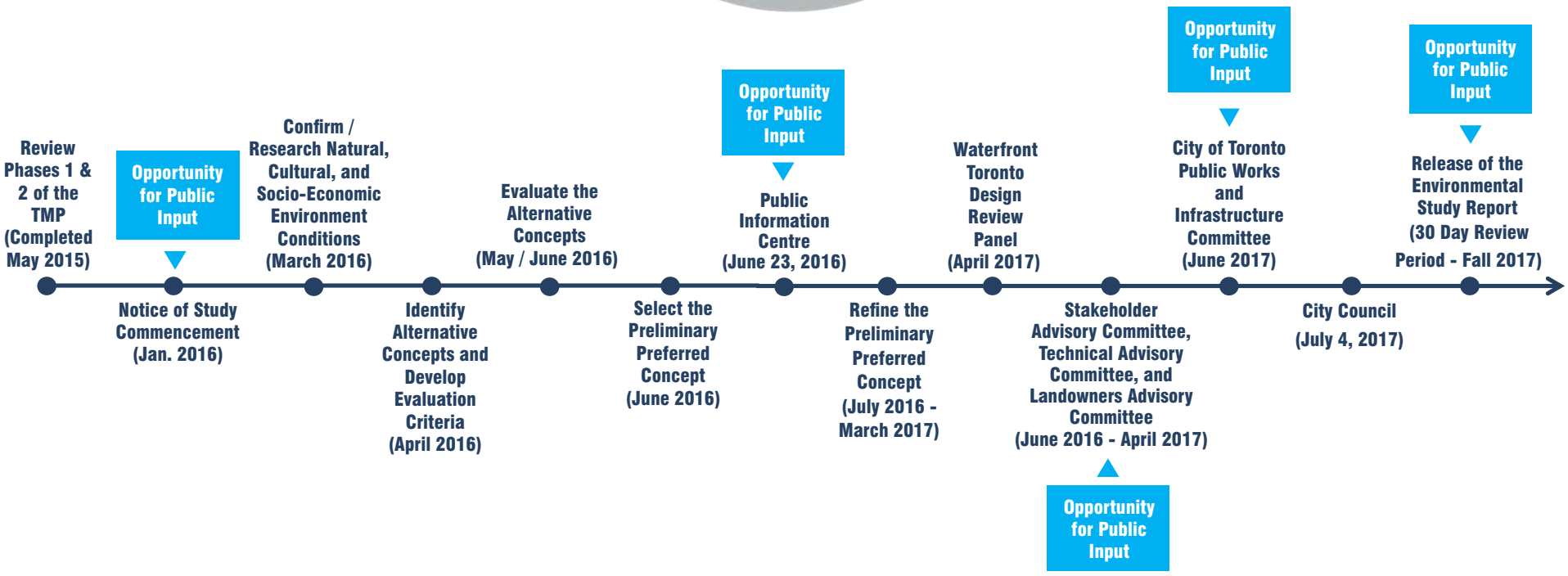
## MCEA Study Area

Exhibit
**1-2**


**Lower Yonge Precinct**
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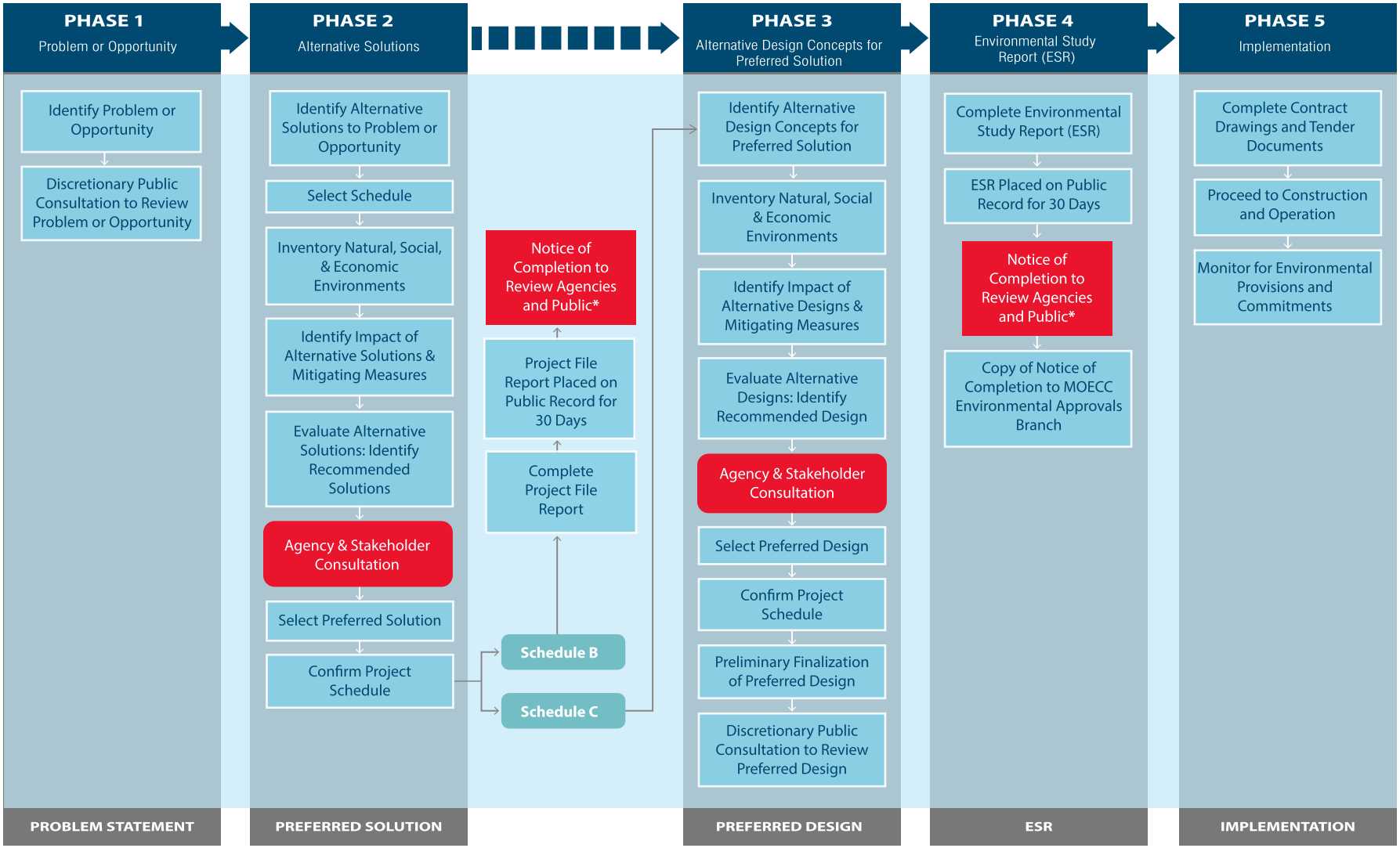
**Study Process**

Exhibit
**1-3**




* Includes provision to request a Part II Order to elevate the project to a higher level of review.

Mandatory Public Contact Points

Adapted from Municipal Engineers Association (MEA), Municipal Class Environmental Assessment, October 2000 (as amended in 2007, 2011 and 2015)

## 1.4 Decision History

The planning framework, planning policies and decisions in the Precinct have been underway for years. This section provides an overview of the decision history related to the precinct planning, Lower Yonge Transportation Master Plan (LY TMP) Environmental Assessment (EA) and Official Plan Amendment (OPA).

Precinct planning involves developing a blueprint for the area. From 2012 – 2016, the Lower Yonge Precinct Plan was undertaken to identify planning and policy directions for the Lower Yonge Precinct and identify an urban design vision. Two reports, providing information and status updates on the progress of work, were initially received and reviewed by the Toronto and East York Community Council on November 6, 2012, and February 25, 2014, respectively.

A third report was provided to the community council, dated August 5, 2014, and the Lower Yonge Precinct Plan was adopted by Toronto City Council on August 25-28, 2014. The Precinct Plan summarized the results of Phase 1 of the Lower Yonge Precinct planning process. In addition, it provided recommendations to receive the LY TMP EA and Lower Yonge Urban Design Report, to endorse the planning and policy directions, and to direct City Planning to complete the Lower Yonge Precinct Plan in consultation with Waterfront Toronto, other City Divisions, landowners, community members and other stakeholders. The recommendations in the staff report were adopted without amendments and the City Council authorized work on the Lower Yonge Precinct Plan to proceed to Phase 2.

Phase 2 of the Lower Yonge Precinct planning process involved more detailed refinements of many of the components considered in Phase 1, including built form, land use compatibility, public realm design and the transportation network. Effort was also focused on key matters such as affordable housing, community services and facilities and required implementation mechanisms.

A separate staff report on the LY TMP EA was received by the Public Works and Infrastructure Committee (PWIC) on February 23, 2015. On March 31, 2015, City Council endorsed the recommendations of the EA and authorized the issuance of the Notice of Completion. The LY TMP fulfilled the requirements of Phases 1 and 2 of the MCEA process, and provided recommendations to proceed with Phases 3 and 4 of the MCEA process. City Council further directed the preparation of an OPA to secure various planned rights-of-way and to evaluate opportunities for securing protected bicycle lanes on Yonge Street between Queens Quay and Front Street.

Toronto City Council, at the June 7, 2016 Council meeting, endorsed the OPA and Lower Yonge Precinct Plan that accommodates approximately 8,000 residential units and 380,000 square metres of non-residential gross floor area, providing future homes and workplaces for up to 13,000 residents and 15,000 employees.

On July 4, 2017, Toronto City Council endorsed the preferred designs identified in Phases 3 and 4 of the Lower Yonge Precinct MCEA study, and authorized the General Manager of

Transportation Services to publish the Notice of Completion and file the ESR on the public record for a minimum 30 days in accordance with the requirements of the Municipal Class Environmental Assessment.

For more information about the history of planning in the Precinct we encourage you to access the City of Toronto's Lower Yonge Precinct webpage (http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=bd6ec6f87bdb1410VgnVCM10000071d60f89RCRD).

## 1.5 Vision for the Precinct

The City's and Waterfront Toronto's vision for the Lower Yonge Precinct developed through the completion of studies, policies and secondary plans, which is discussed in **Section 2.1**.

The Lower Yonge Precinct will be a vibrant, mixed-use, complete community that develops its character from the proximity to the waterfront. The high-rise development will integrate the built form with a public realm that features a street network designed for all users, including motorists, pedestrians and cyclists. A large public park will form the heart of the Precinct and provide opportunities for recreational activities. The Lower Yonge Precinct will create a place that connects to the larger urban fabric, including Union Station, East Bayfront, Harbourfront, Southcore Financial District and St. Lawrence neighbourhood.

Public realm, transportation access (including various modes) and mixed uses are necessary elements. The following guiding principles were developed to help achieve the vision for the Precinct:

1. Ease of movement (multiple, connected, circulation paths)
   - Ease of movement refers to short block dimenions, connected streets, increased porosity, pedestrian-scaled blocks and waterfront access.
2. Accessible public spaces (high quality, safe and vibrant outdoor destinations)
   - Accessible public spaces aims to create spaces that are accessible, comfortable and flexible in their use and a connected network of open space.
3. Pedestrian comfort (sidewalks and public places that are physically comfortable for all seasons)
4. Diversity of uses (a live-work-play-shop environment should be included within walking distance with active ground floors)
5. Good urban form (protecting view corridors to the lake with tall buildings to the north, sun light access and human scale built form)

# 2.0 IDENTIFIED PROBLEMS AND OPPORTUNITIES

This chapter documents the need and justification for the Lower Yonge Precinct Environmental Study Report (ESR). Several supporting analyses were undertaken to develop a rationale for the study, including a review of the City's policy framework and an assessment of the identified problems and opportunities within the study area.

## 2.1 Policy Framework

Provincial and City policies that provide direction about growth, land use planning and environmental protection were reviewed to determine applicability to the Lower Yonge Precinct ESR. This section provides an overview of the Provincial and City policy framework, as well as previously completed studies.

### 2.1.1 Provincial Policy Framework

**The Planning Act**

The *Ontario Planning Act* is the overarching legislation governing land-use planning in Ontario, distributing legislative powers between the Province and municipalities, and laying out planning policies and plans. The *Planning Act* grants the City the power to create Official Plans, Zoning Bylaws, and planning policies that provide direction when making planning and development decisions. The Ministry ensures that municipalities have regard for matters of Provincial interest as outlined in Section two (2) of the *Planning Act.*

**Provincial Policy Statement (2014)**

Issued under Section 3 of the *Planning Act*, the Provincial Policy Statement (PPS) provides policy direction on matters of Provincial interest related to land use planning and development in Ontario. The *Planning Act* requires that decisions on land use planning matters made by the Province, Ontario Municipal Board, municipalities and other decision-makers must be consistent with the PPS, including development or amendment of Provincial plans, municipal Official Plans or Zoning By-laws.

Key policy objectives include: building strong, healthy, resilient communities; wise use and management of resources; and protecting public health and safety. The PPS recognizes that local context and character is important. Policies are outcome-oriented and some policies provide flexibility in their implementation, provided that provincial interests are upheld. City Council's planning decisions are required to be consistent with the PPS.

The PPS promotes the provision of healthy communities that accommodate an appropriate range and mix of uses to meet long term needs. In accordance with the PPS, densities and land uses are to be transit supportive and appropriate for available or planned infrastructure and public service facilities.

In accordance with the PPS, healthy, active communities should be promoted by the planning of public streets, spaces and facilities to meet the needs of pedestrians, facilitate active transportation and enhance community connectivity.

**Growth Plan for the Greater Golden Horseshoe (2017)**

The Places to Grow: Growth Plan for the Greater Golden Horseshoe (GPGGH), in effect as of July 1, 2017, is a plan to manage growth in Southeastern Ontario. The plan allocates population and employment targets to upper-tier and single-tier municipalities within the Greater Golden Horseshoe, including the City of Toronto.

The GPGGH provides a framework for implementing the Provincial government's vision for building stronger, prosperous communities by better managing growth within the Greater Golden Horseshoe. The Growth Plan guides decisions on a wide range of issues including transportation, infrastructure, urban form, housing, natural heritage and resource protection. Land use planning decisions are required to conform to the Growth Plan. The Growth Plan calls for planning that provides for the opportunity to build compact, vibrant and complete communities.

The Lower Yonge Precinct is within the Downtown Toronto *Urban Growth Centres* designation, which will be planned to be a focal point for investment to accommodate significant population and employment growth. Section 3.2.1 provides direction on integrated planning, including coordinating infrastructure planning, land use planning and asset planning. New and expanded infrastructure will be supported by infrastructure master plans, environmental assessments to support land use planning by addressing leveraging infrastructure to support growth targets and ensure that sufficient infrastructure capacity exists in key growth areas, such as Lower Yonge.

**Accessibility for Ontarians with Disabilities Act (2005)**

The Province enacted the *Accessibility for Ontarians with Disabilities Act* (AODA), which governs the provision of public infrastructure including sidewalks, walkways, stairs, curb ramps, tactile walking surfaces, pedestrian signals and parking spaces. The City of Toronto has developed standards for all newly constructed or redeveloped infrastructure to ensure compliance with AODA.

### 2.1.2 City of Toronto Policy Framework

Over the years, the City and Waterfront Toronto have developed a policy framework to support the creation of a transportation network for all users. The policy framework was applied during Phases 1 and 2 of the TMP to generate and evaluate transportation network alternatives. Key principles used to guide this Environmental Assessment include:

- Encouraging use of sustainable transportation, such as walking, cycling, and transit.
- Supporting ease of movement to, from, and within the Precinct.
- Balancing regional and local vehicular circulation and accessibility.
- Encouraging vibrant, mixed-use development within the Precinct.
- Supporting Yonge Street's role as a connection between the downtown and the waterfront and also as a special public space.

An overview of the policy framework for the Lower Yonge Precinct ESR is outlined in the following plans, guidelines and studies.

**Former Metropolitan Toronto Official Plan (1993)**

As the guiding document for the former City of Toronto Official Plan, the former Metropolitan Toronto Official Plan remains in force in the Lower Yonge Precinct. The Plan provides policy direction for attaining an urban structure that fosters livability, focuses programs on sustainable community development, enhances the planning process and promotes effective collaboration.

The policies of the Official Plan are further articulated through the Metropolitan Waterfront Plan, dated February 1994, which was adopted by Metropolitan Council as the guiding document directing projects undertaken within the waterfront, based upon four objectives:

- To plan and manage the Waterfront Green Space System in a way that retains, maintains and enhances ecosystem integrity, improves physical connections to other green spaces and meets the recreational needs of Toronto residents;
- To protect and enhance inter-regional access to and through the waterfront, including increased reliance on transit, commuter rail and marine transportation and public access to the along the waterfront;
- To ensure a balanced use of waterfront lands supporting residential, employment and recreational activities; and,
- To promote a high standard of quality in the physical form of the waterfront to reflect its importance to the identity and livability of the region.

### Former City of Toronto Official Plan (1993)

The former City of Toronto Official Plan is in force for the Lower Yonge Precinct. This Plan supports the precinct planning approach and comprehensive level of analysis. It sets out a policy framework, including goals and objectives, for the waterfront in Chapter 14. This includes the primary goal for the waterfront as set out in Policy 14.2, which promotes increased and sustainable public enjoyment and use of the area by ensuring that future developments and actions by both the public and private sectors will assist in achieving certain objectives. These objectives include: improving public access to the waterfront, increasing the amount of public parkland across the entire waterfront and enhancing the quality of the waterfront as a place. The general policies for the Bayfront area (Policy 14.21) state that Council shall encourage residential, commercial, institutional and compatible industrial uses in suitable locations in order to increase the area's public character, promote active and varied use of the area by people throughout the year, and assist in meeting Council's housing policies in Section 6 of the Plan.

The Lower Yonge Precinct contains lands in both the Central Bayfront and East Bayfront areas of the former City of Toronto Official Plan. A set of planning and urban design principles for the Central Bayfront and East Bayfront is set out in Policy 14.28. These principles set out the need for further planning and development for this area to address land use, open space, built form and infrastructure. Development is directed to be phased at an appropriate pace. To further this comprehensive planning framework, cooperative arrangements among landowners and public agencies and levels of government should be promoted to realize both public and private objectives, including the creation of an appropriate streets and blocks plan.

Addressing transportation considerations, Policy 14.28 (i) requires redevelopment to be based on a street system, which improves connections between the City and Central/East Bayfront, accommodates the Gardiner Expressway in its present location but allows for its restructuring and establishes Queens Quay East as a significant waterfront boulevard.

### City of Toronto Central Waterfront Secondary Plan (2003)

The Central Waterfront Secondary Plan was adopted by City Council on April 16, 2003 as an amendment to Part II of the former City of Toronto Official Plan. It was appealed in its entirety, and although parts of the Plan have been approved by the Ontario Municipal Board, the Plan is not yet approved and in force for the Lower Yonge Precinct. The CWSP has been used as the guiding policy document for waterfront redevelopment and policy implementation.

The purpose of the CWSP is to identify key public priorities and opportunities, as well as an implementation process for waterfront revitalization. The Plan is based on four core principles:

A. Removing Barriers/Making Connections;

B. Building a Network of Spectacular Waterfront Parks and Public Spaces;

C. Promoting a Clean and Green Environment; and

D. Creating Dynamic and Diverse New Communities.

The CWSP envisioned multi-modal complete street design that prioritized active modes of transportation, transit and the creation of a vibrant and well-designed public realm. The CWSP provides direction on complete street requirements, including providing a sufficient road right-of-way to accommodate vehicle travel lanes, transit, pedestrian and cycling facilities, landscaping and public realm design elements.

Streets in the waterfront have been identified as places with distinct identities, including design approach, character, urban connectivity, high-quality urban design, landscaping and amenities. Enhanced connectivity to the rest of the City is emphasized. Visual connection to the water is a key consideration when laying out the street grid. Streets that terminate at the water's edge will take advantage of views of the water and the City; and these streets will be framed with buildings that take advantage of those iconic views.

Although the CWSP predates the heritage policies of the Official Plan, cultural heritage preservation and celebration polices have guided waterfront revitalization plans. Specific policy direction has been provided within the CWSP for the protection, conservation and/or reuse of listed heritage properties.

The CWSP requires that community infrastructure be planned during the development of precinct plans and delivered in conjunction with new development to provide community services and amenities to new residents. The CWSP also encourages innovative approaches to providing community infrastructure, including integration into private developments, co-location of facilities and repurposing heritage buildings.

**City of Toronto Official Plan (2006)**

The City of Toronto Official Plan was adopted by Council in 2002 and approved by the Ontario Municipal Board in 2006. The Central Waterfront policies were appealed to the OMB and the 2006 Official Plan is not in force and effect for the Central Waterfront Area, including Lower Yonge. The Official Plan is the guiding policy document for the City.

A number of policies in the Official Plan direct improvement of the City’s transportation network as a component of building complete communities and well-served employment areas.

Section 2.2 of the Official Plan acknowledges that growth areas are knitted together by the City's transportation network and contemplates its planned expansion through designation of existing and future rights-of-way in maps and schedules. Policy 2.2.3(a) of the Official Plan states that the City's transportation network will be maintained and developed to support the growth management objectives of the plan by protecting and developing the network of rights-of-way.

Section 3.1.1 of the Official Plan seeks to ensure the City's streets, parks and public open spaces remain beautiful, comfortable, safe and accessible. Policy 3.1.1.5 directs that streets be designed to balance the spatial needs of pedestrians, people with mobility aids, transit vehicles, cyclists, automobiles, and spaces for utilities and landscaping. Policy 3.1.1.14 directs that new streets be designed to promote a connected grid, provide access for new development, and create adequate space for pedestrians, bicycles and landscaping as well as transit, vehicles, utilities and utility maintenance.

**Toronto Walking Strategy (2009)**

The Toronto Walking Strategy includes 46 actions, with the objective to build the physical and cultural environment that supports and encourages walking, including a pedestrian friendly public realm that seamlessly integrates with transit, cycling and other sustainable modes of travel. The Strategy's actions are based on three guiding principles:

- Universal Accessibility – all public and private places and spaces should be barrier free;
- Safety – the safety of pedestrians takes precedence over other modes of transportation, and,
- Design Access – high-quality design creates a positive experience for everyone.

**TOcore Proposals Report (2016)**

On December 9, 2015, City Council adopted a staff report entitled 'TOcore: Planning Toronto's Downtown – Phase 1 – Summary Report and Phase 2 Directions'. The report outlined the deliverables of TOcore which will be a renewed planning framework through a Downtown Secondary Plan and a series of infrastructure strategies. The work for TOcore began on May 13, 2014 when Toronto and East York Community Council adopted a staff report regarding 'TOcore: Planning Toronto's Downtown', along with a related background document entitled 'Trends and Issues in the Intensification of Downtown'.

The Downtown study area is bounded by Lake Ontario to the south, Bathurst Street to the west, the mid-town rail corridor and Rosedale Valley Road to the north and the Don River to the east. The Secondary Plan will provide an integrated planning framework and structure addressing elements of land use, built form, heritage, housing, office, institutional, retail, parks and open spaces, community facilities, streets, transit, energy and water. Staff from the TOcore unit have been involved in many of the decision-making processes associated with the formulation of the Lower Yonge Precinct OPA.

On December 13, 2016, City Council adopted the TOcore Proposals Report that provide proposed policy direction that will inform development of the downtown secondary plan. The TOcore Proposals Report proposes an updated vision for Downtown and a set of 5 guiding principles that have been informed by an extensive public engagement campaign during the spring of 2016. The document sets out 128 policy directions that will ensure the Downtown contributes to the overall quality of life of the whole city, sustains its role in keeping the City globally competitive and remains a livable place for current and future residents.

The report provides provided an update on infrastructure strategies, including the development of a Downtown Mobility Strategy that prioritizes walking, cycling, surface transit and essential access and identifies networks and other improvements to address movement, connectivity and accessibility.

**Union Station Heritage Conservation District Plan (2006)**

The Union Station District Heritage Conservation District was created under Part V of the *Ontario Heritage Act* to recognize the special character and cultural history. The heritage character of the Union Station District illustrates several periods of development. The objectives of the Union Station Heritage Conservation District Plan are:

- To complete a comprehensive analysis and evaluation of the historical and architectural character of the Union Station District in order to identify the heritage character of the area;
- To propose a method by which the City of Toronto can effectively protect and enhance the heritage attributes of the area;
- To develop design guidelines which will assist the property owners and decision makers to assess appropriate changes and development proposals within the district; and,
- To encourage and facilitate the participation and input of local stakeholders and the city in pursuing and promoting the awareness of the preservation and enhancement of neighbourhood character.

**Streetscape Manual (2010)**

The Streetscape Manual was tool developed to guide the design, construction and maintenance of sidewalk and boulevard improvements on arterials roads. The Manual emphasizes design quality and amenity in the pedestrian realm with specifications for paving, trees, medians, lighting and street furniture. Interested readers can review the Streetscape Manual at www.toronto.ca/streetscapemanual.

**Toronto Ten Year Cycling Network Plan (2016)**

The Toronto Bike Plan, adopted by City Council in 2001, set out an ambitious agenda for making Toronto a great city for cycling. This comprehensive visioning document included policy recommendations for bicycle friendly streets, safety, education, bike-transit integration and bike parking programs, and the recommendation that Toronto develop a bikeway network that would be accessible to every Toronto resident.

The Ten Year Cycling Network Plan, adopted in 2016, is the City's comprehensive roadmap and work plan, outlining the City's planned investments in cycling infrastructure from 2016 to 2025. The Plan builds upon the City's existing cycling routes by identifying potential cycling network projects that:

- Connect the gaps of the existing cycling network;
- Growth the cycling network into new parts of the City; and,
- Renew existing cycling network routes.

**Vibrant Streets – Toronto's Coordinated Street Furniture Program**

Vibrant Streets provides guidance to change the look and function of Toronto's streets, as well as meeting the needs of residents and visitors. Thoughtful design, through provision of well-placed amenities, transit shelters, street furniture, recycling bins and wayfinding signs, contributes to a beautiful, functional and safe surrounding environment.

### 2.1.3 Lower Yonge Precinct Policies

**Waterfront Toronto Lower Yonge Transportation Master Plan Environmental Assessment (2014)**

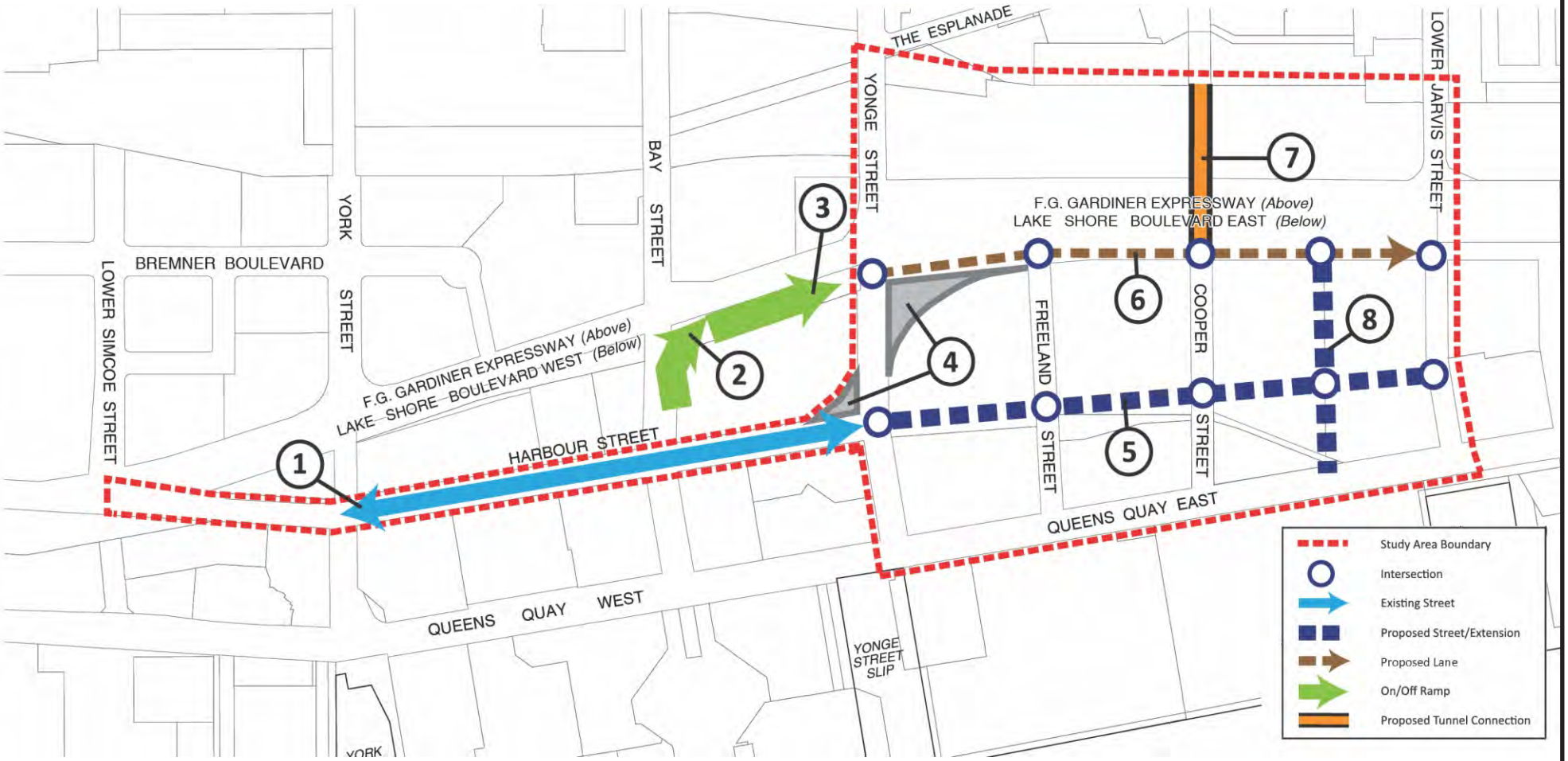
The Lower Yonge Transportation Master Plan Environmental Assessment fulfilled the requirements for Phases One and Two of the MCEA Process for the Lower Yonge Precinct. The TMP EA identified the transportation infrastructure required to support the future growth and development of the Lower Yonge Precinct as defined by the Lower Yonge Precinct Plan.

The TMP EA identified a Preliminary Preferred Alternative for the study area which would be designed to accommodate over 630,000 square metres of commercial and residential development, allowing for 7,500 to 12,000 jobs and 6,000 to 10,000 residents. A more fine-grained local street network for the Precinct was created and several changes to the regional transportation network were also included to improve traffic flow as well as help minimize the impact of regional traffic on the local street network.

The TMP network recommendations are listed below and shown in **Exhibit 2-1**.

1. Converting Harbour Street to a two-way street from York Street to Yonge Street
2. Elimination of Eastbound Bay Street On-Ramp
3. Shortening of the Eastbound Lower Jarvis Off-Ramp
4. Elimination of the S-Curve and regularization of Yonge Street/Harbour Street and Yonge Street/Lake Shore Boulevard intersections
5. Extension of Two-Way Harbour Street from Yonge Street to Lower Jarvis Street
6. Addition of one Eastbound Lane on Lake Shore Boulevard East
7. Tunnel Connection between Cooper Street and Church Street
8. Creation of a new local street east of Cooper Street connecting Lake Shore Boulevard East to the Queens Quay East

The TMP network provides a more permeable street grid for all users, including pedestrians, motorists, and cyclists.




**Lower Yonge Precinct**
Municipal Class EA Schedule 'C' Project
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# Summary of Transportation Master Plan Recommendations

Exhibit
**2-1**

**Lower Yonge Urban Design Report: Principles and Recommendations (2014)**

The Lower Yonge Urban Design Report: Principles and Recommendations (UDR) presents the overall urban design vision for the Lower Yonge Precinct and is intended to provide guidance for implementing that vision through the Precinct Plan, Transportation Master Plan, Municipal Class Environmental Assessment and development applications. The UDR proposes land use, public realm and built form recommendations based on a set of principles, including:

- Ease of Movement - Multiple, connected circulation paths make all forms of movement easier and more convenient;
- Well-loved Public Places - People love and are drawn to places that offer high quality, safe and vibrant outdoor destinations;
- Pedestrian Comfort - People enjoy and prefer places that are physically comfortable;
- Diversity of Use - A diversity of uses, conveniently located near each other, creates a work-live-play-shop-environment where getting into a car is not necessary; and,
- Good Urban Form - People are inspired by and drawn to places framed by good urban forms that graciously respond to their context at a human scale.

The following is a high level summary of the key recommendations:

- Create eight city blocks by reconfiguring and extending Harbour Street from Yonge Street to Lower Jarvis Street and introduction of a “New Street” between Cooper Street and Lower Jarvis Street, a north-south connectin that will extend from Queens Quay East to Lake Shore Boulevard Eastbound. The Harbour Street extension improves connectivity of the precinct to the waterfront and the downtown while balancing regional and local transportation needs;
- Create a central park which serves as the heart of the community; and,
- Built form recommendations consistent with past waterfront precinct plans to the east while acknowledging its contextual relationship to the downtown core to the west and the St Lawrence community to the north.

The principles and recommendations were developed concurrently with TSP and precinct planning to ensure the precinct has a good mix of uses, a pedestrian and bike friendly environment, safe and comfortable public spaces, animated ground floors for a vibrant public realm, appropriate building base heights, tower dimensions, and tower placement that meet the objectives of for all waterfront communities.

**Lower Yonge Precinct Plan and OPA (2016)**

The planning process for the Lower Yonge Precinct study was initiated in 2012 by City Planning in collaboration with Waterfront Toronto. The purpose of the study was to establish a planning context for the comprehensive and orderly development of this underutilized portion of Toronto's waterfront in order to achieve a complete community. It was undertaken with direction provided by the Central Waterfront Secondary Plan for waterfront precinct planning, and was intended to provide similar planning direction to work done previously in the West Don Lands, East Bayfront and Keating Precincts. The Lower Yonge Precinct Plan and implementing draft Official Plan Amendment (OPA) was endorsed by City Council on June 7/8, 2016.

The Lower Yonge Precinct will be a vibrant, mixed-use, complete community that derives its character from its waterfront context and the large central park at its heart. A home and workplace for people of all incomes, as well as a destination to visit, Lower Yonge will be a green, sustainable neighbourhood with streets and sidewalks that are inviting to both pedestrians and cyclists. The area will be characterized by mid-rise base buildings framing the public realm at a human scale, and broadly spaced towers ensuring sunlight, good wind conditions and ample views of the sky from all streets and the park.

The OPA established a set of planning policies with maps, intended to guide future private and public investment, under the following general themes:

1. **Public Realm**: streets and blocks network, regional transportation improvements; complete streets; active transportation; ground floor animation, parks and open space, privately owned, publicly-accessible spaces (POPS), public art, and transit;

2. **Infrastructure:** community services and facilities, sustainability/resiliency, parking/loading, servicing, and travel demand management;

3. **Development:** land use, compatibility with Redpath Sugar, housing, heritage conservation and archaeology, and built form (including base buildings, articulation, tall buildings, density and specific provisions for the 1-7 Yonge Street property); and

4. **Implementation:** municipal approvals (including complete application requirements, holding provisions, Section 37 agreements and subdivision), municipal class environmental assessment, design review panel, landowner agreements, and monitoring.

The realization of projected densities, particularly the introduction of residential density, will be contingent upon the provision and timely delivery of transportation and servicing infrastructure, community services and facilities, public realm, and other features that are necessary to support residential populations.

### St. Lawrence Neighbourhood Community Improvement Plan

The St. Lawrence Neighbourhood Community Improvement Plan was enacted in 2008 and provides a Public Realm Strategy for the southwest quadrant of the St. Lawrence Neighbourhood. The Community Improvement Plan (CIP) is intended to complement other planning initiatives in the St. Lawrence Neighbourhood by creating a strategic framework for the improvement of public lands in the area. Recommendations in the plan include improvements to Berczy Park, streetscape improvements, and improvements to the terminus of Church Street including improvements to the TPA parking garage at 2 Church Street. The CIP identifies The Esplanade as a distinct and recognizable mixed use street with wide sidewalks, linear parks and grand promenades. It identifies that The Esplanade may become an important pedestrian route as the West Don Lands and Union Station precincts redevelop.

## 2.1.4 Other Environmental Assessment Studies

### Gardiner Expressway and Lake Shore Boulevard Reconfiguration Environmental Assessment and Urban Design Study

The City of Toronto and Waterfront Toronto completed an environmental assessment for the Gardiner Expressway and Lake Shore Boulevard East Reconfiguration Environmental Assessment and Integrated Urban Design Study The purpose of the EA was to determine the future of the elevated corridor from approximately Lower Jarvis Street to just east of the Don Valley Parkway at Logan Avenue. The separate alternative solutions considered as part of the EA included: maintain, improve, replace, remove, and an additional hybrid option that combines maintain, replace and remove alternatives. On March 21, 2016 Toronto City Council approved the EA that recommends the hybrid option that includes maintaining the existing elevated expressway between Lower Jarvis Street and Cherry Street, removing the existing Gardiner-DVP connection and rebuilding the existing connection along the alignment closer to the rail corridor. For more information about the Gardiner EA Study, visit www.gardinereast.ca.

### East Bayfront Transit Environmental Assessment Study

The purpose of the East Bayfront Transit Environmental Assessment Study has been to determine the transit facilities required to serve the long-term needs of the study area, while achieving the TTC's objectives of high-quality, reliable transit services and the City's and Waterfront Toronto's objectives of design and environmental excellence. The future East Bayfront Light Rail Transit (LRT) is planned to run along Queens Quay East at the southern edge of the study area. To read more about the East Bayfront Transit EA and review the preferred alignment and cross section, visit the following webpage:
https://waterfrontoronto.ca/nbe/wcm/connect/waterfront/611b92f5-1201-48ff-ac74-2f3de96dc609/ebf_environmsntal_study_report_1.pdf?MOD=AJPERES

### York-Bay-Yonge Environmental Assessment Study

A “Schedule C” Class Environmental Assessment for the reconfiguration of the York/Bay/Yonge eastbound off-ramp and removal of Bay Street eastbound on-ramp was completed in April 2013. The preferred solution includes a single three-lane eastbound off-ramp terminating at Lower Simcoe Street. Construction of the replacement began in fall 2016 and will continue until 2018.

### Queens Quay Revitalization Environmental Assessment

Waterfront Toronto and the City of Toronto completed the Environmental Assessment and construction to revitalize the Queens Quay from Bathurst Street to Yonge Street. The recommended plan accommodates recreational, transit, cyclist, pedestrians and automobile traffic. Landscape features, pavement treatment and public realm enhancements were incorporated into the design.

### Metrolinx Union Station Rail Corridor Enhancements Project TPAP

Metrolinx is proposing major enhancements of the Union Station Rail Corridor (USRC) between Yonge Street and the Don River, and undertaking a Transit Project Assessment Process (TPAP) to explore the impacts of adding a new track to the north, two tracks to the south and expanding the Wilson Yard. The rational that Metrolinx has articulated for these proposed improvements is to improve rail service and support RER project service levels. The Project Area has been identified as a 120 m buffer around the rail corridor and proposed enhancements, which included the Lower Yonge Study Area.

### Metrolinx Electrification TPAP

Metrolinx is proposing the electrification of many of their rail corridors, including the Union Station Rail Corridor, between Yonge Street and the Don River, and has completed a Transit Project Assessment Process (TPAP) to explore impacts of installing power facilities and overhead gantries. The TPAP process has completed with a Notice to Proceed issued December 11, 2017.

## 2.2 Problems and Opportunities

This study is being undertaken to identify and plan the transportation network that would support redevelopment in the Precinct and balance both the local and regional travel demands. Transportation infrastructure is needed to accommodate the future intensification of the Precinct.

Phases 1 and 2 of the MCEA explored existing conditions, identified problems and opportunities and, through the Transportation Master Plan (TMP), presented a preliminary preferred road network that balanced the needs of vehicles, pedestrians and cyclists. The TMP included a street and block plan; improved connections to Downtown; balanced local and regional vehicular demand; and identified facilities that encourage active modes of transportation.

### 2.2.1 Problem and Opportunity Statement

Under the MCEA process, proponents are required to develop and document problems and opportunities that provide reasonable justification to proceed with the project. The problem / opportunity statement was prepared during Phases 1 and 2 of the MCEA and was informed by the existing conditions and the Central Waterfront Secondary Plan.

The problem / opportunity statement reads as follows:

<u>Problem</u>

As part of the Lower Yonge Precinct Plan, Waterfront Toronto and the City will examine the existing infrastructure and transportation facilities within the Lower Yonge MCEA Study Area, which do not properly align with the policies set forth in the Central Waterfront Secondary Plan (CWSP) and may not be sufficient to meet the new development demands in the Precinct. The CWSP emphasizes a sustainable transportation system that reduces auto dependence and gives priority to transit, cycling and walking, while removing physical barriers between the Waterfront and the rest of Toronto. In addition, the foot of Yonge Street is to act as a gateway to Toronto and its waterfront, a destination for residents and tourists, and should include high-quality public amenities with distinctive cultural buildings, tourist facilities and a range of public uses and other development.

In contrast, the Lower Yonge Study Area's existing transportation infrastructure is largely auto-oriented, while pedestrian and cyclist amenities are limited and generally in poor condition. The Precinct is physically isolated from Toronto's downtown, including the Financial District, due to the Gardiner Expressway and Union Station rail corridor, which restrict the mobility of all transportation modes into and out of the area. Yonge Street is not well-suited for significant tourist activity and lacks a unified vision for its role as the primary link between the downtown and the waterfront. Sustainable residential and commercial redevelopment within the Precinct requires a shift to other active modes of transportation, such as transit, walking and cycling, that the existing road network does not support.

Opportunity

Moving forward, there is an opportunity for the City and Waterfront Toronto to approach the Precinct's urban design and transportation system in a way that better supports new residential, commercial, and tourist activity as described in the CWSP while not inhibiting the Gardiner Expressway or Lake Shore Boulevard as important regional links. Key opportunities include the creation of a more fine-grained road network, improving and increasing connections between the Precinct and the downtown, including the Financial District, balancing local and regional vehicular demand, and providing facilities that invite people to walk, cycle, and use transit within the area while deprioritizing auto use. The TMP will ensure that transportation and land use decisions are integrated and implementation is coordinated with development of the Precinct to create a livable, well-connected Lower Yonge neighbourhood that provides a variety of services, amenities and land uses accessible by all modes.

# 3.0 EXISTING CONDITIONS

The following sub-sections provide an overview of the existing features within the Lower Yonge MCEA Study Area, including the Natural Environment (**Section 3.1**), Socio-Economic Environment (**Section 3.2**), Cultural Environment (**Section 3.3**), Transportation Features (**Section 3.4**), and Utilities (**Section 3.5**).

Information presented in this chapter was developed based on secondary source information (including but not limited to the Lower Yonge Master Servicing Functional Planning Study, aerial photography and mapping), correspondence with regulatory agencies (including but not limited to the Ministry of Natural Resources and Forestry (MNRF), the Ministry of the Environment and Climate Change (MOECC), Toronto and Region Conservation Authority (TRCA), Waterfront Toronto and the City of Toronto, and field investigations.

## 3.1 Natural Environment

There are limited natural environment features within the Lower Yonge MCEA Study Area, due to the surface parking lots, roadways and existing buildings. The sub-sections below provide an overview of the natural environment based on a review of background data, correspondence with external agencies including the MNRF, searching MNRF's online database for natural features within 1 km of the study area, and site visits occurred on March 7 and June 16, 2016. A natural environment technical memo is available in **Appendix A**.

### 3.1.1 Vegetation

There are vegetation patches in the study area that contain trees, shrubs and herbaceous plants. Some trees, shrubs and herbaceous plants occur together in raised beds along the sidewalk or in flat beds along buildings. Trees also occur as specimens planted between the boulevard surfaces along the sidewalks. There are a few parkettes in the study area containing planted trees, shrubs and manicured lawn.

Along the rail corridor this vegetation developed naturally from adjacent seed dispersal but in most cases vegetation was planted. Meadow is present but only along the rail corridor where the ground is not manicured. Many of the plants observed are exotic and tolerant of highly disturbed conditions, but some are native species.

### 3.1.2 Tree Inventory

A desktop tree inventory was completed for the Lower Yonge MCEA Study Area. The tree inventory was completed by reviewing Google Streetview, and the legal survey in conjunction with the notes taken during the site visits.

Examples of tree species include basswood (*Tilia americana*), quaking aspen (*Populus tremuloides*), Siberian elm (*Ulmus pumila*), maple (*Acer* sp.), eastern hemlock (*Tsuga* sp.), mugo pine (*Pinus mugo*), oak (*Quercus* sp.), ash (*Fraxinus* sp.), Austrian pine (*Pinus nigra*), white spruce (*Picea glauca*) and ginkgo (*Ginkgo biloba*). Examples of shrub species include red-osier dogwood (*Cornus stolonifera*), euonymus (*Euonymus* sp.), staghorn sumac (*Rhus typhina*), northern white cedar (*Thuja occidentalis*), vibernum (*Vibernum* sp.), spiraea (*Spiraea* sp.), tartarian honeysuckle (*Lonicera tatarica*) and juniper (Juniperus sp.). Examples of herbaceous species include wild grape (*Vitis riparia*), smooth brome (*Bromus inermis*), goldenrod (*Solidago* sp.), common milkweed (*Asclepias syriaca*), ox-eye daisy (*Leucanthemum vulgare*), burdock (*Arctium* sp.), garlic mustard (*Alliaria petiolata*), hound's-tongue (*Cynoglossum officinale*), catnip (*Nepeta cataria*), climbing nightshade (*Solanum dulcamara*) and creeping thistle (*Cirsium arvense*). None of the trees observed are species at risk. The tree inventory is included in **Appendix A.**

### 3.1.3 Wildlife

Wildlife habitat is limited due to the developed nature of the study area. Those species observed tend to be tolerant of humans and development. Three bird species were observed during the site visit that are common to urban areas and tolerant of a high level of human disturbance. The ringed billed gull (*Larus delawarensis*) is a native species, while the rock pigeon (*Columba livia*) and house sparrow (*Passer domesticus*) are exotic species.

Approximately six nests were observed under the Gardiner Expressway ramp along Harbour Street. These nests likely belong to rock pigeon.

### 3.1.4 Species at Risk

Species at Risk (SAR) are species designated Extirpated, Endangered (END), Threatened (THR) or Special Concern (SC) under the provincial *Endangered Species Act*, 2007 (ESA) and/or the federal Species at Risk Act (SARA) that are protected through provisions of the designations. Background information was also obtained through consultation with MNRF, Aurora District.

No SAR were observed during the site visit. However, MNRF indicated that there is the potential for Peregrine Falcon (*Falco peregrinus*) to exist within the study area. Peregrine Falcon is designated Special Concern under the *Endangered Species Act, 2007* (ESA). MNRF's database contains a record for Peregrine Falcon being observed on June 19, 2008 at a property north of the study area. According to the Canadian Peregrine Foundation website, Peregrine Falcons have been nesting on a building ledge since 1995 and continued to use the ledge in 2015.

The street trees and other natural environment features in the study area may be used by migrating species including SAR birds and the SAR butterfly, Monarch (*Danaus plexippus*).

### 3.1.5 Fish and Fish Habitat

There are no surface water features or watercourses within the Lower Yonge MCEA Study Area.

South of the study area is the Lake Ontario harbour and two (2) boat slips for commercial vessels. The land adjacent to the waterfront has been highly modified with development, including industrial and residential uses. Lake Ontario has the potential to attract migratory waterfowl species to the general area year round.

### 3.1.6 Landscape Composition

The landscape in the area can be characterized as a developed urban / industrial neighbourhood, with limited natural environment features. Many street trees have been planted in the urban landscape. These features are not considered natural vegetation, and were not examined in detail.

### 3.1.7 Surface Water

There are no surface water features within the Precinct. Surface water adjacent to study limits is limited to Lake Ontario, immediately south of Queens Quay. All other surface water is drained to existing storm sewers within the road allowances. The storm sewers outlet directly into Lake Ontario. Lake Ontario is protected under the federal *Navigation Protection Act (2012)*.

### 3.1.8 Drainage

The existing Lower Yonge Precinct MCEA Study Area is characterized by hardscaping and impervious areas.

A 3000 mm diameter Combined Sewer Outlet (CSO) is located within the study area, extending from Church Street north of the Esplanade southerly under the Toronto Parking Authority garage at the end of Church Street, under the Metrolinx rail corridor, and outlets to Lake Ontario at the Lower Jarvis Street slip.

For full details of drainage please refer to the drainage technical memo available in **Appendix B**.

### 3.1.9 Contaminated Property

A Phase One Environmental Site Assessment (ESA) was undertaken to identify areas / properties with actual or potential site contamination that may impact evaluation and selection of the preferred alternatives, future roadway design and construction activities. The Phase One ESA was based on the current and former land uses and activities within and surrounding the study area. Secondary source information reviewed included: aerial photography, historical records, ERIS Ecolog database, MOECC records (including incidents of spills, well records, etc.) and a field investigation was completed to broadly identify properties / areas that pose potential for site contamination.

Areas of Potential Environmental Concern (APECs) were identified within the study area by assessing the overall relative potential of contamination from the findings. The APECs with high potential for contamination are summarized below.

#### 3.1.9.1 High Potential for Contamination

Properties with the following uses within the Lower Yonge MCEA Study Area can be classified as having high potential for contamination:

- Former polychlorinated biphenyl (PCB) storage and/or transfer;
- Locations containing storage tanks for substances such as fuels or PCBs;
- Railway tracks and/or rail yards;
- Dry cleaning;
- Gas stations;
- Metal fabrication and/or treatment;
- Receiving sites for metals, fuels, solvents waste oils and phenolic wastes;
- Rubber manufacturing;
- Ink manufacturing and/or storage;
- Chemical and dye manufacturing, processing and/or bulk storage;
- Waste disposal;
- Sugar refinery;
- Coal storage and burning;
- Autobody shops;
- Bus terminal; and
- Locations where documented spills have occurred, including oil or diesel fuel.

Forty-one (41) locations with high potential for contamination have been identified in and directly adjacent to the study area with the uses noted above. In addition to these, the following concerns were noted:

- Approximately 51 current or former fuel storage tanks were identified throughout the study area. Records confirm six tanks as underground storage tanks. The remainder of the tanks could not be confirmed as above-ground or underground. Where tanks are located on or adjacent to the study area, the potential for contaminant migration from the tanks presents high potential for environmental concern;
- Actual contamination of soil and groundwater in portions of the study area has been identified in previous analysis completed in 1990, in the east side of the Lower Yonge Precinct. Soil concentrations exceeded the applicable standards for chloroform, benzo(b+k)fluoranthene, benzo(a)pyrene, dibenz(ah)anthracene, lead, copper, and

cyanide at one or more locations. Groundwater concentrations exceeded the applicable standards for trichloroethylene, benzo(b+k)fluoranthene, benzo(a)pyrene, ideno(1,2,3-cd)pyrene, benzo(g,h,i)perylene, chrysene, and copper. It should be noted that the laboratory detection limit for cadmium in 1990 is greater than the 2011 Standard for cadmium in groundwater;

- According to records reviewed, the Toronto waterfront was gradually filled in during the late 1800s and early 1900s. Waste materials including ash, garbage, and street sweepings were used as fill material. All of Harbour Street and the Lower Yonge Precinct are south of the original waterfront, and therefore it is likely that soils in these areas consist of poor quality fill materials; and
- Adjacent properties have been used for commercial and industrial purposes for over 100 years. Past operations of environmental significance include vehicle repair garages, retail fuel stations, dry cleaners, metal manufacturing and processing, and chemical manufacturing and bulk storage. These past land uses pose the potential to impact soil and groundwater in the study area from contaminant migration through groundwater movement.

**Exhibit 3-1** illustrates the location of the APECs with the study area. **Section 8.1.8** contains both the recommendations from the report and summarizes mitigation measures that will be implemented during construction to address the findings. The Phase I ESA report is available in **Appendix C.**

### 3.1.10 Air Quality

An Air Quality Assessment was completed to assess potential air quality impacts of the recommended plan. Background (ambient) conditions were characterized using available statistics from up to five years of air quality monitoring stations located near the Lower Yonge MCEA Study Area. Transportation-related emissions include: carbon monoxide (CO), nitrogen dioxide ($NO_2$), respirable particulate matter ($PM_{2.5}$), inhalable particulate matter ($PM_{10}$), and a number of hydrocarbons (formaldehyde, acetaldehyde, acrolein, benzene, 1,3-butadiene, and benzo(a)pyrene).

These contaminants are emitted due to fuel combustion, brake wear, tire wear, the breakdown of dust on the roadway, fuel leaks, evaporation and permeation, and refueling leaks and spills. Note that emissions related to refueling leaks and spills are not applicable to motor vehicle emissions from roadway travel. Instead, these emissions contribute to the overall background levels of the applicable contaminants.

Receptors are defined residential dwellings, retirement homes, hospitals, childcare centres, schools, or similar institutional buildings. Within the study area, the receptors are generally residential buildings (some existing; others planned) and George Brown College Waterfront College Campus. **Exhibit 3-2** shows the locations of the receptors within and adjacent to the study area.

Concentrations of the pollutants are typically higher in urban centres as their main source is motor vehicle exhaust. As the study area is located in the centre of Toronto and near a busy highway (the Gardiner Expressway), concentrations of these pollutants are expected to be higher compared to areas of Toronto that experience less traffic, and compared to levels in Ontario in general.

Refer to **Section 8.1.9** to review the findings from the Air Quality Assessment completed to assess the proposed transportation improvements within the Lower Yonge Precinct MCEA Study Area. The Air Quality Assessment is available in **Appendix D.**


**Legend**

- Extended Study Area - 250 m Buffer
- Study Area Addition
- Extended Study Area Addition - 250 m Buffer
- Study Area
- Potential Fill Material
- Intera Kenting Investigation Boundary (1990)
- Terraprobe Investigation Boundary (2013)
- Fuel Storage Tanks

**Lower Yonge Precinct**
Municipal Class EA Schedule 'C' Project
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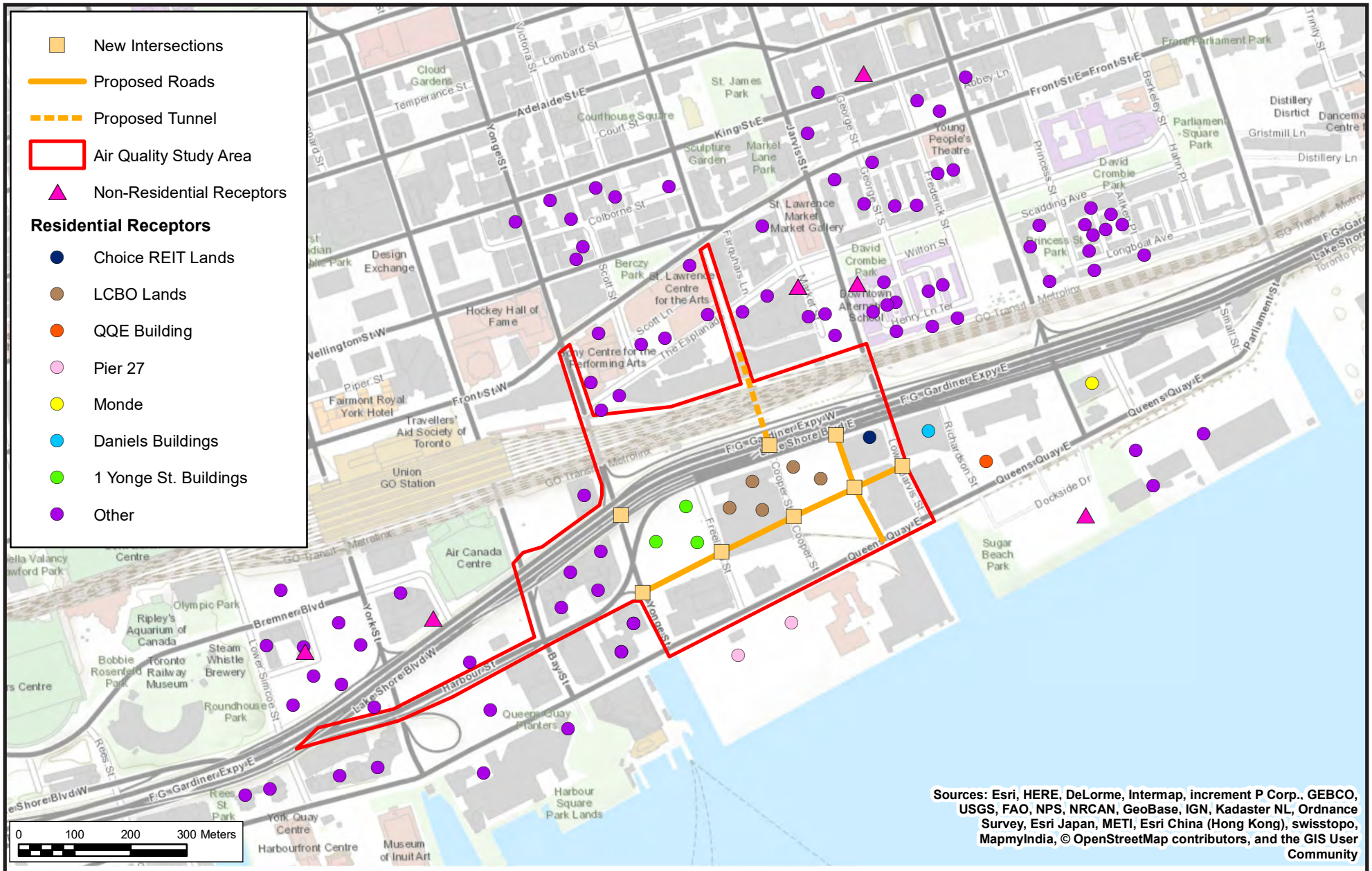
# Areas of Potential Environmental Concern

Exhibit
**3-1**




**Lower Yonge Precinct**
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# Existing & Proposed Air Quality Receptor Locations

Exhibit
**3-2**

## 3.2 Socio-Economic Environment

The following sub-sections are intended to provide a descriptive overview of the demographic and socio-economic conditions within and surrounding the Lower Yonge MCEA Study Area. An area of influence has been defined to capture surrounding population as the Lower Yonge Precinct Plan Study Area has no historic residential population, and residential population for the Lower Yonge MCEA Study Area is limited. The area of influence boundary (Socio-Economic Environment Study Area) is shown in red on **Exhibit 3-3**. This review uses a consolidation of data from areas within and surrounding the study area, derived from Statistics Canada Census data from 2011 and 2016, the 2011 National Household Survey, and available City of Toronto published statistics. For comparison purposes, this data was evaluated against city-wide data as the baseline.

**Exhibit 3-3: Area of Influence**


### 3.2.1 Demographic Profile

The City of Toronto is divided into four districts: Scarborough, Toronto and East York, North York, and Etobicoke York. The Lower Yonge Precinct MCEA Study Area is located within the political Ward 28 (Toronto Centre-Rosedale).

#### 3.2.1.1 Ward 28

Ward 28 is bounded by Bloor Street East to the north, the Don Valley Parkway (DVP) to the east, waterfront including the Toronto Islands to the south. The western border of this ward includes York Street from the waterfront to Queen Street, and then continues east on Queen Street, and Sherbourne Street provides the western boundary for the study area between Queen Street and Bloor Street East.

The population of Ward 28 increased by approximately 10.4% between 2006 and 2011, with respective populations of 60,330 and 66,585 (Statistics Canada, 2011). According to Toronto's 2011 National Household Survey, the majority of the labour force in this Ward works in the following sectors: management, business, finance and administration, and natural and applied sciences. Growth has continued in Ward 28 since 2011 and the City of Toronto Executive Committee have estimated that population within the ward will be 76% greater than the average ward population in 2026 (http://www.toronto.ca/legdocs/mmis/2016/ex/bgrd/backgroundfile-97618.pdf), highlighting the significant growth projection for this area.

The primary housing stock in this ward is apartment buildings that are 5 or more storeys, followed by apartments that are less than 5 storeys.

#### 3.2.1.2 Area of Influence

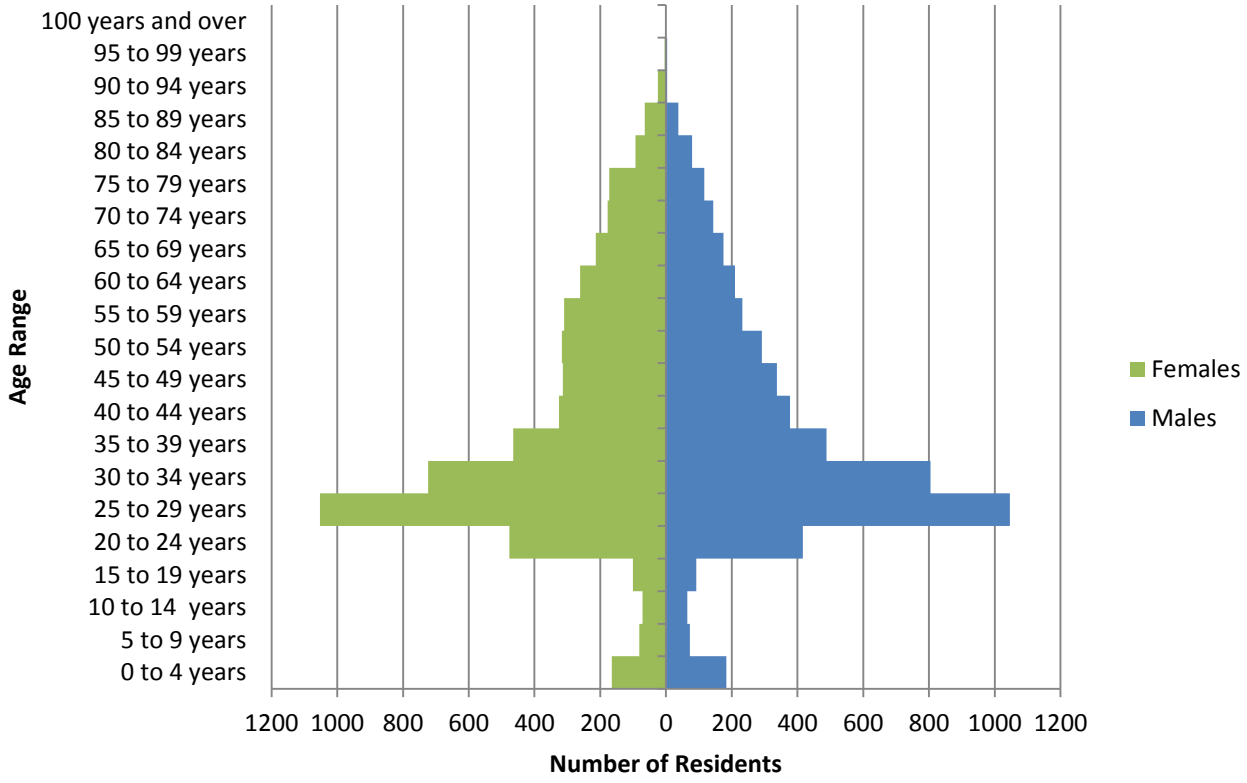
The 2016 Federal Census population within the area of influence was 14,416, representing a 36% increase over the 2011 population and 128% increase over the 2006 population (**Exhibit 3-4**). The rate of growth in the area of influence is faster than the overall city-wide rate of about 9% between 2006 and 2016. This rapid growth is reflective of the area's intensification to higher density mixed residential, commercial and office uses.

**Exhibit 3-4: Population**

| | Study Area | City-Wide |
|---|---|---|
| 2006 Population | 6,315 | 2,503,281 |
| 2011 Population | 10,593 | 2,615,060 |
| 2016 Population | 14,416 | 2,731,571 |

The demographic distribution of the area of influence, as shown in **Exhibit 3-5**, shows a dominance of those in the 25–34 age range in 2011. This range is consistent with the "millennial" cohort. This age category represents approximately 34% of the population in the area of influence. In comparison, this age category only represents 16% of the City's population as a whole. The proximity of the area of influence to the financial district, vibrant nightlife, major event venues, transit and the waterfront, as well as a growing condominium market makes the area of influence desirable to this demographic.

**Exhibit 3-5: Age Distribution (2011)**




## 3.2.2 Land Uses

### 3.2.2.1 Central Waterfront Secondary Plan Designations

The CWSP designates the lands within the Lower Yonge Precinct as *Regeneration Areas*, with a strip abutting Yonge Street as *Parks and Open Space Areas*. The CWSP provides for a mixed-use policy direction for the Central Waterfront area as a whole, including Lower Yonge. A broad mix of commercial, residential, industrial, parks and open space, and institutional uses are permitted in *Regeneration Areas*.

The Lower Yonge Precinct Plan and implementing OPA propose to modify the CWSP land uses for the area, with the lands north of the Harbour Street Extension designated *Regeneration Areas*, with a maximum of 75% residential GFA. The lands to the south of the Harbour Street extension, with the exception of the Park block, are designated *Regeneration Areas (Qualified)* which does not permit residential land uses or any sensitive uses, as defined by NPC-300. The Park block, bounded by Freeland Street, Queens Quay East, straightened Cooper Street and the Harbour Street extension, is designated *Parks and Open Space.*

**Zoning By-law No. 438-86**

The former City of Toronto Zoning By-law 438-86, as amended, is applicable to the lands within the Lower Yonge Precinct. All of the lands within the CWSP area were exempt from inclusion into City of Toronto harmonized Zoning By-law 569-2013.

The property at 1-7 Yonge Street is zoned CR T6.0 C6.0 R0, or commercial-residential, with a maximum total density of six times the lot area, maximum commercial density of 6 times the lot area and no permitted residential density. Although the CR zone is a mixed-use zone, this property is only permitted non-residential uses; residential uses are not permitted. A restrictive site specific zoning by-law exception, 12(2)297, was approved as part of an OMB settlement in 1995 and further prescribes the form of development on the block. The by-law protects for a potential Harbour Street extension or a new public right-of-way to accommodate a mid-block street between Yonge Street and Freeland Street. It also protects for a generous pedestrian promenade along Yonge Street.

The eastern blocks of the Lower Yonge Precinct, located between Freeland Street and Lower Jarvis Street, are zoned IC D3 N1.5. This industrial-commercial zoning permits a variety of industrial and commercial uses in buildings with a maximum density of 3.0 times the lot area with a maximum of 1.5 times the lot area for certain non-residential uses. The Zoning By-law does not specify a height limit on these blocks.

The City-owned lands (public right-of-way) in the northwest corner of the precinct, which comprise the splay formed by the sweep of Harbour Street across Yonge Street, are zoned CR T3.0 C3.0 R0. This zoning permits commercial development at a density of 3 times the lot area. Residential uses are not permitted on these lands, the mixed use zone notwithstanding. The lands are not subject to a height limit.

The lands to the west of Yonge Street are primarily zoned CR, which permit a mixed uses with a combination of residential and commercial uses, without a height restriction. These lands have been fully developed.

The Metrolinx USRC is primarily zoned industrial in the T zone category from Lake Shore Boulevard to the northern edge of the rail corridor, which permit a range of public transit and rail uses.

#### 3.2.2.2 Existing Land Uses

Within the Precinct

The Lower Yonge Precinct consists of three large properties

**1-7 Yonge Street** -This property currently consists of: the 25-storey Toronto Star office tower (1 Yonge Street) at the corner of Yonge Street and Queens Quay East; the one and five-storey

former Toronto Star production facilities (now office suites) to the north and east of the tower; and a surface parking lot (7 Yonge Street) on the north half of the site. The property is approximately 2.7 hectares (6.7 acres) in size. This property is owned by Pinnacle International.

**55-95 Lake Shore Boulevard East and 2 Cooper Street** -The central property in the Precinct is bisected by Cooper Street. On the west side of Cooper Street, the property is comprised of: an LCBO retail store (2 Cooper Street); LCBO warehouse building and head office building (55 Lake Shore Boulevard East), both of which are listed on the City's Inventory of heritage properties; and a rail spur at 15 Freeland Street, which runs east-west across the block. On the east side of Cooper Street is a large surface parking lot, another rail spur (15 Cooper Street), which cuts diagonally through the southern half of the property and a small parkette at the northeast corner of Cooper Street and Queens Quay East. The property is approximately 4.6 hectares (11.3 acres). This property is owned by Menkes Developments, which purchased the property from the Province and the rail spurs from TPLC in 2016.

**10 Lower Jarvis Street and 125 Lake Shore Boulevard** -This property contains a two-storey supermarket (and ancillary retail) store on the southern two-thirds of the block and a two-level parking structure on the northern third. It is owned by Choice Properties REIT, the real estate division of Loblaws. The property is approximately 2.7 hectares (6.7 acres) in size.

Adjacent to the Precinct

The surrounding area land uses and planned development include:

**East:** East of Lower Jarvis Street is the East Bayfront Precinct, planned to be a mixed-use district, predicated on primarily midrise built form with some taller building sites, as provided for in the East Bayfront Precinct Plan and zoning by-law. Revitalization of the Precinct has begun on the south side of Queens Quay with the completion of Sugar Beach, abutting the Jarvis slip, the 8-storey Corus office building (25 Dockside Drive) and 8-storey George Brown College building (51 Dockside Drive). The development of the 'Waterfront Innovation Centre' (125-155 Queens Quay East), to the north of Sugar Beach and the Corus Building, is anticipated to commence in 2017. On the north side of Queens Quay abutting Lower Jarvis Street, and currently under construction is the Daniels 'Waterfront City of the Arts' mixed-use development comprised of a 13 storey office/institutional building fronting on Queens Quay (130-132 Queens Quay) and two residential towers (45 and 35 storeys), known as 'Lighthouse Tower' at 143-177 Lake Shore Boulevard East.

**South:** On the south side of Queens Quay East is the Pier 27 development at 25 Queens Quay East, a seven-building, two-phase mixed-use development with commercial/retail uses fronting on the ground floor and a publicly accessible waterfront promenade. Phase One, closer to the lake, containing four 14-storey buildings connected by bridges, is complete. The second phase, now approved, proposes a 35-storey tower and two 13-storey buildings. The foot of Yonge Street adjacent to the Yonge Street Slip is proposed to be a public park. To the east of Pier 27 is the

Redpath Sugar Refinery at 95 Queens Quay East, a multi-building complex with ancillary surface parking facilities. The property is listed on the City's Inventory of Heritage Properties.

**West:** West of the study area are several existing mixed-use developments. Immediately west is the World Trade Centre complex at 10 Yonge Street and 10 Queens Quay West, which consists of a central courtyard surrounded by two 37 and 26-storey towers and the Pinnacle Centre development (33 Bay, 18 Harbour, 16 and 12 Yonge Street) with four residential towers (54, 52, 40 and 30 storeys) and retail and office uses. Further north is 18 Yonge Street, a 39-storey residential building and a proposed 48-storey office development at 45 Bay Street. To the southwest is the Westin Harbour Castle Hotel with two 34-storey towers on the south side of Queens Quay and conference centre on the north side.

**North:** To the north is the elevated Gardiner Expressway with Lake Shore Boulevard below, and the CN rail corridor. Further north is the 57-storey L-Tower development with within the Sony Centre (1 Front Street East), the 36-storey Backstage development (5-7 The Esplanade), the 33-storey Esplanade condos at 25 The Esplanade, The TCHC residential building and TPA parking lot at 55 The Esplanade and the mixed-use mid and low-rise St. Lawrence neighbourhood.

Uses that influence how the Precinct is presently used by local and regional traffic includes: Redpath Sugar, George Brown College, Jack Layton Ferry Terminal, Toronto Island, South Core, Westin Harbour Castle Hotel and Conference Centre, St. Lawrence Market, commercial businesses, and Union Station.

#### 3.2.2.3 Existing Land Ownership

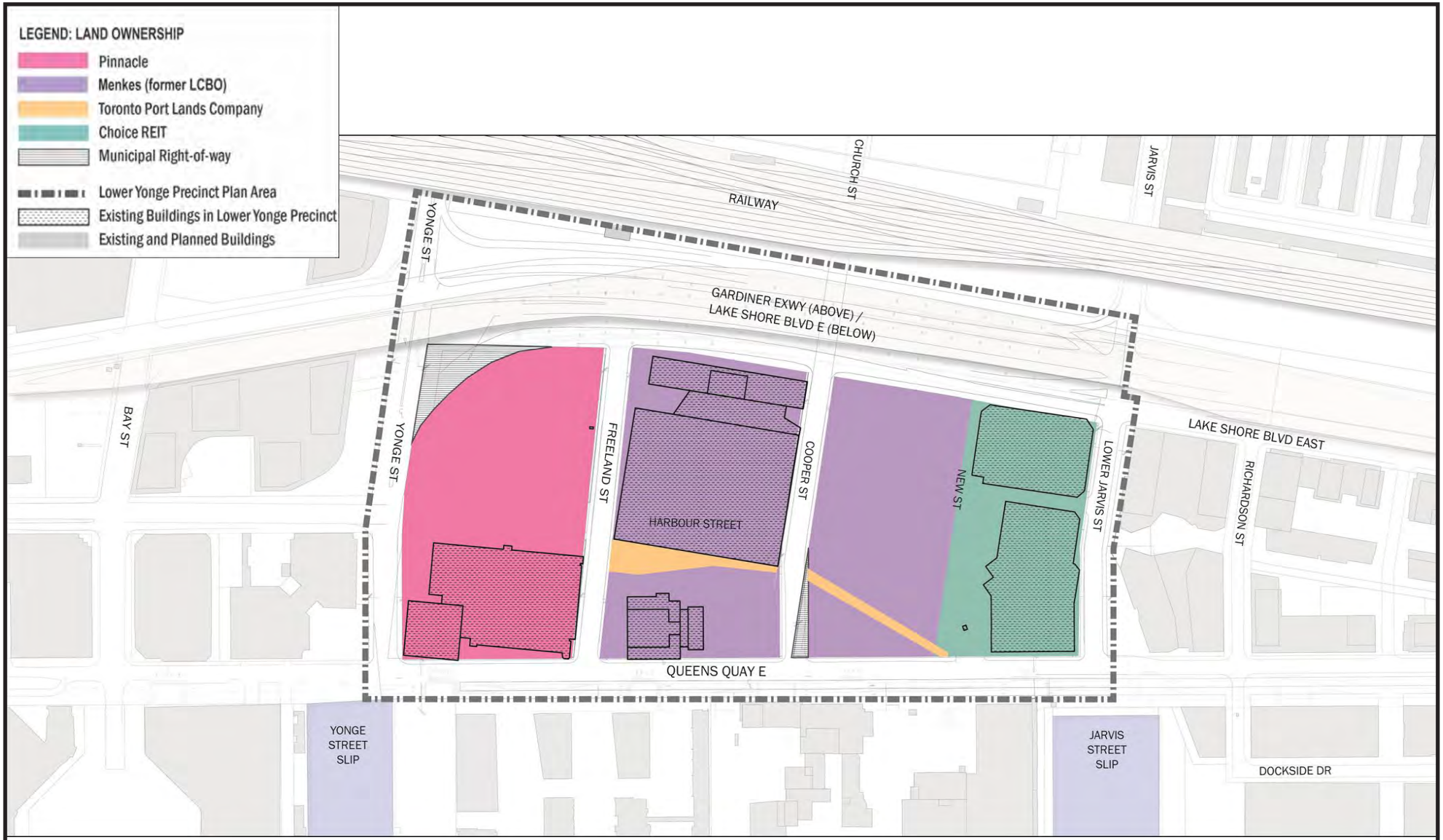
The Lower Yonge Precinct currently consists of three large, undivided parcels (see **Exhibit 3-6**). The current ownership is outlined below:

- 1-7 Yonge Street: Pinnacle International
- 55-95 Lake Shore Boulevard – Menkes (formerly the LCBO)
- 10 Lower Jarvis Street – Choice Properties REIT (Loblaws)
- 11 Freeland Street and 15 Cooper Street – Menkes (formerly Toronto Port Lands Company [TPLC] rail spur)

#### 3.2.2.4 Evolution of Development

The area surrounding Lower Yonge Precinct is undergoing a wave of intensification and can be described as an area in transition. In addition to the completion of several residential and mixed-use projects within the last five years, a number of properties are either under construction or are in the midst of the development approvals process. **Exhibit 3-7** illustrates the recently built, under construction and proposed developments within and in proximity to the Lower Yonge Precinct.

Development has occurred along Harbour Street, to the west of to the Precinct. Waterpark Place, located at 10 and 20 Bay Street and 85 Harbour Street, is a 19, 26, and 30-storey office development by Oxford Properties. The development is connected to the PATH by two elevated enclosed pedestrian bridges linked directly to the Air Canada Centre and Union Station. The project is fully constructed.




**Lower Yonge Precinct**
Municipal Class EA Schedule 'C' Project
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# Existing Ownership

Exhibit
**3-6**


**Lower Yonge Precinct**
Municipal Class EA Schedule 'C' Project
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# Development Activity within proximity of the Lower Yonge Precinct Area

Exhibit
**3-7**

#### 3.2.2.5 Development Applications

This section provides an overview of the existing development applications submitted to the City. The details of the development applications are subject to change and we encourage you to visit the 'development application section' of the City website for the most current information.

**1-7 Yonge Street:** Pinnacle International is the owner of 1 and 7 Yonge Street and submitted applications to amend the Official Plan and Zoning By-law in March 2013 to redevelop the site. The development proposal includes three mixed-use buildings on the north block, comprising a 95-storey building (including a future hotel) on the west side of the block, a 80-storey building at the northeast corner of the block, and a 65-storey building (including a Community Centre) on the southeast corner of the block.

The south block comprises the retention of the existing 25-storey Toronto Star building, with a 35-storey tower built adjacent to the existing building (13 storeys above), and a separate 22-storey office building. The blocks are separated by the east-west extension of Harbour Street. The application was appealed to the Ontario Municipal Board; a settlement in principle was reached by all parties on March 30, 2017.

**55-95 Lake Shore Boulevard**: Menkes has applied for Subdivision approval, and Official Plan Amendment and a Rezoning in May 2016. Site plan applications were submitted for Blocks 1 and 2 in December 2016. The current proposal is for mixed-use development with a variety of retail, service and community uses, 5 residential towers, 1 office building and a new park.

**10 and 125 Lower Jarvis Street:** Choice Properties REIT has stated its intention to redevelop the site. Timing for redevelopment is undetermined at this time.

### 3.2.3 Noise

A Noise Sensitive Area (NSA) is defined as a noise sensitive land use (urban or rural) with an Outdoor Living Area (OLA) associated with the land use. NSAs include:

- Private homes such as single family residences;
- Townhouses;
- Multiple unit buildings, such as, apartments with outdoor living areas for use by all occupants; and
- Hospitals, nursing homes where there are outdoor living areas for the patients/residents.

The Precinct is located in a complex acoustic environment due to the large variety of dominant noise sources within or directly adjacent to the Lower Yonge Precinct MCEA Study Area. These sources include: the elevated Gardiner Expressway, Lake Shore Boulevard, rail corridor and

Redpath Sugar. In addition, various structures (high-rise towers, elevated expressway and rail corridor) act as reflectors and noise barriers.

The NSAs are from residential properties as shown in **Exhibit 3-8** and summarized below:

- Pinnacle Centre Success Towers (12-16 Yonge Street);
- Residences of the World Trade Centre (10 Yonge Street and 10 Queens Quay);
- Pier 27 Condos (29-39 Queen's Quay East);
- Waterclub Condos (8 York Street, 208 and 218 Queen's Quay West); and,
- Riviera Condos (228-230 Queen's Quay West).

Noise impacts today are associated with limited traffic volume and noise impacts associated with the land uses (i.e., rooftop heating, ventilation and air conditioning systems).

Following the MTO/MOECC *Environmental Guide for Noise*, a noise assessment was undertaken to assess the potential operational and construction noise impacts resulting from the proposed transportation infrastructure improvements in the Precinct. The key findings of the noise assessment are summarized in **Section 8.2.2**. The noise assessment is available in **Appendix E**.


**Lower Yonge Precinct**
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## Noise Sensitive Areas

Exhibit
**3-8**

## 3.3 Cultural Environment

### 3.3.1 Archaeological Resources

An archaeological inventory was completed in accordance with the *Standards and Guidelines for Consultant Archaeologists* (2011) to complete the background research. The objectives of the background research were:

- To provide information about the geography, history, previous archaeological fieldwork and current land condition of the study area; and,
- To evaluate in detail the archaeological potential of the study area which can be used for a Stage 1 Archaeological Assessment, if necessary.

The Precinct was created by depositing lake-fill into Lake Ontario between 1893 and 1903 to create a new waterfront which extends from the rail corridor to the Esplanade. Further lake-fill was added from approximately 1910 to 1931, and in 1950 to create the modern waterfront. The Precinct includes ten (10) previously inventoried archaeological resource features, which are generally wharves.

The Ontario Archaeological Sites Database maintained by the Ministry of Tourism, Culture and Sport (MTCS) indicated there are approximately twenty-six (26) previously registered archaeological sites within one kilometer of the study area. Two (2) previously archaeological assessments have been completed within 50 m of the study area, which include: monitoring at 16-18 Harbour Street, 33 Bay Street, 16 Yonge Street and a Stage 1 Archaeological Assessment for the draft plan of subdivision part of Lots 20-25 located at 125 Queens Quay East. The archaeology report that includes a figure showing the previously assessed lands is available in **Appendix F.**

Potential impacts to the archaeological resources and proposed mitigation measures are summarized in **Section 8.3.1**.

### 3.3.2 Built Heritage and Cultural Heritage Landscapes

A cultural heritage inventory was completed to provide preliminary information about built heritage and cultural heritage landscapes within and adjacent to the Lower Yonge Precinct MCEA Study Area. The inventory was completed by reviewing previous reports, historic and large-scale orthographic mapping, and aerial photographs to identify cultural heritage resources.

The study area has a rich history with many heritage ‘listed’ and/or ‘designated’ features within and directly adjacent to the Precinct, as listed in **Exhibit 3-9** and shown in **Exhibit 3-10**.

## Exhibit 3-9: Cultural Heritage Resources

| Cultural Heritage Resource | Designation |
|---|---|
| 55 Lake Shore Boulevard East (LCBO Office and Warehouse) | Listed, City of Toronto's Heritage Register |
| Scott Street Tower Interlocking Station | Designated, Regulation 10/06 of the *Ontario Heritage Act*. |
| 143 Lake Shore Boulevard East (commercial) | Identified in the Lower Yonge Precinct Transportation Master Plan. |
| 16-18 Harbour Street, 33 Bay Street, 16 Yonge Street (commercial / residential) | Designated as part of the Union Station Heritage Conservation District under Part V of the *Ontario Heritage Act* (By-Law 634-2006). |
| 60 Harbour Street - Toronto Harbour Commission Building (commercial / residential) | Designated under Part IV, OHT Heritage Easement Agreement (CT918-882, 1987); Designated as part of the Union Station Heritage Conservation District under Part V of the *Ontario Heritage Act* (By-Law 634-2006). |
| 90 Harbour Street - Women's compensation Board Building (institutional) | Demolished, though was part of the Union Station Heritage Conservation District, designated under Part V of the *Ontario Heritage Act* (By-Law 634-2006). |
| 8 Queens Quay West (commercial / residential) | Designated as part of the Union Station Heritage Conservation District under Part V of the *Ontario Heritage Act* (By-Law 634-2006). |
| Carries the Canadian National Railway over Jarvis Street South | Identified under the Union Station Rail Corridor EA. As part of that EA a draft CHER has be undertaken and the bridge meets Regulation 9/06. |
| Carries the Canadian National Railway over Yonge Street | Designated as part of the Union Station Heritage Conservation District under Part V of the *Ontario Heritage Act* (By-Law 634-2006). |
| Gardiner Expressway (transit infrastructure) | Designated as part of the Union Station Heritage Conservation District under Part V of the *Ontario Heritage Act* (By-Law 634-2006). |
| 95 Queens Quay East – Redpath Sugar (industrial) | Listed on the City of Toronto's Heritage Register. |
| 9 Church Street (commercial) | Designated under Part IV of the *Ontario Heritage Act* (By-Law 564-84). |
| 70 the Esplanade (commercial) | Designated under Part IV of the *Ontario Heritage Act* (By-Law 866-2006). |

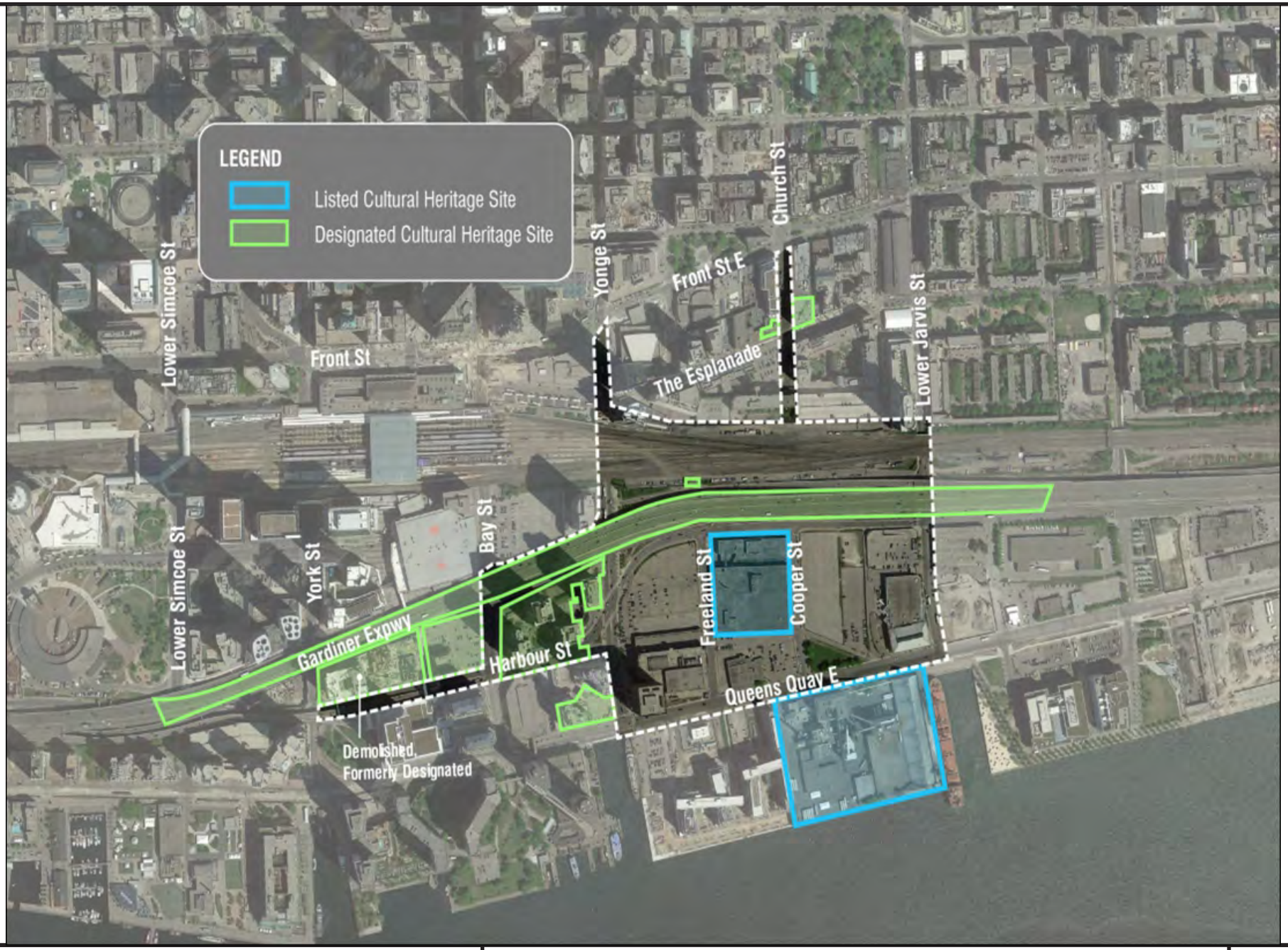
The LCBO Headquarter Offices (see Photos 1 and 2), located at 55 Lake Shore Boulevard East, were completed in 1954. These buildings are representative of modernist architectural style, and have a distinctive design element: the pedestrian bridge, connecting the third floor of the office building with the third floor of the warehouse.

Photo 1: LCBO Headquarters


Photo 2: LCBO Headquarters

The Frederick G. Gardiner Expressway within the study area, including the off-ramp terminating at Lower Jarvis Street was completed in 1964. The Gardiner Expressway is a designated feature under the *Union Station Heritage Conservation District* because it contributes to the heritage value of the district. Specifically, the structure's historic and associative values including the elevation, concrete and steel construction contribute to the function and character of the district.

As part of this EA study, heritage impact assessments (HIAs) were carried out for 55 Lake Shore Boulevard East and the Gardiner Expressway Off-Ramp within the study area. The key findings of the HIAs and proposed mitigation measures are summarized in **Section 8.3.2**, while the heritage inventory and HIA reports are available in **Appendix G**.

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## Location of Cultural Heritage Resources

Exhibit
**3-10**

## 3.4 Public Realm

### 3.4.1 Area Context

The Precinct originally consisted of industrial lands built on fill material that once relied on the shoreline wharves, harbour and proximity to the rail corridor. The Precinct is anticipated to redevelop into a mixed use neighbourhood that will include mixed use residential building with tall towers, office and retail uses, an elementary school, community centre, two daycares and a central park. The well designed public realm will create a connected and vibrant new community that will define the foot of Yonge Street.

As the Precinct redevelops into a mixed-use neighbourhood that will include: high rise towers with residential and commercial uses, institutional uses (including a community centre and school), and open space the industrial past will evolve into a vibrant neighbourhood.

#### 3.4.1.1 Adjacent Neighbourhoods

Revitalization and redevelopment has been occurring along the waterfront as communities develop. From west to east, there are the following waterfront communities (see **Exhibit 3-11**) all connected with the Queens Quay:

- Bathurst Quay
- Harbourfront
- Lower Yonge
- East Bayfront
- Keating Channel

Bathurst Quay

The Bathurst Quay neighbourhood exists on the west portion of the waterfront is and bounded by the Lake Shore Boulevard to the north, waterfront trail to the west, water's edge to the south and Spadina Avenue to the east. This neighbourhood includes the Tip Top Taylor Lofts, Music Garden, a community centre, public school and the Canada Malting Silos. This neighbourhood has been constructed.

Harbourfront

Harbourfront extends from the Gardiner Expressway to the north, Bathurst Street in the west, along Queens Quay, and the eastern boundary is York Street. Some landmarks in this neighbourhood include: Queens Quay Terminal, Jack Layton Ferry terminal, Harbour Square, Harbourfront Centre, and HTO Park. This neighbourhood has been constructed.

East Bayfront

As one of the first neighbourhoods developed along the waterfront, East Bayfront is a 23 hectare (55 acre) site that extends from Lower Jarvis Street east to Parliament Street and from Lake Shore Boulevard south to the water. East Bayfront features 6,000 residential units, 5.5 hectares of parks and public spaces and a continuous promenade. This neighbourhood is under construction. For more information about the community visit: www.waterfrontoronto.ca/explore_projects2/east_bayfront.

Keating Channel

The Keating Channel neighbourhood, located in northern quadrant of the Lower Don Lands is bounded by Small Street to the west, the Union Station Rail Corridor to the north, Keating Channel to the south, and the Don River to the east. This neighbourhood will undergo revitalization to change a derelict area into a unique residential neighbourhood. The Precinct Plan was completed in 2010, and can be viewed at: www.waterfrontoronto.ca/nbe/portal/waterfront/Home/waterfronthome/projects/keating+channel+precinct.

Queens Quay (West)

Queens Quay, which runs east-west parallel to the lakefront, is the waterfront's main street spanning more than 3 km from Bathurst Street in the central waterfront to Parliament Street in East Bayfront, the new waterfront neighbourhood currently being developed by Waterfront Toronto. Construction of Queens Quay (West) is now complete and has been rebuilt both above and below ground.

Construction included two lanes of east-west traffic on the north side of the street with a dedicated Light Rail Transit (LRT) line in the middle, and on the south side, a generous granite pedestrian promenade defined by a double row of trees runs alongside the Martin Goodman Trail, a 17 km multi-use recreational trail. The trail was originally disjoined as it passed through the centre of the city; Waterfront Toronto's revitalization of Queens Quay (West) now connects the trail. Businesses and condominiums on the north side of the street now front onto widened granite sidewalks and a row of mature trees.

Following completion of Queen Quay (West) focus has now turned to the revitalization of the waterfront to the east of Yonge Street. Construction that will completely rebuild and revitalize Queens Quay continues along with finalizing the design.

### 3.4.2 Privately Owned Publicly Accessible Spaces

Privately Owned Publicly Accessible Spaces (POPS) provide open space that contributes to the public realm. Courtyards, plazas, gardens and mid-block pedestrian connections are examples of POPS that are provided and maintained by developers but benefit all users. These spaces are intended to complement public parks. POPS are to be developed following the *City's Urban Design Guidelines for POPS* (2014) to make these spaces an asset to the public realm.


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## Waterfront Communities

Exhibit
**3-11**

## 3.5 Transportation Features

### 3.5.1 Roadways Network

The Lower Yonge Precinct Area is bordered by Yonge Street to the west, Lower Jarvis Street to the east, Lake Shore Boulevard East to the north and Queens Quay East to the south. These roads are classified as minor or major arterials. Freeland Street is a north-south collector street that serves local traffic and provides direct access to arterial roads. Cooper Street is classified as a local road.

Directly adjacent to the Precinct Area is the F. G. Gardiner Expressway that is heavily used by local and regional traffic to access downtown Toronto.

**Exhibit 3-12** provides an overview of the existing lane configuration for the streets within and adjacent to the Lower Yonge Precinct, while **Exhibit 3-13** outlines the existing road classification and right-of-way width.

**Exhibit 3-12: Street Existing Lane Configuration**

| Street | Lane Configuration |
|---|---|
| Cooper Street | One lane in each direction with on-street parking |
| Freeland Street | One lane in each direction with on-street parking |
| Lower Jarvis Street | Two lanes in each direction (peak hours) |
| Lake Shore Boulevard East | Two to three eastbound lanes (depending on segment) and three westbound lanes |
| Yonge Street | Two southbound and two northbound lanes at Harbour Street; on road bike lanes in each direction<br>South of Harbour Street – two southbound and one northbound; on road bike lanes in each direction |
| Harbour Street | One-way street; three eastbound lanes |
| Church Street, south of The Esplanade | One lane in each direction |
| Queens Quay East | Two lanes in each direction |

**Exhibit 3-13: Existing Road Classifications**

| Roadway | From | To | Existing Classification | Existing ROW (m) |
|---|---|---|---|---|
| **Lake Shore Boulevard EB** | Yonge Street | Lower Jarvis Street | Major Arterial | Varies |
| **Harbour Street** | York Street | Yonge Street | Major Arterial | 26.2 |
| **Yonge Street** | Queens Quay | Lake Shore Boulevard | Major Arterial | 24.4 |
| **Yonge Street** | Lake Shore Boulevard | Front Street | Major Arterial | 24.5 (varies) |
| **Freeland Street** | Queens Quay | Lake Shore Boulevard EB | Collector | 20.1 |
| **Cooper Street** | Queens Quay | Lake Shore Boulevard EB | Local | 20.1 |
| **Church Street** | Front Street | The Esplanade | Collector | 20.1 |
| **Lower Jarvis Street** | Queens Quay | Lake Shore Boulevard EB | Collector | 20.1 (min.) |

### 3.5.2 Pedestrian Conditions

Scope for improving current pedestrian conditions exists, along with connectivity to downtown. The existing road network can accommodate moderate levels of pedestrians, but when the redevelopment occurs improvements to the existing conditions are required. The existing road network within the Precinct accommodates pedestrians on sidewalks which are provided on both sides of the roadway for all streets within the Precinct. The existing dimensions of the sidewalks vary depending on the street. There are no direct PATH connections to connect pedestrians to downtown underground.

Both signalized and stop control intersections presently exist in the Precinct to provide safe pedestrian crossing locations. The locations of existing stop control and traffic signals within the Study Area are shown on **Exhibit 3-14**.


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## Current Controlled Stop Locations

Exhibit
**3-14**

### 3.5.4 Active Transportation

Existing cycling facilities within and around the study area include on-road bike lanes on Yonge Street from Queens Quay East to Front Street, and the Martin Goodman Trail on the south side of Queens Quay East, forming part of the Waterfront Trail providing connections to north-south cycling routes, such as Lower Simcoe Street and Sherbourne Street. In addition, bike lanes are currently present on Bay Street between Queens Quay East and Lake Shore Boulevard East.

Although cycling facilities do exist within and around the study area there is still scope for improvement. City Council provided the following direction on March 31, 2015 specific to Yonge Street between Queens Quay and Front Street (PW2.4 - City Council Decision 4):

> *City Council directs the General Manager, Transportation Services, as part of the subsequent phases of the Environmental Assessment process, to evaluate opportunities to include in the design of the new road infrastructure, measures and facilities to accommodate cyclists in a safe and convenient manner, and in particular to evaluate options for securing protected bicycle lanes on Yonge Street between Queens Quay and Front Street.*

Apart from the existing cycling facilities on Yonge Street from Queens Quay East to Front Street, there are currently no other signed or marked cycling routes within the rest of the Lower Yonge Precinct Area.

### 3.5.5 Parking

<u>On Street Parking</u>

There are currently some on street parking spaces within the Lower Yonge Precinct. There are reserved spaces for seven taxi cabs on the east side of Yonge Street in front of 1 Yonge Street, but no other parking spaces on Yonge Street between Queens Quay and Front Street. Parking is permitted on the west side of Freeland Street just south of Lake Shore Boulevard, but it is restricted between 19:00 (7:00 pm) and 07:00 (7:00 am) without a permit. There are some parking spaces on Cooper Street between Queens Quay East and Lake Shore Boulevard, alternating between the east side near Queens Quay East and on the west side near Lake Shore Boulevard, again restricting overnight (19:00 – 07:00) parking without a permit. Lower Jarvis Street provides on street parking between Queens Quay East and Lake Shore Boulevard on the east side with restrictions between 07:00 and 09:00 and again between 16:00 and 18:00. There are a couple of parking spaces available on the west side of Lower Jarvis Street in front of the Loblaws store, with ‘No Parking Permitted’ in place between 07:00 and 09:00 and ‘No Stopping Permitted’ in place between 16:00 and 18:00.

On-street parking is not permitted on Queens Quay East and Lake Shore Boulevard.

Permit Parking

Freeland Street and Cooper Street are currently used for on-street permit parking. The City has issued 60 on-street permit parking spaces to residents of the Toronto Island.

### 3.5.6 Rail Transit

Union Station is located on Front Street West between York Street and Bay Street, approximately 500 m northwest of the Lower Yonge Precinct. Union Station is the largest transportation hub in the country, a designated National Historic Site and a significant Toronto landmark, offering transit services to destinations within Toronto, the Greater Toronto and Hamilton Area (GTHA), Canada and the United States. GO Transit commuter rail services and the Toronto Transit Commission Yonge/University/Spadina Subway converge at Union Station.

Metrolinx introduced UP Express in June 2015 which operates between Union Station and L. B. Pearson International Airport. UP Express provides service at 15 minute intervals between 05:30 and 01:00 every day, with stops at Union Station, Bloor Street, Weston Road, and the Airport.

VIA Rail and Amtrak provide passenger rail services across Canada and into the United States from Union Station.

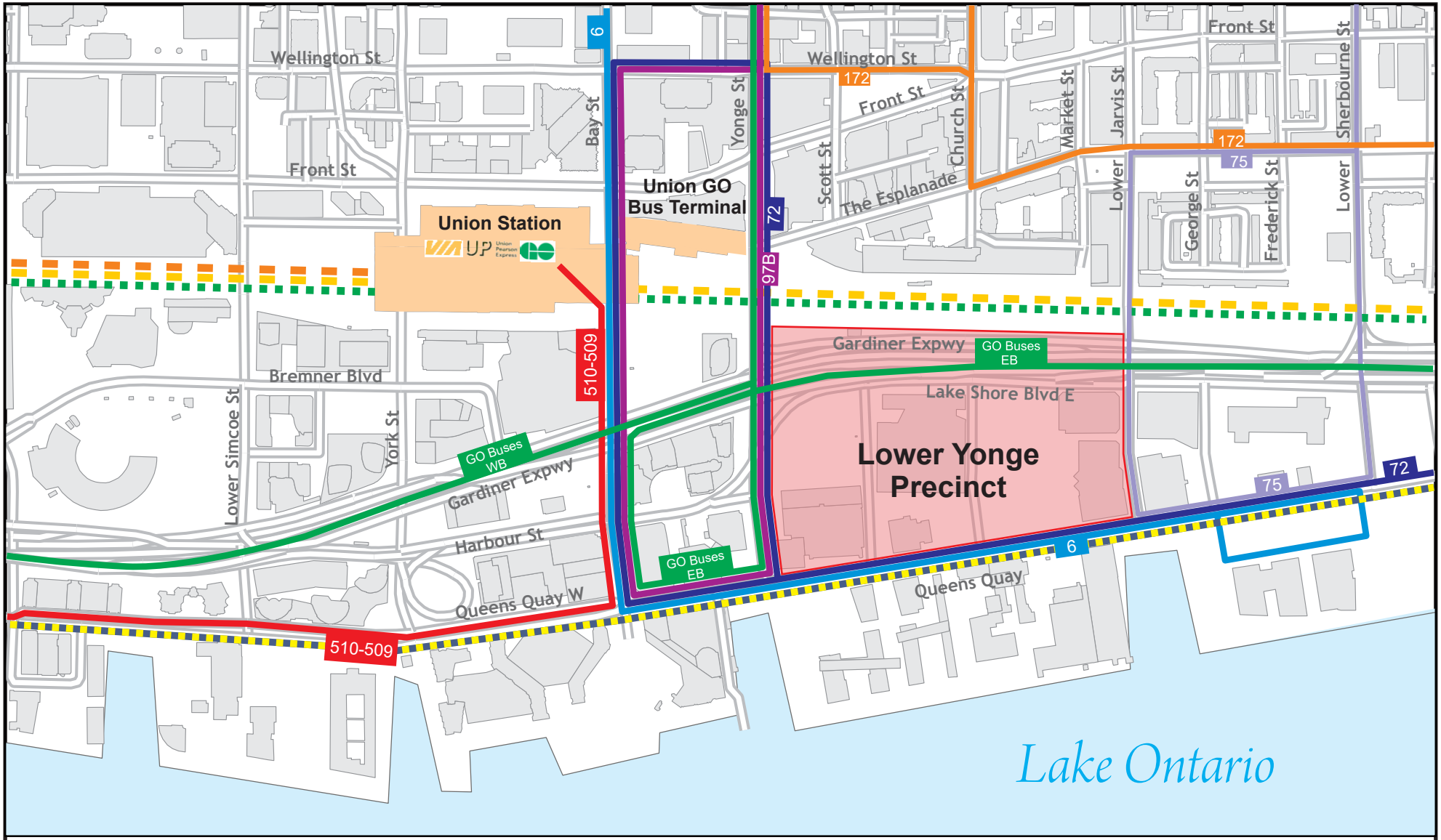
### 3.5.7 Public Transit

A division of Metrolinx, GO Transit is a regional public transit which services the Greater Toronto and Hamilton area with routes running through the City of Toronto to communities across the Greater Golden Horseshoe by bus and train. The Toronto Transit Commission (TTC) is the primary public transit body servicing the residents within the City of Toronto on a network of underground subway and above ground streetcars.

The Lower Yonge Precinct area is serviced by a public transit network, typically within a walking distance of less than 250 m (5 minute walk). The TTC, GO Transit rail and bus, the UP Express and VIA Rail are all easily accessible from the Precinct.

The GO Transit Bus Terminal is immediately east of Union Station, south of Front Street, providing additional transit service throughout the GTHA.

The Lower Yonge Precinct is located in close proximity to existing transit services, including access to TTC services, GO rail and bus services, the UP Express, and VIA Rail services. The existing transit network in the vicinity of the Precinct is shown in **Exhibit 3-15** and listed in **Exhibit 3-16**.




**Legend**

Existing Transit

- 6 Bay Bus
- 72 Pape Bus
- 75 Sherbourne Bus
- 97B Yonge Bus
- 172 Cherry Bus
- 509-510 TTC Streetcar
- GO Bus Routes
- UP Express
- GO Rail
- VIA Rail

Cycling Facilities

- Martin Goodman Trail

**Lower Yonge Precinct**
Municipal Class EA Schedule 'C' Project
Environmental Study Report

# Existing Transit Service

Exhibit
**3-15**

## Exhibit 3-16: Existing Transit Services in the Vicinity of the Lower Yonge Precinct

| Service | Approximate Service Hours (Weekday Service) |
|---|---|
| **TTC Subway** | |
| Yonge-University Line | NB: 6:03 a.m. to 1:18 a.m.<br>SB: 5:40 a.m. to 1:16 a.m. |
| **TTC Streetcar** | |
| 509 Harbourfront | WB: 6:06 a.m. to 1:18 a.m.<br>EB: 5:50 a.m. to 1:02 a.m. |
| 510 Spadina | NB: 5:25 a.m. to 2:15 a.m.<br>SB: 5:15 a.m. to 2:30 a.m. |
| **TTC Bus Service** | |
| 6 Bay | NB: 5:35 a.m. to 1:19 a.m.<br>SB: 5:08 a.m. to 12:55 a.m. |
| 97B Yonge | NB: 6:31 a.m. to 9:01 a.m.<br>NB: 2:54 p.m. to 5:58 p.m.<br>SB: 5:46 a.m. to 8:46 a.m.<br>SB: 1:39 p.m. to 5:49 p.m. |
| 72 Pape | NB: 5:03 a.m. to 2:10 a.m.<br>SB: 5:03 a.m. to 1:45 a.m. |
| 75 Sherbourne | NB: 5:30 a.m. to 9:35 p.m.<br>SB: 5:15 a.m. to 10:02 p.m. |
| **GO Rail Service** | |
| Lake Shore West | EB: 5:31 a.m. to 11:01 p.m.<br>WB: 6:55 a.m. to 12:43 p.m. |
| Lake Shore East | EB: 6:13 a.m. to 12:13 a.m.<br>WB: 5:07 a.m. to 11:38 p.m. |
| Milton | EB: 6:23 a.m. to 8:26 a.m.<br>WB: 3:40 p.m. to 7:04 p.m. |
| Kitchener | EB: 5:49 a.m. to 3:37 p.m.<br>WB: 8:48 a.m. to 6:50 p.m. |
| Richmond Hill | NB: 3:10 p.m. to 7:40 p.m.<br>SB: 6:25 a.m. to 9:20 a.m. |
| Barrie | NB: 3:40 p.m. to 6:45 p.m.<br>SB: 5:15 a.m. to 7:15 a.m. |
| Stouffville | NB: 2:03 p.m. to 7:18 p.m.<br>SB: 5:15 a.m. to 9:19 a.m. |

| Service | Approximate Service Hours (Weekday Service) |
|---|---|
| **GO Bus Routes** | |
| 18 Lake Shore West | EB: 4:15 a.m. to 5:00 a.m.<br>WB: 5:40 a.m.; 1:30 a.m. to 2:30 a.m. |
| 90 Lake Shore East | EB: 5:30 a.m. (one bus)<br>EB: 1:10 a.m. to 2:20 a.m.<br>WB: 3:55 a.m. and 4:15 a.m. |
| 21 Milton | EB: 4:50 a.m. to 12:30 a.m.<br>WB: 6:20 a.m. to 2:20 a.m. |
| 31 Kitchener | EB: 4:40 a.m. to 1:10 a.m.<br>WB: 5:50 a.m. to 2:30 a.m. |
| 61 Richmond Hill | NB: 9:40 a.m. to 2:40 a.m.<br>SB: 5:10 a.m. to 2:20 p.m. |
| 63 King City | NB: 12:20 p.m. to 2:20 a.m.<br>SB: 4:50 a.m. to 11:35 a.m. |
| 65 East Gwillimbury | NB: 6:40 a.m. to 2:10 a.m.<br>SB: 4:45 a.m. to 12:00 a.m. |
| 71 Stouffville | NB: 6:40 a.m. to 1:50 p.m.<br>NB: 7:50 p.m. to 2:40 a.m.<br>SB: 4:30 a.m. to 2:10 a.m. |
| **Union-Pearson Express (UP Express)** | |
| Union-Pearson Express | EB: 5:27 a.m. to 12:57 a.m.<br>WB: 5:30 a.m. to 1:00 a.m. |

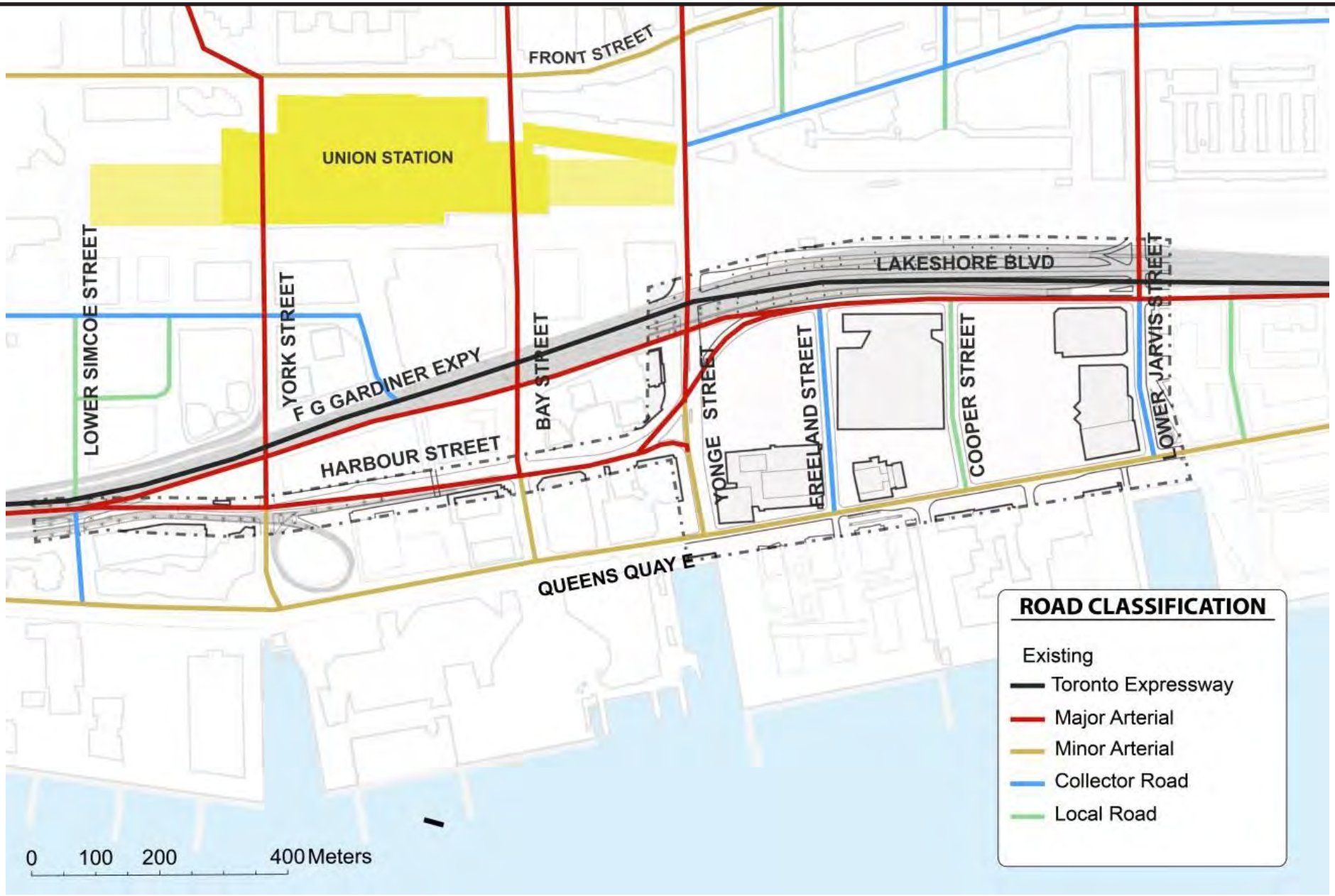
*Route data and approximate service hours is current as of October 2016, subject to change at the discretion of the service providers.

### 3.5.8 Existing Vehicular Conditions

Originally designated to accommodate industrial and commercial activity along Toronto's waterfront, the Precinct is currently heavily oriented towards motorists. Harbour Street and Lake Shore Boulevard are major arterials running west and north of the Precinct, while the Queens Quay is a minor arterial running south of the Precinct.

Within the Precinct, there are four (4) north-south streets classified as local roads (Cooper Street), collector roads (Freeland Street and Lower Jarvis Street) and minor arterial (Yonge Street). The road network within and adjacent to the Lower Yonge Precinct MCEA Study Area is illustrated in **Exhibit 3-17**. The existing conditions assessment from the perspective of existing traffic operations was conducted on the basis of work previously completed for the Lower Yonge Transportation Master Plan Environmental Assessment (LY TMP). The LY TMP existing conditions assessment was conducted using a traffic simulation model of downtown Toronto, for both the AM and PM peak hours. The existing road network in generally sufficient to meet traffic

demand; however, during AM and PM rush hours, regional traffic demand creates excessive queuing at major signalized intersections in the study area.




Source: Lower Yonge Transportation Master Plan Environmental Assessment, 2014

**Lower Yonge Precinct**
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## Study Area Existing Road Network

Exhibit
**3-17**

Events at Air Canada Centre and Rogers Centre can exacerbate traffic congestion when they overlap with the rush hour traffic demand. The results of the existing condition assessment for the study area are provided below in **Exhibit 3-18**.

**Exhibit 3-18: Existing (2010) Level of Service from LY TMP**

| Intersection | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|
| | Delay1 | Level of Service (LOS) | Delay | Level of Service (LOS) |
| Simcoe St / Lake Shore Blvd | 32.4 | C | 33.5 | C |
| Simcoe St / Harbour St | 28.9 | C | 25.3 | C |
| Simcoe St / Queens Quay | 27.0 | C | 17.9 | B |
| York St / Lake Shore Blvd | 22.5 | C | 25.0 | C |
| York St / Harbour St | 23.4 | C | 27.3 | C |
| York St / Queens Quay | 42.6 | D | 29.9 | C |
| Bay St / Lake Shore Blvd | 20.3 | C | 22.0 | C |
| Bay St / Harbour St | 19.8 | B | 22.8 | C |
| Bay St / Queens Quay | 27.5 | C | 24.5 | C |
| Yonge St / Lake Shore Blvd | 24.8 | C | 21.9 | C |
| Yonge St / Harbour St | 8.5 | A | 7.7 | A |
| Yonge St / Queens Quay | 10.9 | B | 10.8 | B |
| Jarvis St / Lake Shore Blvd(WB) | 16.7 | B | 25.7 | C |
| Jarvis St / Lake Shore Blvd(EB) | 17.9 | B | 16.9 | B |
| Jarvis St / Queens Quay | 32.4 | C | 33.5 | C |

**Source:** Lower Yonge Transportation Master Plan Environmental Assessment, 2014

**Notes:** (1) Delay is measured in seconds. All delay metrics are the average of ten simulation runs.

### 3.5.9 Existing Traffic Patterns

The current road network within the Precinct is intended to primarily facilitate the movement of Regional traffic, or traffic that is either originating or destined to locations outside of the Precinct. Local traffic, or traffic that originates or is destined to the Precinct itself, is a relatively minor component of total traffic volumes in the area.

Local traffic volumes are limited as a result of the low development intensity currently in the Precinct, which in turn generates a modest amount of local vehicular, pedestrian and cyclist activity. Currently, local traffic demand is primarily driven by employees from Toronto Star, LCBO, and Loblaws supermarket, as well as retail customers at LCBO and Loblaws. Residential activity is concentrated just outside of the study area; however, local residents do not use existing roads

located within the Precinct. Some additional activity is generated by visitors to the nearby Lake Ontario Waterfront.

Regional traffic volumes, on the other hand, utilize significant amounts of the transportation network capacity in the Precinct. Many ‘regional’ drivers accessing the downtown must travel along the border of the Precinct, and the Gardiner Expressway on- and off-ramps heavily influence circulation patterns in the area. In addition, events along the Waterfront generate some regional traffic demand, mostly during summer months. Finally, special events at Air Canada Centre and Rogers Centre also contribute to the regional traffic demand. This regional traffic load travelling along the border of the Precinct largely contributes to the area’s current auto-oriented character.

These Regional traffic volumes primarily rely on the elevated Gardiner Expressway, Lake Shore Boulevard and Harbour Street for accessing and leaving the downtown core. Within the study area, westbound Lake Shore Boulevard and eastbound Harbour Street function as a one-way couplet, which connects the downtown road network to and from the Gardiner Expressway.

# 4.0 TRANSPORTATION ISSUES

## 4.1.1 Existing Road Network

Due to the high utilization of the study area network by Regional rather than Local traffic, the network, by design, better serves as a "by-pass" through the Precinct rather than facilitating movement within. As a result, the major arterial roads hinder local traffic circulation, creating physical barriers between the downtown and the Waterfront. Currently, access to the Precinct is hindered by the irregular intersections of Harbour Street and Yonge Street, Yonge Street and Lake Shore Boulevard, and Lake Shore Boulevard and Jarvis Street, which limit the available routes that can be used to access or leave the area. This is especially applicable for traffic to and from the north on Yonge Street and Lower Jarvis Street, and to/from the west on the Gardiner Expressway.

Traffic to and from the north is limited for a number of reasons. Firstly, the southbound left turn movements are currently not allowed/feasible at the Yonge Street intersections with Lake Shore Boulevard and Harbour Street. Therefore, all local traffic travelling from the north on Yonge Street has to utilize Queens Quay East in order to access the Precinct. The same applies to the local traffic going in the opposite directions since the direct access to Lake Shore Boulevard Westbound is not provided. In addition, all local traffic travelling from the north on Lower Jarvis Street have to utilize Queens Quay East in order to access the portion of the Precinct west of Cooper Street.

Traffic coming from the west on the Gardiner Expressway and destined for the Precinct currently cannot utilize the intersection of Lake Shore Boulevard and Lower Jarvis Street because vehicles on the Gardiner Expressway eastbound off-ramp are not allowed to turn right onto Lower Jarvis Street. As a result, the traffic heading to the Precinct needs to utilize the York/Bay/Yonge off-ramp. This ramp is currently being relocated to the west to Lower Simcoe Street, which may impact travel times for the Lower Yonge Precinct traffic since traffic will be required to exit the Gardiner Expressway further west.

Balancing existing regional and future local traffic needs is critical for reconnecting the Precinct to the downtown and accommodating additional vehicular demand to be generated by new proposed commercial and residential developments.

## 4.1.2 10 Yonge

There is a set of stairs and a pedestrian ramp used by residents and retail tenants for loading activities located on the north side of the building adjacent to Harbour Street. This setup does not comply with the approved off-street loading facilities for residents and tenants of 10 Yonge Street. Also the set of stairs and pedestrian ramp have been built in the City's public right-of-way. Unpermitted use of the Harbour Street right-of-way for loading and unloading activities has been

observed and results in unsafe conditions for pedestrians walking along the south boulevard of Harbour Street.

### 4.1.3 16 - 18 Harbour Street, 33 Bay Street, 16 Yonge Street

There are four (4) residential condominium towers located at 16-18 Harbour Street, 33 Bay Street, 16 Yonge Street. The ground floor of the towers consist of retail uses and a commercial parking garage. The main access to the property is currently provided to/from Harbour Street, and a secondary access to a laneway at is located at the back of the complex adjacent to Lake Shore Boulevard. Access to the laneway is provided from Yonge Street.

The laneway operates as a two-way operation with in/right out/right access provided to Yonge Street and there are also connections to Harbour Street access. Presently, the laneway serves as an access route to on-site parking and is the only access to the loading facilities for waste removal, deliveries, and moving activities.

### 4.1.4 55 The Esplanade

A Toronto Community Housing Corporation (TCHC) owns a residential building at 2 Church Street. The lands would be required for the extension of the Cooper Street tunnel.

# 5.0 CONSULTATION AND ENGAGEMENT

Consultation and engagement was an integral component of the study, as it provided opportunities for two-way communication with interested stakeholders. Consultation activities provide a forum to identify potentially significant environmental issues early in the decision-making process and ensure that they are given appropriate consideration.

A consultation program was developed for this EA study to meet the statutory requirements of the MCEA process, facilitate on-going discussion and build relationships with local stakeholders to obtain local knowledge of the Lower Yonge Precinct MCEA Study Area and ultimately improve project outcomes by incorporating public feedback.

A variety of consultation techniques were applied during each phase of the process, which included Technical Advisory Committee (TAC) meetings, Stakeholder Advisory Committee (SAC) meetings, Landowners and Users Advisory Committee (LUAC), individual stakeholder meetings, a Public Information Centre (PIC), an online survey, project webpages and project notification through mailings and newspaper advertisements, and direct contact with the Project Team via mail, email, phone or fax. This section provides an overview of the consultation activities undertaken, and identifies the key issues raised and how they were resolved.

## 5.1 External Agency Consultation

Federal and Provincial agencies, municipal staff, utilities service providers and stakeholder interest groups were notified at the beginning of the study via letter and email on January 29, 2016 informing them of the study and soliciting their comments. Individuals and groups that expressed an interest in the project were kept informed throughout the study and were invited to attend the PIC held as part of the study. The agencies that were contacted include the following:

**Federal Agencies**

- Department of Fisheries and Oceans
- Environment Canada, Great Lakes and Corporate Affairs
- Transport Canada
- Parks Canada
- Canadian Transportation Agency

**Provincial Agencies**

- Ontario Growth Secretariat
- Ministry of Natural Resources and Forestry (MNRF)
- Ministry of Agriculture, Food and Rural Affairs
- Ministry of Community Safety and Correctional Services

- Ministry of Economic Development
- Ministry of Education
- Ministry of Energy
- Ministry of Municipal Affairs and Housing (MMAH)
- Ministry of the Environment and Climate Change (MOECC)
- Ministry of Tourism, Culture and Sport (MTCS)
- Ministry of Transportation (MTO)
- Ministry of Economic Development
- Infrastructure Ontario (IO)
- Ontario Provincial Police (OPP)
- Toronto and Region Conservation Authority (TRCA)
- Metrolinx
- GO Transit

**City of Toronto Departments**

- Parks, Forestry and Recreation
- City Planning
- Toronto Water
- Transportation Services
- Economic Development and Culture
- Urban Forestry
- Heritage Preservation Services

**Local Agencies**

- Toronto Public Health
- Toronto EMS
- Toronto Fire
- Toronto Parking Authority
- Toronto Police Services
- Toronto Transit Commission
- Greater Toronto Airports Authority
- Toronto Catholic District School Board
- Toronto District School Board
- Conseil Scolaire de district Catholique Centre-Sud

**Utilities**

- Hydro One Networks Inc.
- Ontario Power Generation (OPG)
- Allstream
- Bell Canada
- Cogeco Data Services
- Enbridge Gas Distribution
- Enbridge Pipeline
- Imperial Oil
- Rogers Cable Systems
- Sun-Canadian Pipe Line Company Ltd.
- Telus
- Tera Span
- Toronto Hydro
- Trans Northern Pipe Line
- CP Rail
- CN Rail

**Local Interest Groups and Businesses**

- 75 On The Esplanade Condominiums
- Build Toronto
- Cycle Toronto (formerly Toronto Cyclist Union)
- Financial District Business Improvement Area (BIA)
- Gooderham Worts Neighbourhood Association
- Pier 27
- Ports Toronto
- Redpath Sugar
- South Core Residents Community Association
- St. Lawrence Neighbourhood Association
- Telsec Business Centre (1 Yonge)
- Toronto Centre for Active Transportation
- Toronto Community Housing Corporation
- Toronto Island Community Association
- Walk Toronto
- West Don Land Committee
- York Quay Neighbourhood Association

**Landowners and Users**

- LCBO
- Loblaws (Choice REIT)
- Menkes Development
- Pinnacle International

A summary of external agency participation is provided in **Exhibit 5-1**. Relevant correspondence is included in **Appendix H**.

**Exhibit 5-1: External Agency Participation**

| Agency / Participant | Comments Received | Action Taken / Response |
|---|---|---|
| **Provincial Agencies** | | |
| Toronto and Region Conservation Authority (TRCA)<br>Renee Afoom-Boateng, Senior Planner, Environmental Assessment Planning | Comment received via email on February 8, 2016 that indicated the following:<br>● Acknowledging receipt of the commencement notification<br>● Identifying the following Areas of Interest within the Lower Yonge Precinct MCEA Study Area: TRCA Regulated Areas (Regulation Limit; Regulatory Flood Plain; Watercourses; Special Policy Area of the Don River) and TRCA Program and Policy Areas (Aquatic Species and Habitat; Habitat Implementation Plans; Living City Programs; Sustainable Technologies; Living City Trails; TRCA Mapping) | ● Comments noted by the Project Team. |
| Infrastructure Ontario (IO)<br>Lisa Myslicki, Environmental Specialist | Comment received via email on February 3, 2016 and June 21, 2016 that indicated the following:<br>● Potential negative impacts to IO Tenants and Lands.<br>● Heritage Management Process and Class Environmental Assessment (EA) Process.<br>● Potential Triggers Related to MOI's Class EA.<br>● Specific Comments. | ● Comments noted by the Project Team. |
| Infrastructure Ontario (IO)<br>Sean Finlay, Vice President, Land Development | Response received via email on March 29, 2016 that indicated the following:<br>● The LCBO Headquarters is owned by LCBO and does not fall into the category of IO managed lands.<br>● Accordingly, you can remove IO from the circulation list.<br>● Recommendation to that LCBO is included on your circulation list. | Email sent on March 24, 2016 to Infrastructure Ontario inquiring how to respond to correspondence received from another branch of IO. |
| Ministry of the Environment and Climate Change (MOECC)<br>Chunmei Liu, EA and Planning Coordinator | Comment received via email on May 18, 2016 that included MOECC's "Areas of Interest" document provides guidance regarding the ministry's interests with respect to the Class EA process. Please identify the areas of interest which are applicable to your project and ensure they are addressed. Proponents who address all of the applicable areas of interest can minimize potential delays to their project schedule. | Response sent via email on June 1, 2016 that acknowledged receipt of the comments and that we have reviewed the "Area of Interest" document and will apply as may be applicable to the Lower Yonge Precinct MCEA. |
| Ministry of Natural Resources and Forestry (MNRF)<br>Jackie Burkhart, District Planner | Comment received via email on June 20, 2016 that indicated there are no concerns with the proposed EA and the subject lands are not within the Lower Don Special Policy Area (SPA). | ● Comments noted by the Project Team. |
| GO Transit<br>Adam Snow, Third Party Projects Officer, Rail Corridor Management Office | Comment received via email on February 23, 2016 that indicated that several departments at Metrolinx would need to be involved in the design process. In terms of specific considerations for this area, the preliminary list includes:<br>● Presence of signal, fibre, and electrical cables and related conduits<br>● Elevation of the bridge deck and impacts to the ballast and steel ties<br>● Electrification infrastructure (currently in development)<br>● Structural integrity - support for the Viaduct<br>● Impact of planned new track installation<br>● Drainage impacts<br>● Ownership, maintenance responsibilities<br>● Construction technical review, management (including coordination with Metrolinx activities) | ● Comments noted by the Project Team. |

| Agency / Participant | Comments Received | Action Taken / Response |
|---|---|---|
| **Local Agencies** | | |
| Toronto District School Board<br>Erica Pallotta, Land Use Project Manager | Comment received via email on January 28, 2016 requesting to be added to the project mailing list. | • Comments noted by the Project Team.<br>• Project mailing-list updated as requested. |
| Toronto Paramedic Services<br>Michael Huk, A/Superintendent | Comment received via email on June 20, 2016 requesting to be added to the project mailing list. | • Comments noted by the Project Team.<br>• Project mailing-list updated as requested. |
| **Utilities** | | |
| Enwave Energy Corporation<br>Elizabeth Kriarakis, Manager, Communications & Corporate Sponsorships | Comment received via email on February 3, 2016 requesting to update the Enwave contact on the mailing list. | • Comments noted by the Project Team.<br>• Project mailing-list updated as requested. |
| Hydro One Networks<br>Stephanie Hodsoll, Public Affairs | Comment received via email on January 28, 2016 requesting to be added to the project mailing list. | • Comments noted by the Project Team.<br>• Project mailing-list updated as requested. |
| Hydro One Networks<br>Claire Zhang, Secondary Land Use Transmission Asset Management | Comment received via email on March 22, 2016 that indicated:<br>• We have confirmed that Hydro One has high voltage transmission facilities within your study area.<br>• In addition to the existing infrastructure mentioned above, the affected transmission corridor may have provisions for future lines or already contain secondary land uses (i.e. pipelines, water mains, parking, etc.).<br>• The integrity of the structure foundations must be maintained at all times, with no disturbance of the earth around the poles, guy wires and tower footings. There must not be any grading, excavating, filling or other civil work close to the structures. | • Comments noted by the Project Team. |
| **Local Interest Groups** | | |
| Tridel<br>Steve Daniels, Vice President of Development Planning | Comment received via email on January 28, 2016 inquiring about how the notice will impact the development at 10 York, which is currently under construction. | • Comments noted by the Project Team. |
| The Riviera Condominiums – Board of Directors | Comment received on February 24, 2016 that indicated the following:<br>• Concern about safety and additional traffic on Lower Simcoe and Harbour Streets as a result of the Gardiner ramp removal.<br>• Request extending the study area to include the intersection of Lower Simcoe and Harbour Street, and the new ramp that will be feeding into Harbour Street, as this may address some of the safety concerns. | Response sent via email that indicated the following:<br>• This MCEA is the continuation of the Lower Yonge Precinct Transportation Master Plan study (TMP), approved by City Council in May 2015. For consistency, both studies should focus on the same study area.<br>• This study will be closely coordinated with other studies which focus on the locations you're referencing, including the York/Bay/Yonge ramp configuration. This project deals with the redesign of the intersection at Lower Simcoe and Harbour Streets, the shortening of the Gardiner ramp located to the west of Lower Simcoe and the redesign of Harbour Street from Lower Simcoe to Bay Street. |
| York Quay Neighbourhood Association | Comment addressed to Councilor McConnell, and sent to the project team via email on May 19, 2016 that indicated:<br>• Concern about the impacts of the proposed rerouting of Harbour Street on the moving door and loading area for 10 Yonge Street and the potential impact on residents.<br>• Request for a meeting with the property manager and some residents to discuss the plan, re-routing of Harbour Street and potential impact on the 10 Yonge Street loading area. | • Comments noted by the Project Team.<br>• Meetings held with property management and the resident representative from 10 Yonge (refer to **Section 5.2.5**). |

| Agency / Participant | Comments Received | Action Taken / Response |
|---|---|---|
| AECOM<br>Leslie Leamen, Executive Assistant | Comment received via email on January 28, 2016 requesting to be added to the project mailing list. | • Comments noted by the Project Team.<br>• Project mailing-list updated as requested. |
| Zelinka Priamo Ltd.<br>Dave Hannam, Senior Planner | Comment received via email on January 28, 2016 requesting to be added to the project mailing list. | • Comments noted by the Project Team.<br>• Project mailing-list updated as requested. |
| Stikeman Elliott LLP<br>Nancy Adler, Land Use Planner | Comment received via email on January 28, 2016 requesting to be added to the project mailing list. | • Comments noted by the Project Team.<br>• Project mailing-list updated as requested. |

## 5.2 Meetings

Meetings were an important part of the consultation / engagement process. For this EA, meetings were held to disseminate, collect and share information; receive stakeholder feedback and work through localized issues. The key meeting dates are provided below and summaries of the meetings are available in the following sub-sections.

- Technical Advisory Committee (TAC) – June 6, 2016 and March 1, 2017
- Stakeholder Advisory Committee (SAC) – June 13, 2016 and April 6, 2017
- 10 Yonge Street – July 28, 2016, February 27, 2017 and April 27, 2017
- 16-18 Harbour Street, 33 Bay Street, 16 Yonge Street – September 13, 2016, March 15, 2017 and May 1, 2017
- Toronto Island Community Association – March 31, 2017 and May 4, 2017
- Landowners Advisory Committee (LUAC) – June 15, 2016 and April 6, 2017
- Toronto Transit Commission (TTC) – October 12, 2016, November 17, 2016, December 7, 2016, March 8, 2017 and April 10, 2017
- Waterfront Toronto Design Review Panel (DRP) – April 19, 2017

### 5.2.1 Technical Advisory Committee

For this study, a Technical Advisory Committee (TAC) was established that was composed of representatives from Waterfront Toronto, the City of Toronto (transportation services, urban design, parks, forestry and recreation, heritage preservation services, Toronto Water), transit agencies (TTC, Metrolinx, GO Transit), Infrastructure Ontario, and Toronto Fire.

TAC Meeting # 1

A meeting was held with members of the TAC on June 6, 2016. The purpose of the meeting was to provide an overview of the area, precinct planning, MCEA study completed to date, and present the alternative cross sections for each road segment and the selection of the preliminary preferred alternatives for feedback.

There were key discussions about requirements for cycling tracks, lane configurations along various cross sections, including: Cooper Street and the proposed tunnel, Harbour Street, Yonge Street, and the Gardiner off-ramp at Yonge Street.

TAC Meeting # 2

The second TAC meeting was held on March 1, 2017. The purpose of the meeting was to provide an update on the study since the June 2016 meeting, present the Harbour Street alignment, preferred transportation network and discuss localized issues.

TAC members inquired about the City's minimum setback for pedestrian clearway, potential locations of bus drop-off and pick-up for the community centre and proposed school, future TTC routes and bus stop locations, and safety / interaction between all road users (i.e. motorists, pedestrians, and cyclists).

A copy of the minutes from the TAC meetings that includes specific questions asked by participants are included in **Appendix H**.

### 5.2.2 Stakeholder Advisory Committee

The Stakeholder Advisory Committee (SAC) was created to allow interested stakeholders and local neighbourhood organizations / committees with an opportunity to express their opinions on the study, and provide feedback on the various cross sections and proposed design elements. The following stakeholders were invited to participate in the SAC meetings:

- 75 The Esplanade
- Redpath Sugar
- Cycle Toronto
- York Quay Neighbourhood Association
- St. Lawrence Neighbourhood Association
- Toronto Island Community Association
- Financial District BIA
- West Don Lands Committee
- Gooderham Worts Neighbourhood Association
- Telsec Business Centres (1 Yonge)
- Pier 27
- Build Toronto
- Toronto Community Housing Corporation
- Toronto Parking Authority
- Walk Toronto
- PortsToronto
- Toronto Centre for Active Transportation
- South Core Residents Community Association
- Code Blue TO
- Del Property Management
- 6 Harbour Street
- Daniels Corporation
- Cityzen
- Oxford Properties

SAC Meeting # 1

The first meeting of the SAC was held on June 13, 2016. The purpose of the meeting was to brief SAC members on the status of the study, and seeks their feedback on the evaluation criteria and evaluation of alternatives; the preliminary preferred alternatives; and timeline of events.

Comments provided by the SAC representatives included ensuring safety and accessibility while moving traffic both in and out of the Redpath facility, taking consideration of the proposed plans for the TPA parking structure near Cooper Street tunnel (i.e. modal splits and shift to autonomous vehicles), emphasizing the importance of pedestrian crossings at the Lake Shore and Jarvis

intersection due to current congestion, and considering a more fine-grain approach to streetscapes, similar to that of Market Street. Discussions were also held relating to cycling infrastructure and design requirements (e.g. introducing physical barriers between cyclists, vehicles and pedestrians, and providing a bike lane north of Lake Shore).

SAC Meeting # 2

The second SAC meeting was held on April 6, 2017. The purpose of the meeting was to brief SAC representatives on the project and seek their feedback on the preferred alternatives; and the preferred transportation network.

The following general comments were received by SAC representatives at the meeting:

- Suggestion to work with developments to explore options of designating some of the underground parking to those who currently have permits within the study area.
- Ensure signal crossing time is appropriate for all pedestrians to cross the street without feeling rushed.
- Request to see shading, benches as part of the public realm.
- Request to use different materials for the cycling and pedestrian infrastructure.

The minutes, available in **Appendix H**, provide more details about the comments received and discussions held at the SAC Meetings.

### 5.2.3 Landowners Advisory Committee Meetings

Pinnacle, Menkes, and Choice REIT were invited to participate in meetings to discuss the EA and issues that may affect development on their sites. Two meetings were held with the Landowners Advisory Committee (LUAC) during the EA study.

Landowners Meeting # 1

The first meeting was held on June 15, 2016 with members of the Project Team, and landowners directly impacted by the proposed development. Landowners in attendance included Menkes Developments, Pinnacle International, and Choice Properties, who own property and / or have interests in the study area.

Some of the key comments/questions received at the land owners meeting:

- Inquiries about the road and sidewalk dimensions.
- Question about the configuration of the intersections at Cooper Street and at Lake Shore Boulevard.
- Inquiry about the grade separation along Cooper Street.
- In the interim before Cooper Street functions as transportation spine, is there a way of looking at a different road configuration?

- Why is a wider sidewalk proposed on the north side of Harbour Street?
- What is the configuration of the interim New Street and how does it function?
- Preference to re-paint / stripe the streets to accommodate more on-street parking, especially if bike lanes are not part of the immediate construction.
- New Street is a receiving / loading street. The pedestrian zone on a short servicing street seems odd, and it is too generous.
- Preference for a 18.0 m ROW on New Street with more road lane width, and less pedestrian clearway.
- Landowners Meeting # 2

The second landowners meeting was held on April 6, 2017. The meeting was held to provide an update on the status of the project, including:

- What we have completed since the first LUAC meeting held in June 2016;
- An overview of the transportation modelling, including the modal split and intersection analysis; and,
- An overview of the goals for the Public Realm Plan and Proposed Design

Some of the key comments/questions received at the land owners meeting:

- What is the setback from the proposed New Street cross section?
- Is there the opportunity for the future bike lane on Cooper Street to be used as parking in the interim?
- Where will the new the Gardiner Off-Ramp land at Yonge Street relative to Lake Shore Boulevard East?
- What is the proposed intersection control along Harbour Street?
- Should additional space be allocated to the road on New Street, and taken from the pedestrian clearway to accommodate truck turning movements?
- How were cyclists included in the preliminary plan?

A copy of the minutes from the two LUAC meetings are in **Appendix H**.

### 5.2.4 Toronto Transit Commission Meetings

During the Environmental Assessment, meetings were held with TTC to discuss the existing transit routes and proposed future routes and corresponding stop locations. The meetings were held on October 12, 2016; November 17, 2016; December 7, 2016; March 8, 2017; and April 10, 2017.

Some of the key comments/questions discussed at the meeting include:

- Identifying the potential routes for existing and future transit service within the Lower Yonge Precinct area;
- Determining the location for future bus stops with the Precinct; and,
- Confirming the curb radii to ensure that articulated buses could maneouver within the Precinct.

### 5.2.5 Stakeholder Meetings

To discuss localized issues, meetings were held with the following stakeholders:

- 16-18 Harbour Street, 33 Bay Street, 16 Yonge Street building property management and the resident representative;
- 10 Yonge building property management and the resident representative; and,
- Toronto Island Community Association.

#### 5.2.5.1 16 – 18 Harbour Street, 33 Bay Street, 16 Yonge Street

Due to the shortening of the Gardiner Off-Ramp from Lower Jarvis Street to Yonge Street, modification to the existing laneway at 16-18 Harbour Street, 33 Bay Street, and 16 Yonge Street is required. Three (3) meetings were held with property management and a resident representative throughout the study to review the existing condition, discuss current uses of the laneway, and explore alternative solutions to mitigate the impacts.

The September 1, 2016 meeting included a site visit to get an understanding of the existing conditions, locations of a ventilation grate, pillars, signs, posts and how vehicles were using the laneway.

On March 15, 2017, a second meeting was held to discuss the proposed improvements that would change the character of Harbour Street in front of 33 Bay Street / 18 Harbour Street. Specifically there was discussion about converting Harbour Street to a two-way collector road, existing loading / unloading and moving operations, and the location of the Gardiner Expressway off-ramp terminating at Yonge Street.

A third meeting was held on May 1, 2017 to discuss how the proposed changes to the Lower Yonge Precinct including the removal of the Bay Street on-ramp to the Gardiner Expressway, the shortening of the Lower Jarvis Street off-ramp to connect at Yonge Street, and the conversion of Harbour Street to two-way operations between York Street and Lower Jarvis Street will impact 16-18 Harbour Street, 33 Bay Street, 16 Yonge Street. The landing for the new Gardiner Off-Ramp will create a new intersection just north of the existing 16-18 Harbour Street, 33 Bay Street, 16 Yonge Street driveway, and there was a discussion about pedestrian safety and the location

of the laneway. Given this, the Project Team presented the preliminary preferred alternative for the laneway that includes:

- conversion of the laneway from a two way operation to a one-way eastbound operation
- creation of a new right-in entrance from Bay Street which connects to the laneway
- conversion of the Yonge Street driveway from right-in / right-out to right-out only

The Property Managers expressed their concern with this proposal, in particular about issues with garbage trucks loading, moving vehicles and the ventilation pit / grill.

#### 5.2.5.2 10 Yonge Street

The 10 Yonge Street Condominium Corporation was engaged and provided input throughout the study. During the Detail Design and implementation phase, the City will continue to engage with the Condominium Corporation to explore alternate solutions. Specifically, there are three (3) localized issues associated with the condominium at 10 Yonge Street that conflict with the proposed reconfiguration of Harbour Street. The three (3) issues are:

1. Vehicles are currently parking illegally in the City's existing ROW for loading and unloading along the south side of Harbour Street.
2. The stairs and ramps are installed within the City's existing ROW with no standing room.
3. The site is not operating as per the approved site-plan.

A site walk occurred on July 28, 2016 to introduce the Project Team, review the site and existing conditions, and obtain information about how the site operates.

A second meeting was held on February 27, 2017 to discuss solutions to the challenges associated with how the site is currently operating. Vehicles parking in the pedestrian clearway will affect the reconfiguration of Harbour Street, and could block access to the cycle track. Solutions discussed and available for review in **Appendix H** include:

- Removing the stairs
- Installing a railing / retaining wall near the piers / columns
- Prohibit parking along the Harbour Street ROW for loading / unloading purposes

The proposed retaining wall will consider factors such as light penetration into the site, and public views of the colonnades (public safety, daylighting, design excellence).

On April 27, 2017 a meeting was held to discuss the project schedule, concern about access to the ground floor businesses, suggestion to permit off-peak curbside operations, and possibility of using the elevator loading door.

The meeting minutes and the handouts from all three (3) meetings are available in **Appendix H**.

#### 5.2.5.3 Toronto Island Community Association

The City has issued sixty-one (61) permit parking spots on Freeland Street and Cooper Street for the Toronto Island Community Association (TICA). The permit parking spots were established when the Precinct was an industrial area, in the 1990s. With the Precinct being revitalizing into a mixed-use development that creates infrastructure for all users (i.e. motorists, cyclists, and pedestrians) the appropriateness of the existing permit parking needs was reviewed (see **Section 7.1.8**).

Consultation with the TICA and local Ward Councilor has occurred throughout the study. Discussions with the TICA about the interim and long-term arrangements are in progress and will continue through the detail design and construction phases. Prior to the permanent removal of the on-street permit parking, formal notice of the City's proposal to remove the permit parking spaces on Freeland Street and Cooper Street.

Meetings were held with a representative from the TICA on March 31, 2017 (site visit), February 9, and May 4, 2017 to review the existing conditions and alternatives. At the February 9, 2017 meeting, the following alternatives were developed as part of the MCEA study:

1. Continue to provide on-street permit parking.
2. Provide off-street permit parking outside of LYP
3. Provide off-street permit parking within LYP
4. Provide off-street parking within 500m of Ferry Terminal at market rates
5. Provide parking under the Gardiner.

Parking under the Gardiner can only be accommodated when the Bay Street on-street is removed and the off-ramp that ends near Lower Jarvis Street is reconstructed.

At the May 4, 2017 meeting, the following additional alternatives were reviewed to accommodate the TICA permit parking within the Precinct:

1. Fifteen (15) parking spots could be accommodated on the east side of Cooper Street until the tunnel was built.
2. More car share spaces within the Precinct.

The City re-iterated that they will do their best efforts to maintain the permit parking spaces for the next 5-10 years.

The meeting minutes from the meetings are available in **Appendix H**.

#### 5.2.5.4 Waterfront Toronto Design Review Panel

The Project Team presented the cross sections to the Waterfront Toronto Design Review Panel (DRP) on April 19, 2017. Discussion at the DRP meeting focused on the vehicular flow both with

and without the Cooper Street tunnel; the location of trees to ensure they thrive, location of on-street parking and provisions for lay-bys.

## 5.3 Public Consultation

### 5.3.1 Project Mailing List

At the onset of the study, a contact list was developed, which included provincial and federal agencies, municipal staff, local Councilors, utility providers, and other interested stakeholders and relevant bodies that may hold interest in the study. As the study progressed, the contact list was updated to ensure that all identified interested parties received study notifications.

Project Notification

Notification letters announcing the Study Commencement and Public Information Centre were distributed by direct mail and email to the study mailing list. The Notices of Study Commencement and Public Information Centre were published in the local community newspaper (NOW Magazine). A copy of the notices is included in **Appendix H**.

### 5.3.2 Project Webpages

The project webpages were updated to coincide with the notification of Study Commencement in January 2016, and have remained active with regular updates occurring throughout the course of the study.

The webpages provide an opportunity for the public and stakeholders to review up-to-date study information and content, background information, download study materials and reports, and provided contact information for the Project Team.

### 5.3.3 Public Information Centre

Public Information Centres (PICs) are informal meetings where area residents, interested stakeholders, and agencies are provided an opportunity to review planning and project information, identify concerns and provide input to the Project Team.

During this study, one PIC was held on June 23, 2016, as described in the sub-section below.

Waterfront Toronto distributed the Notice of PIC to stakeholders on its email distribution list on June 9, and June 22, 2016. The PIC was also included in the May 2016 and June 2016 editions of the email newsletter (News from Our New Blue Edge). The Notice of PIC was published in *NOW Magazine* on June 9 and 16, 2016.

Notification letters were distributed by direct mail or e-mailed to contacts on the City of Toronto study mailing list on June 3, 2016, including interested stakeholder groups. Notification letters

were distributed by registered mail and email to the applicable Indigenous on June 10, 2016 with subsequent follow up emails sent on June 15, 2016 and June 17, 2016. On June 14, 2016, notification letters were distributed by email to the applicable government agencies and utility providers.

In addition, a copy of the PIC notice was sent via Canada Post bulk mailing to approximately 16,923 properties (residential and businesses) within an approximately 400 m radius of the Lower Yonge Precinct MCEA Study Area.

#### 5.3.3.1 Public Information Centre – June 23, 2016

The PIC was held at the Waterfront Neighbourhood Centre as a drop-in style open house from 4:30 p.m. to 8:00 p.m. The purpose of the meeting was to provide information about the problem / opportunity statement, existing conditions and next steps for the Lower Yonge Precinct Area. The Project Team was specifically seeking feedback on the evaluation of the street alignment alternatives, evaluation criteria and the selection of the preliminary preferred transportation plan.

Eighty-two (82) people signed in at the PIC. Representatives with the following organizations were present at the PIC: Ports Toronto, Toronto Island Community Association, 10 Yonge Street, Enwave, BA Group, R.V. Anderson Associates, Urban Strategies, St. Lawrence Neighbourhood Association, Dillon Consulting, and LCBO. Media representatives, if in attendance, did not self-identify at the meeting.

Some of the key comments heard at the open house and provided by residents and stakeholders after the event include:

- There was support for the multi-modal transportation options, including cycling facilities.
- Support for a cycle track instead of a standard bike lane.
- Several attendees believed four vehicle lanes for the Cooper Street tunnel is too many, and instead, preference was given to bike lanes and sidewalks with fewer lanes.
- Multiple comments were received regarding reduction of parking throughout the study area, as it was believed there are currently too many vehicles in the downtown area.
- Participant encouraged the “grand entrance” to be relocated to the Queens Quay - Yonge Street intersection.
- More benches and street furniture to enhance the public realm was recommended.
- Stakeholders and residents had multiple concerns about the reconstruction of Harbour Street.
- Concerns about air quality because of the increased density, congestion and vehicles idling at intersections.
- Parking should be reduced for the new development – need fewer cars in the downtown.

- Multiple participants expressed concerns about the density and the traffic associated with the density and congestion.
- Several individuals expressed concern over the parking and potential impacts to the TCHC building with the extension of Cooper Street.
- Concerns were raised about existing traffic congestion on Harbour Street, and accessing Yonge Street from Harbour Street in the morning, especially with redevelopment.
- Concerned about the use of a grid network and comments that it is poor for neighbourhood design.
- Concerns about the proposed right-in, right-out movement at the entrance to 33 Bay and corresponding transportation movements.

Four (4) attendees submitted comment sheets at the PIC. Thirteen (13) additional comments were submitted by mail, phone, fax, online form or email before the PIC, following the PIC notification; and after the events through to July 14, 2016. A summary of the PIC, including all comments received, displays presented, and FAQs is provided in **Appendix I**. Online comment forms were also provided to the SAC, and promoted on Waterfront Toronto's social media platforms and newsletters.

## 5.4 Indigenous Community Engagement

Indigenous communities, Métis organizations and government agencies were contacted by the Project Team at key milestones throughout the study process. Indigenous and Northern Affairs Canada (formerly Aboriginal Affairs and Northern Development Canada) and the Ministry of Indigenous Relations and Reconciliation (formerly Ministry of Aboriginal Affairs) were sent letters to identify any Indigenous communities that may have an interest in the study. The Indigenous communities engaged built off the list of communities from Phases 1 and 2. The following Indigenous communities are on the contact list:

- Mississaugas of the New Credit First Nation
- Mississaugas of the Scugog Island First Nation
- Curve Lake First Nation
- Georgina Island First Nation
- Alderville First Nation
- Moore Deer Point
- Chippewas of Rama First Nation
- Hiawatha First Nation
- Beausoliel First Nation

Following the release of the commencement notification acknowledgements were received from the Hiawatha First Nation and Curve Lake First Nation.

## 5.5 Integration of Stakeholder Feedback

The intent of holding the Public Information Centre (PIC) and contacting external agencies, Indigenous communities and other stakeholders for this project was to ensure the public and external agencies had an opportunity to identify any potential concerns and influence the outcome of the preferred plans as appropriate, while also addressing the consultation principles identified in the MCEA document. One of the consultation principles relates to showing how the input received in earlier stages affected the project.

Comments and concerns provided by external agencies throughout the study, and how they were addressed are summarized in **Exhibit 5-2**.

**Exhibit 5-2: Summary of External Agency Comments and Responses**

| Summary of Key Comments | Project Team Response |
|---|---|
| The removal on the existing on-street parking for the TICA is a concern. | The Project Team reviewed alternatives to accommodate the removal of on-street parking for the TICA and held meetings with TICA during the EA (refer to **Sections 5.2.5.3 and 7.1.8**). |
| For cycling infrastructure it was suggested that barriers be provided on both sides of cycling infrastructure is the best option. | Barriers are not being recommended for the cycling infrastructure. Raised cycle tracks provide separation between vehicles and there will be a buffer / furnishing zone that provides separation from pedestrians. Future bike lanes have been designed to maximize space. |
| Concerns about air quality because of the increased density, congestion and vehicles idling at intersections. | It is anticipated that air quality is to improve in the area, in spite of increased congestion. The traffic projections indicate an overall increase in traffic and increased traffic delays in future, but exhaust emission projections indicate that these increases will be more than offset by significantly lower tailpipe emissions, due to the ongoing effect of federal regulations dealing with motor vehicle exhaust pollutants.<br>Active transportation is also encouraged as reflected in the design of the preferred alternatives; cycling and pedestrian infrastructure is provided throughout, where possible. |

| Summary of Key Comments | Project Team Response |
|---|---|
| Multiple participants expressed concerns about the density and the traffic associated with the density and congestion. | This EA study has considered the redevelopment and proposed growth (28,000) as part of the development of the transportation network.<br>The development applications submitted to the City for review are provided for context in this EA only, and cannot be submitted as a Part II Order. |
| | All developers are required to submit Traffic Impact Assessments to the City to analyze the impact of a development on the transportation system, which is reviewed by the City in relation to existing policies and public consultation input. |
| | The transportation modelling completed to assess the Level of Service (LOS) for the proposed transportation network included forecasted volumes based on the anticipated population and employment growth.<br>The street network is designed for all users, including motorists, pedestrians, cyclists and transit. |
| More benches and street furniture to enhance the public realm was recommended. | The Project Team developed a public realm plan that identifies general areas for street furniture and benches within the Precinct (refer to **Section 7.3**). The specific locations will be determined during detail design. |
| The proposed configuration affects residents moving in and out of the building located at 10 Yonge Street. | Alternate access to the building is available via the laneway on the south side of Harbour Street, west of Yonge Street. Vehicles are not permitted to park on the boulevard. The Project Team committed to continue to work with management and residents of 10 Yonge (or 33 Bay) on potential options in advance of, and during, detailed design to resolve outstanding concerns. |
| Concerns about the proposed right-in, right-out movement at the entrance to 33 Bay and corresponding transportation movements. | Given the location of the intersection for the Yonge Street off-ramp, existing turning movements for 33 Bay cannot be accommodated as it would be unsafe to pedestrians. The Project Team reviewed options in consultation with the Board of Directors at 33 Bay (refer to **Section 5.2.5.1**). The Project Team |

| Summary of Key Comments | Project Team Response |
|---|---|
| | committed to continue to work with management and residents of 10 Yonge (or 33 Bay) on potential options in advance of, and during, detailed design to resolve outstanding concerns. |
| Comment about number of travel lanes on various streets. | Vehicle lanes were determined based on the existing conditions, road classification, anticipated use (local vs regional) and transportation modelling. |

# 6.0 EVALUATION OF ALTERNATIVES

The Lower Yonge Transportation Master Plan (LY TMP) completed in June 2015 provides the foundation for the development of alternatives. The alternatives were developed and reviewed to determine which ones best met the problem and opportunity statement, which is to evaluate alternatives to improve movement using existing and potential new road connections for the benefit of all modes of travel.

The following sections build off the work completed during Phases 1 and 2 of the TMP, and evaluation completed to fulfill the requirements of Phases 3 and 4 of the MCEA process.

This chapter describes the alternatives developed for each street segment within the Lower Yonge Precinct Area; the evaluation of the alternatives; and the section of the preferred alternatives.

## 6.1 Alternatives

To ensure there is reasonable and adequate justification to proceed with the improvements and that the need for the study is clearly demonstrated, the MCEA requires that alternatives be considered.

The overall decision-making process for this study occurred in Phases, as Phases 1 and 2 were previously completed. Therefore, this alternative assessment focuses on street segment cross sections, and their ability to:

- Improve and increase existing connections between the Precinct and the downtown;
- Balance local and regional vehicular demand; and,
- Provide facilities that invite people to walk, cycle and use transit within the area while deprioritizing auto use.

### 6.1.1 Alternative Planning Solutions

To ensure there is reasonable and adequate justification to proceed with the improvements and that the need for the study is clearly demonstrated, the MCEA process requires that Planning Alternatives be considered.

At Phase 2 of the MCEA process, the proponent is required to identify all reasonable alternative solutions to address the problem or opportunity. These alternative solutions were documented in the August 2014 Transportation Master Plan, which is available at this location: http://www.toronto.ca/legdocs/mmis/2014/te/bgrd/backgroundfile-72599.pdf.

As described previously, the Lower Yonge Precinct Study Area is expected to become developed and population and employment estimates of approximately 28,000 are anticipated based on the land development. As a result, greater volumes of local vehicle traffic, public transportation, pedestrians, and cyclists are anticipated and will need to be accommodated. The four (4) alternative solutions explored during Phases 1 and 2 of the MCEA study to address these greater expected transportation volumes are listed below and shown in **Exhibit 6-1**:

- Alternative 1 - Do Nothing
- Alternative 2 - Neighbourhood Streets
- Alternative 3 - Closing the Gap
- Alternative 4 - Regional Connections

#### 6.1.1.1 Alternative 1 – Do Nothing

The 'do nothing' alternative would retain the Lower Yonge Precinct in its present form with the existing transportation network. This alternative assumes no major changes to the current network for any mode.

This alternative fails to create a multi-modal street network to support the proposed redevelopment, and anticipated population and employment growth for the Lower Yonge Precinct.

#### 6.1.1.2 Alternative 2 - Neighbourhood Streets

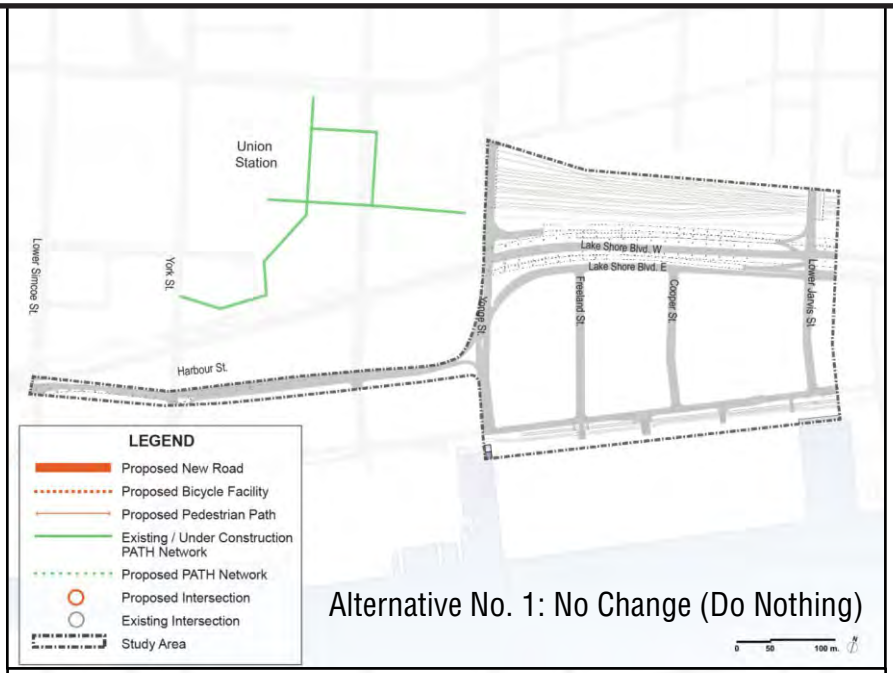
This Alternative introduces a street network that creates more vibrancy, mix-use neighbourhood land use pattern. Harbour Street would be extended eastward from Yonge Street, and a new north-south street ('New' Street) would be created east of Cooper Street bound by Lake Shore Boulevard Eastbound and Queens Quay East to create smaller blocks.

Neighbourhood Streets does not address the projected multimodal transportation needs of the Precinct or City objectives. The minor improvements added do not present a strategy for responding to changing nature of the neighbourhood and development activity.

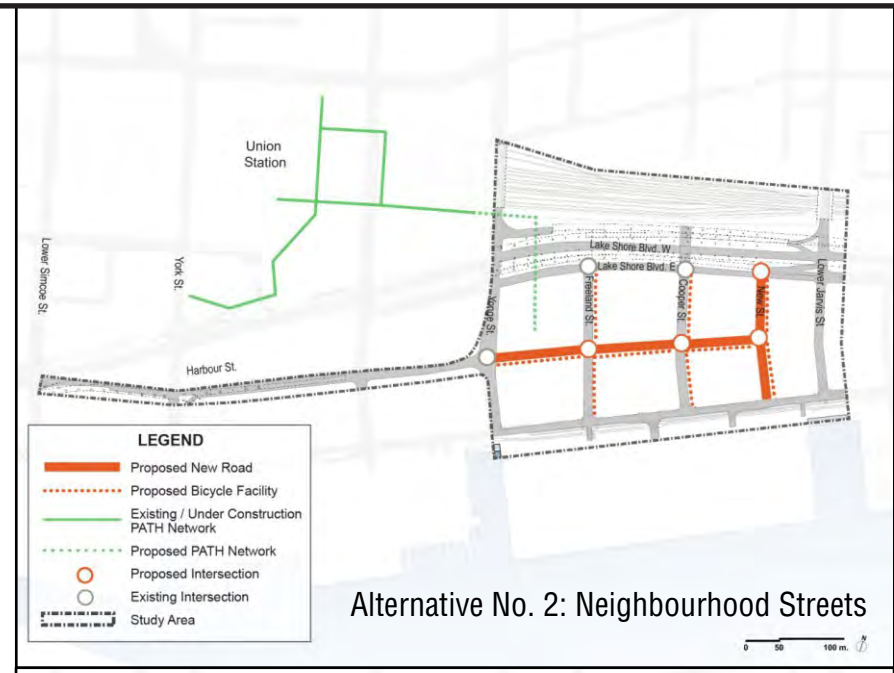
#### 6.1.1.3 Alternative 3 - Closing the Gap

In addition to the improvements from Alternative 2, Alternative 3 provides a new connection across Lake Shore Boulevard / Gardiner Expressway Corridor to Church Street. By extending Cooper Street to Church Street via a tunnel beneath the Gardiner Expressway, the gap between Lower Yonge and the Downtown is being closed. This alternative also removes the Bay Street on-ramp to the Gardiner Expressway, and extends Lake Shore Boulevard eastbound between Bay Street and Yonge Street.

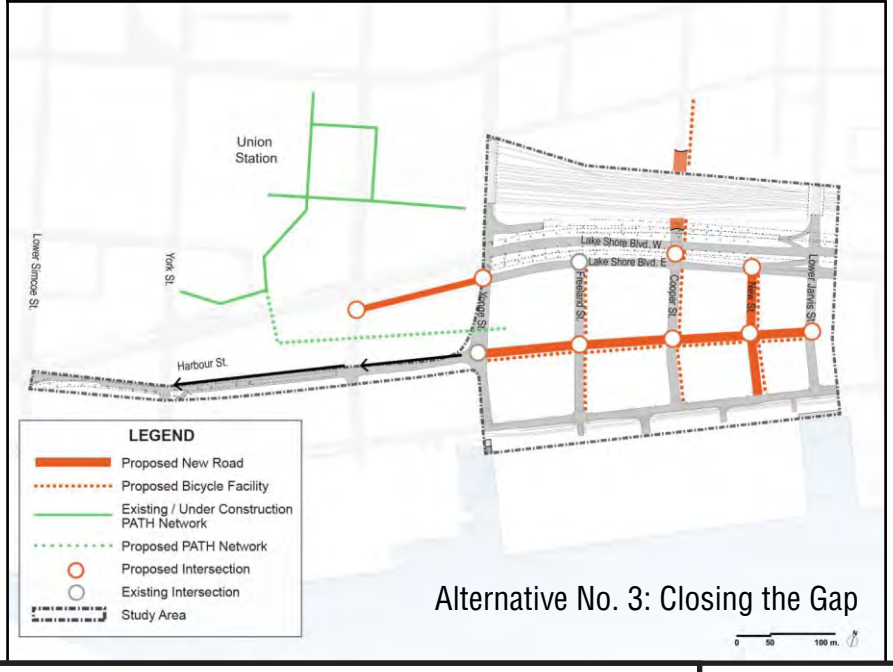
Alternative 3 provides local accessibility, but regional connectivity is limited. In addition, this Alternative was determined to not be cost effective, based on the TMP Study analyses.



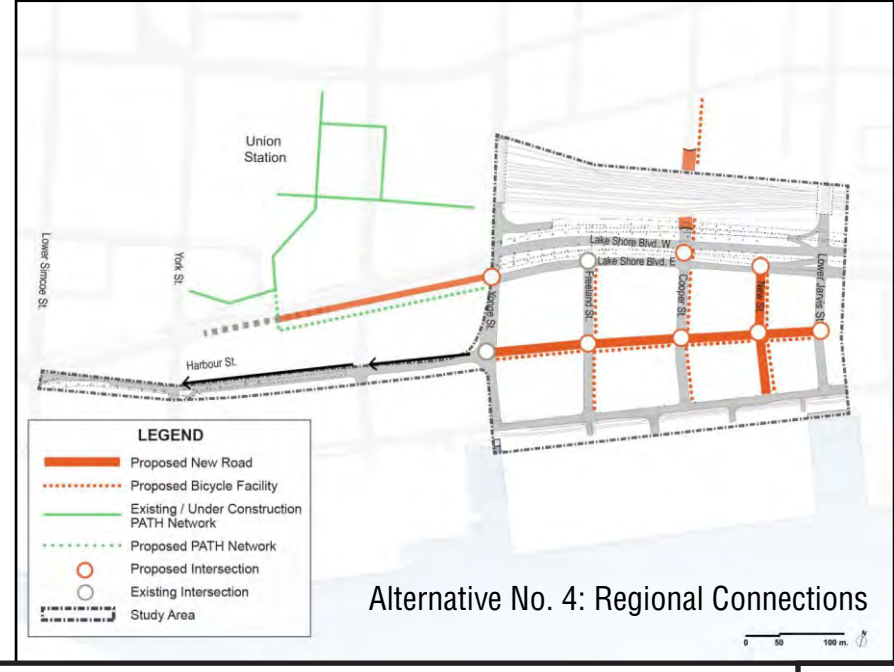

Alternative No. 1: No Change (Do Nothing)




Alternative No. 2: Neighbourhood Streets




Alternative No. 3: Closing the Gap




Alternative No. 4: Regional Connections

**Lower Yonge Precinct**
Municipal Class EA Schedule 'C' Project
Environmental Study Report

## Alternative Solutions from the TMP

Exhibit
**6-1**

#### 6.1.1.4 Alternative 4 - Regional Connections

Alternative 4 builds off Alternative 3 with regard to the local street network and connections to Downtown. This Alternative includes relocating the Gardiner Expressway off-ramp at Lower Jarvis Street to Yonge Street and widening Lake Shore Boulevard Eastbound from to three lanes.

Regional Connections prioritizes local and regional transportation needs; supports sustainable transportation; supports ease of movement; supports Yonge Street as a special public space; and encourages vibrant mixed-use.

### 6.1.2 Preferred Planning Alternatives

Based on the evaluation completed during Phases 1 and 2 of the MCEA study, Regional Connections (Alternative 4) was selected as the preferred alternative in the TMP Study. Regional Connections satisfies all of the transportation components, providing significant improvements to both regional and local transportation infrastructure for pedestrians, cyclists, vehicles, while allowing for a sufficient level of traffic accessibility for the proposed development.

## 6.2 Evaluation Criteria

The evaluation criteria developed during Phases 1 and 2 that reflected the Transportation Principles were updated during Phase 3 to address the evolving needs of the design alternatives and based on stakeholder input received.

The criteria were grouped into the following factor areas:

- Transportation
- Cost
- Land Use / Socio-Economic Environment
- Natural Environment
- Archaeology and Cultural Heritage
- Streetscape / Public Realm
- Constructability

Once the factor areas were established, specific criteria for each factor were developed, as shown in **Exhibit 6-2**. These criteria were used for the cross section assessments by assigning a performance grade of very poor, poor, good and very good based on greatest impact / least benefit to less impact / more benefit. The evaluations are described in more detail in the next sub-sections.

**Exhibit 6-2: Evaluation Factors and Criteria**

| Category | Criteria | Definition |
|---|---|---|
| **Transportation** | Supports sustainable transportation | Prioritizes the ability to comfortably walk, cycle or take transit within the Lower Yonge Precinct MCEA Study Area. These types of environments provide ample space and options for pedestrian and cyclist movements, vehicle speeds are reduced, vehicle rights-of-way are relatively narrow and intersection crossing distances are short. |
| | Supports ease of movement to, from and within the precinct for all users | Supports users of all modes in travelling to, from and within the Precinct with relative ease and comfort. These types of environments are well-integrated into surrounding areas and have a street pattern with relatively small blocks, providing multiple routing options for each mode. |
| | Promotes vehicle capacity | Promotes vehicle capacity, i.e. the number of vehicles that the roadway or intersection can allow to pass through in a given amount of time. It is typically measured in terms of volume (vehicles per hour) or intersection delay (level of service). |
| | Improves traffic safety | Assuming that all components will be designed in a way that is safe for all users, this evaluation criterion is based on the comfort and perception of safety by all users. |
| | Design | Adheres to the City of Toronto design standards and guidelines for transportation facilities, and maintains connectivity to lands adjacent to LYP. Considers the impacts to existing and proposed road infrastructure, compatibility with City's Cycling Network plans, balance of vehicle/cycling/pedestrian uses of public road allowances, and promotes accessibility (Compliance with City Accessibility Design Guidelines and provincial AODA). |
| | Accommodates drainage | Ability to accommodate drainage on the roadways and impermeable surfaces. |
| | Impacts to transit | Minimizes effects on existing transit, including access and travel times and considers future transit routes. |
| | Impacts to emergency vehicles | Minimizes effects on emergency services, including access and travel times. |
| **Cost** | Construction costs | Assesses the construction costs of each alternative. |
| | Operations and maintenance costs | Balances capital costs for maintenance and operation with the benefits produced by each alternative. |
| | Lifecycle costs | Considers the costs through the full life-cycle of the improvements and balancing long-term costs. |
| **Land Use / Socio-economic Environment** | Supports Yonge Street's role as a special public space | Supports cohesive vision for Yonge Street between the rail corridor and Queens Quay. Elements would include a consistent view corridor and street pattern between the waterfront and the CBD, as well as ample sidewalk capacity for public space and amenities. |
| | Encourages vibrant, mixed-use development | Is conducive to redevelopment of the Precinct. This included transportation alternatives that do not disrupt the logical development of parcels and that would support active ground floor spaces. |
| | Minimizes impacts to private property | Minimizes permanent takings, temporary occupation, temporary access obstruction during construction (incl. businesses), and permanent access closures. |
| | Public amenities and streetscape animation | Percentage of the right-of-way dedicated to public realm uses such as pedestrian activity, trails, public art, and street furniture. |
| | Nuisance effects | Minimizes construction noise and vibration, operational noise and vibration, and construction dust and emissions |
| | Coordination with existing plans and policy | Compatible with existing planning policy, precinct plans and environmental assessments |
| **Natural Environment** | Water quality / aquatic species | Minimizes the potential for the transportation component to have an adverse effect on water quality and aquatic species. |
| | Vegetation / wildlife, including Species At Risk | Minimizes the potential for the transportation component to have an adverse effect on vegetative community; wildlife; or bird species. |
| | Potential for contamination and excess material | Minimizes the potential to encounter contamination, and effectively manages excess material. |
| | Tree canopy coverage | Maximizes opportunity for street tree planting in optimized urban condition that provides for the long term health of the trees |
| | Microclimate | Maximizes access to natural sunlight within the corridor, and provides shelter from wind. |
| | Climate Change | Maximizes the use of green infrastructure, and reduces the heat island effect. |
| | Effects on air and noise | Minimizes the effects on air and noise. |
| **Archaeology and Cultural Environment** | Archaeology | Minimizes the potential for the transportation component to have an adverse effect on archaeological resources in the vicinity of the study area. |
| | Cultural heritage | Minimizes the potential for the transportation component to have an adverse effect on cultural heritage resources in the vicinity of the study area. |
| **Streetscape / Public Realm** | Quality of design | Supports design excellence of infrastructure and streetscape. Maximizes impact of corridor on design of adjacent development. |
| | Quality of place | Enhances the attractiveness of urban environment and creates placemaking opportunities. |
| **Constructability** | Effects on the current transportation network | Supports transit, pedestrian, road, rail, and bike mobility through the study and minimizes the duration of disruption for each mode. |
| | Staging | Fewer number of stages and minimizes the duration of the construction stages. |
| | Effects on utilities | Minimizes the number and scale of existing utilities affected |

## 6.3 East-West Streets

Lake Shore Boulevard East and the Queens Quay East are the existing east-west streets within the Lower Yonge Precinct Area. Harbour Street will be extended from the existing terminus at Yonge Street easterly to Lower Jarvis Street. The sub-sections below provide an overview of the alternatives for each section of Harbour Street and the evaluation of the alternatives. These alternatives were presented at the PIC on June 23, 2016.

### 6.3.1 Harbour Street (Bay Street to Yonge Street)

Three alternatives were assessed for Harbour Street from Bay Street to Yonge Street, all of the alternatives have a right-of-way of 26.20 m. The alternatives are described in more detail below and shown in **Exhibit 6-3a.** The assessment is shown in **Exhibit 6-3b**.

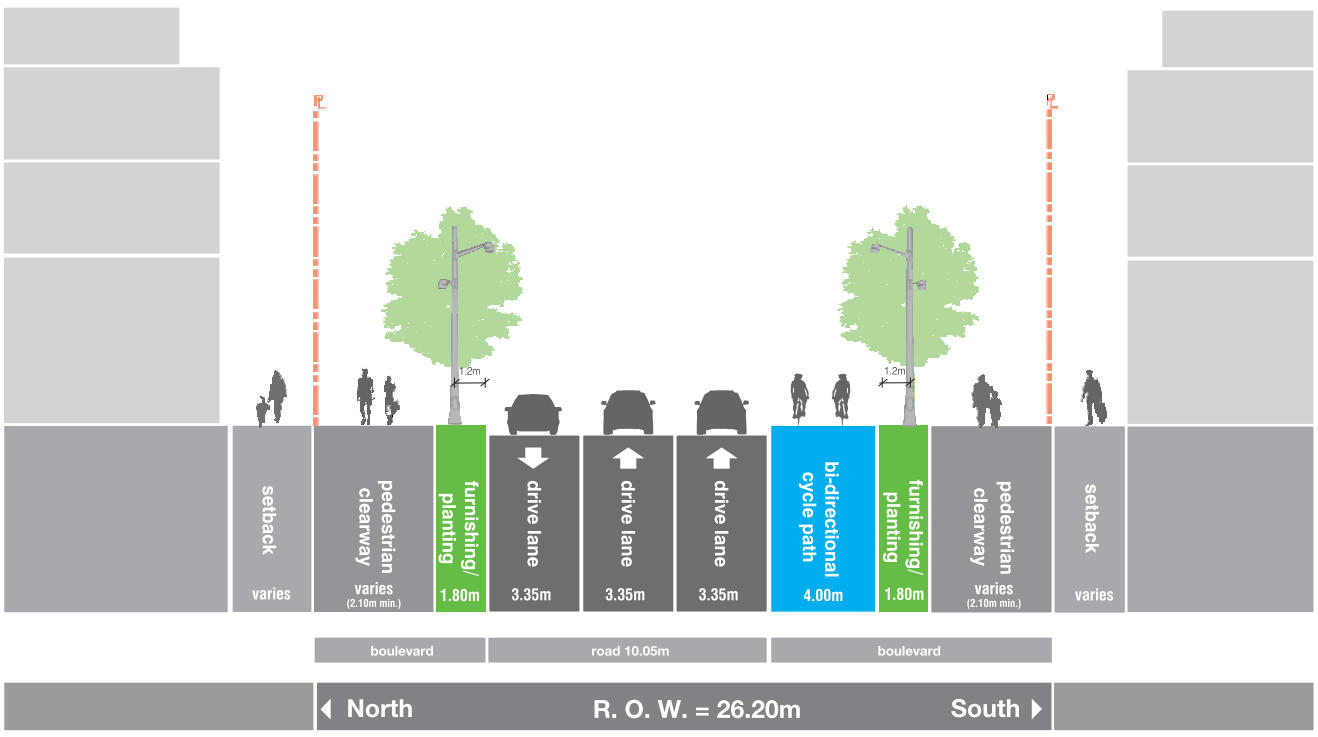
Alternative 1 consists of a four-lane cross section with travel lanes being 3.50 m wide. There are two lanes in each direction and cyclists would share the curbside travel lanes with vehicles as shown with the bike sharrows.

Alternative 2 consists of a three-lane cross section with two-lanes in the eastbound direction and one-lane westbound. The lane widths would be 3.35 m, and there would be a bi-directional cycle track on the south-side of Harbour Street directly adjacent to the vehicular traffic. There would be a buffer between the pedestrian clearway and the cycle track to provide separation.

Alternative 3 includes a three-lane cross section with in the eastbound direction and one-lane westbound. The vehicular lanes would be 3.35 m wide. There would be a bi-directional cycle track on the south-side of Harbour Street separated from the vehicular and pedestrian traffic through the use of buffer zones and furnishing / planting.

## Alternative 1 (TMP):
## Harbour Street: Bay Street - Yonge Street (Facing East)
## 4-Lane with Bike Sharrows (26.20m R.O.W.)


## Alternative 2:
## Harbour Street: Bay Street - Yonge Street (Facing East)
## 3-Lane + Bi - Directional Cycle Path (26.20m R.O.W.)




## Alternative 3:

## Harbour Street: Bay Street - Yonge Street (Facing East)
## 3-Lane + Bi - Directional Cycle Path (26.20m R.O.W.)
## THE PREFERRED CROSS SECTION

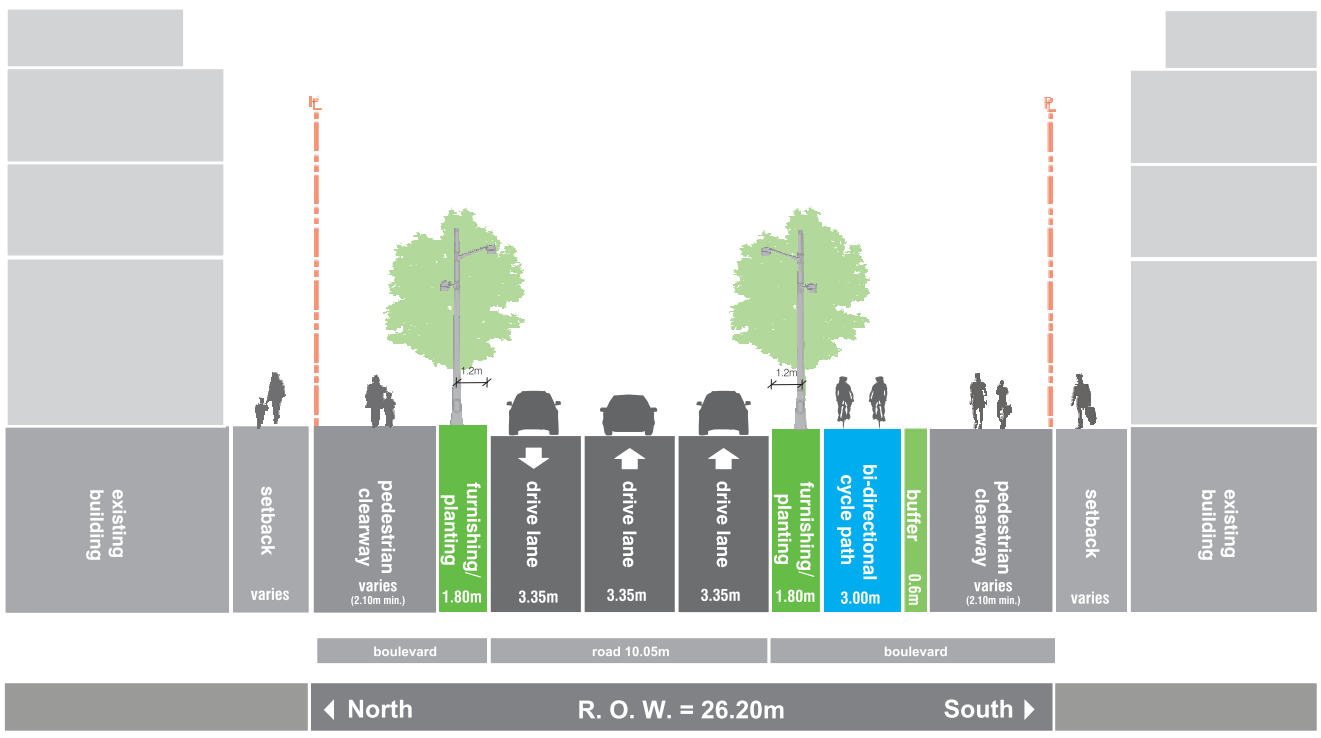


**Exhibit 6-3b: Harbour Street - Bay Street to Yonge Street Evaluation of Alternatives**

| Criteria | Alternative 1 TMP Four Lanes + Bike Sharrows | Alternative 2 Three Lanes + Bi-directional Cycle track | Alternative 3 Three Lanes + Bi-directional Cycle track | Key Highlights |
|---|---|---|---|---|
| **Transportation** |  |  |  | Alternatives 2 and 3 provide appropriate capacity in both directions (Alternative 1 results in excess capacity), cycle lanes, and pedestrian clearway. Alternative 1 is least preferred as it requires cyclists to share drive lanes with curb lane traffic. |
| **Cost** |  |  |  | There is no significant difference between the Alternatives. |
| **Land Use / Socio-Economic Environment** |  |  |  | Alternative 2 and 3 are consistent with existing plans / policies; bike lanes are separated from other modes (pedestrians / vehicles) with sufficient buffers. |
| **Natural Environment** |  |  |  | Given the lack of natural environment features, there is no significant difference between the Alternatives. |
| **Archaeology and Cultural Environment** |  |  |  | There is no significant difference between the Alternatives and potential impacts on archaeology and cultural resources. |
| **Streetscape / Public Realm** |  |  |  | Alternative 3 dedicates the highest percentage of the right-of-way to public realm users. |
| **Constructability** |  |  |  | There is no significant difference between Alternatives 2 and 3. |
| **Overall** |  |  |  | **Alternative 3** is overall preferred for the following reasons:<br>• Promotes local accessibility;<br>• Supports ease of movements to, from and within the Precinct;<br>• Balance regional and local vehicular circulation;<br>• Retains active transportation configuration to be built to the west;<br>• Encourages sustainable transportation modes; and<br>• Provides for separated bike lanes. |

### 6.3.2 Harbour Street (Yonge Street to Freeland Street)

Three alternatives were assessed for Harbour Street from Yonge Street to Freeland Street, all of the alternatives have a right-of-way of 27.00 m. The alternatives are described in more detail below and shown in **Exhibit 6-4a**.The assessment is shown in **Exhibit 6-4b**.

Alternative 1 consists of a four-lane cross section with travel lanes being 3.50 m wide, for a total road width of 14.00 m. There are two lanes in each direction and cyclists would share the curbside travel lanes with vehicles as shown with bike sharrows. On-street parking would be permitted during the off-peak hours.

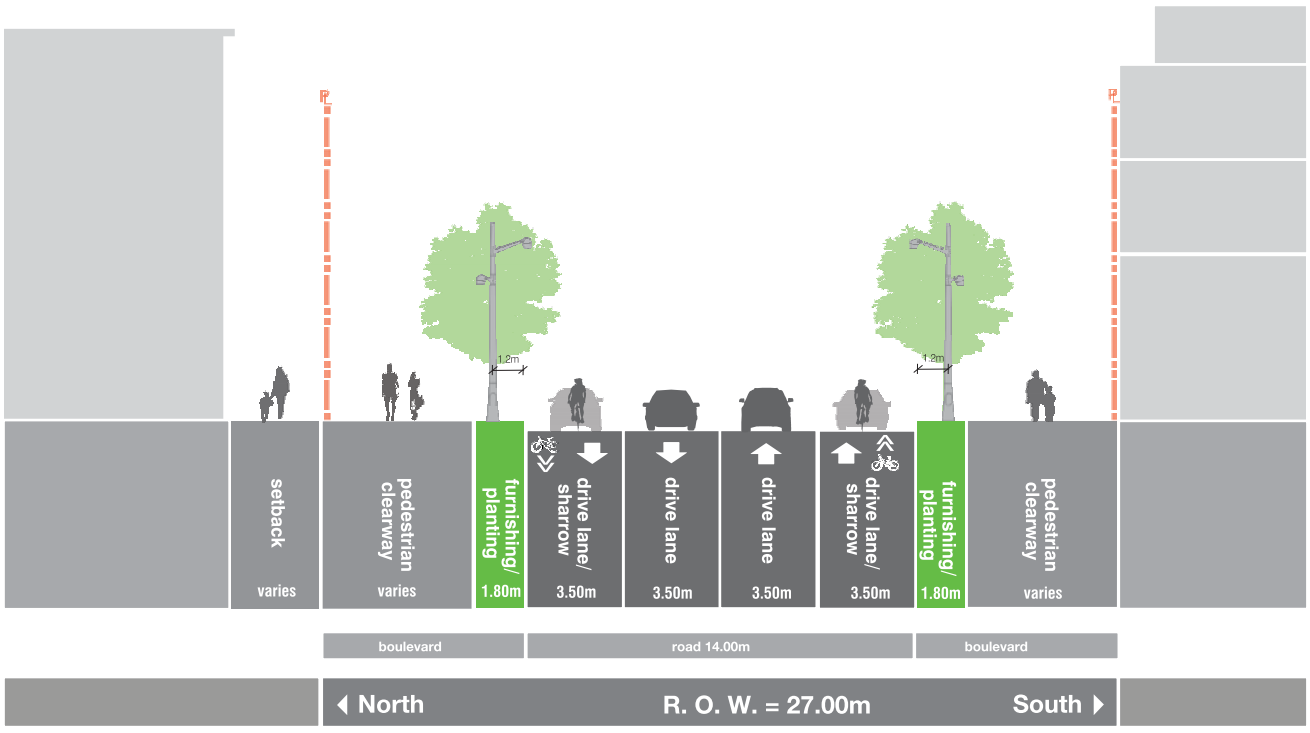
Alternative 2 consists of a four-lane cross section with two-lanes in the eastbound direction and two-lanes in the westbound direction. The lane widths would be 3.30 m, and the road width in Alternative 2 is 13.20 m. There would be a bi-directional cycle track on the south-side of Harbour Street directly adjacent to the vehicular traffic.

Alternative 3 includes a three-lane cross section with two eastbound lanes and one-lane westbound. The vehicular lanes would be 3.30 m wide. The total road width is 9.90 m, which provides for opportunities for wider pedestrian clearway. There would be a 3.00 m bi-directional cycle track on the south-side of Harbour Street separated from the vehicular and pedestrian traffic from buffer zones and furnishing / planting.

None of the Alternatives have an impact on the existing heritage resources at 55-95 Lake Shore Boulevard.

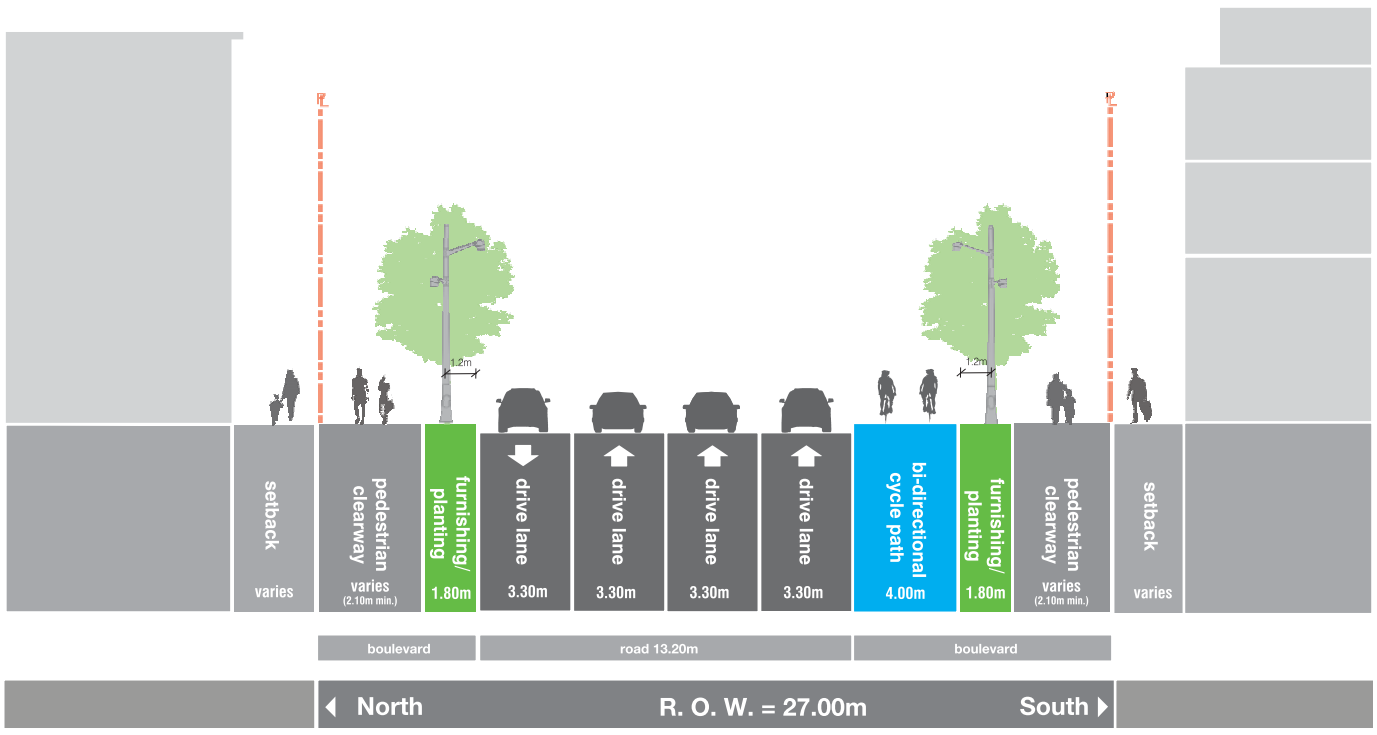
## Alternative 1 (TMP):

## Harbour Street: Yonge Street - Freeland Street (Facing East)
## 4 - Lane with Bike Sharrows (27.00m R.O.W.)




## Alternative 2:

## Harbour Street: Yonge Street - Freeland Street (Facing East)
## 4 - Lane + Bi - Directional Cycle Path (27.00m R.O.W.)




## Alternative 3:

## Harbour Street: Yonge Street - Freeland Street (Facing East)
## 3 - Lane + Bi - Directional Cycle Path (27.00m R.O.W.)
## THE PREFERRED CROSS SECTION

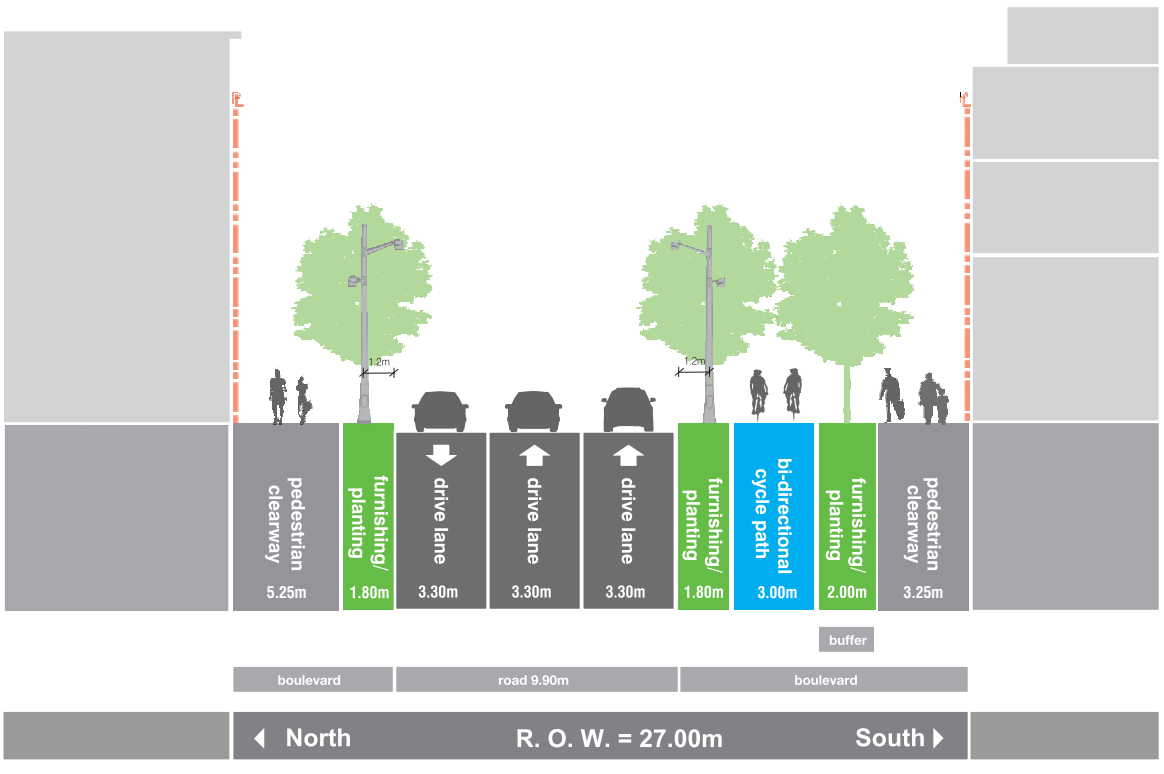
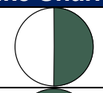
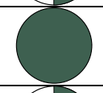
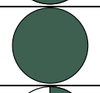
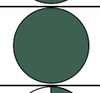
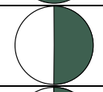
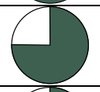
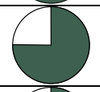
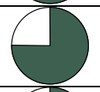
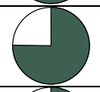
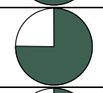
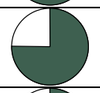
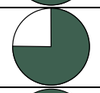
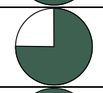
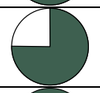
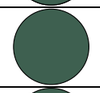
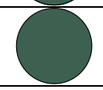
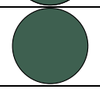
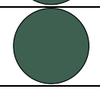


**Exhibit 6-4b: Harbour Street - Yonge Street to Freeland Street Evaluation of Alternatives**

| Criteria | Alternative 1<br>TMP<br>Four Lanes<br>+ Bike Sharrows | Alternative 2<br>Four Lanes<br>+ Bi-Directional<br>Cycle track | Alternative 3<br>Three Lanes<br>+ Bi-Directional<br>Cycle track | Key Highlights |
|---|---|---|---|---|
| **Transportation** |  |  |  | Alternative 3 provides for appropriate vehicular capacity in both directions (both Alternatives 1 and 2 result in excess westbound capacity), bike facility, and pedestrian clearway. Alternative 1 is least preferred as it requires cyclists to share lanes with curb lane traffic. |
| **Cost** |  |  |  | There is no significant difference between the Alternatives. |
| **Land Use / Socio-Economic Environment** |  |  |  | All Alternatives require the same right-of-way; however both Alternatives 2 and 3 align with the proposed cross-section to the west. |
| **Natural Environment** |  |  |  | Given the lack of natural environment features, there is no significant difference between the Alternatives. |
| **Archaeology and Cultural Environment** |  |  |  | There is no significant difference between the Alternatives and potential impacts on archaeology and cultural resources. |
| **Streetscape / Public Realm** |  |  |  | Alternative 3 dedicates the highest percentage of the right-of-way to public realm users, including the largest pedestrian walkway of all Alternatives. |
| **Constructability** |  |  |  | There is no significant difference between the Alternatives. |
| **Overall** |  |  |  | **Alternative 3** is overall preferred for the following reasons:<br>• Balances regional and local vehicular circulation and accessibility;<br>• Greater percentage of the right-of-way dedicated to public realm uses; and<br>• Encourages sustainable transportation modes with appropriate separation between all modes of transportation. |

### 6.3.3 Harbour Street (Freeland Street to Lower Jarvis Street)

Three alternatives were assessed for Harbour Street from Freeland Street to Lower Jarvis Street, all of the alternatives have a right-of-way of 27.00 m. The alternatives are described in more detail below and shown in **Exhibit 6-5a**.The assessment is shown in **Exhibit 6-5b**.

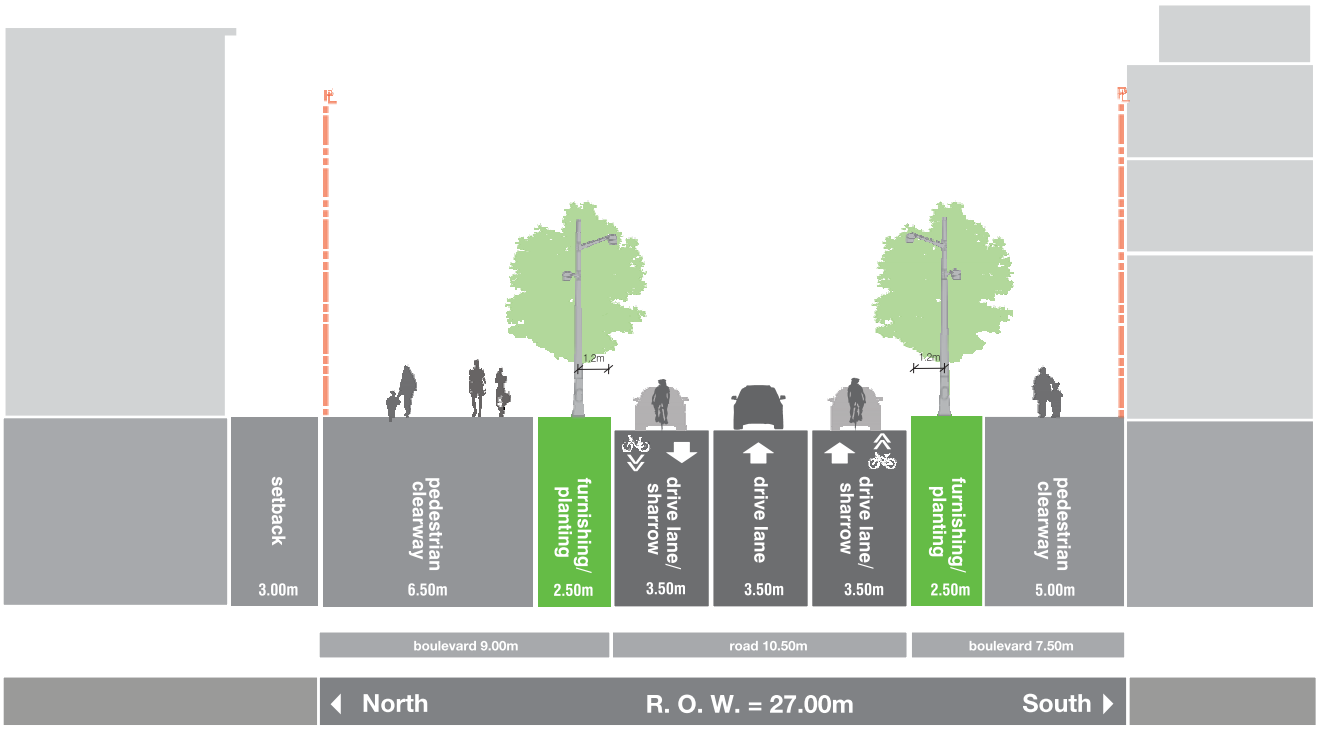
Alternative 1 consists of a three-lane cross section with travel lanes being 3.50 m wide, for a total road width of 10.50 m. There are two-lanes in the eastbound direction and one-lane westbound direction. Cyclists would share the curbside travel lanes with vehicles as shown with bike sharrows. On-street parking would be permitted during the off-peak hours. This alternative provides for wide boulevards and pedestrian clearways.

Alternative 2 consists of a two-lane cross section with one-lane in each direction, with a curbside parking lane on the north side of Harbour Street. Lane widths would be 3.30 m, and the total road width would be 8.80 m. There would be a 4.00 m bi-directional cycle track on the south-side of Harbour Street directly adjacent to the vehicular traffic.

Alternative 3 includes a three-lane cross section with two eastbound lanes and one-lane westbound. The vehicular lanes would be 3.30 m wide. The total road width is 9.90 m. There would be a 3.00 m bi-directional cycle track on the south-side of Harbour Street separated from the vehicular and pedestrian traffic from buffer zones and furnishing / planting.

## Alternative 1 (TMP):

## Harbour Street: Freeland Street - Lower Jarvis Street (Facing East)
## 3 - Lane with Sharrows (27.00m R.O.W.)




## Alternative 2:
## Harbour Street: Freeland Street - Lower Jarvis Street (Facing East)
## 2 - Lane + Bi - Directional Cycle Path + Parking Lane (27.00m R.O.W.)


## Alternative 3:
## Harbour Street: Freeland Street - Lower Jarvis Street (Facing East)
## 3 - Lane + Bi - Directional Cycle Path + Parking Lane (27.00m R.O.W.)
## THE PREFERRED CROSS SECTION

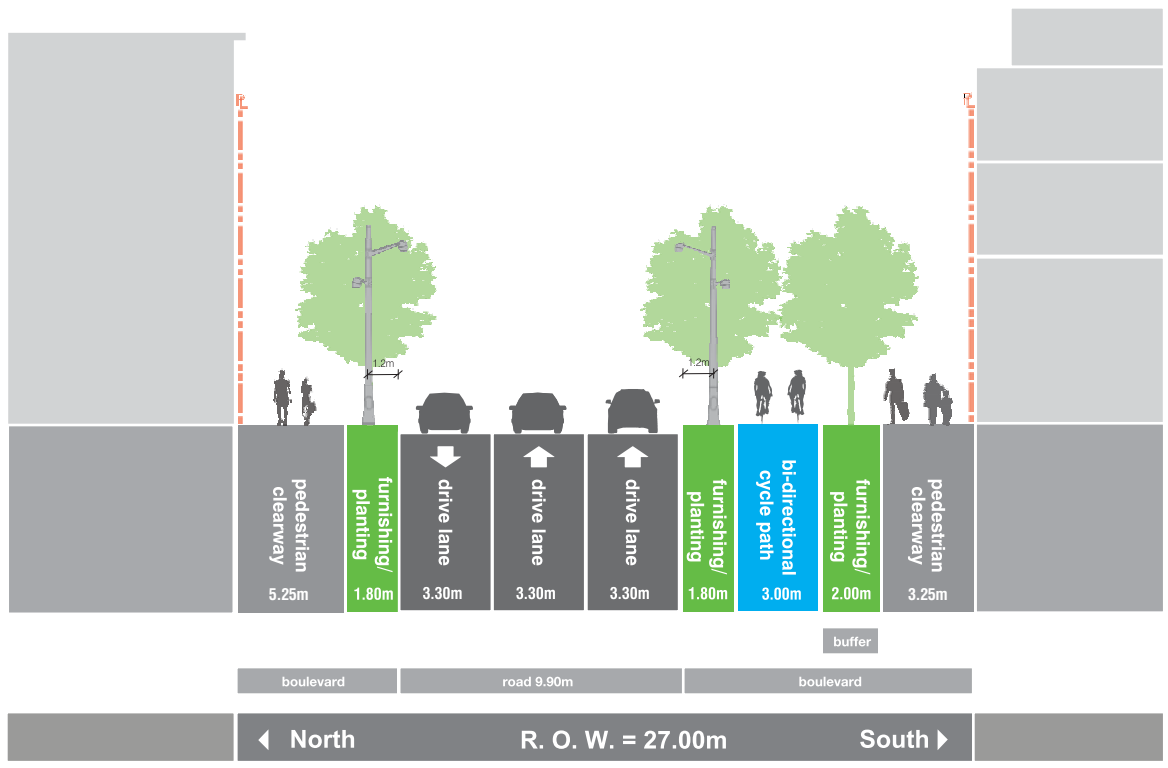
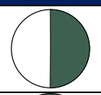
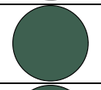
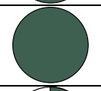
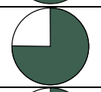
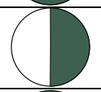
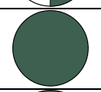
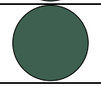


**Exhibit 6-5b: Harbour Street - Freeland Street to Lower Jarvis Street Evaluation of Alternatives**

| Criteria | Alternative 1 TMP Three Lanes + Bike Sharrows | Alternative 2 Two lanes + Bi-Directional Cycle track + Parking Lane | Alternative 3 Three lanes + Bi-Directional Cycle track | Key Highlights |
|---|---|---|---|---|
| **Transportation** |  |  |  | Alternative 3 provides the greatest transportation benefits including an appropriate cycling facility, and provides appropiate capacity in both directions. Alternative 1 requires cyclists to share lanes with curb lane traffic. Alternative 2 does not provide sufficient vehicular capacity. |
| **Cost** |  |  |  | In terms of cost, there is no significant difference between the Alternatives. |
| **Land Use / Socio-Economic Environment** |  |  |  | Alternative 2 and 3 align with the proposed cross section to the west. |
| **Natural Environment** |  |  |  | Given the lack of natural environment features, there is no significant difference between the Alternatives. |
| **Archaeology and Cultural Environment** |  |  |  | All Alternatives will have impacts on a listed heritage site. |
| **Streetscape / Public Realm** |  |  |  | Alternative 2 dedicates the highest percentage of the right-of-way to public realm users. |
| **Constructability** |  |  |  | There is no significant difference between the Alternatives. |
| **Overall** |  |  |  | **Alternative 3** is overall preferred for the following reasons:<br>• Balances regional and local vehicular circulation and accessibility;<br>• Encourages sustainable transportation modes; and<br>• Supports ease of movements for all transportation modes, from and within the Precinct. |

### 6.3.4 Lake Shore Boulevard (Yonge Street to Lower Jarvis Street)

A single alternative was assessed for eastbound Lake Shore Boulevard between Yonge Street and Lower Jarvis Street. No changes are proposed for westbound Lake Shore Boulevard, with an exception of a WB left turn lane at Cooper Street when the Cooper Street tunnel is built. The alternative is described in more detail below and shown in **Exhibit 6-6a**.

Alternative 1 consists of a basic three-lane cross-section with the outer lanes being 3.50 m and 3.30 m for the inner lane. No cycling facilities are proposed. Provisions would be made for a future left turn lane at Cooper Street when the Cooper Street tunnel is built.

### 6.3.5 Gardiner Off-Ramp

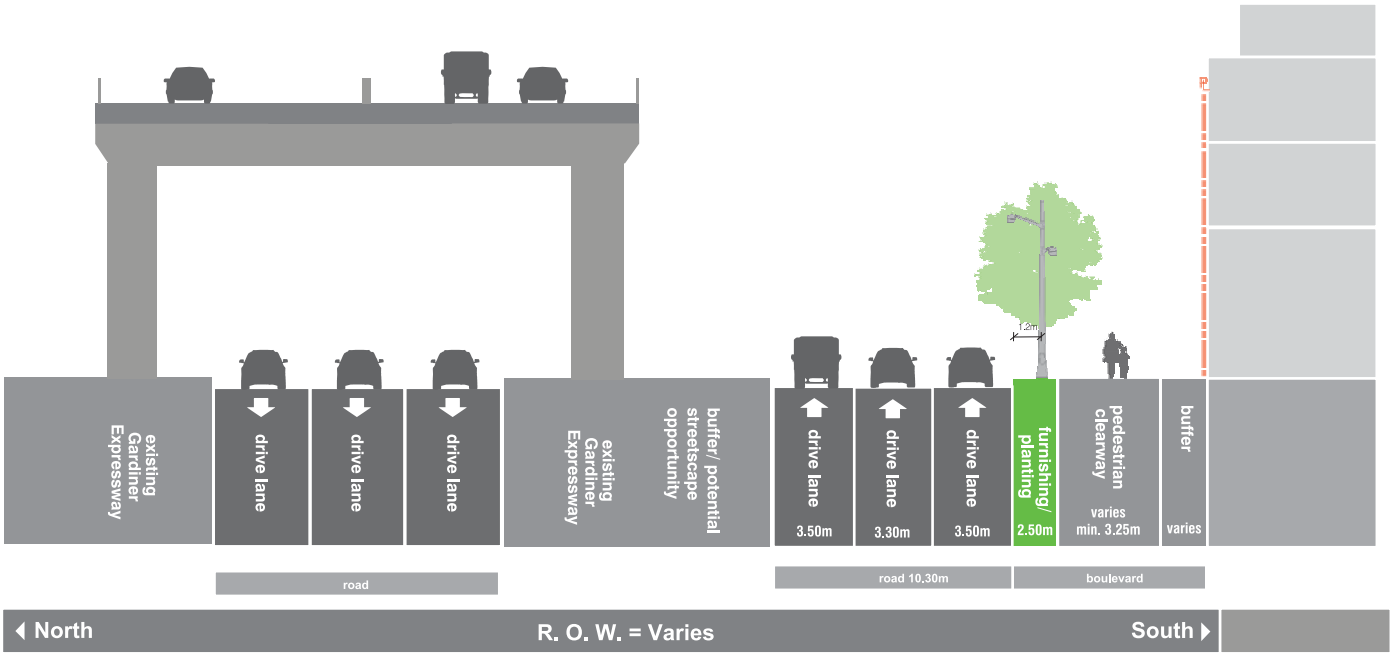
Three alternatives were assessed for lane configuration for the Gardiner Off-ramp that will terminate at Yonge Street. The alternatives are described in more detail below and shown in **Exhibit 6-7a**.The assessment is shown in **Exhibit 6-7b**.

Alternative 1 consists of a single-lane off-ramp that expands to three-lanes at the Yonge Street intersection to permit various turning movements.

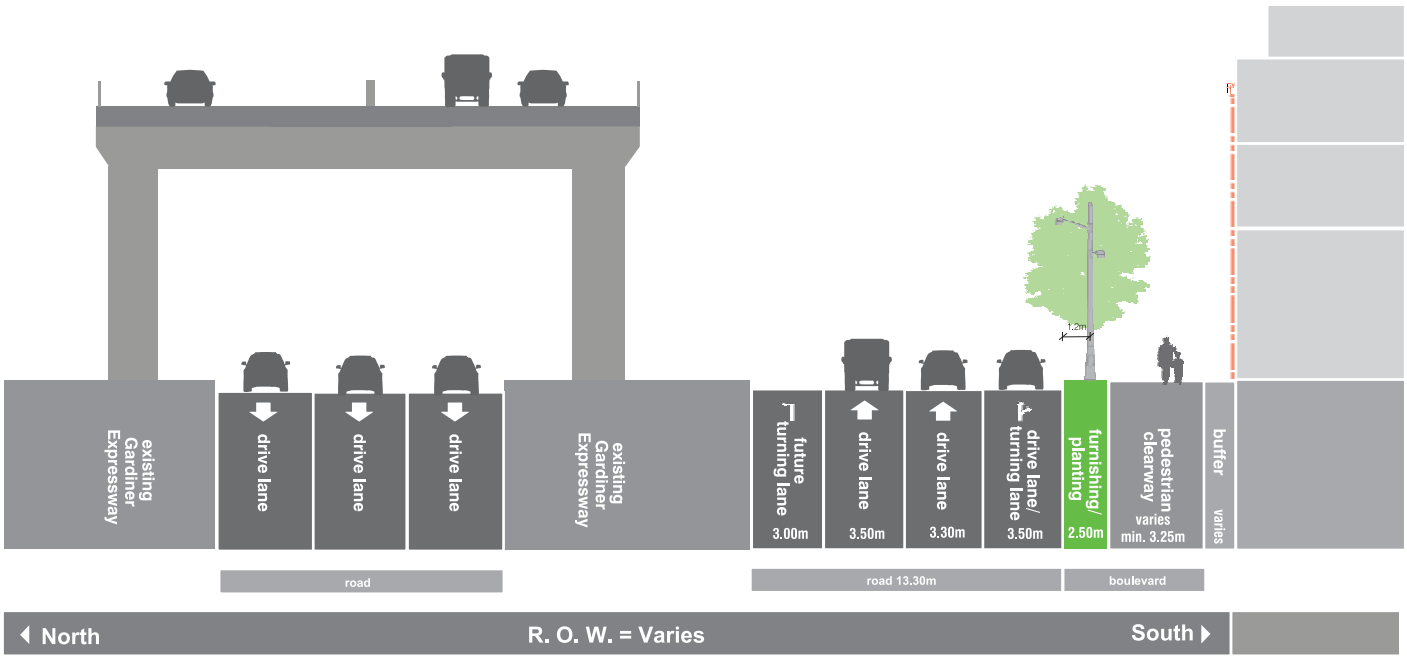
Alternative 2 consists of two-lanes that increases to four-lanes at the Yonge Street intersection to permit various turning movements.

Alternative 3 consists of a single lane that expands to four-lanes at the Yonge Street intersection to permit various turning movements.

## Lake Shore Boulevard : Yonge Street - Lower Javis Street (Facing East)
## 3-Lane + Wider Boulevard
## THE PREFERRED CROSS SECTION




## Lake Shore Boulevard at Cooper Street (Facing East From West Side of Cooper Street)
## 3-Lane + Wider Boulevard
## THE PREFERRED CROSS SECTION



# Gardiner Off-ramp (Facing East)
# THE PREFERRED CROSS SECTION

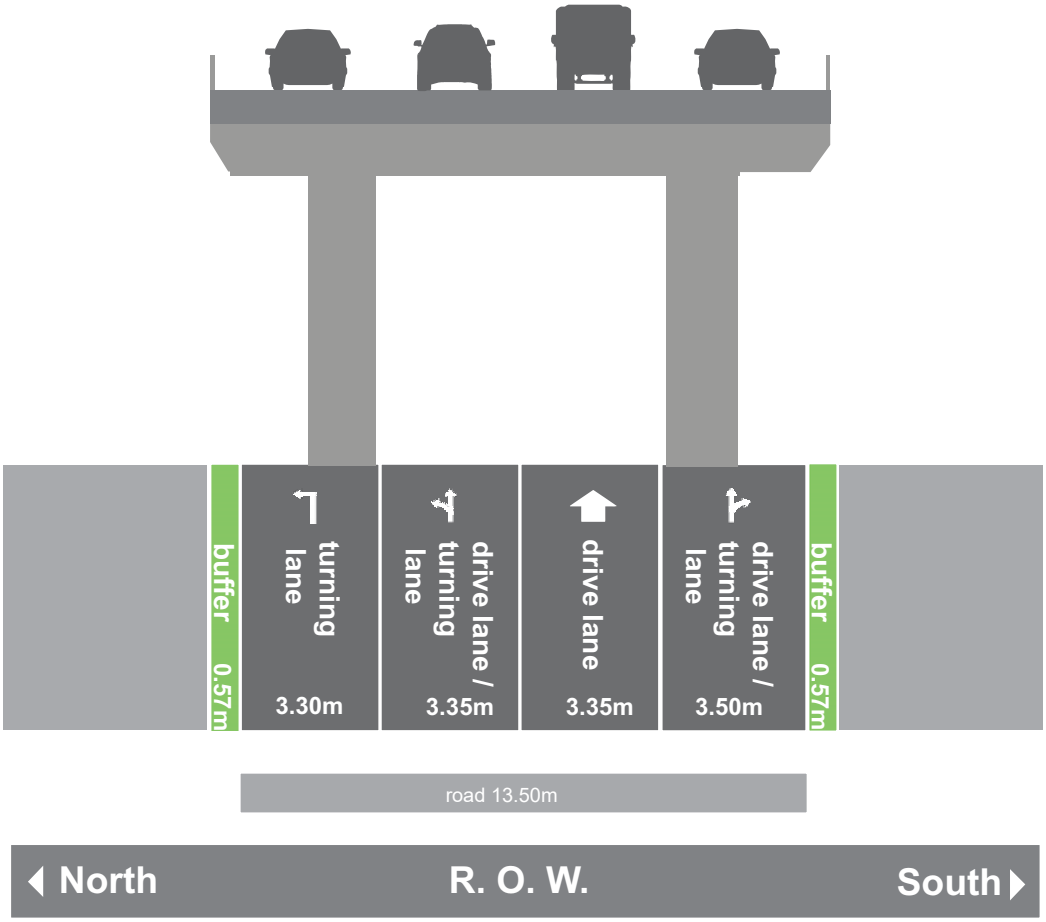
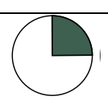


**Exhibit 6-7b: Gardiner Off-Ramp Evaluation of Alternatives**

| Criteria | Alternative 1 TMP Single lane to three lanes | Alternative 2 Two lanes to four lanes | Alternative 3 Single lane to four lanes | Key Highlights |
|---|---|---|---|---|
| **Transportation** |  |  |  | Four lanes required at the Yonge Street intersection to address traffic demands. |
| **Cost** |  |  |  | Alternative 1 costs slightly less to construct given it is a three lane throat at Yonge Street. |
| **Land Use / Socio-Economic Environment** |  |  |  | There is insufficient property on south side of the Gardiner Expressway to construct two lane exit. |
| **Natural Environment** |  |  |  | There is no significant difference between the Alternatives given the urban environment of the off-ramp terminus. |
| **Archaeology and Cultural Environment** |  |  |  | All alternatives are anticipated to have the same impact on archaeology and cultural resources. There is no significant difference between the Alternatives. |
| **Streetscape / Public Realm** |  |  |  | Alternative 1 is preferred because the three lane throat provides slightly more space for pedestrians on Yonge Street. |
| **Constructability** |  |  |  | Two lane exit have major property constraints. |
| **Overall** |  |  |  | Although assessed similarly to Alternative 1, Alternative 3 is preferred as it provides sufficient capacity to meet travel demands including turning movements at Yonge Street and it can be built without additional property. |

## 6.4 North-South Streets

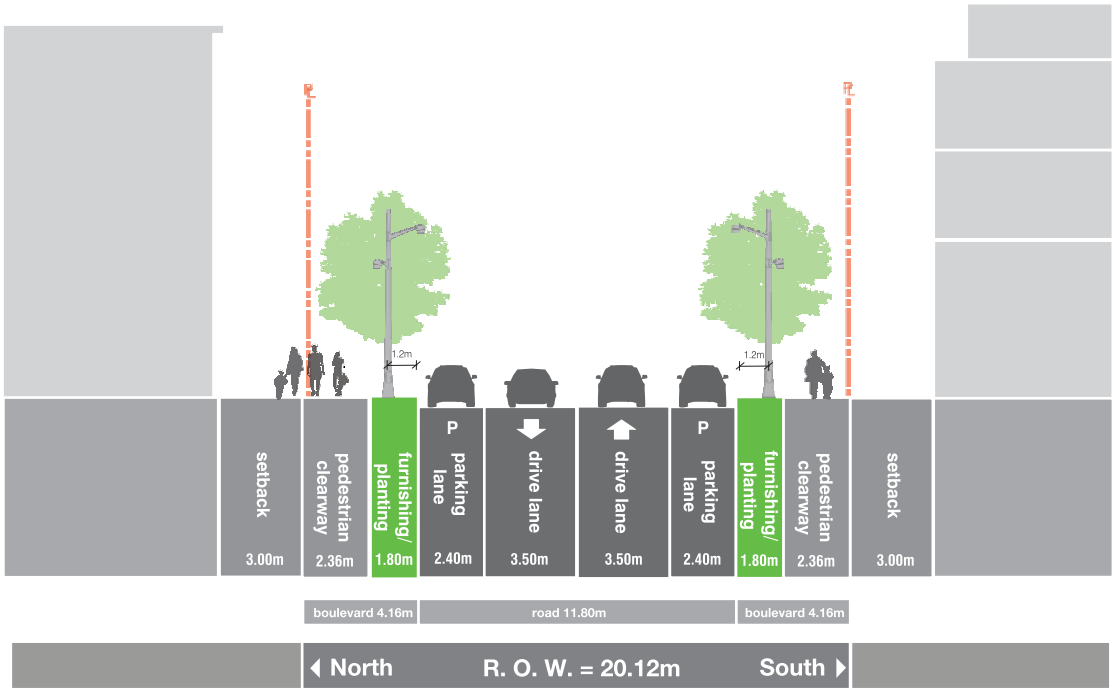
### 6.4.1 Freeland Street (Queens Quay to Lake Shore Blvd)

Two alternatives were assessed for Freeland Street from Queens Quay to Lake Shore Boulevard; both alternatives have a right-of-way of 20.12 m. The alternatives are described in more detail below and shown in **Exhibit 6-8a**.The assessment is shown in **Exhibit 6-8b**.

Alternative 1 consists of a two-lane cross with each lane being 3.50 m wide. The total road width would 11.80 m. On-street parking would exist on both sides of Freeland Street.

Alternative 2 consists of a two-lane cross with each lane being 3.30 m wide. The total road width would be 9.60 m. On-street parking would be permitted on one side of the street, where appropriate to accommodate truck movements. The reduced road width provides more opportunities for a wider pedestrian clearway.

## Alternative 1 (TMP):
## Freeland Street: Queens Quay - Lake Shore Blvd EB (Facing North)
## 2 - Lane + Parking Lanes (20.12m R.O.W.)




## Alternative 2:
## Freeland Street: Queens Quay - Lake Shore Blvd EB (Facing North)
## 2 - Lane + Parking (20.12m R.O.W.)
Note: *Parking will be permitted on one side where appropriate to accommodate truck movements.

**PRELIMINARY PREFERRED**

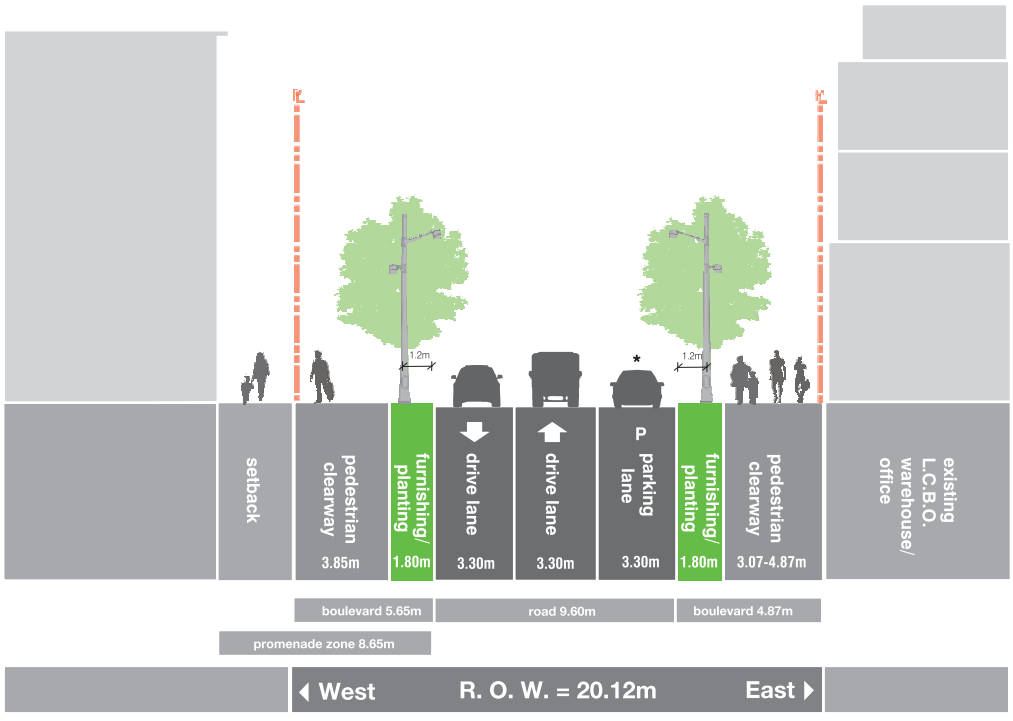
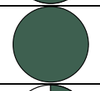
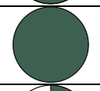
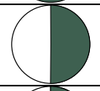
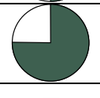


**Exhibit 6-8b: Freeland Street from Queens Quay to Lake Shore Blvd Evaluation of Alternatives**

| Criteria | Alternative 1<br>Two lanes + parking lanes | Alternative 2<br>Two lanes + parking | Key Highlights |
|---|---|---|---|
| **Transportation** |  |  | The Alternative 1 roadway is greater than half of the road allowance, and dedicated on-street parking lanes on both sides of the street is incompatiable with urban design objectives. |
| **Cost** |  |  | There is no significant difference between the Alternatives. |
| **Land Use / Socio-Economic Environment** |  |  | Alternative 2 provides a balance between the movement of goods and parking available. |
| **Natural Environment** |  |  | Given the lack of natural environment features, there is no significant difference between the Alternatives. |
| **Archaeology and Cultural Environment** |  |  | Both Alternatives are equally preferred as it is anticipated that neither will impact archaeological resources and culture heritage. |
| **Streetscape / Public Realm** |  |  | Alternative 2 is preferred because it dedicates the highest percentage of the right-of-way to public realm users. |
| **Constructability** |  |  | There is no significant difference between the Alternatives. |
| **Overall** |  |  | Alternative 2 is preferred for the following reasons:<br>• The right-of-way is appropriately scaled allowing for different modes of transportation;<br>• Provides greater pedestrain clearway; and<br>• Parking is permitted where appropriate. |

### 6.4.2 Cooper Street (Queens Quay to Lake Shore Blvd)

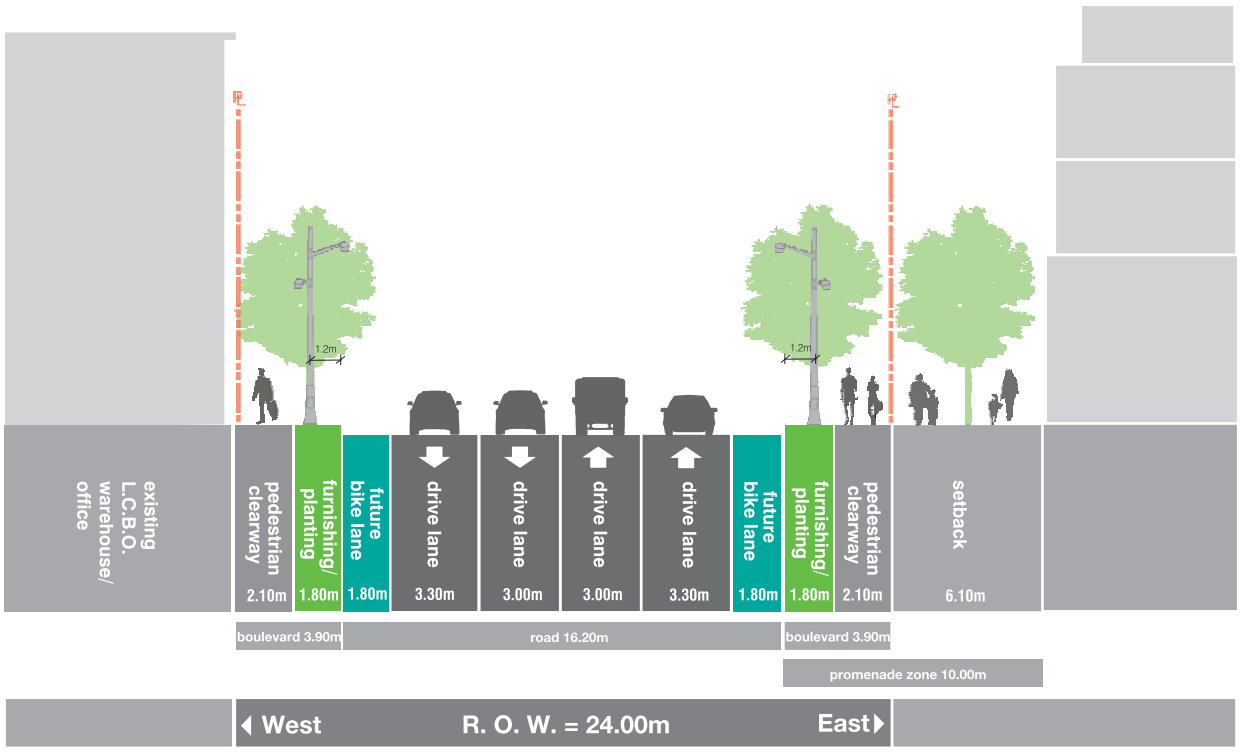
Three alternatives were assessed for Cooper Street from Queens Quay East to Lake Shore Boulevard Eastbound. The right-of-way width for the three alternatives varies. The alternatives are described in more detail below and shown in **Exhibit 6-9a**.The assessment is shown in **Exhibit 6-9b**.

Alternative 1 consists of a four-lane cross section with a right-of-way width of 24.00 m. The inner travel lanes are 3.00 m wide and the curbside lane being 3.30 m wide, for a total road width of 16.20 m. The road width provides an opportunity for a future uni-directional bike facility.

Alternative 2 consists of a two-lane cross-section with a right-of-way width of 19.90 m. The travel lanes are 3.15 m wide, and the road width provides an opportunity for a future uni-directional bike facility. On the west side of Cooper Street parking is permitted to accommodate truck movements. The parking is temporary, as it would be removed when the bike lanes are implemented.

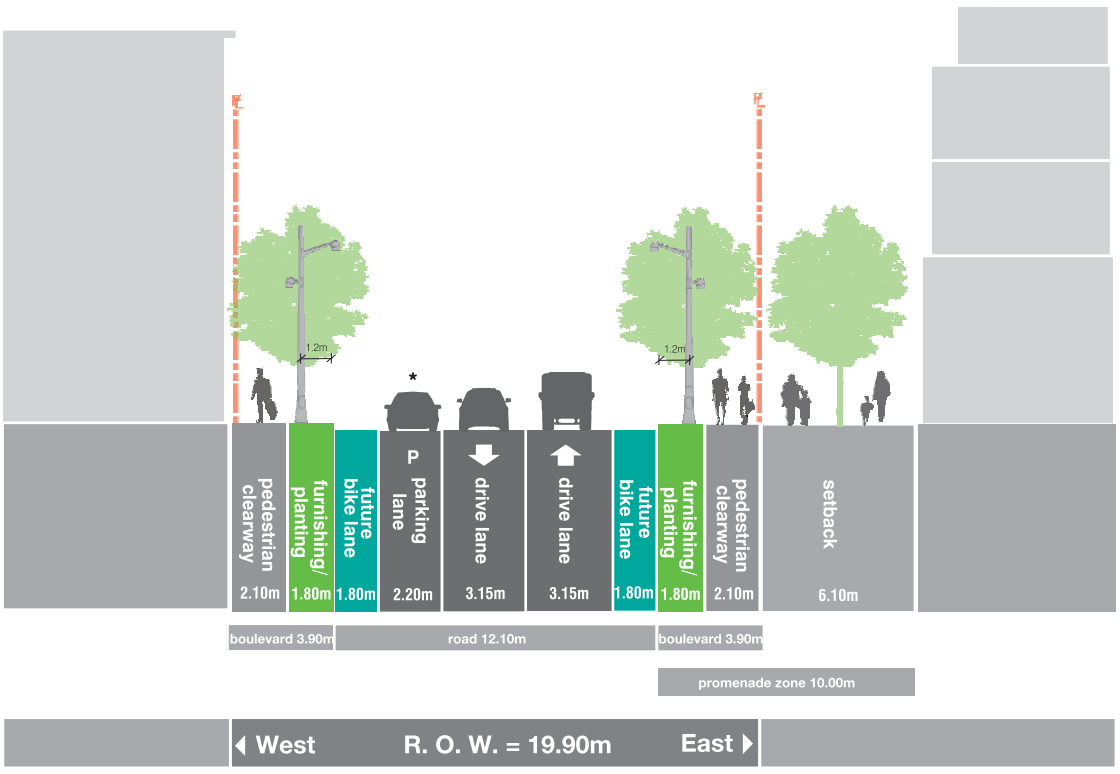
Alternative 3 includes a three-lane cross section with two northbound lanes and one lane southbound. There are no opportunities for on-street parking. The vehicular lanes would be either 3.00 m or 3.30 m wide. The total road width is 13.20 m. The road width provides an opportunity for a future uni-directional bike facility if identified as a future need.

## Alternative 1:
## Cooper Street: Queens Quay - Lake Shore Blvd EB (Facing North)
## 4 - Lane + Future Uni - Directional Bike Facility (24.00m R.O.W.)




## Alternative 2:
## Cooper Street: Queens Quay - Lake Shore Blvd EB (Facing North)
## 2 - Lane + Uni - Directional Bike Facility (19.90m R.O.W.)

Note: *Parking will be permitted on one side where appropriate to accommodate truck movements. Parking would be removed when bike lanes are implemented.




## Alternative 3:
## Cooper Street: Queens Quay - Lake Shore Blvd EB (Facing North)
## 3 - Lane + Future Uni - Directional Bike Facility (21.00m R.O.W.)
## THE PREFERRED CROSS SECTION

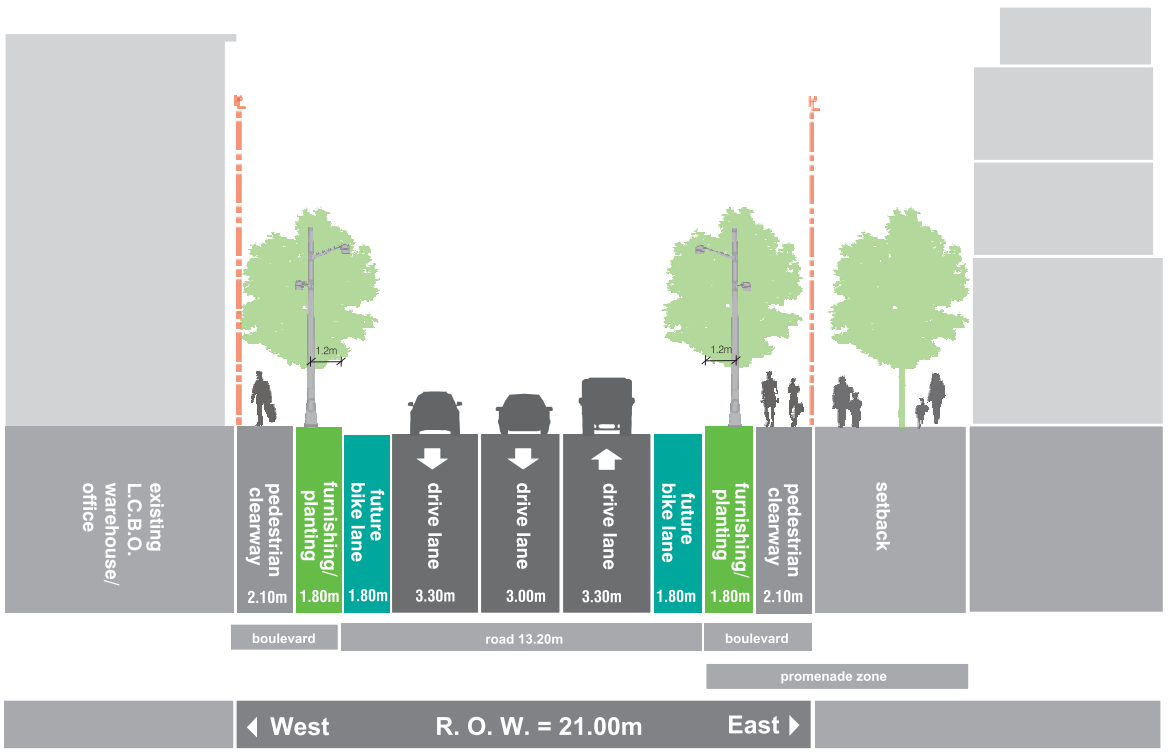
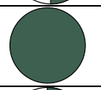
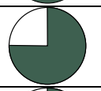
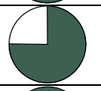
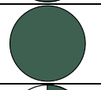


**Exhibit 6-9b: Cooper Street from Queens Quay to Lake Shore Blvd Evaluation of Alternatives**

| Criteria | Alternative 1<br>Four lanes + Future Uni-Directional Cycle Facility | Alternative 2<br>Two Lanes + Parking + Uni-Directional Cycle Facility | Alternative 3<br>Three lanes + Future Uni-Directional Cycle Facility | Key Highlights |
|---|---|---|---|---|
| **Transportation** |  |  |  | Although Alternative 2 provides for parking, it has the lowest vehicular capacity and is less accommodating for future Cooper tunnel connection. |
| **Cost** |  |  |  | Alternative 1 would cost slightly more given the greater road width and right-of-way. |
| **Land Use / Socio-Economic Environment** |  |  |  | The Alternative 2 and 3 right-of-way requirements are less compared to Alternative 1. |
| **Natural Environment** |  |  |  | There is no significant difference between the Alternatives. |
| **Archaeology and Cultural Environment** |  |  |  | There is no significant difference between the Alternatives. |
| **Streetscape / Public Realm** |  |  |  | Alternatives 2 and 3 provide balance between the road and public realm. |
| **Constructability** |  |  |  | There is no significant difference between the Alternatives. |
| **Overall** |  |  |  | **Alternative 3** is overall preferred for the following reasons:<br>• Balances vehicular capacity and sustainable transportation modes; and<br>• The right-of-way is appropriately scaled allowing for all modes of transportation. |

### 6.4.3 Cooper Street Tunnel

Three alternatives were assessed for Cooper Street Tunnel. The right-of-way width for the three alternatives varies. The alternatives are described in more detail below and shown in **Exhibit 6-10a**.The assessment is shown in **Exhibit 6-10b**.

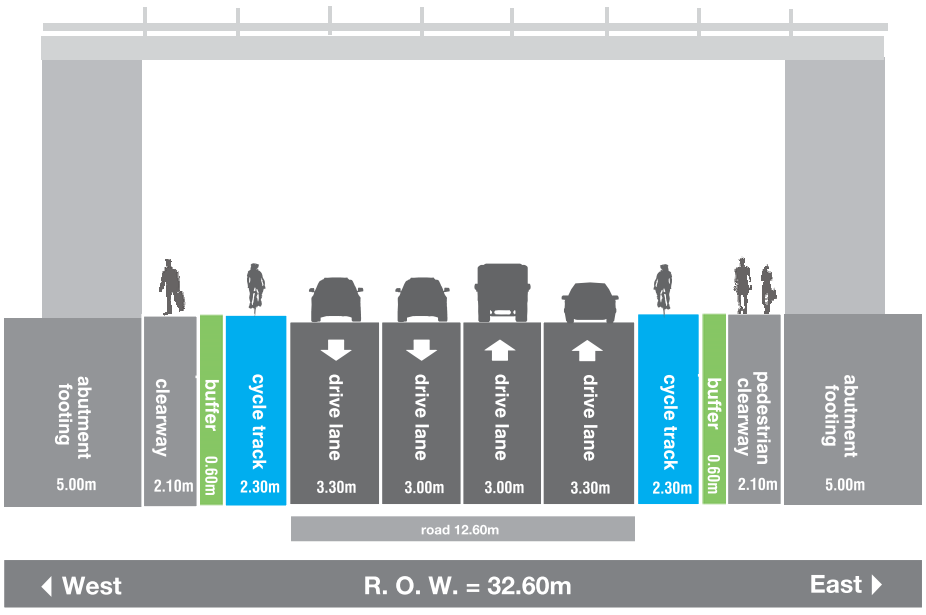
Alternative 1 consists of a four-lane cross section with a right-of-way width 32.60 m. The inner travel lanes are 3.00 m wide and the curbside lane being 3.30 m wide, for a total road width of 12.60 m. The tunnel design includes two abutments has the travel lanes adjacent with no median separation. Uni-directional raised cycle track would exist on both sides of Cooper Street, separated from the pedestrians with a buffer.

Alternative 2 consists of a four-lane cross section with a right-of-way width 35.10 m. The inner travel lanes are 3.00 m wide and the curbside lane being 3.30 m wide, for a total road width of 15.10 m. The tunnel design includes two abutments and a central pier that separates the northbound and southbound travel lanes. Uni-directional raised cycle track would exist on both sides of Cooper Street, separated from the pedestrians with a buffer.

Alternative 3 includes four-lane cross section with a right-of-way width 35.70 m. The inner travel lanes are 3.00 m wide and the curbside lane being 3.30 m wide, for a total road width of 12.60 m. The tunnel design includes two abutments and two piers that separate the travel lanes from the other modes of transportation. Uni-directional raised cycle track would exist on both sides of Cooper Street, separated from the pedestrians with a buffer.

**Alternative 1 (TMP) :**

## Cooper Street: Tunnel Alignment (Facing North)
## 4 - Lane + Uni - Directional Cycle Tracks (32.60m R.O.W.)



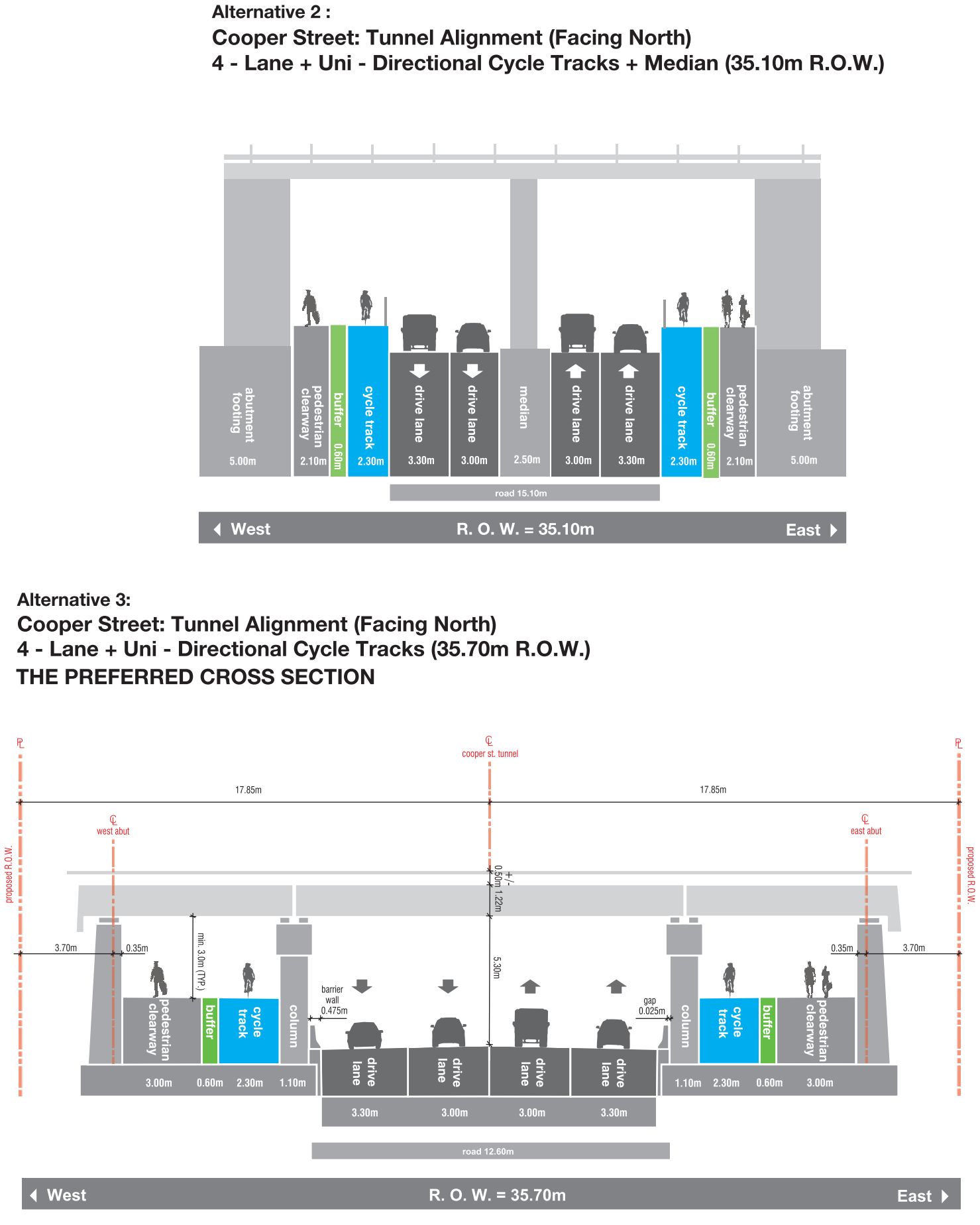

**Alternative 2 :**

## Cooper Street: Tunnel Alignment (Facing North)
## 4 - Lane + Uni - Directional Cycle Tracks + Median (35.10m R.O.W.)




**Alternative 3:**

## Cooper Street: Tunnel Alignment (Facing North)
## 4 - Lane + Uni - Directional Cycle Tracks (35.70m R.O.W.)
## THE PREFERRED CROSS SECTION

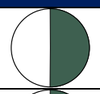
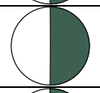
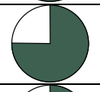
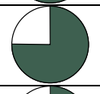
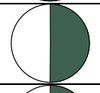
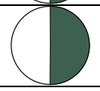



**Lower Yonge Precinct**
Municipal Class EA Schedule 'C' Project
Environmental Study Report

**Cooper Street Tunnel**
**Alternative Cross Sections**

Exhibit
**6-10a**

**Exhibit 6-10b: Cooper Street Tunnel Evaluation of Alternatives**

| Criteria | Alternative 1<br>Four lanes + Uni-Directional Cycle Tracks (single span) | Alternative 2<br>Four lanes + Uni-Directional Cycle Tracks + Median<br>(two span) | Alternative 3<br>Four lanes + Uni-Directional Cycle Tracks<br>(three span) | Key Highlights |
|---|---|---|---|---|
| **Transportation** |  |  |  | Alternative 3 supports sustainable transportation by separating cyclists and pedestrians from vehicles, and maintains emergency vehicle access. Alternative 2 does provide separation between vehicles, it provides less than ideal emergency vehicle access. |
| **Cost** |  |  |  | Alternatives 2 and 3 are less expensive than Alternative 1. |
| **Land Use / Socio-Economic Environment** |  |  |  | Alternative 3 requires the least amount of private property. |
| **Natural Environment** |  |  |  | The tunnel is not anticipated to impact the natural environment; therefore there is no significant difference between the Alternatives. |
| **Archaeology and Cultural Environment** |  |  |  | The tunnel is not anticipated to impact archaeology or heritage resources; therefore there is no significant difference between the Alternatives. |
| **Streetscape / Public Realm** |  |  |  | Alternative 3 is preferred as it has an improved vertical profile which enhance pedestrians and cyclists experience (e.g. will not be splashed by vehicles in the tunnel) and safety. |
| **Constructability** |  |  |  | Alternative 1 is difficult to construct due to the heavy weight of the long girders that would be required. |
| **Overall** |  |  |  | **Alternative 3** is overall preferred for the following reasons:<br>• Supports sustainable transportation by separating pedestrians and cyclists from vehicles;<br>• Requires the least amount of private property; and,<br>• Provides a quality design and increased safety for pedestrians and cyclists. |

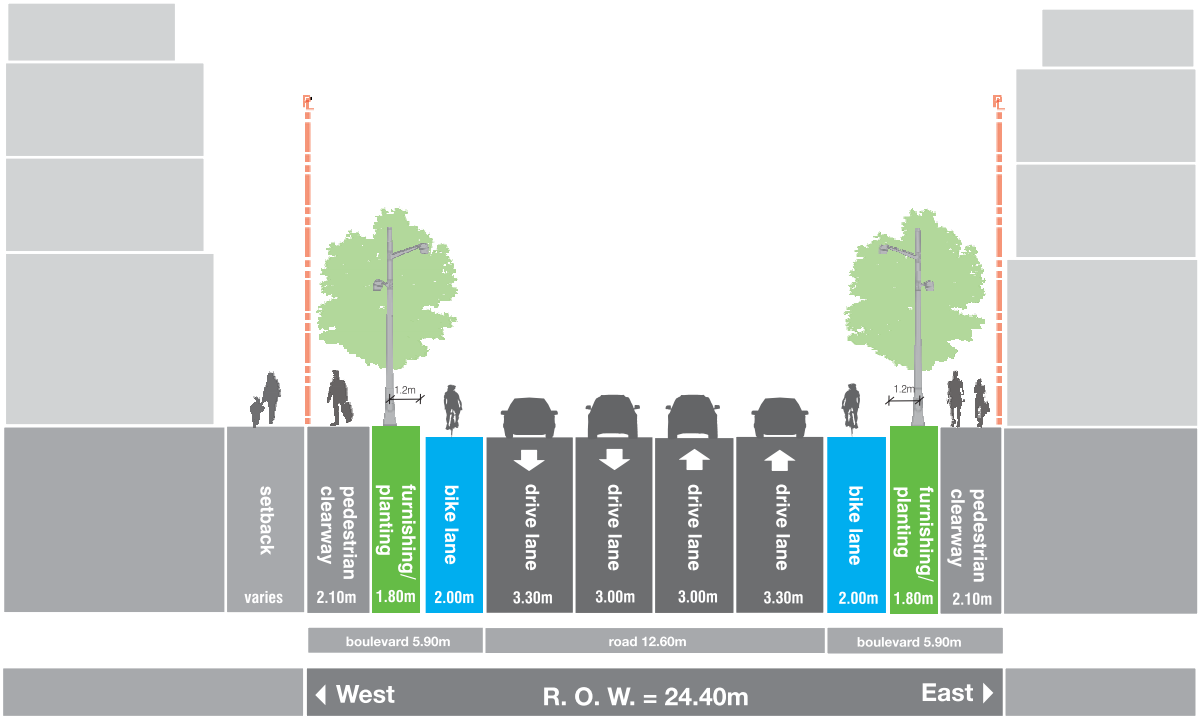
### 6.4.4 Church Street

Two alternatives were assessed for Church Street south of the Esplanade. The right-of-way slightly varies for both alternatives. The alternatives are described in more detail below and shown in **Exhibit 6-11a**.The assessment is shown in **Exhibit 6-11b**.

Alternative 1 consists of a four-lane cross section with a right-of-way width 24.40 m. The inner travel lanes are 3.00 m and the curbside lane being 3.30 m, for a total road width of 12.60 m. There are uni-directional bike lanes adjacent to the vehicular lanes.

Alternative 2 consists of a four-lane cross section with a right-of-way width 23.80 m. The inner travel lanes are 3.00 m wide and the curbside lane being 3.30 m wide, for a total road width of 12.60 m. Uni-directional raised cycle track would exist on both sides of Church Street. The cycle track is 2.30 m wide with a reduced furnishing/planting zone compared to Alternative 1.

## Alternative 1:
## Church Street: South of The Esplanade
## 4-Lane + Uni - Directional Bike Lanes




## Alternative 2:
## Church Street: South of The Esplanade
## 4-Lane + Uni - Directional Cycle Path (23.80m R.O.W.)
## THE PREFERRED CROSS SECTION

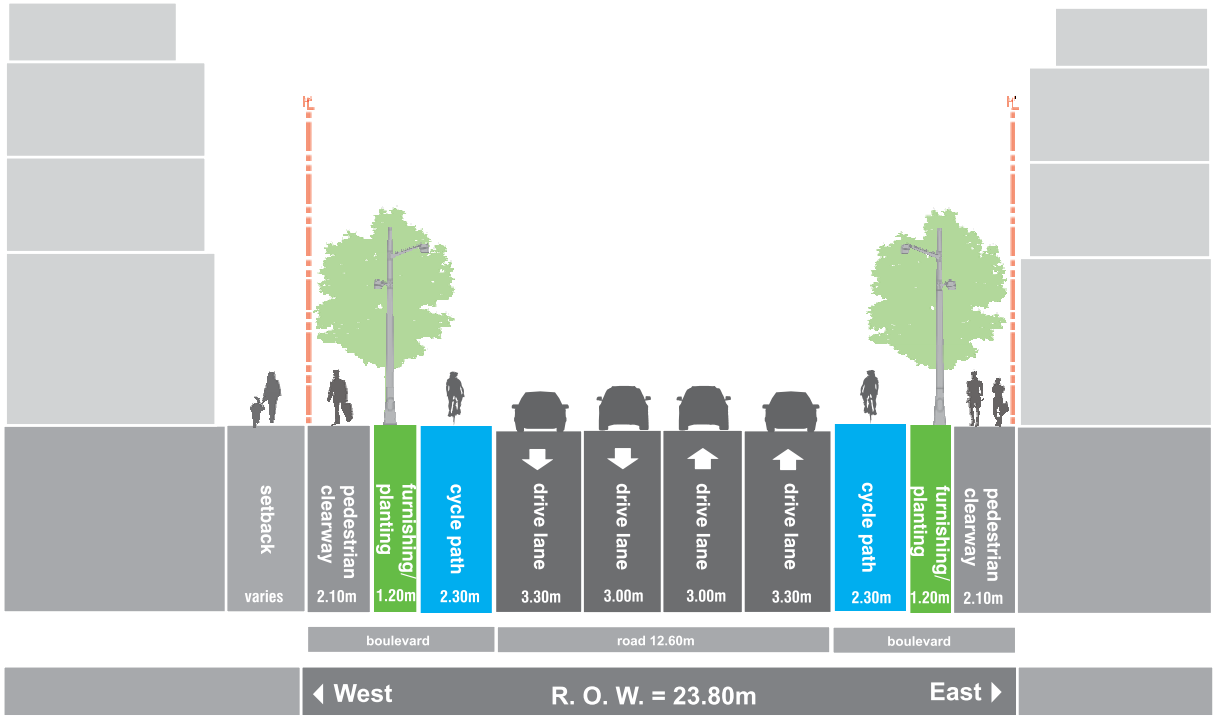
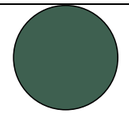
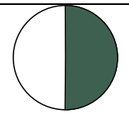
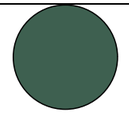
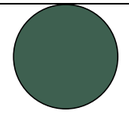
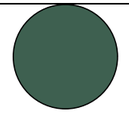
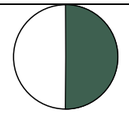
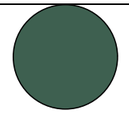


**Exhibit 6-11b: Church Street Evaluation of Alternatives**

| Criteria | Alternative 1<br>Four Lane + Uni-Directional Bike lanes | Alternative 2<br>Four Lane + Uni-Directional Cycle track | Key Highlights |
|---|---|---|---|
| **Transportation** |  |  | Alternative 2 provides raised cycle track which provides additional safety for cyclists. |
| **Cost** |  |  | Cost of Alternative 1 will be less as no requirement for raised cycle track. |
| **Land Use / Socio-Economic Environment** |  |  | There is no significant difference between the Alternatives. |
| **Natural Environment** |  |  | All Alternatives are equally preferred given anticipated limited impacts on the natural environment. |
| **Archaeology and Cultural Environment** |  |  | All Alternatives are equally preferred given the limited potential to encounter archaeological and cultural resources. |
| **Streetscape / Public Realm** |  |  | Both Alternatives provide the same opportunities for streetscaping and pedestrian movement. |
| **Constructability** |  |  | There is no significant difference between the Alternatives. |
| **Overall** |  |  | Alternative 2 is preferred for the following reasons:<br>• Balance of regional and local vehicular circulation; and,<br>• Uni-directional cycle track is preferred over the bike lanes. |

### 6.4.5 'New' Street

Three alternatives were assessed for New Street. The right-of-way width for the three alternatives varies from 18.00 m to 20.00 m. The alternatives are described in more detail below and shown in **Exhibit 6-12a**.The assessment is shown in **Exhibit 6-12b**.

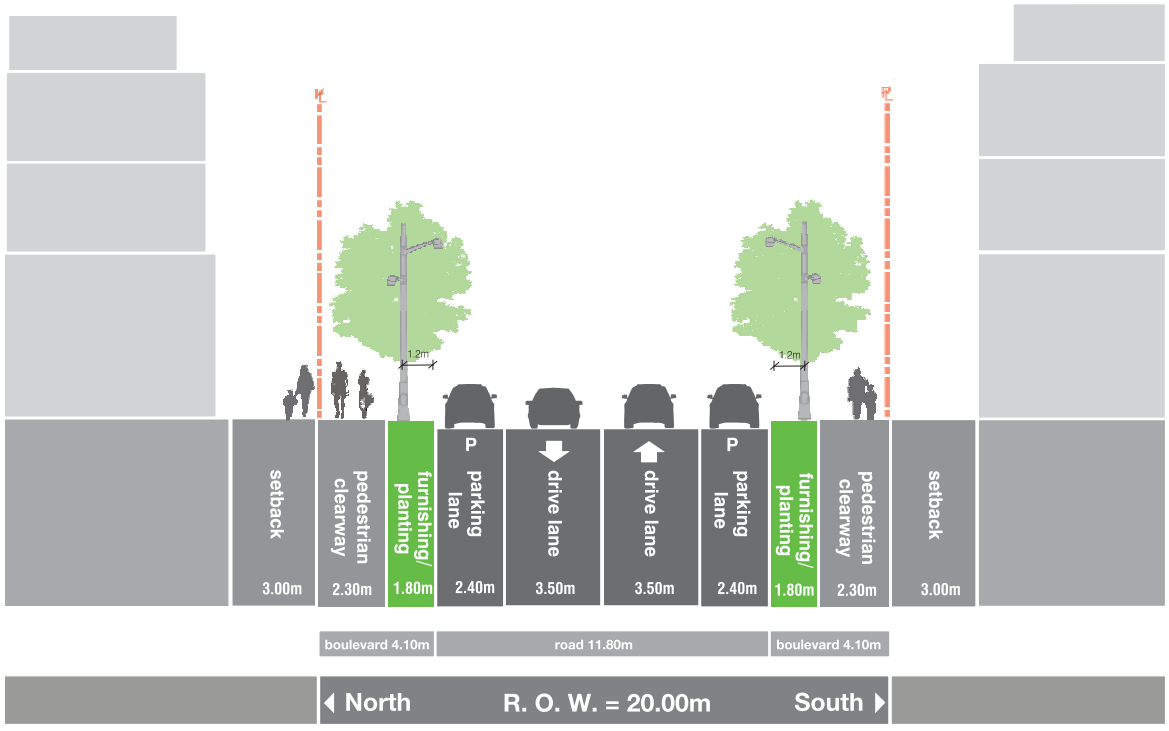
Alternative 1 consists of a two-lane cross section with a right-of-way width 20.00 m. The travel lanes are 3.50 m wide, and there are parking lanes on either side of New Street. The total road width is 11.80 m.

Alternative 2 consists of a two-lane cross section with a right-of-way width 18.00 m. The travel lanes are 3.15 m wide. Parking will be permitted on one side of the road (i.e. east side) where appropriate to accommodate track movements. The total road width is 8.50 m.

Alternative 3 consists of a two-lane cross section with a right-of-way width 19.00 m. The travel lanes are 3.30 m. On-street parking will be permitted on one side of the road (i.e. east side) where appropriate to accommodate track movements. The total road width is 8.80 m.

## Alternative 1 (TMP):

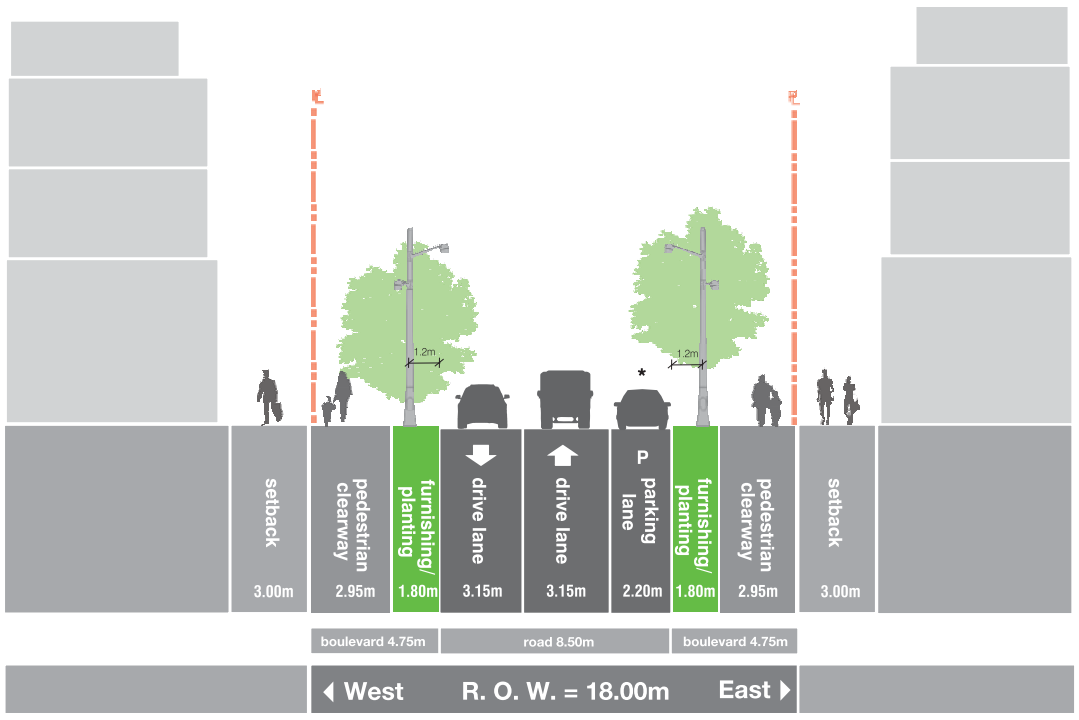
### New Street: Queens Quay - Lake Shore Blvd EB (Facing North)
### 2 - Lane + Parking Lanes (20.00m R.O.W.)




## Alternative 2

### New Street: Queens Quay - Lake Shore Blvd EB (Facing North)
### 2 - Lane + Parking (18.00m R.O.W.)

Note: *Parking will be permitted on one side where appropriate to accommodate truck movements.




## Alternative 3:

### New Street: Queens Quay - Lake Shore Blvd EB (Facing North)
### 2 - Lane + Parking (19.00m R.O.W.)

Note: *Parking will be permitted on one side where appropriate to accommodate truck movements.

### THE PREFERRED CROSS SECTION

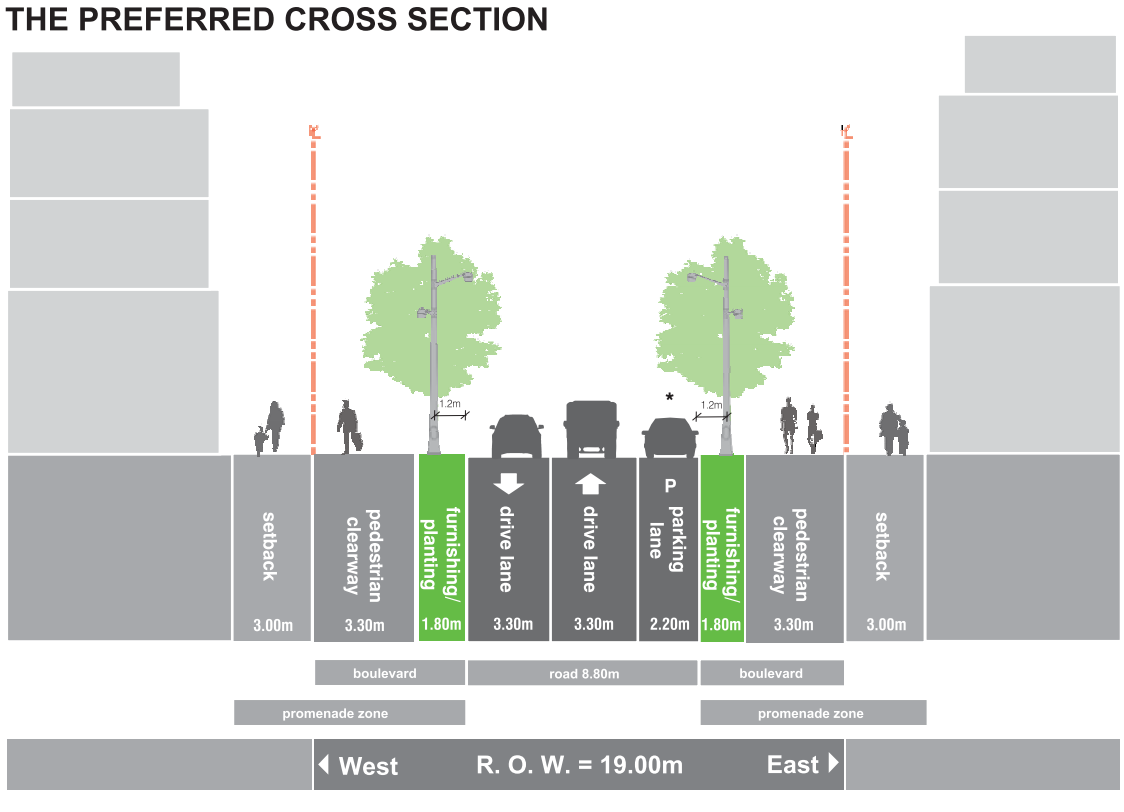
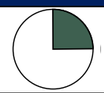
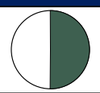
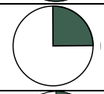
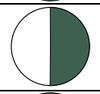


**Exhibit 6-12b: New Street Evaluation of Alternatives**

| Criteria | Alternative 1<br>Two lanes + Parking Lanes<br>(20m ROW) | Alternative 2<br>Two lanes + Parking<br>(18m ROW) | Alternative 3<br>Two Lanes + Parking as permitted<br>(19m ROW) | Key Highlights |
|---|---|---|---|---|
| **Transportation** |  |  |  | Alternative 3 provides a wider pedestrian clearway than Alternative 1. |
| **Cost** |  |  |  | Alternative 1 has a slightly greater road width that Alternatives 2 and 3, and hence greater cost. |
| **Land Use / Socio-Economic Environment** |  |  |  | Alternative 3 exceeds the minimum pedestrian clearway. |
| **Natural Environment** |  |  |  | Alternative 2 has a smaller ROW and as such will generate less excess material. |
| **Archaeology and Cultural Environment** |  |  |  | All Alternatives have limited potential to encounter archaeological and cultural resources. |
| **Streetscape / Public Realm** |  |  |  | Alternative 3 provides distinct ‘zones’ for furnishings / planting and pedestrian clearway and the roadway is appropriately sized for the road allowance. |
| **Constructability** |  |  |  | There is no significant difference between the Alternatives. |
| **Overall** |  |  |  | Alternative 3 is preferred for the following reasons:<br>• Balance of regional and local vehicular circulation; and,<br>• Enhances public realm and improves pedestrian mobility. |

### 6.4.6 Lower Jarvis Street (Queens Quay to Lake Shore Blvd)

Two alternatives were assessed for Lower Jarvis Street. The right-of-way width for the two alternatives is 26.00 m. The alternatives are described in more detail below and shown in **Exhibit 6-13a**. The assessment is shown in **Exhibit 6-13b**.

Alternative 1 consists of a four-lane cross section. The travel lanes are 3.30 m wide, and off-peak parking is permitted where appropriate to accommodate truck movements. The total road width is 13.20 m. Uni-directional cycle tracks exist on either side of the street.

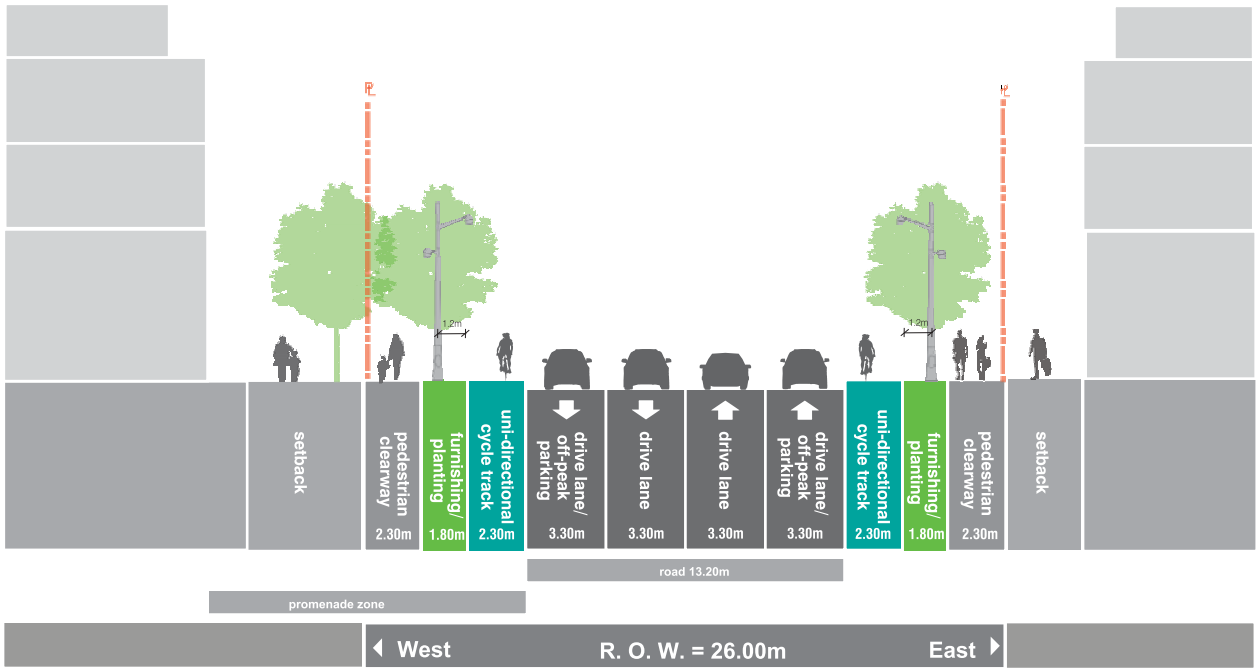
Alternative 2 consists of a three-lane cross section. The travel lanes are 3.30 m wide for a total road width of 9.90 m. There is a bi-directional cycle track on the west side of Lower Jarvis Street given presence of greater space to the west than the east.

## Alternative 1:

### Lower Jarvis Street: Queens Quay - Lake Shore Blvd (Facing North)
### 4-Lane + Off-Peak Parking + Uni - Directional Cycle Tracks (26.00m R.O.W.)

Note: *Parking will be permitted where appropriate to accommodate truck movements.

### THE PREFERRED CROSS SECTION




## Alternative 2:

### Lower Jarvis Street: Queens Quay - Lake Shore Blvd (Facing North)
### 3-Lane + Bi - Directional Cycle Path (26.00m R.O.W.)

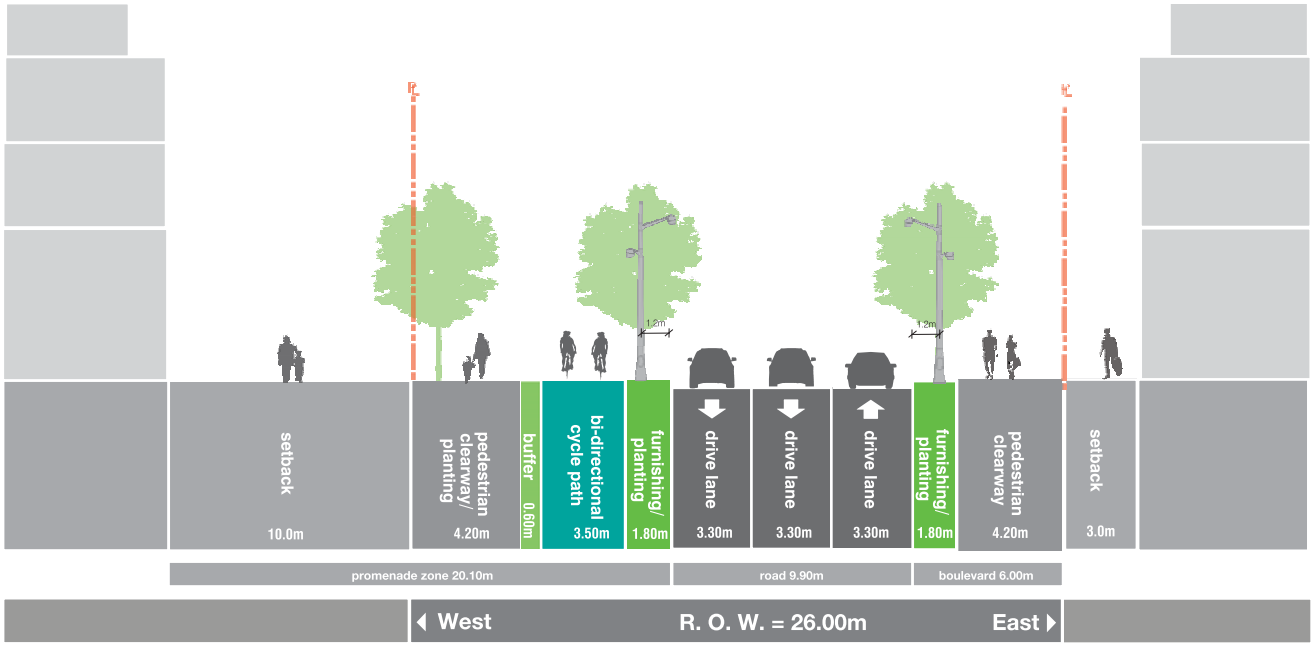
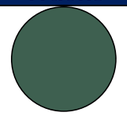
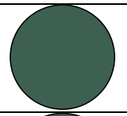
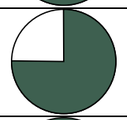
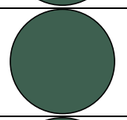
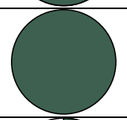
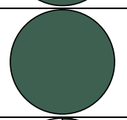
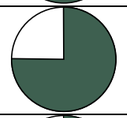
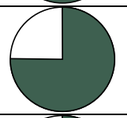
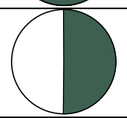
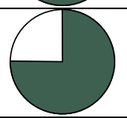
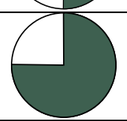
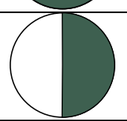
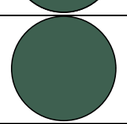
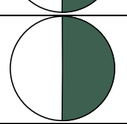


**Exhibit 6-13b: Lower Jarvis Street from Queens Quay to Lake Shore Blvd Evaluation of Alternatives**

| Criteria | Alternative 1 Four Lane + Off-Peal Parking + Uni-Directional Cycle Tracks | Alternative 2 Three Lane + Bi-Directional Cycle track | Key Highlights |
|---|---|---|---|
| **Transportation** |  |  | Alternative 1 is preferred because it provides appropriate traffic capacity; off-peak parking and uni-directional cycle track is preferred over di-directional as it provides for better connectivity at intersection crossings. Whereas, Alternative 2 does not provide sufficient capacity. |
| **Cost** |  |  | Alternative 1 has a slightly greater road width, and hence a greater cost. |
| **Land Use / Socio-Economic Environment** |  |  | Alternative 2 is preferred because it dedicates greater space to the public realm including maintaining it within the right-of-way; whereas Alternative 1 dedicates a greater percentage to the road. |
| **Natural Environment** |  |  | All alternative are equally preferred given anticipated limited impacts on the natural environment. |
| **Archaeology and Cultural Environment** |  |  | All alternative are equally preferred given the limited potential to encounter archaeological and cultural resources. |
| **Streetscape / Public Realm** |  |  | Alternative 2 is preferred because it enhances the public realm and improves pedestrian mobility. |
| **Constructability** |  |  | Alternative 1 is preferred as the existing roadway is maintained. |
| **Overall** |  |  | Alternative 1 is preferred for the following reasons:<br>• Balance of regional and local vehicular circulation; and,<br>• Uni-directional bike facilties are preferred over bi-directional. |

### 6.4.7 Yonge Street (Queens Quay to Lake Shore Blvd)

Yonge Street, from Queens Quay East to Lake Shore Boulevard, has one alternative to the south of Harbour Street and one alternative to the north of Harbour Street. As such, both have been carried forward as preferred alternatives with no evaluation required. Both alternatives have a proposed right-of-way of about 24.50 m. The alternatives are described in more detail below and shown in **Exhibit 6-14a**.

The South of Harbour Street alternative consists of a three-lane cross section with the inner travel lane being 3.20 m wide and the curbside lanes being 3.30 m wide. The total road width would be 9.80 m. Uni-directional bike lanes would exist on both sides of Yonge Street above the fully mountable curb, directly adjacent to the vehicular travel lanes.

The North of Harbour Street consists of an undivided five-lane cross section with the inner travel lanes being 3.20 m wide and the curbside lane being 3.30 m wide. The 3.0 m wide northbound left turn lane will be provided at Lake Shore Boulevard. The total road width would vary from 13.00 m (at Queens Quay East) to 17.50 m (at Lake Shore Boulevard). Uni-directional raised cycle track would exist on both sides of Yonge Street with a fully mountable curb directly adjacent to the vehicular travel lanes.

### 6.4.8 Yonge Street (Lake Shore Boulevard to Rail Corridor)

Two alternatives were assessed for Yonge Street from Lake Shore Boulevard to the Rail Corridor; both alternatives have a right-of-way of 24.50 m. The alternatives are described in more detail below and shown in **Exhibit 6-14b**. The assessment is shown in **Exhibit 6-14c**.

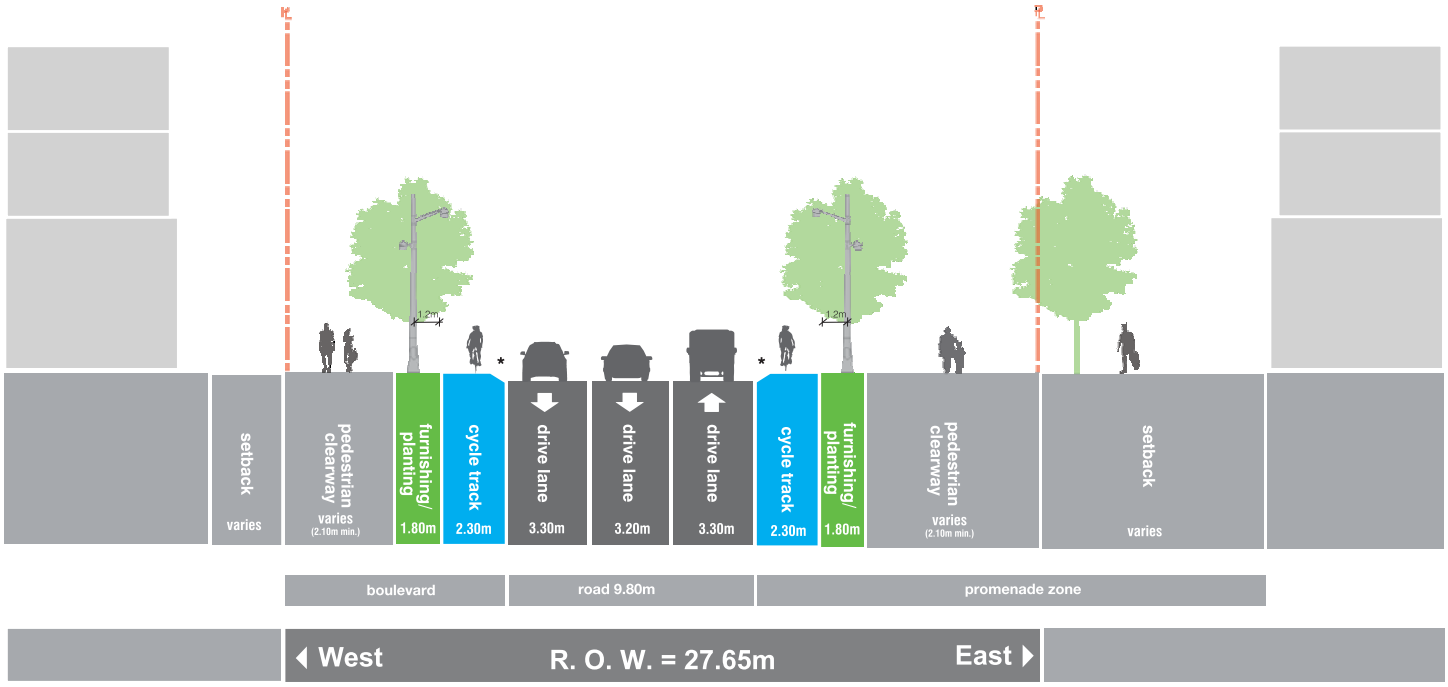
Alternative 1 consists of a four-lane cross section with the inner travel lanes being 3.20 m wide and the curbside lane being 3.30 m wide. The total road width would be between 13.00 – 16.00 m, depending on the width of the center median. Uni-directional bike lanes would exist on Yonge Street at the same elevation as the roadway, directly adjacent to the vehicular travel lanes.

Alternative 2 consists of a four-lane cross section with the inner travel lanes being 3.20 m wide and the curbside lane being 3.30 m wide. The total road width would be between 14.90 – 16.00 m, depending on the width of the center median. Uni-directional raised cycle track would exist on both sides of Yonge Street with a fully mountable curb.

## Yonge Street: South of Harbour Street
## 3-Lane + Uni-directional Cycle Tracks (27.65m R.O.W.)

Note: Raised cycle tracks with fully mountable curb

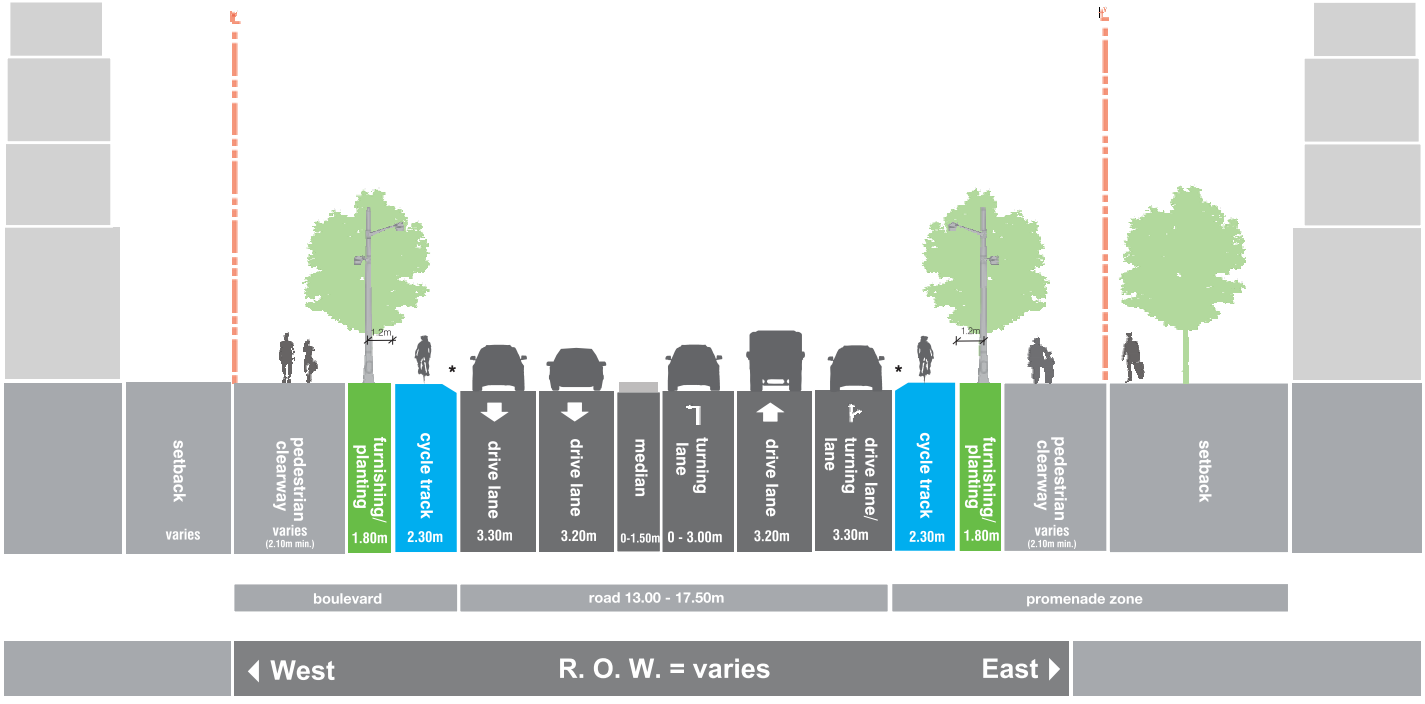
### THE PREFERRED CROSS SECTION



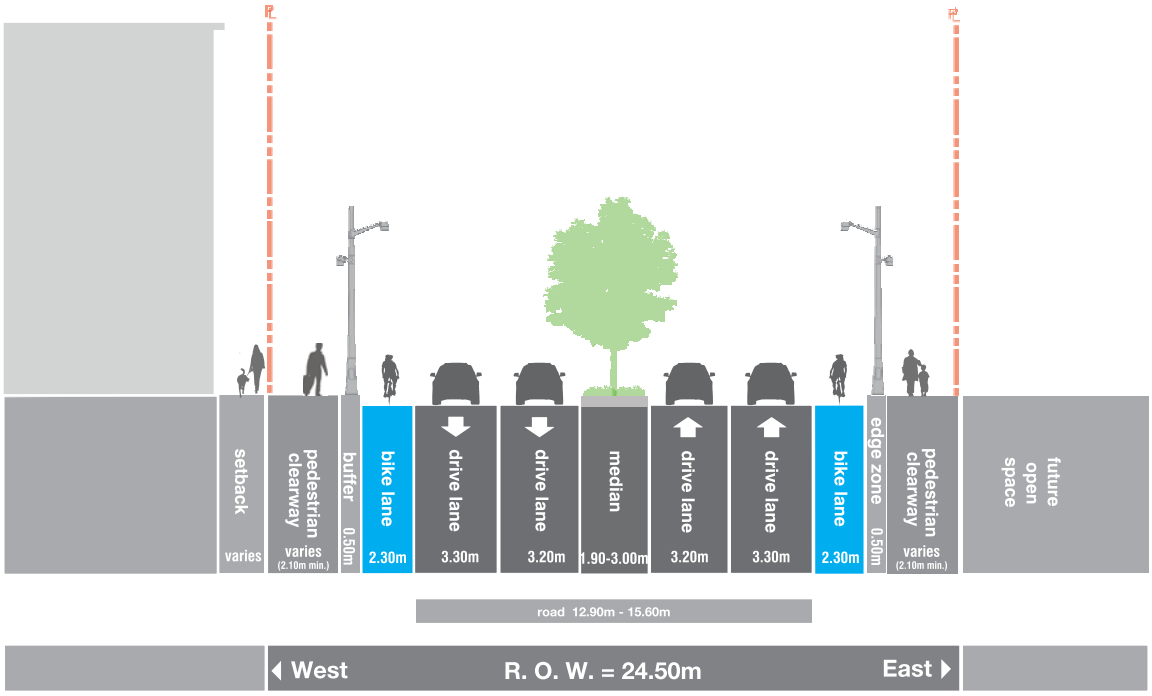

## Yonge Street: North of Harbour Street - Lake Shore Blvd
## 4-Lane + Uni-directional Cycle Tracks (Varies R.O.W.)

Note: Raised cycle tracks with fully mountable curb

### THE PREFERRED CROSS SECTION



**Alternative 1:**
**Yonge Street: North of Lake Shore Blvd - Railway Corridor (Facing North)**
**4-Lane + Uni-directional Bike Lanes + Median (24.50m R.O.W.)**




**Alternative 2:**
**Yonge Street: North of Lake Shore Blvd - Railway Corridor (Facing North)**
**4-Lane + Uni-directional Cycle Tracks + Median (R.O.W. Varies)**
Note: Raised cycle tracks with fully mountable curb
**THE PREFERRED CROSS SECTION**

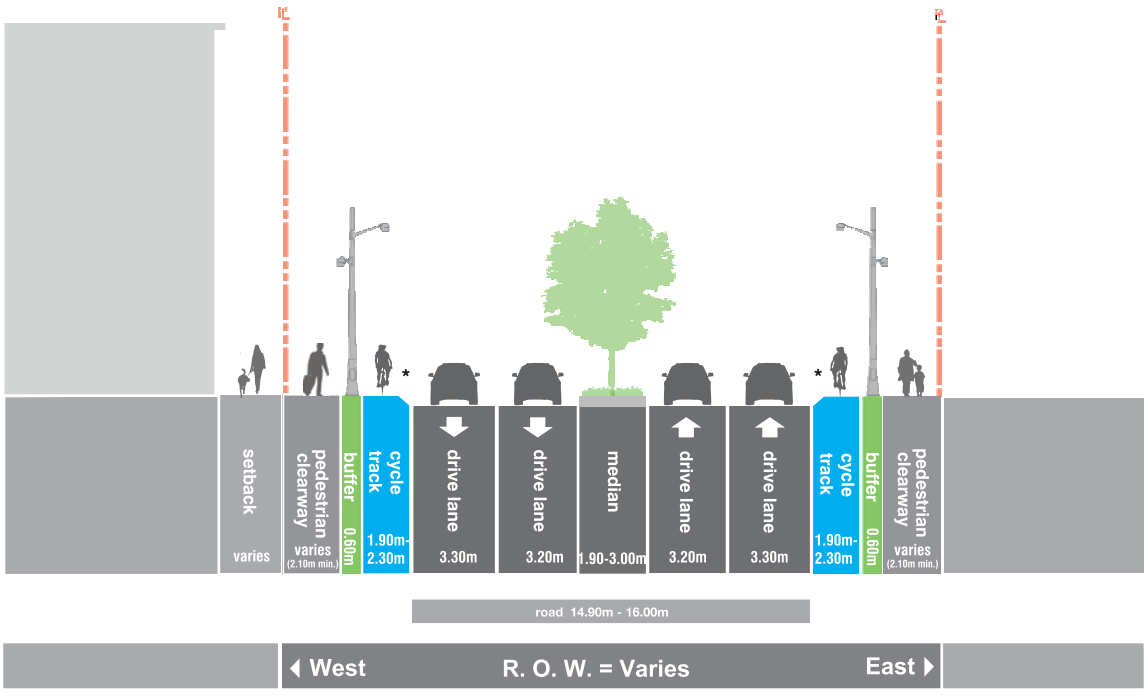


**Exhibit 6-14c: Yonge Street – Lake Shore Blvd. to Rail Corridor Evaluation of Alternatives**

| Criteria | Alternative 1<br>Four lanes<br>+ Uni-directional Bike Lanes + Median | Alternative 2<br>Four lanes +Uni-directional Bike Lanes with fully mountable curbs + Median | Key Highlights |
|---|---|---|---|
| **Transportation** |  |  | Alternative 2 provides raised cycle track which provides additional safety for cyclists, and the fully mountable curbs allow ease of movement for emergency vehicles. |
| **Cost** |  |  | There is no significant difference between the Alternatives. |
| **Land Use / Socio-Economic Environment** |  |  | Alternative 2 provides raised cycle track which provides additional safety and separation from vehicular traffic for cyclists. |
| **Natural Environment** |  |  | Given the lack of natural environment features, there is no significant difference between the Alternatives. |
| **Archaeology and Cultural Environment** |  |  | All Alternatives are anticipated to have the same impact on archaeology and cultural resources. There is no significant difference between the Alternatives. |
| **Streetscape / Public Realm** |  |  | Alternative 2 provides additional protection to cyclists and encourages use of the public space by both pedestrians and cyclists. The property to the east is owned by the City providing additional opportunities for streetscaping (to be further investigated). |
| **Constructability** |  |  | There is no significant difference between the Alternatives. |
| **Overall** |  |  | **Alternative 2** is overall preferred for the following reasons:<br>• Provides appropriate separation between different modes of transportation; and<br>• Encourages sustainable transportation modes. |

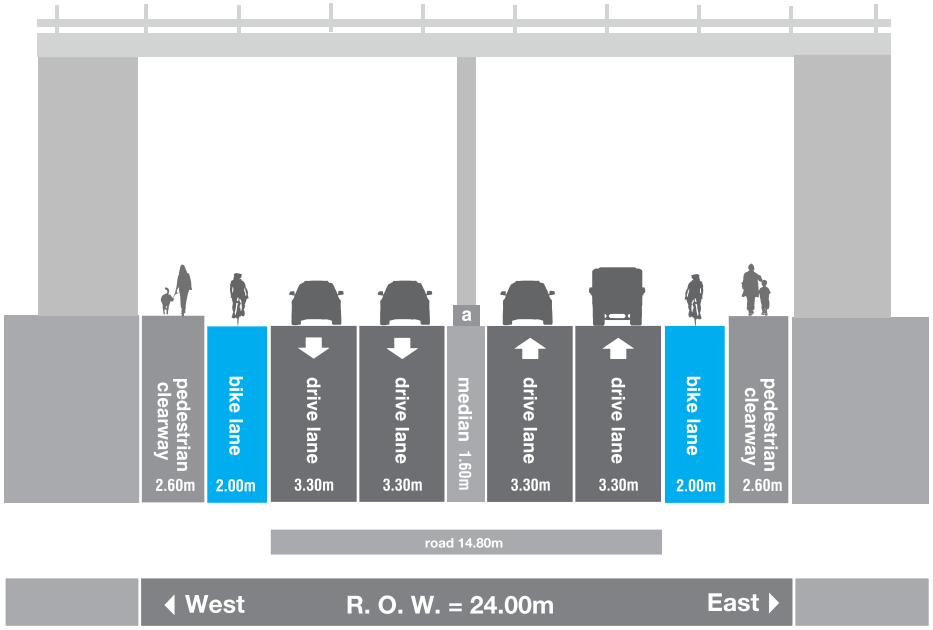
### 6.4.9 Yonge Street (Rail Corridor)

Two alternatives were assessed for Yonge Street at the Rail Corridor; both alternatives have a right-of-way of 24.00 m. The alternatives are described in more detail below and shown in **Exhibit 6-15a**.The assessment is shown in **Exhibit 6-15b**.

Alternative 1 consists of a four-lane cross with each lane being 3.30 m wide. The total road width would be 14.80 m, with a center median. Uni-directional bike lanes would exist on Yonge Street at the same elevation as the roadway, directly adjacent to the vehicular travel lanes.

Alternative 2 consists of a four-lane cross with each lane being 3.30 m wide. The total road width would be 14.80 m, with a center median. Uni-directional raised cycle tracks would exist on Yonge Street, with a fully mountable curb.

## Alternative 1:
## Yonge Street: Railway Corridor (Facing North)
## 4-Lane + Uni-directional Bike Lanes + Median (24.00m R.O.W.)




## Alternative 2:
## Yonge Street: Railway Corridor (Facing North)
## 4-Lane + Uni-directional Cycle Tracks + Median (24.00m R.O.W.)
Note: * Fully mountable curb and cycle tracks with +/- 2% cross slope

## THE PREFERRED CROSS SECTION

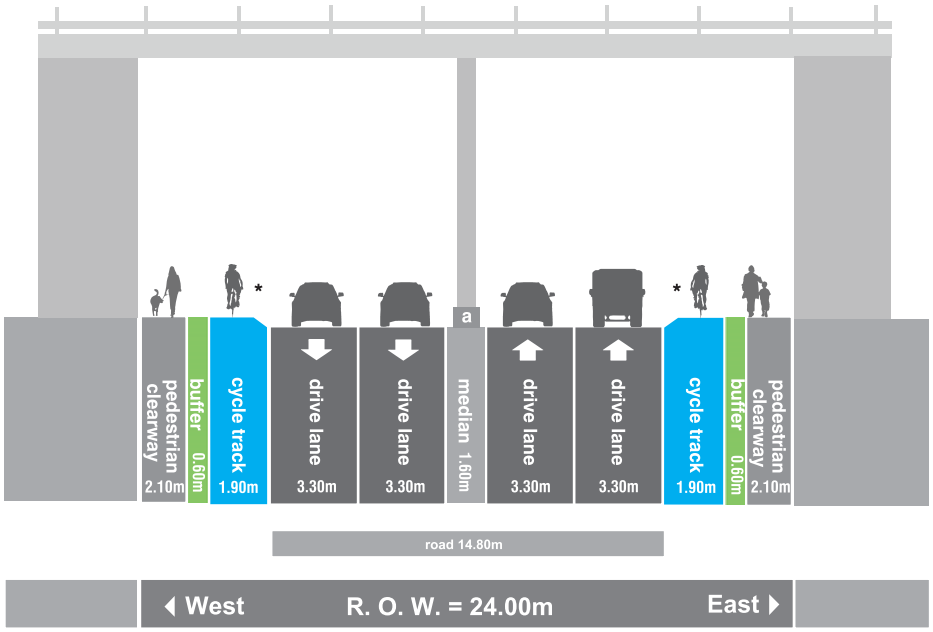
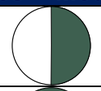
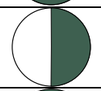


**Exhibit 6-15b: Yonge Street at the Rail Corridor Evaluation of Alternatives**

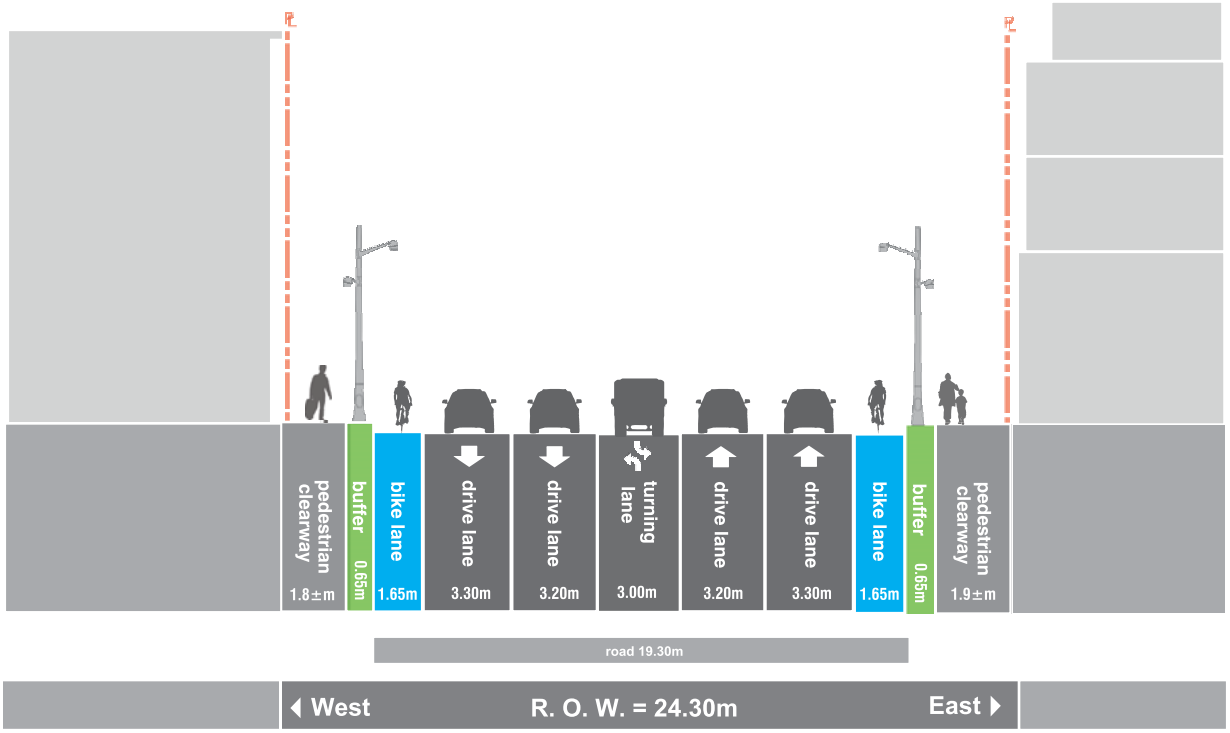
| Criteria | Alternative 1<br>Four lanes<br>+ Uni-directional bike lanes + Median | Alternative 2<br>Four lanes + Uni-directional cycle tracks + Median | Key Highlights |
|---|---|---|---|
| **Transportation** |  |  | Alternative 2 provides bike facility, pedestrian clearway, and vehicular traffic, and appropriate buffer between pedestrians and cyclists. The fully mountable curb provides movement for emergency vehicles. |
| **Cost** |  |  | In terms of cost, there is no significant difference between the Alternatives. |
| **Land Use / Socio-Economic Environment** |  |  | Alternatives 1 and 2 are consistent with existing plans / policies; and bike lanes are present on both Alternatives. There is no significant difference between the Alternatives. |
| **Natural Environment** |  |  | Given the lack of natural environment features, there is no significant difference between the Alternatives. |
| **Archaeology and Cultural Environment** |  |  | All Alternatives are anticipated to have the same impact on archaeology and cultural resources. There is no significant difference between the Alternatives. |
| **Streetscape / Public Realm** |  |  | Alternative 2 provides the full pedestrian separation from drive lanes, encouraging use of the public space. |
| **Constructability** |  |  | There is no significant difference between the Alternatives. |
| **Overall** |  |  | **Alternative 2** is overall preferred for the following reasons:<br>• Provides greater separation between different modes of transportation; and<br>• Encourages sustainable transportation modes. |

### 6.4.10 Yonge Street (Rail Corridor to Front Street)

Due to existing property constraints, existing and future traffic demands, and the desire to retain a cycling facility between Queens Quay and Front Street, only one alternative were assessed for the section of Yonge Street between the Rail Corridor and Front Street. The alternative is described in more detail below and shown in **Exhibit 6-16a**. There was no assessment of this alternative.

The preferred Alternative consists of two through lanes and a centre back-to-back left turn lane between The Esplanade and Front Street. The curb lanes are 3.30 m wide and the inner lanes are 3.20 m wide. The 3.0 m wide centre turn lane will be provided from The Esplanade to Front Street.

## Yonge Street: Railway Corridor - Front Street (Facing North)
## 4-Lane + Uni-directional Bike Lanes + Turning Lane (24.30m R.O.W.)
## THE PREFERRED CROSS SECTION



### 6.4.12 Lower Yonge Cycling Infrastructure

A range of facility types were considered and evaluated their suitability and feasibility along the Lower Yonge Street corridor, also taking cognizance of existing cycling infrastructure. A broad range of protected facility types were considered, including facilities with one-way and two-way bicycle operation, various elevations (street level or raised) and various forms of separation between cyclists and motorists.

<u>One-way and Two-way Facilities</u>

In evaluating one-way and two-way facility type options for Yonge Street, the following design implications were considered:

- a roadway with a two-way cycling facility is asymmetrical, as the cycling facility is located on only one side of the street. Under the Rail Corridor, the centre median contains structural supports for the overhead Rail Corridor, and these supports cannot feasibly be relocated. An asymmetrical roadway design in this context would not be desirable as it would require the elimination of a travel lane or sidewalk on one side of the street in order to accommodate a two-way cycling facility;
- two-way facilities introduce conflict points between cyclists and turning motorists that are less intuitive for most road users. On Yonge Street, this would result in either significantly increased risk exposure for cyclists or significantly reduced intersection capacity if risk exposure were mitigated by providing a protected bicycle signal phase with no turning movement conflicts. This challenge is especially pronounced on Yonge Street due to the number of closely spaced, high volume intersections such as Lake Shore Boulevard eastbound and westbound; and,
- two-way facilities are typically considered in locations where two-way operation can be continued for a long distance to avoid additional bicycle crossings at the locations where two-way operation is introduced or discontinued. There is no indication at this time that a two-way facility could be continued on Yonge Street north of Front Street, and therefore a two-way facility south of Front Street is not recommended at this time.

In order to maintain two sidewalks and all necessary travel lanes under the Rail Corridor, mitigate conflict at intersections, and provide continuity of the cycling facility, a one-way cycling facility is preferred, and a two-way cycling facility design concept was not developed further.

<u>Cycling Facility Elevation</u>

In evaluating facility elevation options for Yonge Street, the following design implications were considered:

- both roadway level and raised cycling facilities can provide a comfortable cycling experience;
- cost of elevating the cycling facilities;

- raised facilities allow catch basins to be located away from the cycling facility and reduce debris accumulation in the cycling facility;
- a buffer zone of 0.5 m or greater buffer zone is recommended between the face of the curb and the edge of a raised cycle track so that cyclists are positioned well away from the edge of the curb and are less likely to unintentionally travel over the barrier curb. This is particularly important for cycle tracks that are separated from the roadway with a barrier curb but also applicable to cycle tracks that are separated from the roadway with a mountable curb. A 0.5 - 0.7 m buffer constructed with tactile and visually contrasting materials should be implemented between the bikeway and the sidewalk when they are located at the same elevation; and,
- roadway reconstruction is an opportunity to implement raised cycling facilities in a cost effective manner.

Preference is given to cycling facility elevation given the improved cycling experience; however, provision may not be feasible in certain section where roadway is constrained and street level cannot be accommodated. This has also been taken into consideration in the evaluation.

Forms of Separation

In evaluating forms of separation to provide designated space for cyclists the following design implications were considered:

- a barrier curb between the motor vehicle lane and the bikeway is one of the most effective forms of separation to deter motorists from encroaching on the cycling facility and can be used in conjunction with cycle tracks at street level, sidewalk level or an intermediate level;
- a mountable curb provides a visual delineation between the motor vehicle lane and the bikeway and also elevates the bikeway above the roadway. The profile of the curb provides flexibility for cyclists and motorists to maneuver between the cycling facility and roadway. This flexibility can be advantageous in locations where greater roadway width is desired to provide a passable space for emergency service vehicles (10.05 m roadway width is desirable), or where cyclists are likely to entering or exiting the cycling facility (to make a direct left turn for example). Mountable curbs provide an opportunity for motorists to move over to permit emergency services vehicles to pass safely;
- flex bollards are typically used for street level cycling facilities or raised facilities separated with a mountable curb. They are moderately effective at deterring motorists from encroaching on the cycling facility, but may be associated with on-going maintenance costs in order to replace damaged bollards. However, flex bollards typically discourage motorists from pulling over to allow emergency vehicles to pass; and,
- planters are typically used where there is sufficient buffer width, typically 1.0 m, and funding to provide an enhanced streetscape; they are often used in conjunction with flex bollards.

A barrier curb is preferred for the segments of Yonge Street with sufficient space to accommodate the buffer zone and where the functional width of the roadway satisfies emergency services requirements. For constrained segments, a mountable curb is preferred to address emergency services requirements.

## 6.5 Consultation Input on the Preferred Cross Section Alternatives

The Preferred Cross Section Alternatives shown above were presented to interested stakeholders, area residents and land owners at the Public Open House, TAC, SAC and landowners meetings to identify potential concerns and influence the outcome of the preferred cross sections.

Based on feedback received, as outlined in **Section 5.0,** the following cross sections were reviewed in more detail following the Public Open House:

- Harbour Street
- New Street

### 6.5.1 Harbour Street

There were concerns raised about interface between pedestrians and cyclists along the south side of Harbour Street, between Yonge Street and Lower Jarvis Street. The preliminary preferred plan proposed that the bi-directional cycle track be located immediately adjacent to the roadway and that the sidewalk be located between the planting / furnishing zone and the buildings. This would result in cyclists riding their bicycles westbound facing the eastbound vehicles and only separated by the curb. As well, the cyclists and pedestrians would only be separated by tactile pavers that were only 600 mm wide. The public concerns noted that there needs to be a greater separation particularly when two-way cycle tracks are adjacent to pedestrian sidewalks.

Based on comments received, the cross section was modified. The bi-directional cycle track located on the south side of Harbour Street will be separated from other users (both motorists and pedestrians) as furnishing / planting zones will be located on either side of the cycle track.

### 6.5.2 New Street

The alternatives shown for New Street all recommended a 20.00 m wide road allowance. The road allowance would be parallel to the existing property line between the LCBO property and the Loblaws property, and centred on this existing property line.

Following further discussions with the new owner of the LCBO lands, it was agreed that the road allowance on Cooper Street would be increased to 21.00 m from 20.00 m and that the road allowance for New Street would be reduced by one metre to 19.00 m. The revised New Street road allowance would be asymmetrical: 9.00 m on the LCBO side of the existing property line

while retaining the 10.00 m taking from Loblaws. The Loblaws contribution will only be obtained when that site is redeveloped.

### 6.5.3 Other Roadways

Input was also received from TTC, Toronto Fire, Toronto Emergency Services, adjacent residents, landowners, and other stakeholders that resulted in minor changes to the cross-sections that were presented to the public, the TAC, and the SAC. These changes were primarily the result of discussions with TTC that modified the curb radii throughout the Precinct and provided a bus lay-by area on the east side of Freeland Street between Queens Quay East and Harbour Street.

# 7.0 RECOMMENDED PLAN

Drawings of the Recommended Cross Sections for each roadway within the Precinct are included in **Exhibits 7.1** (**a** through to **r**). Based on the analysis and evaluation of alternatives and the review and integration of comments received through the consultation process, the Recommended Plan is shown in **Exhibits 7-2** (**a** through to **i**).

Subsequent to the PIC held on June 23, 2016 and undertaking the alternatives evaluation (**Section 6.0**) a request was made from TTC to include a bus lay-by / resting area for the preferred alternative for Freeland Street: Queens Quay to Lake Shore Boulevard. This resulted in splitting Freeland Street: Queens Quay to Lake Shore Boulevard into two separate sections: Freeland Street from Queens Quay to Harbour Street, and Freeland Street from Harbour Street to Lake Shore Boulevard. The 3.00 m TTC lay-by / resting area was included within the preferred alternative for Freeland Street from Queens Quay to Harbour Street only, as this was the area identified by TTC. The revised preferred alternatives were created for both Freeland Street from Queens Quay to Harbour Street, and Freeland Street from Harbour Street to Lake Shore Boulevard as shown in **Appendix J**. The Recommended Cross Sections for the new separate sections are also displayed in **Exhibits 7-1h** and **7-1i**.

The recommended plan creates an effective transportation network and develops the streetscape and public realm in the Lower Yonge Precinct. The transportation network incorporates all modes of transportation for pedestrians, cyclists and motorists. Wider sidewalks and street trees are key components of the plan.

Existing on-street parking for TICA will be removed. More information about the potential solutions for the permanent on-street parking is available in **Section 7.1.8.2**.

## 7.1 Transportation Network

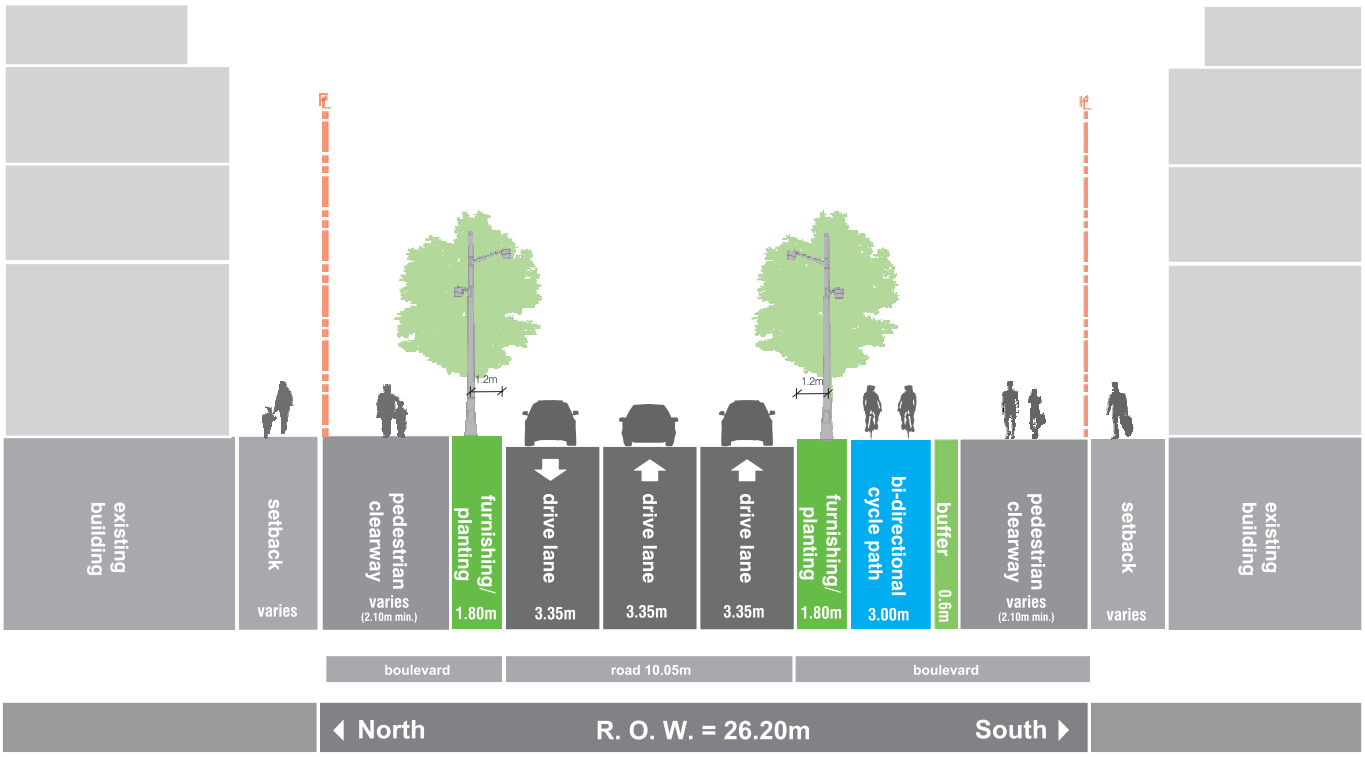
The Recommended transportation network will include the following:

- A new eastbound Gardiner Expressway off-ramp terminating on the west side of Yonge Street;
- A normalizing of the Harbour Street-to-eastbound Lake Shore Boulevard at Yonge Street;
- An extension of Harbour Street from Yonge Street to Lower Jarvis Street;
- A widening of eastbound Lake Shore Boulevard East from two lanes to three between Yonge Street and Lower Jarvis Street;
- A new north-south roadway between Cooper Street and Lower Jarvis Street that will connect Queens Quay East to eastbound Lake Shore Boulevard East;
- A future tunnel under the Metrolinx Rail Corridor to connect Cooper Street at Lake Shore Boulevard East to Church Street south of The Esplanade;

- Removal of the Bay Street on-ramp to eastbound Gardiner Expressway; and
- Removal of the eastbound Gardiner Expressway off-ramp that currently terminates west of Lower Jarvis Street.

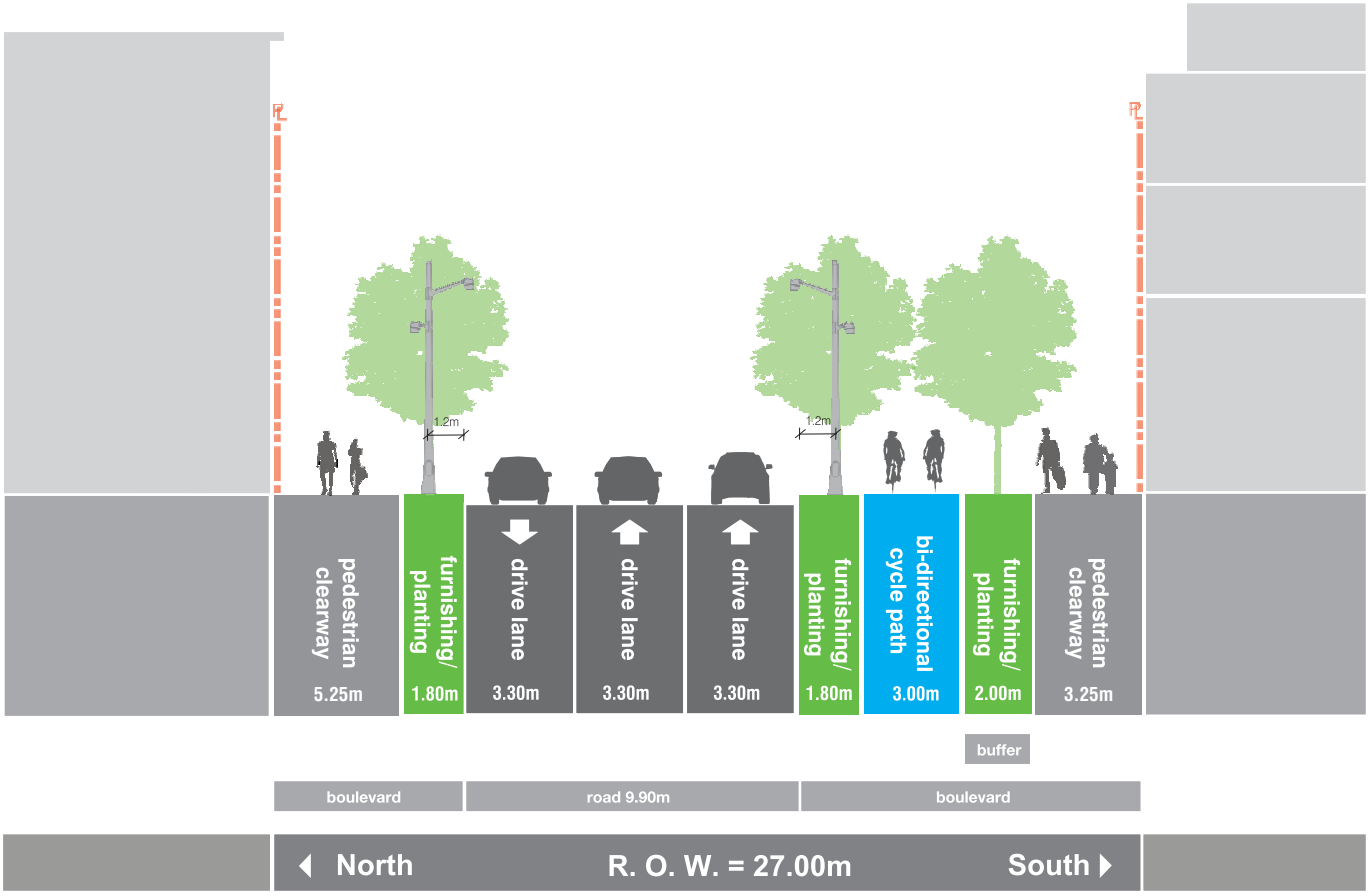
## Alternative 3:

## Harbour Street: Bay Street - Yonge Street (Facing East)
## 3-Lane + Bi - Directional Cycle Path (26.20m R.O.W.)



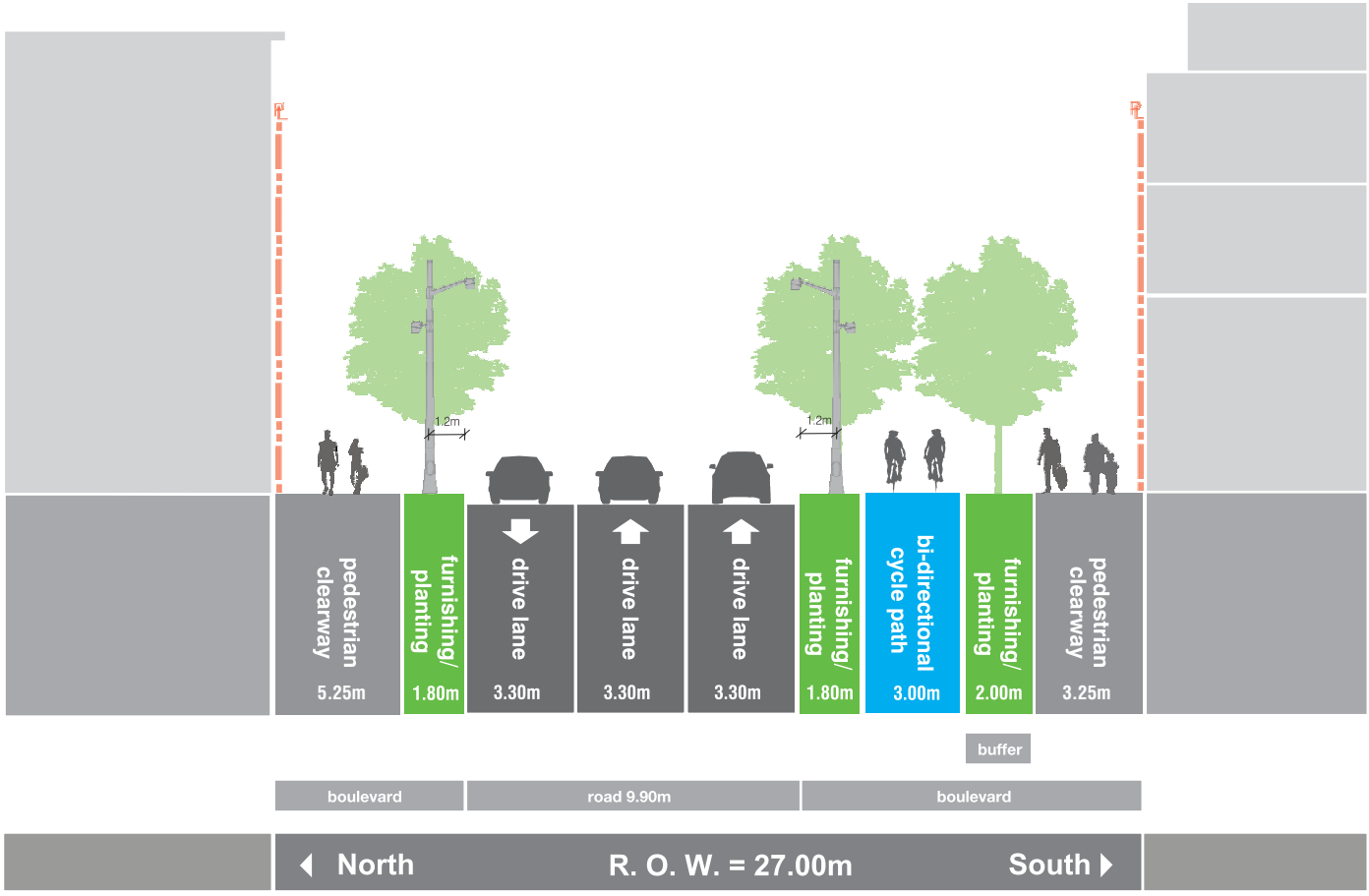
Alternative 3:

## Harbour Street: Yonge Street - Freeland Street (Facing East)
## 3 - Lane + Bi - Directional Cycle Path (27.00m R.O.W.)

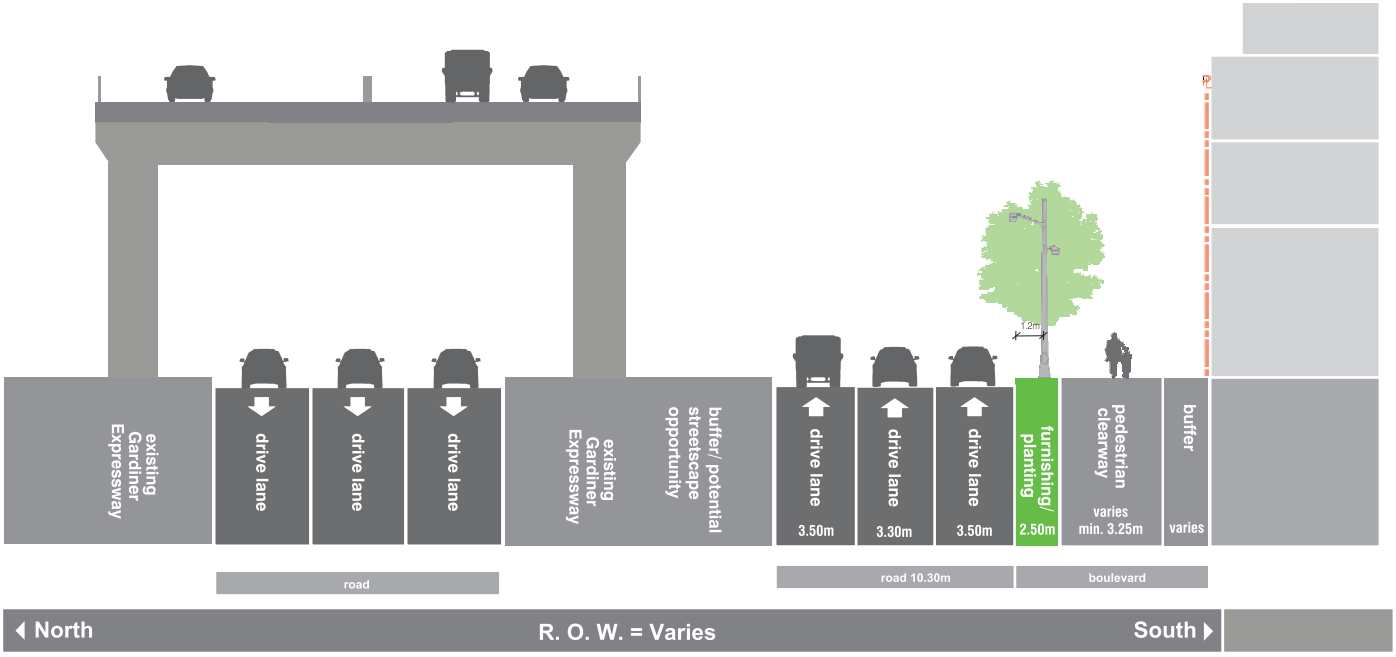


Alternative 3:

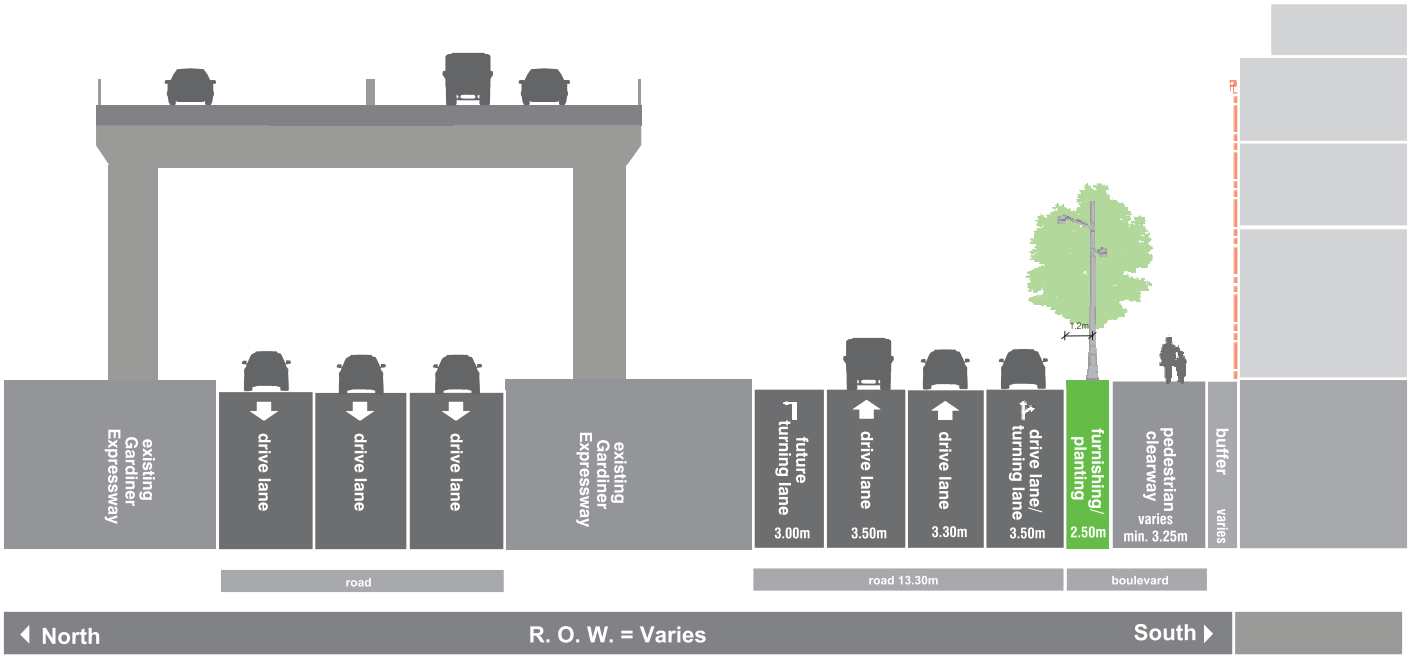
## Harbour Street: Freeland Street - Lower Jarvis Street (Facing East)
## 3 - Lane + Bi - Directional Cycle Path + Parking Lane (27.00m R.O.W.)



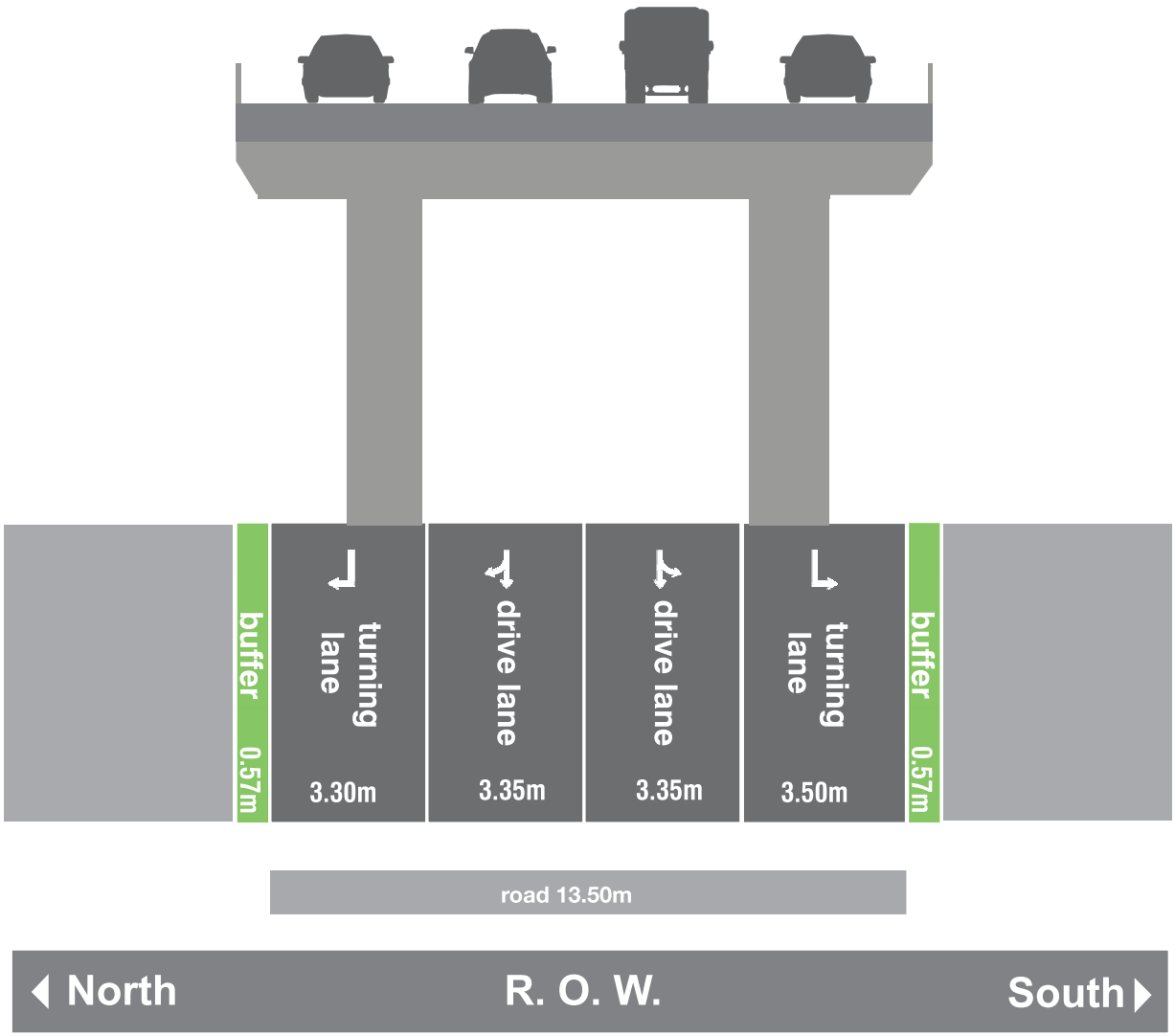
## Lake Shore Boulevard : Yonge Street - Lower Javis Street
## 3-Lane + Wider Boulevard



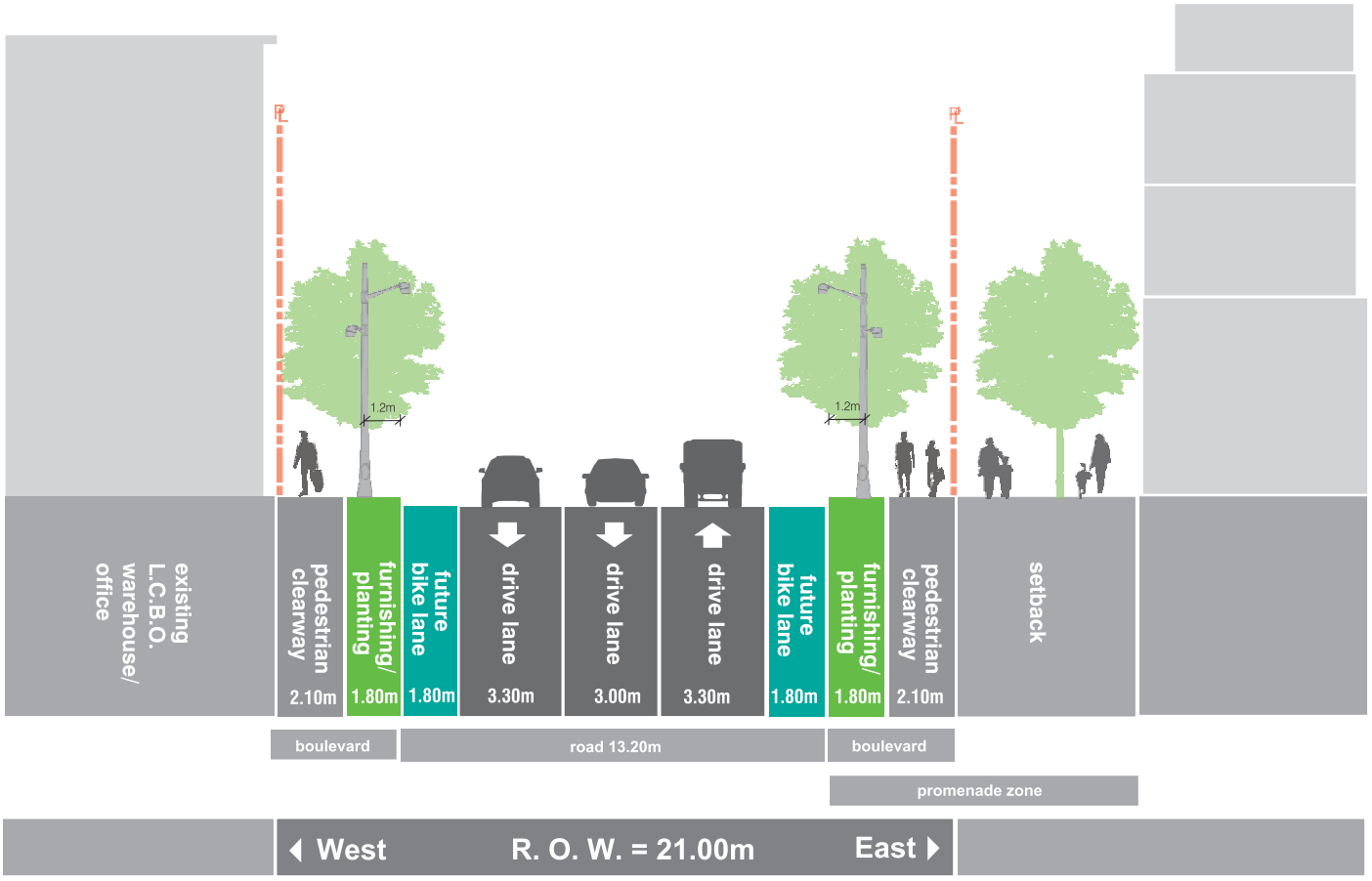
## Lake Shore Boulevard at Cooper Street (Facing East)
## 3-Lane + Wider Boulevard



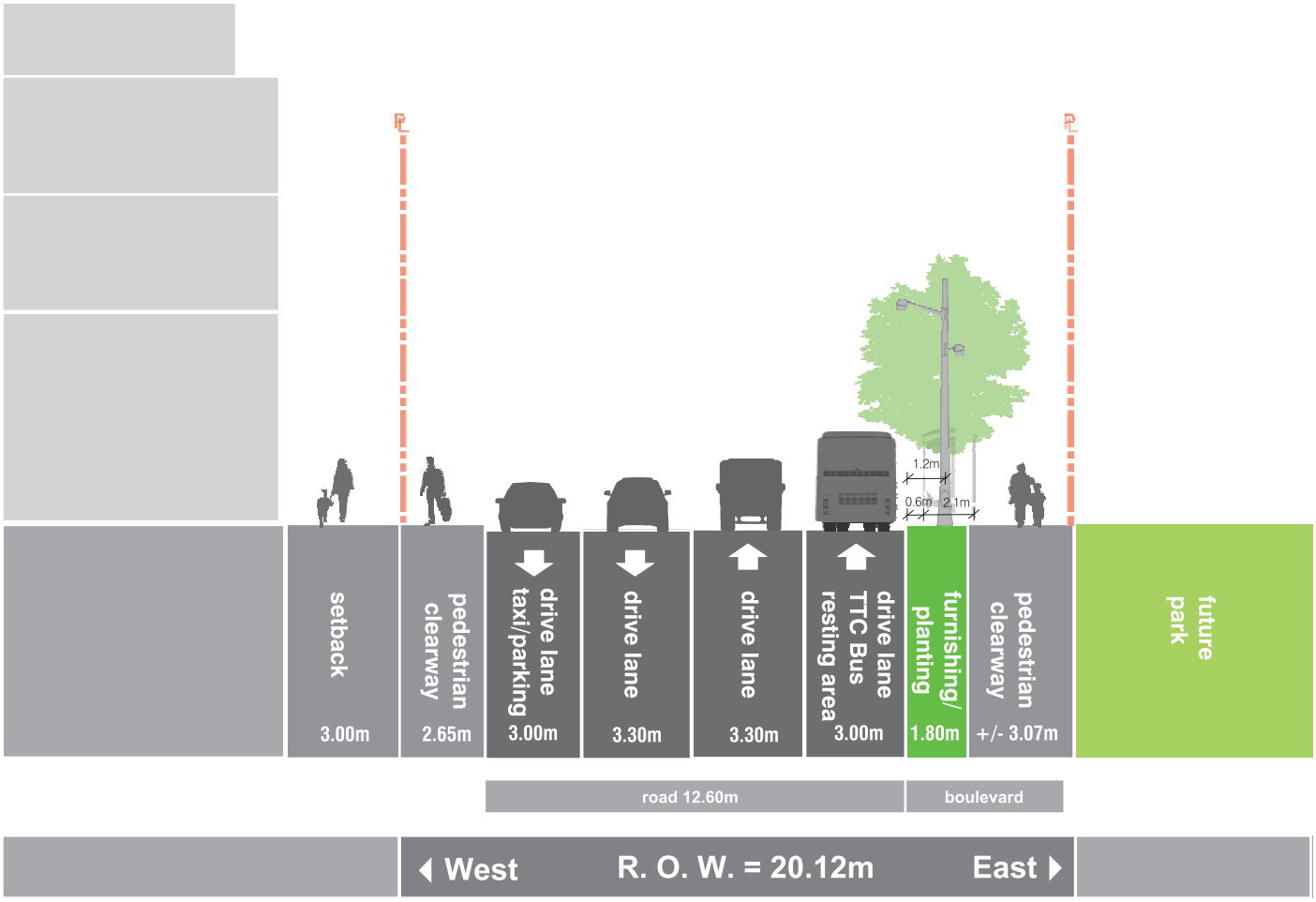
## Gardiner Off-ramp (Facing East)



**Alternative 3:**
**Cooper Street: Queens Quay - Lake Shore Blvd EB (Facing North)**
**3 - Lane + Future Uni - Directional Bike Facility (21.00m R.O.W.)**



## Freeland Street: Queens Quay - Harbour Street (Facing North)
## 2 - Lane + TTC Bus Resting Area (20.12m R.O.W.)

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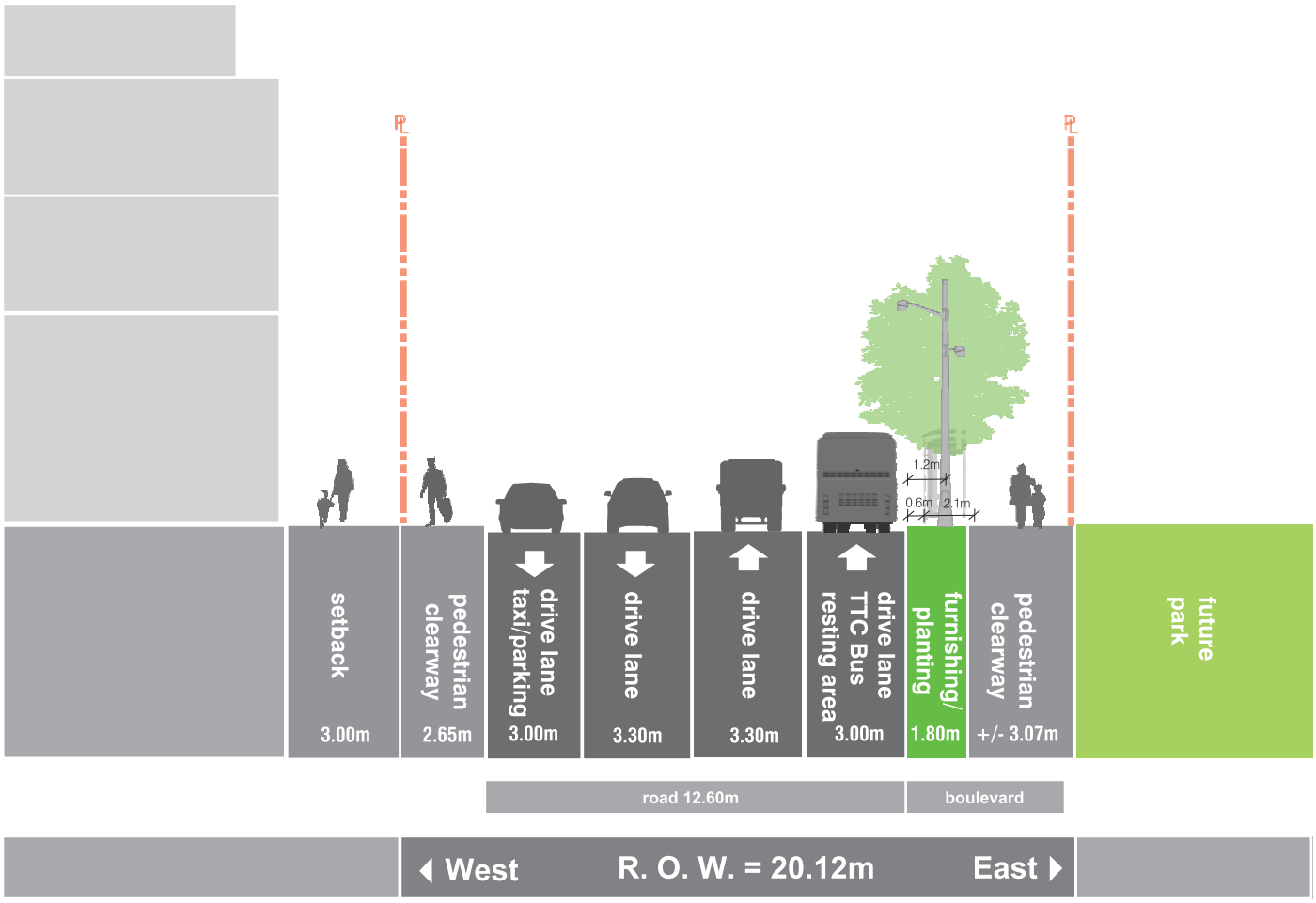
**Freeland Street from Queens Quay to Harbour Street Recommended Cross Section**

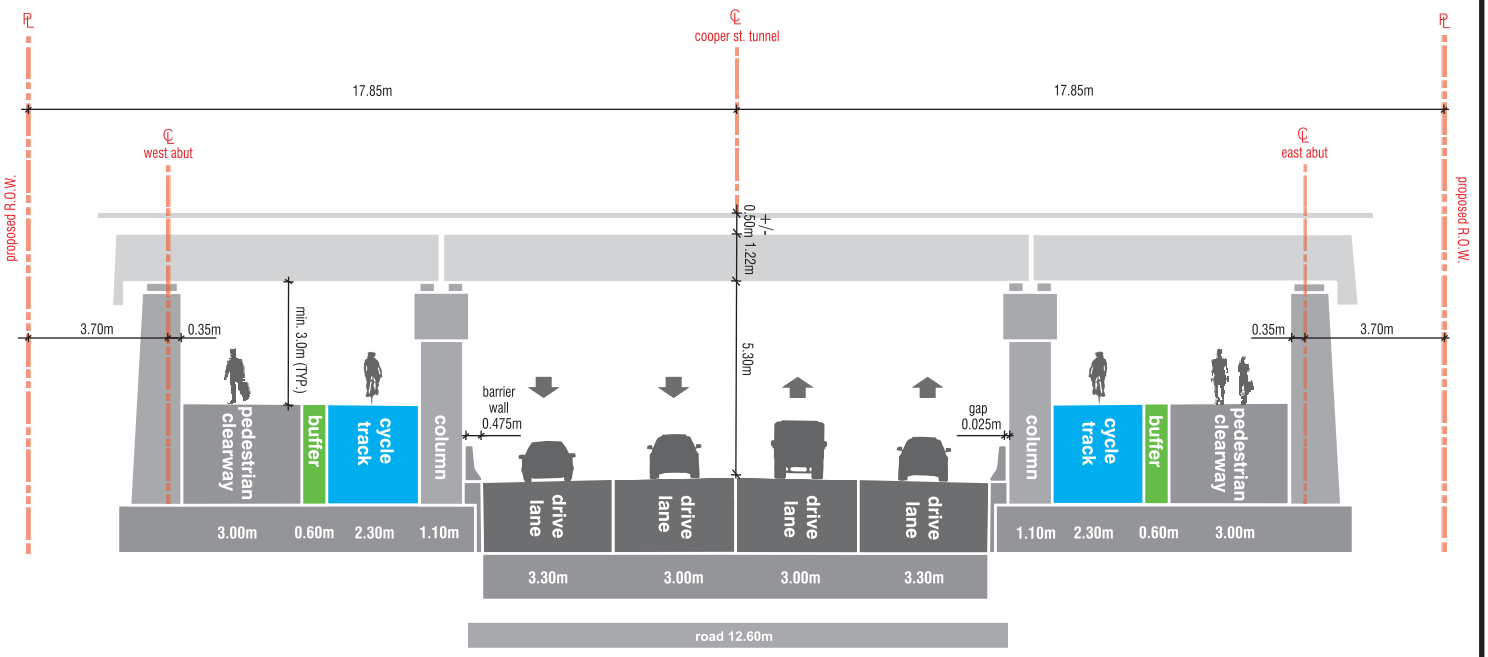
Exhibit
**7-1h**

## Freeland Street: Queens Quay - Harbour Street (Facing North)
## 2 - Lane + TTC Bus Resting Area (20.12m R.O.W.)



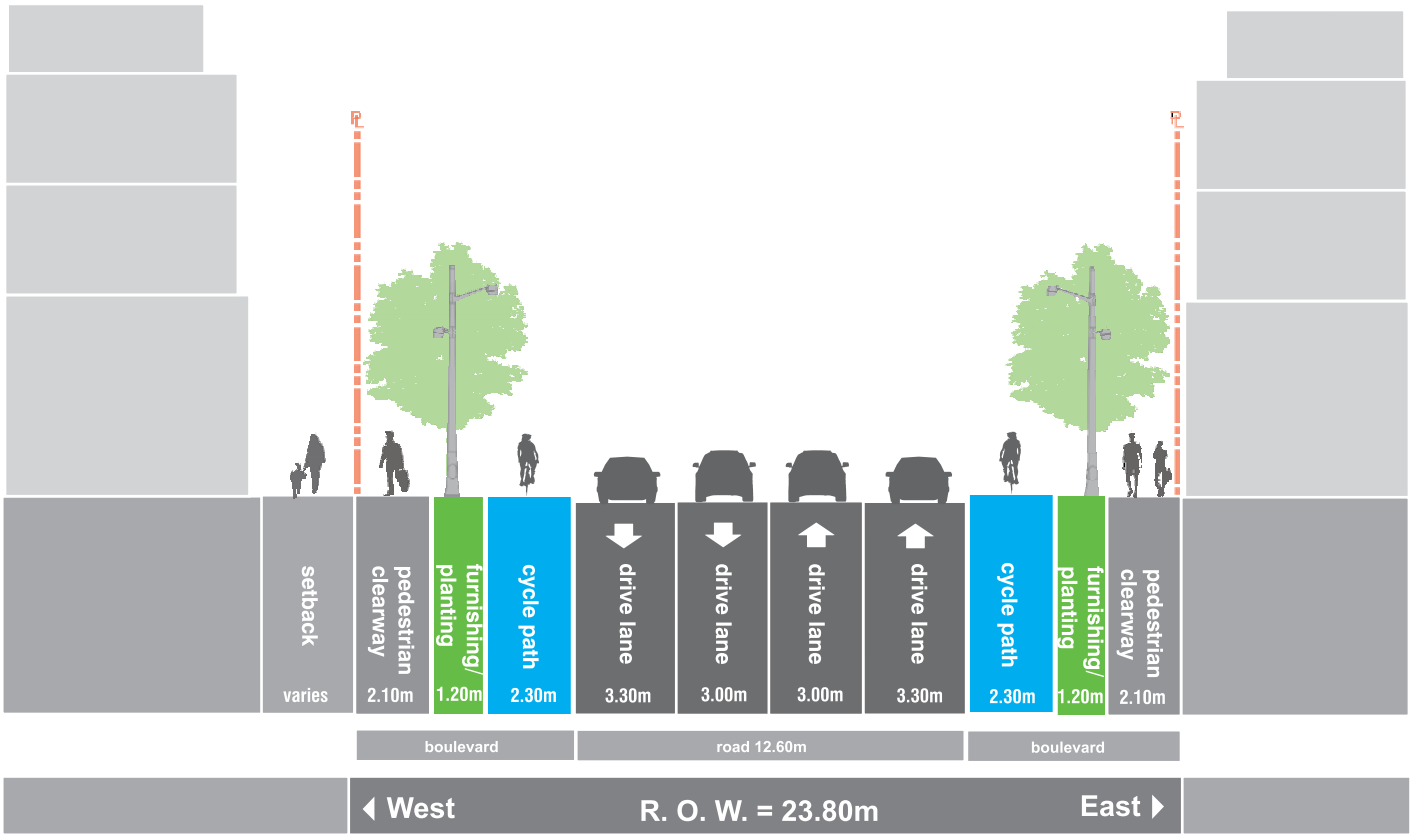
**Alternative 3:**

## Cooper Street: Tunnel Alignment (Facing North)
## 4 - Lane + Uni - Directional Cycle Tracks (35.70m R.O.W.)




◀ West | R. O. W. = 35.70m | East ▶

**Alternative 2:**
**Church Street: South of The Esplanade**
**4-Lane + Uni - Directional Cycle Path (23.80m R.O.W.)**

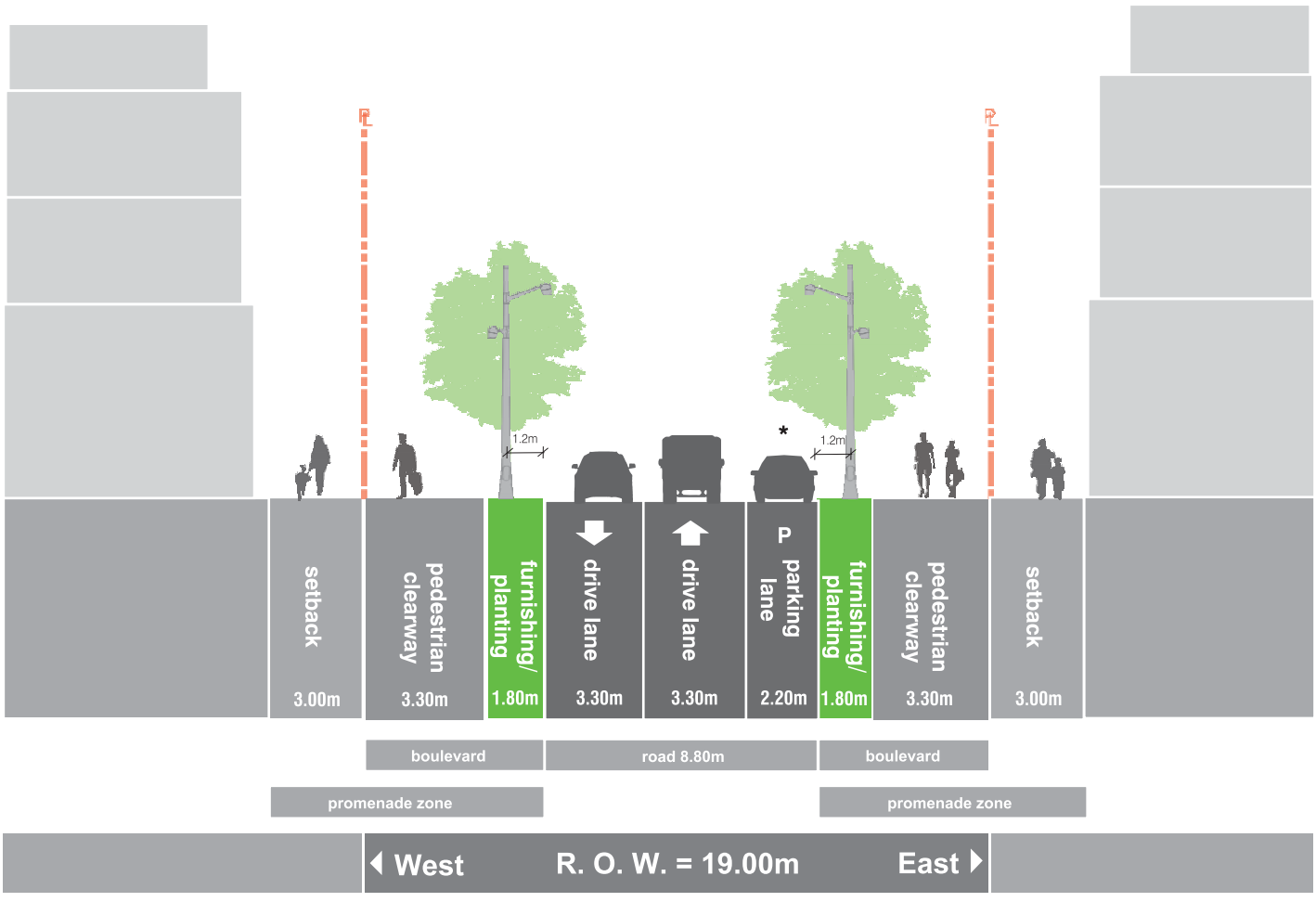


**Alternative 3:**

## New Street: Queens Quay - Lake Shore Blvd EB (Facing North)

## 2 - Lane + Parking (19.00m R.O.W.)

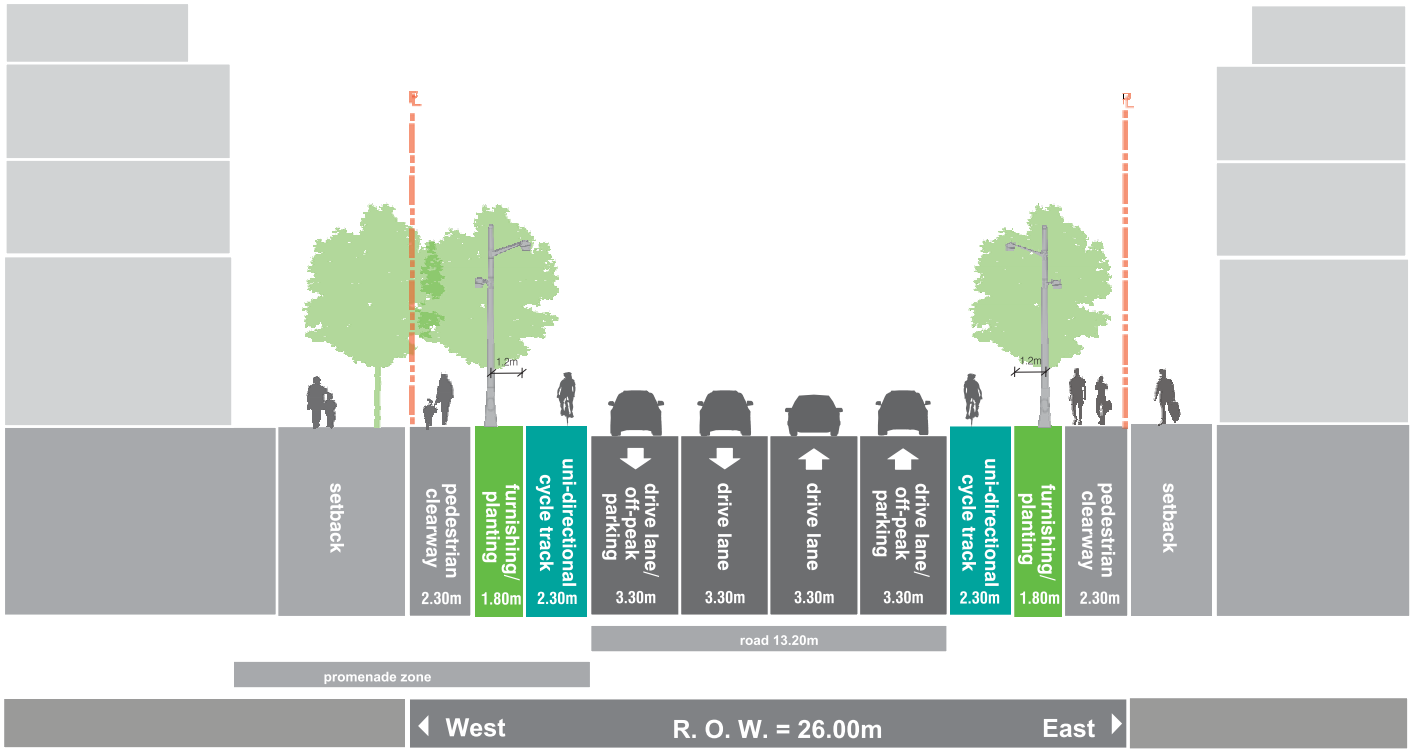
**Note: *Parking will be permitted on one side where appropriate to accommodate truck movements.**



**Alternative 1:**

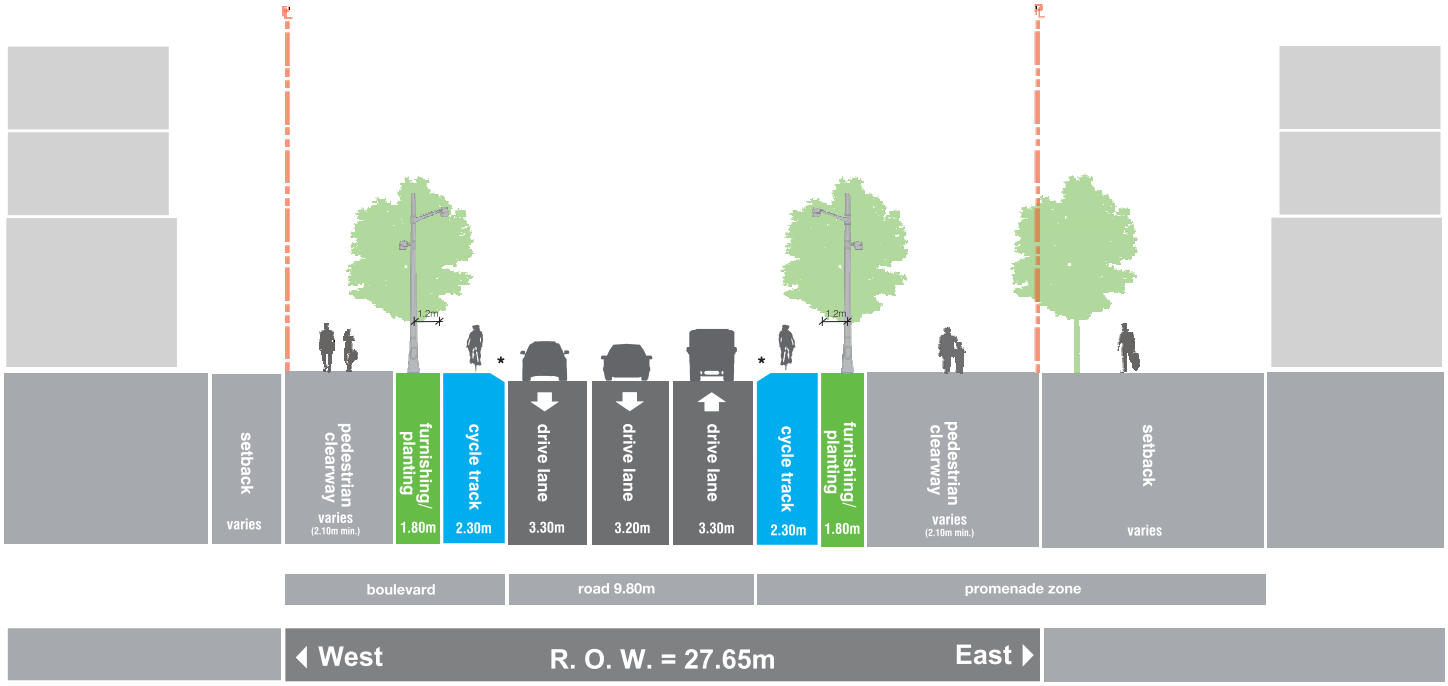
## Lower Jarvis Street: Queens Quay - Lake Shore Blvd (Facing North)
## 4-Lane + Off-Peak Parking + Uni - Directional Cycle Tracks (26.00m R.O.W.)

Note: *Parking will be permitted where appropriate to accommodate truck movements.

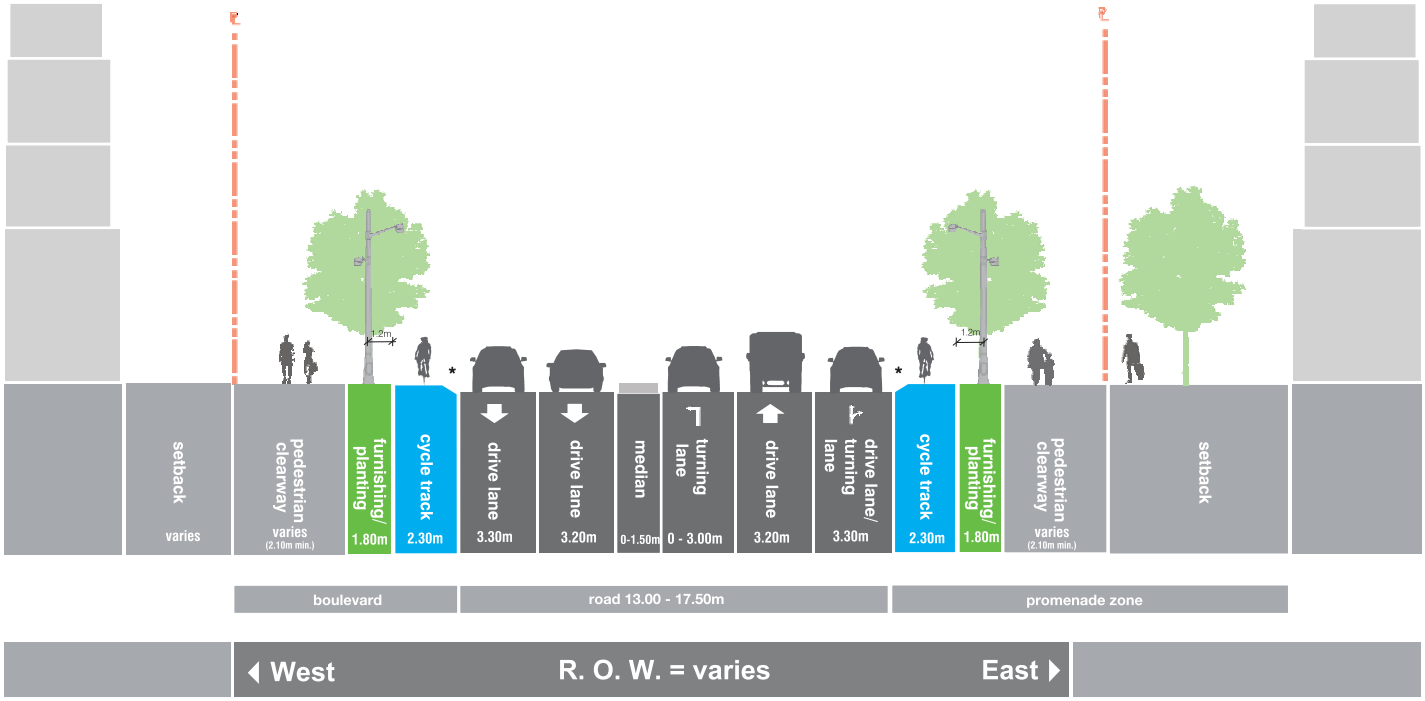


## Yonge Street: South of Harbour Street
## 3-Lane + Uni-directional Cycle Tracks (27.65m R.O.W.)

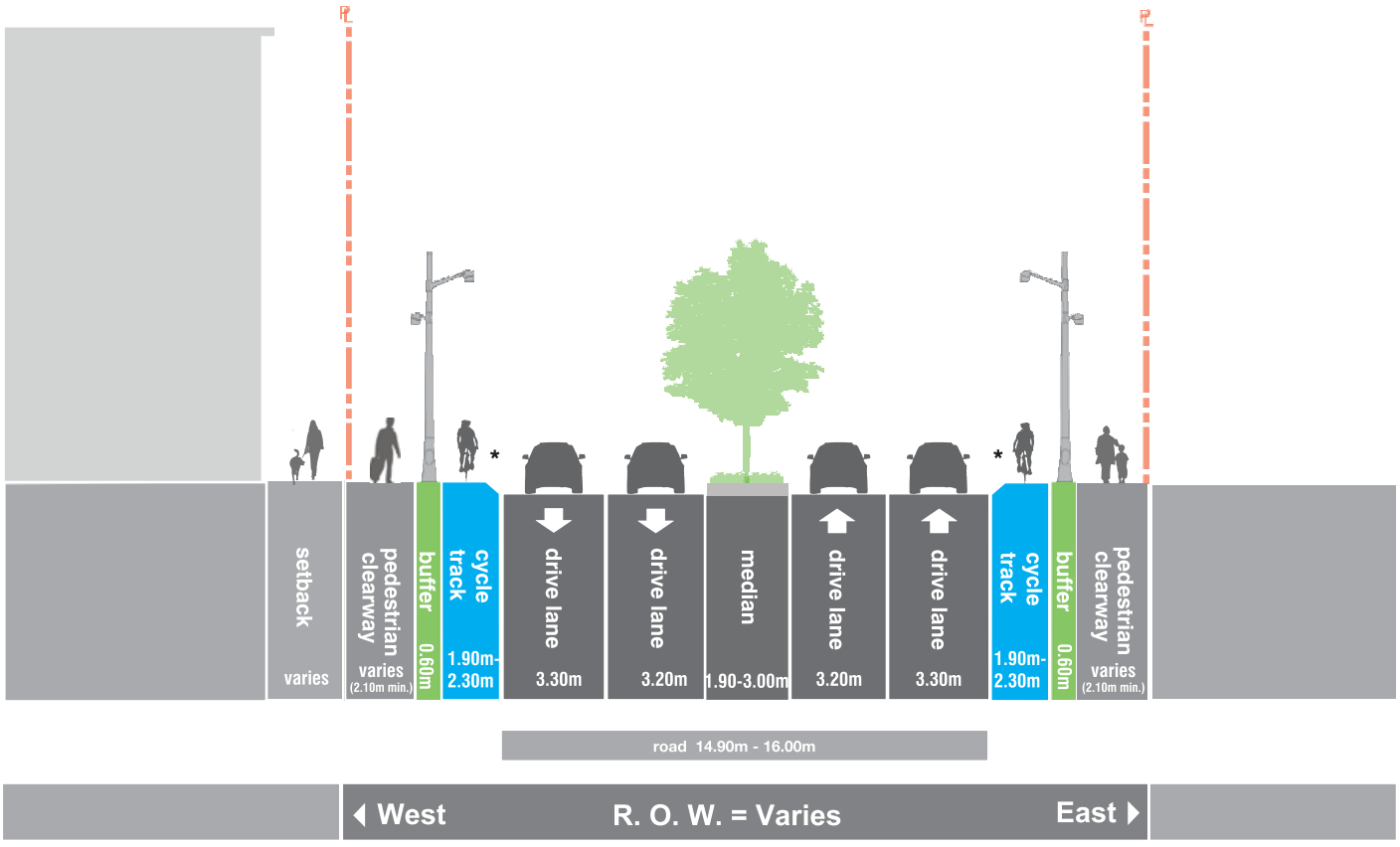
**Note: Raised cycle tracks with fully mountable curb**



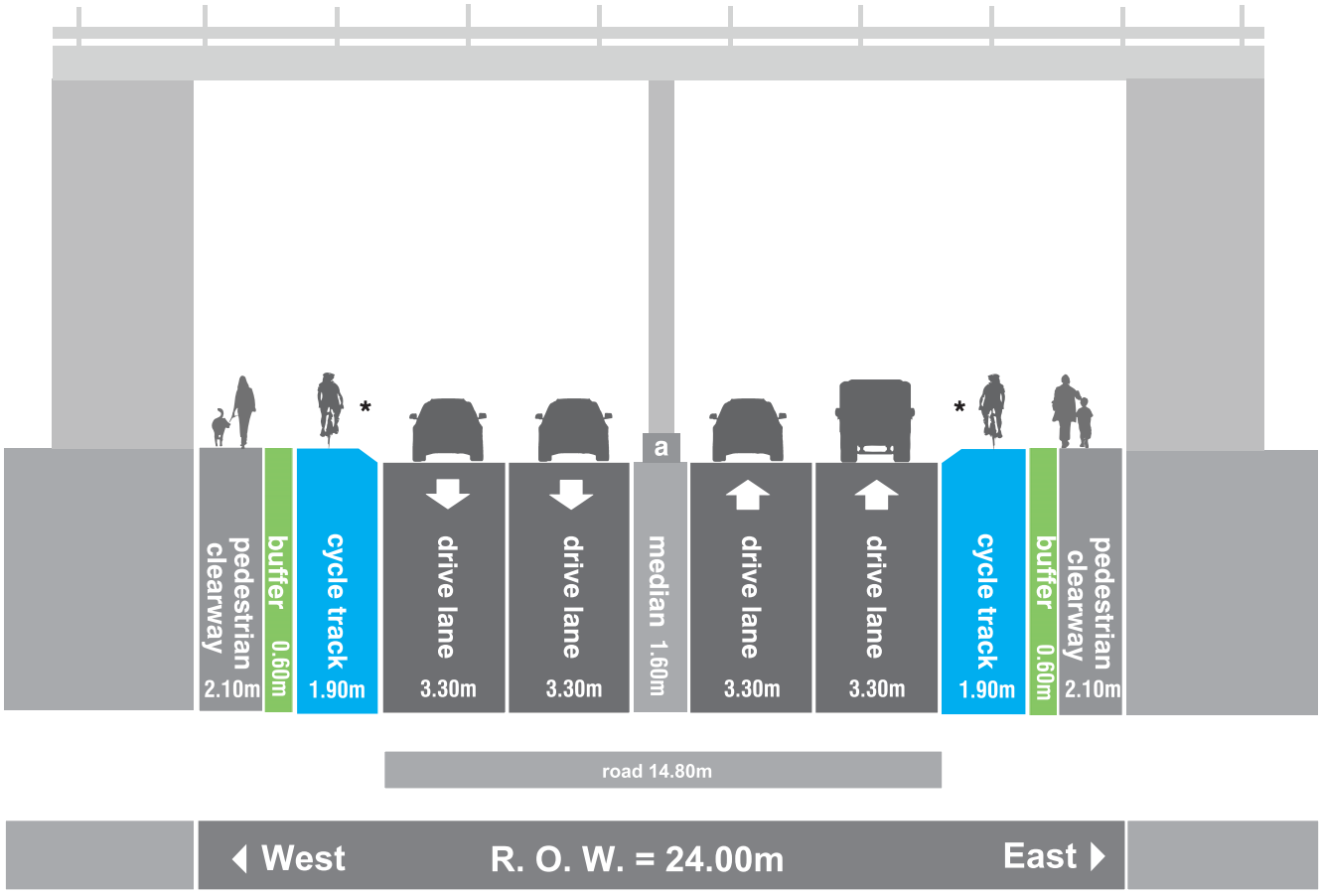
## Yonge Street: North of Harbour Street - Lake Shore Blvd
## 4-Lane + Uni-directional Cycle Tracks (Varies R.O.W.)
**Note: Raised cycle tracks with fully mountable curb**



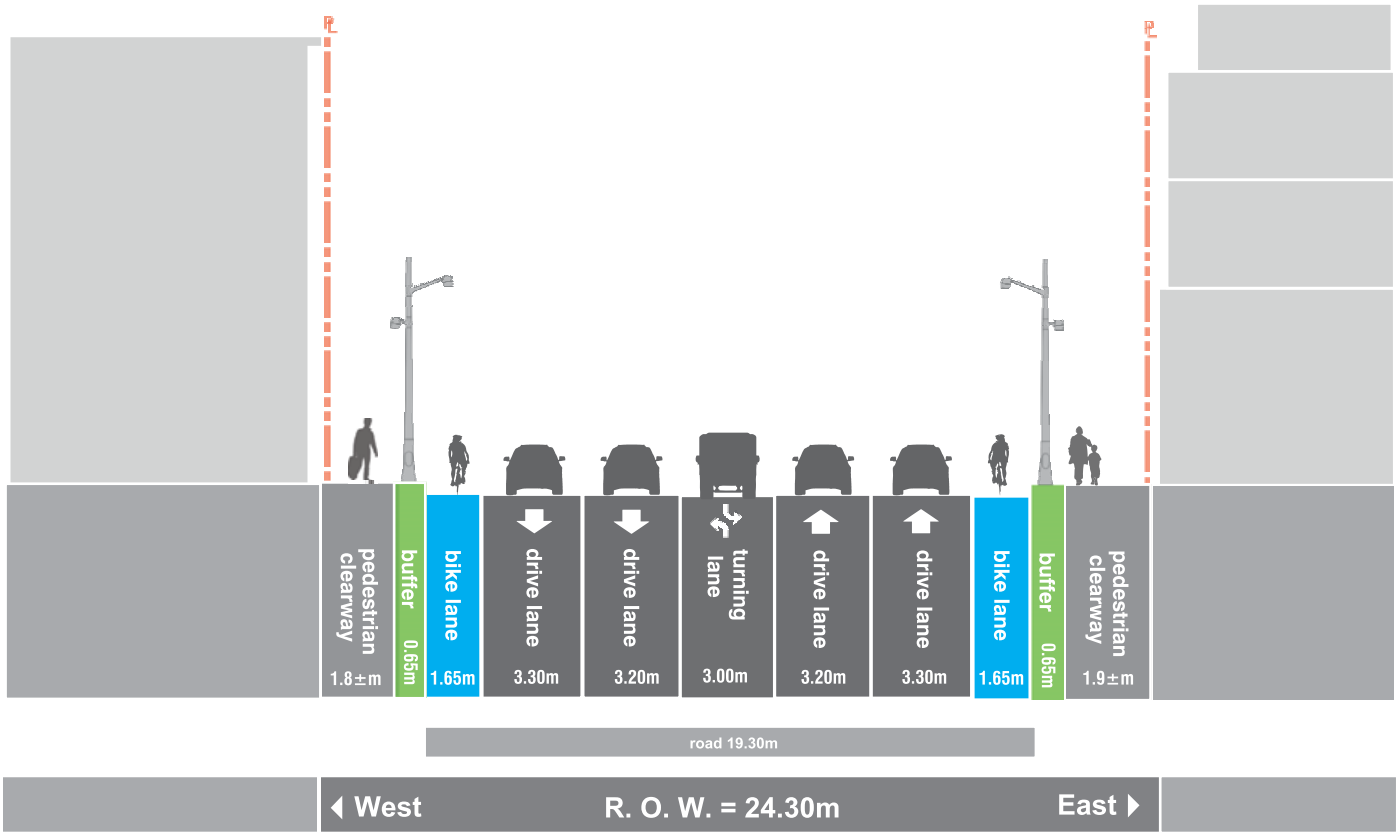
**Alternative 2:**
**Yonge Street: North of Lake Shore Blvd - Railway Corridor (Facing North)**
**4-Lane + Uni-directional Cycle Tracks + Median (R.O.W. Varies)**
**Note: Raised cycle tracks with fully mountable curb**



**Alternative 2:**
**Yonge Street: Railway Corridor (Facing North)**
**4-Lane + Uni-directional Cycle Tracks + Median (24.00m R.O.W.)**
Note: * Fully mountable curb and cycle tracks with +/- 2% cross slope



## Yonge Street: Railway Corridor - Front Street (Facing North)
## 4-Lane + Uni-directional Bike Lanes + Turning Lane (24.30m R.O.W.)



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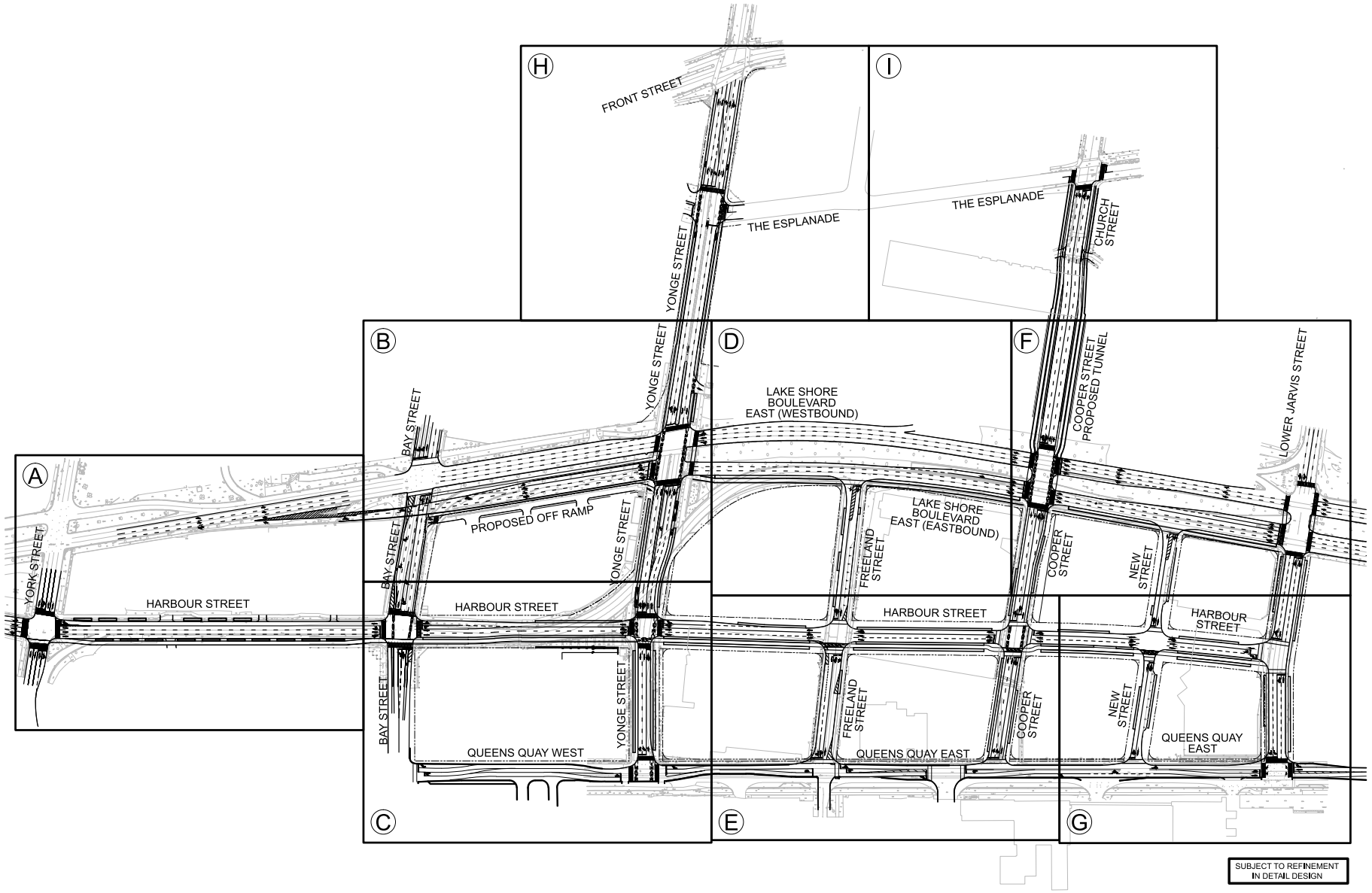


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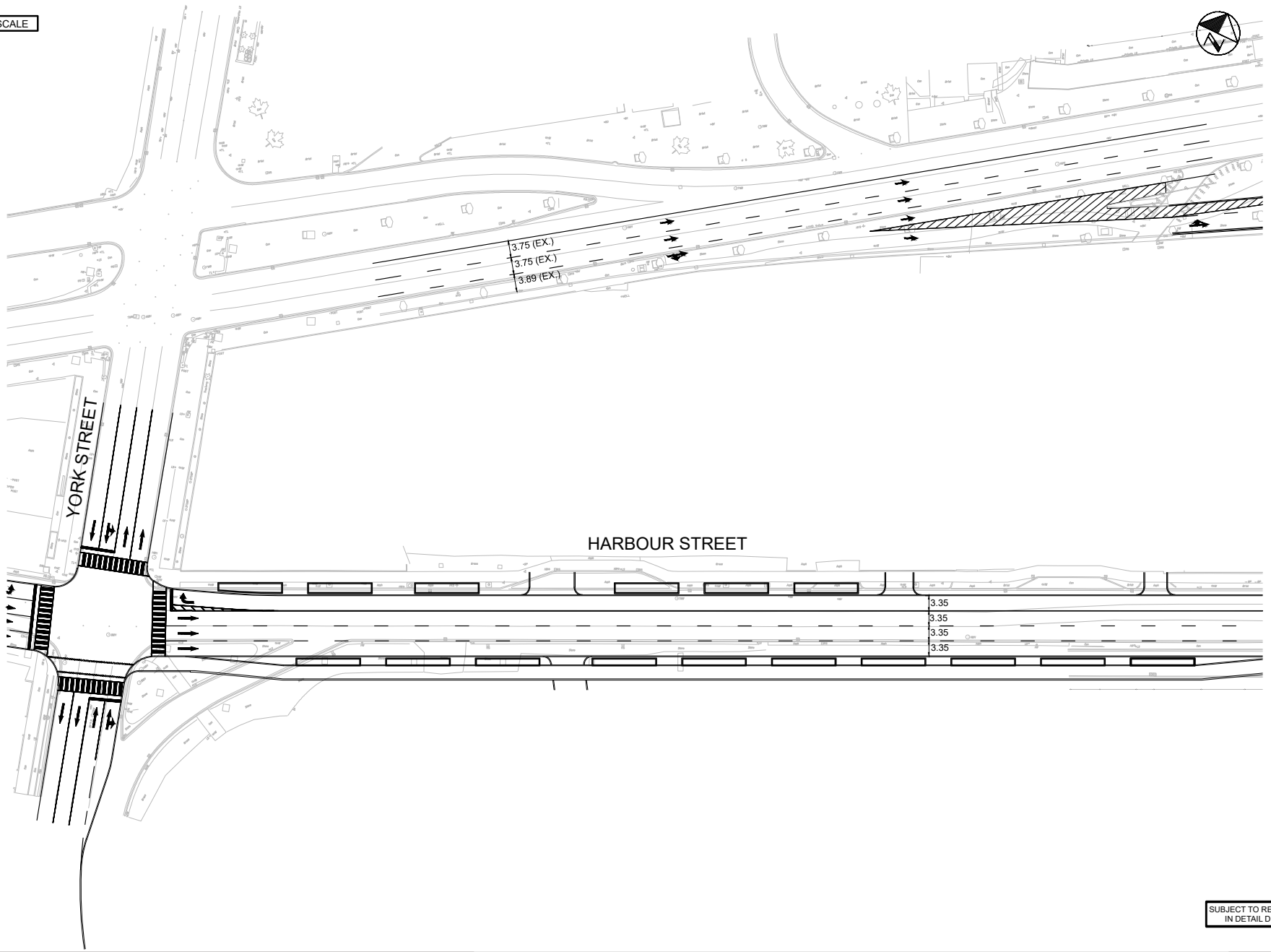
# Recommended Plan
# Key Plan

Exhibit
**7-2**

NOT TO SCALE




SUBJECT TO REFINEMENT IN DETAIL DESIGN

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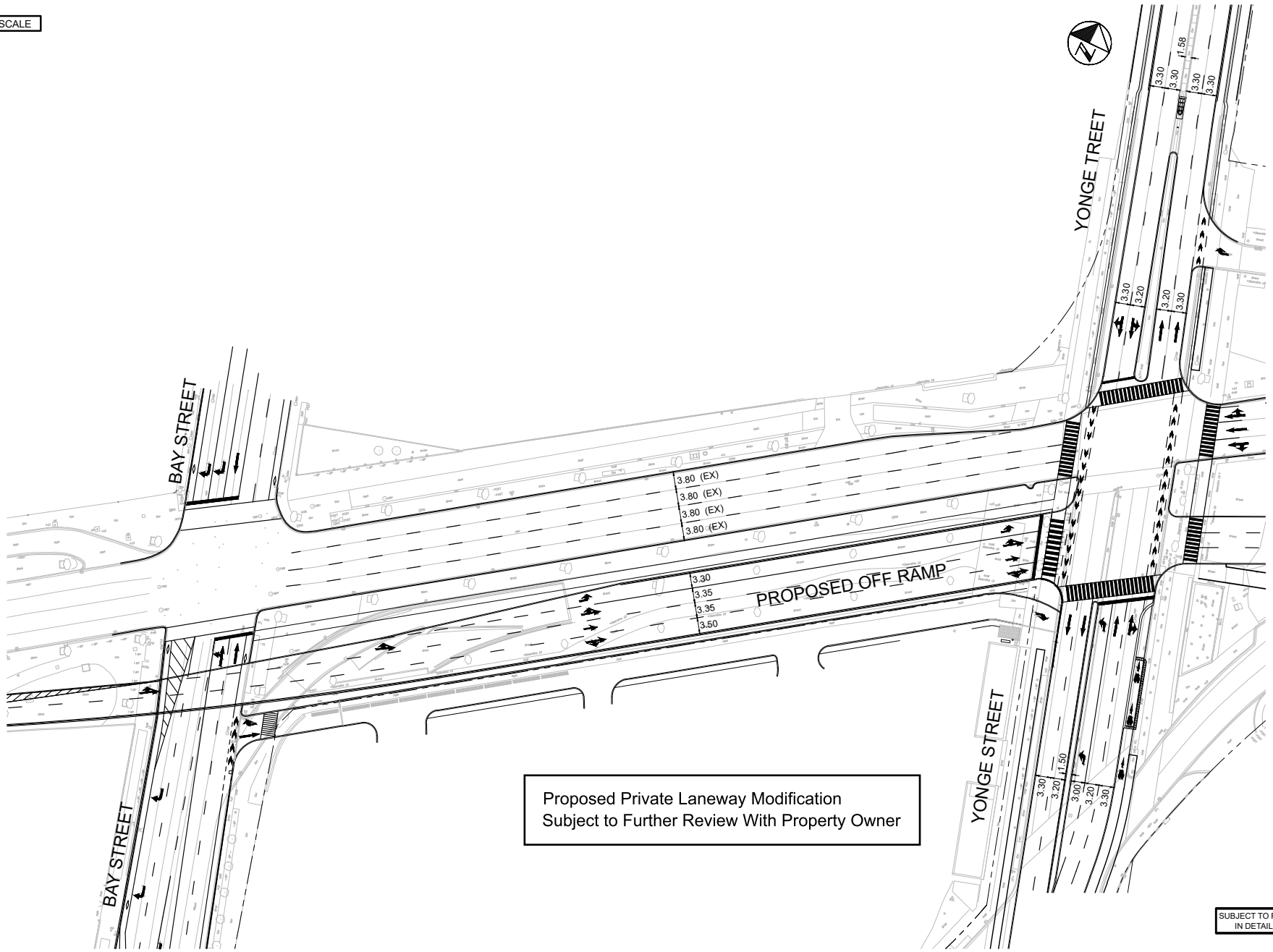
# Recommended Plan

Exhibit
**7-2a**

NOT TO SCALE

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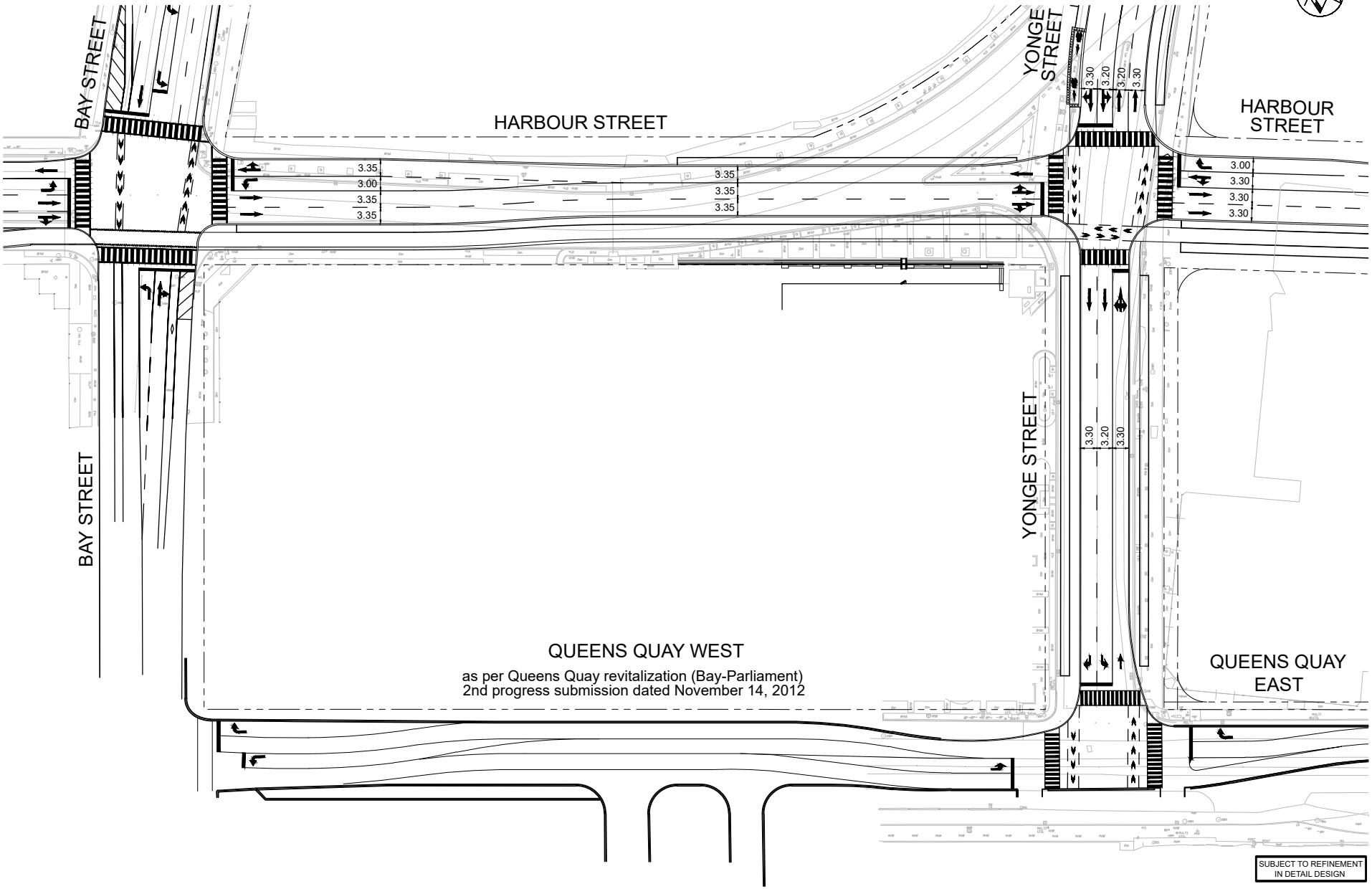
# Recommended Plan

Exhibit
**7-2b**

NOT TO SCALE

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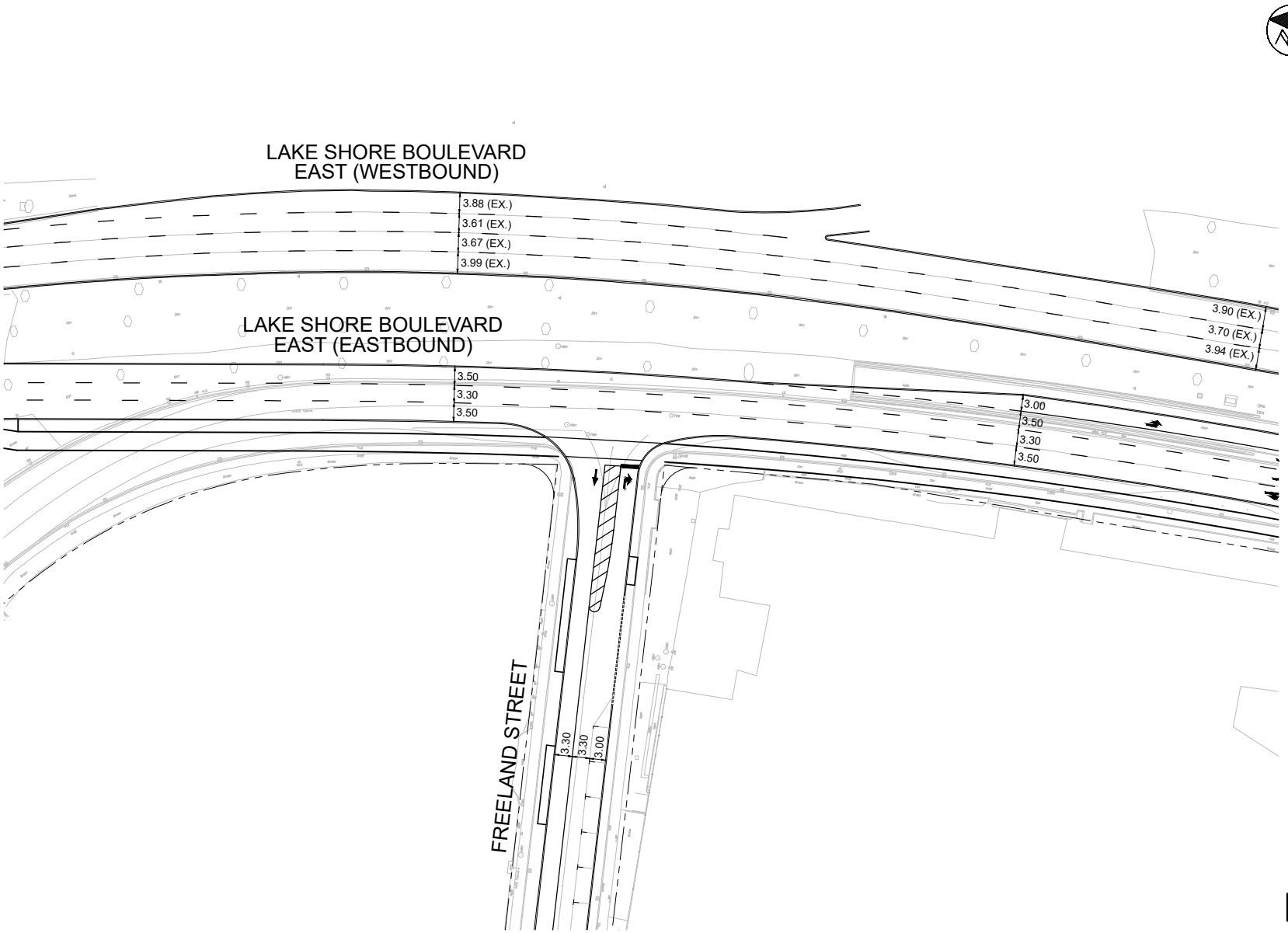
# Recommended Plan

Exhibit
**7-2c**

NOT TO SCALE




SUBJECT TO REFINEMENT IN DETAIL DESIGN

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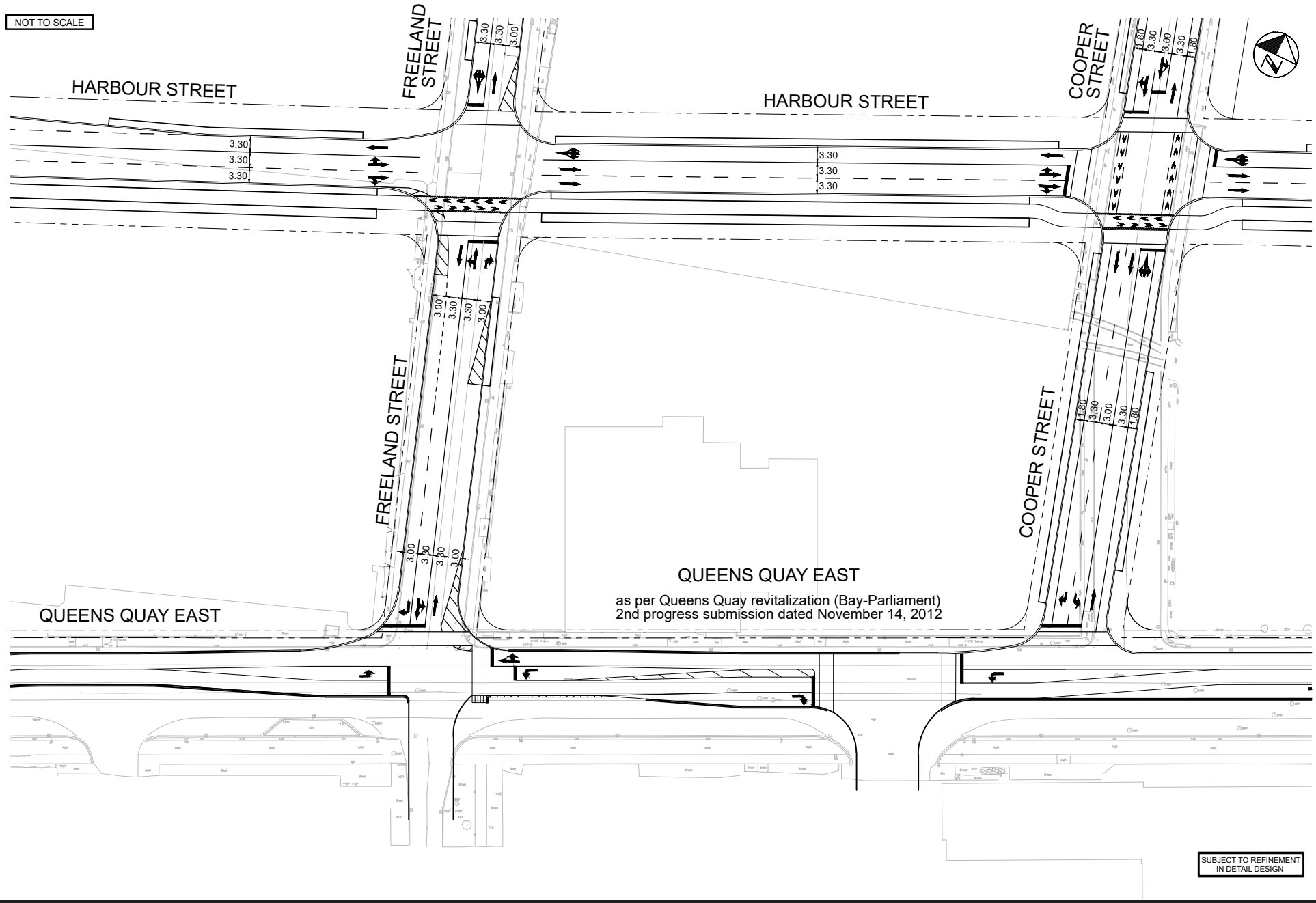
# Recommended Plan

Exhibit
**7-2d**

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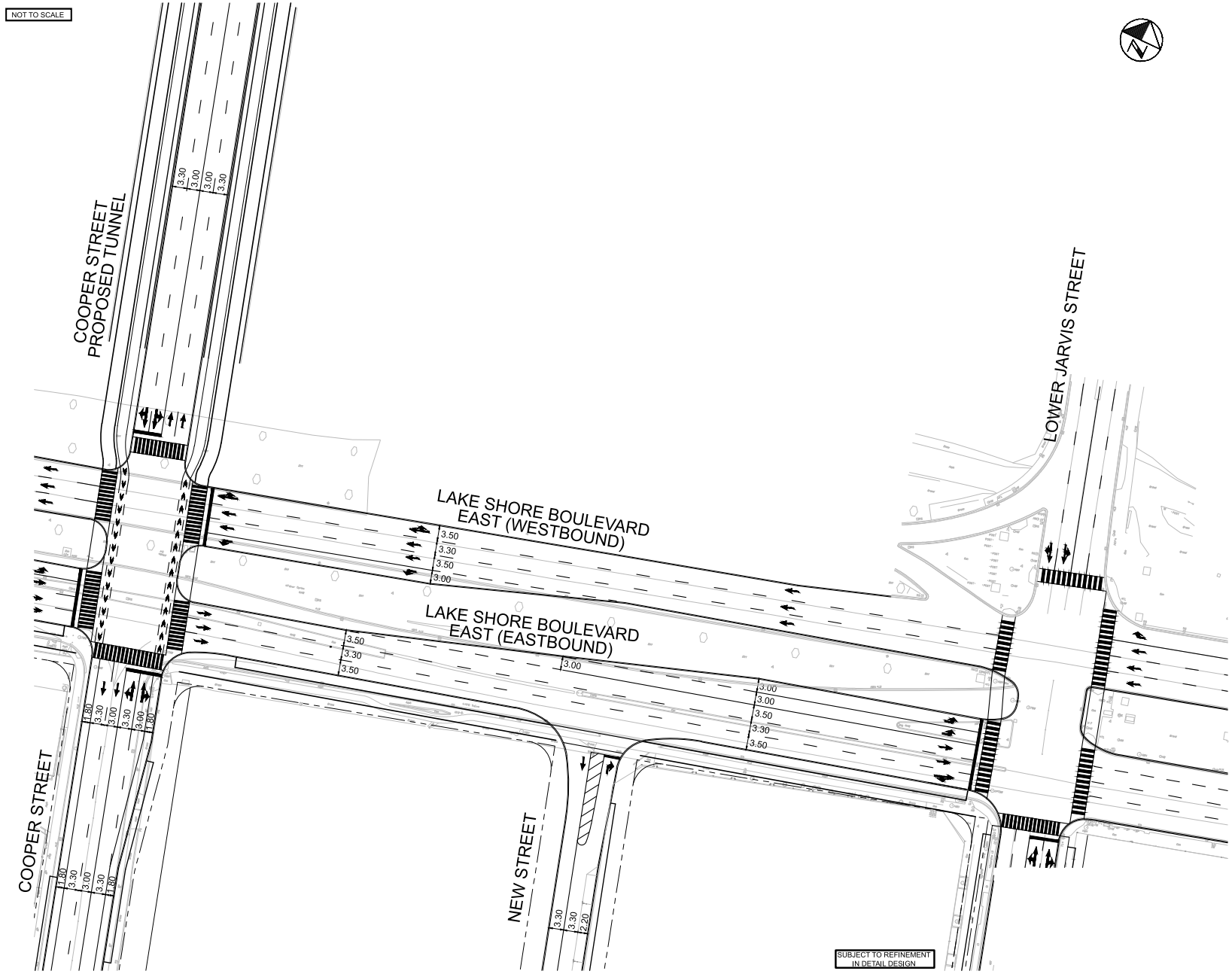
# Recommended Plan

Exhibit
**7-2e**

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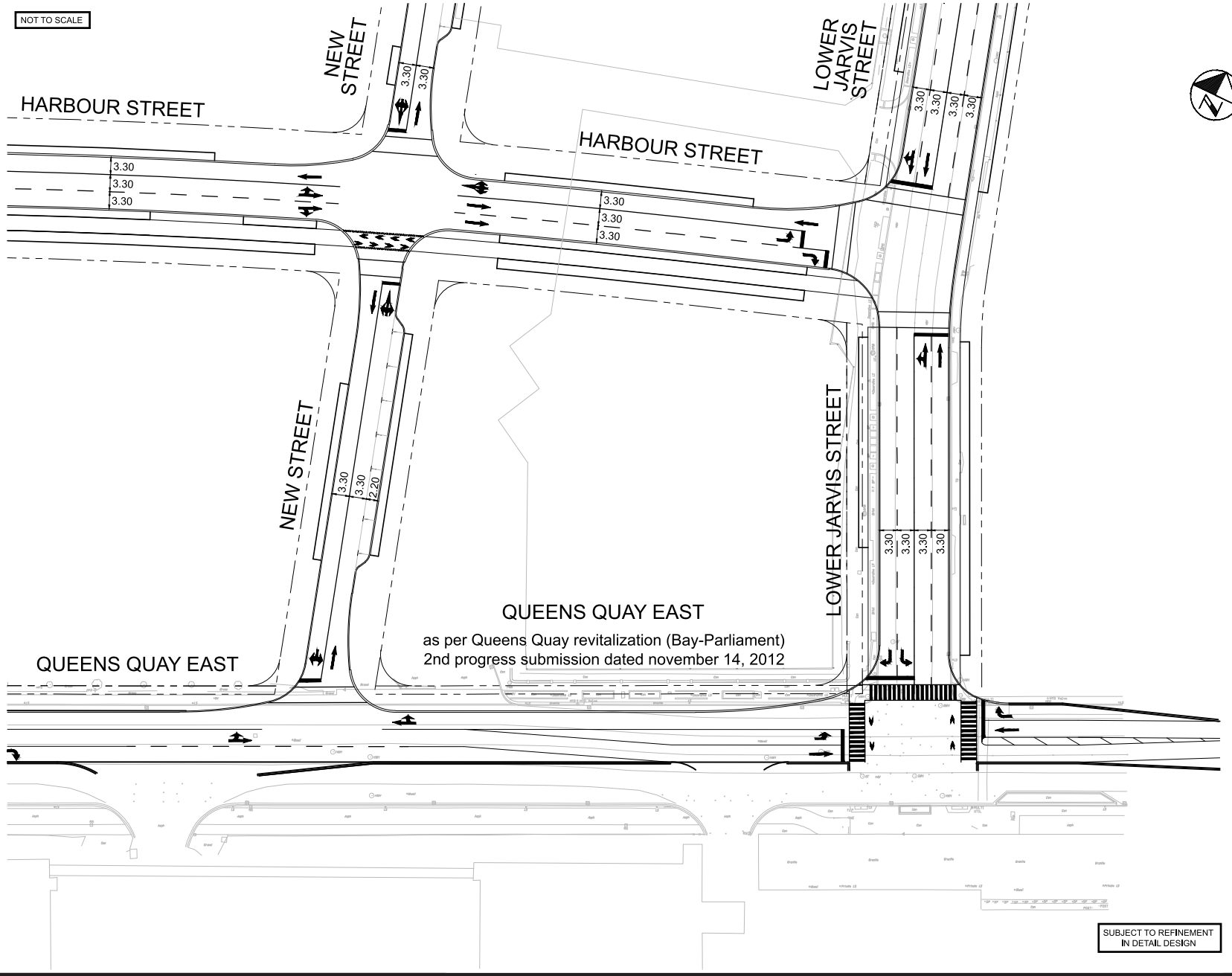
# Recommended Plan

Exhibit
**7-2f**

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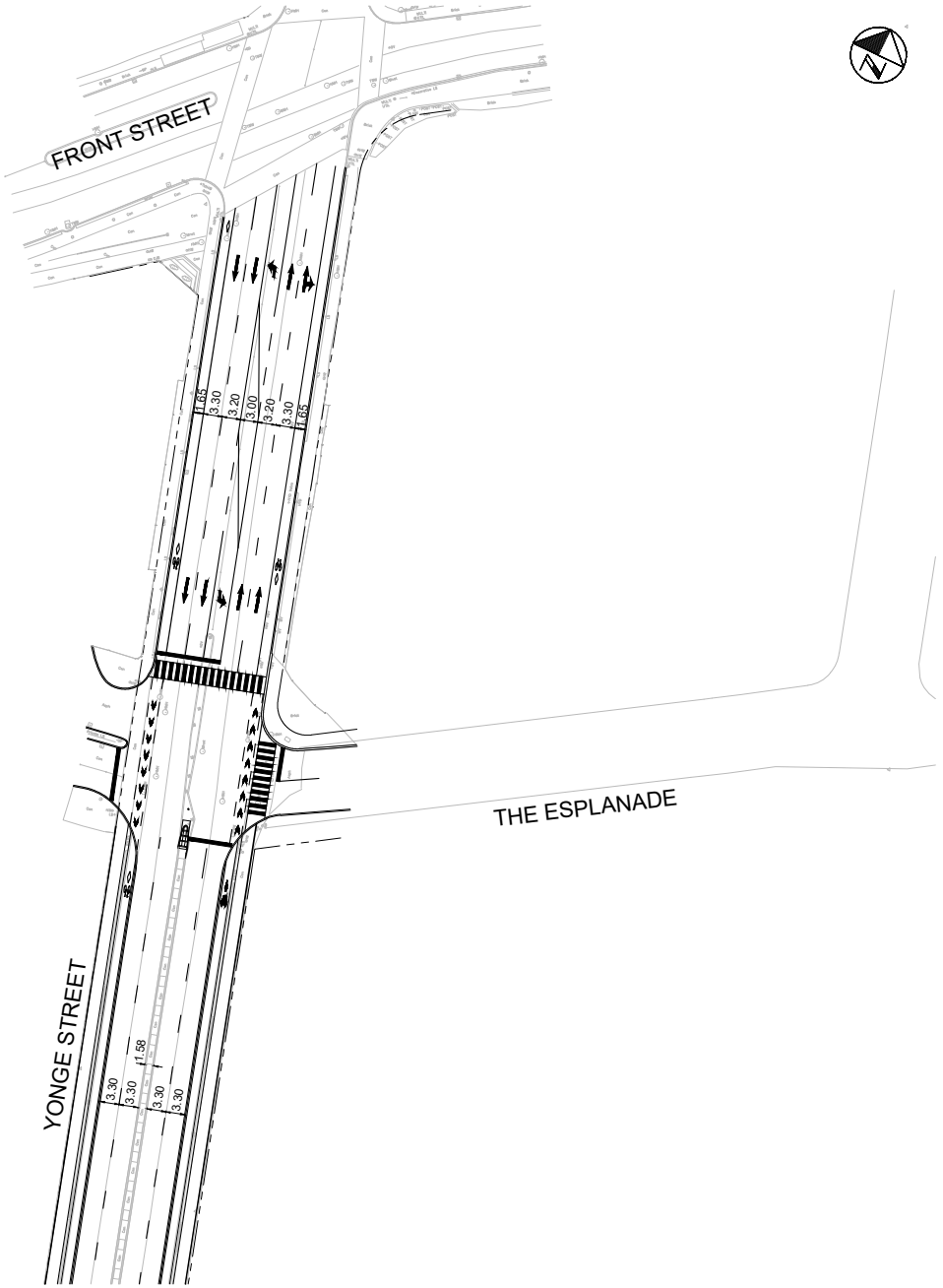
# Recommended Plan

Exhibit
**7-2g**

NOT TO SCALE




SUBJECT TO REFINEMENT IN DETAIL DESIGN

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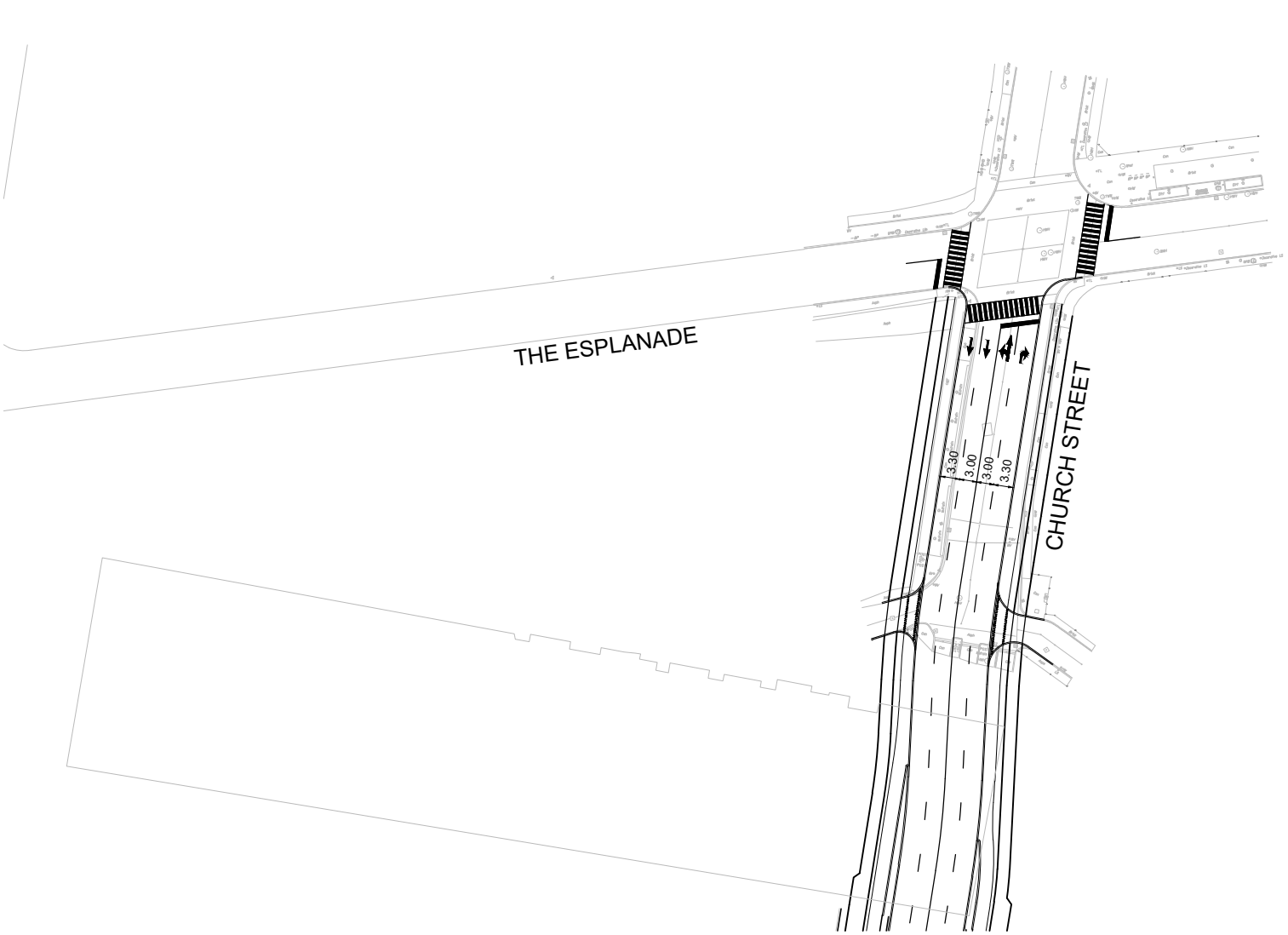
# Recommended Plan

Exhibit
**7-2h**

NOT TO SCALE




SUBJECT TO REFINEMENT IN DETAIL DESIGN

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# Recommended Plan

Exhibit
**7-2i**

### 7.1.1 Proposed Road Classifications

**Exhibit 7-3** provides an overview of the proposed road classifications, and the proposed street hierarchy plan is shown in **Exhibit 7-4**.

**Exhibit 7-3: Proposed Road Classifications**

| Roadway | From | To | Proposed Classification | Proposed ROW (m) | Proposed Through/Curb Lane Width (m) | Posted Speed (km / h) |
|---|---|---|---|---|---|---|
| Lake Shore Boulevard EB | Yonge Street | Lower Jarvis Street | Major Arterial | Varies | 3.3 / 3.5 | 50 |
| Harbour Street | York Street | Yonge Street | Major Arterial | 26.2 | 3.35 / 3.35 | 40 |
| Harbour Street | Yonge Street | Lower Jarvis Street | Collector | 27.0 | 3.3 / 3.3 | 40 |
| Yonge Street | Queens Quay | Lake Shore Boulevard | Major Arterial | 27.65 | 3.2 / 3.3 | 40 |
| Yonge Street | Lake Shore Boulevard | Front Street | Major Arterial | 24.5 | 3.2 / 3.3 | 40 |
| Freeland Street | Queens Quay | Lake Shore Boulevard EB | Collector | 20.1 | 3.3 / 3.3 | 40 |
| Cooper Street | Queens Quay | Lake Shore Boulevard EB | Local | 21.0 | 3.0 / 3.3 | 40 |
| Church Street | Lake Shore Boulevard EB | The Esplanade | Collector | 23.8 (north of the rail) and 35.7 (tunnel) | 3.0 / 3.3 | 40 (north of the rail corridor)<br>40 (tunnel) |
| Lower Jarvis Street | Queens Quay | Lake Shore Boulevard EB | Minor Arterial | 26.0 | 3.5 / 3.5 | 40 |
| New Street | Queens Quay | Lake Shore Boulevard EB | Local | 19.0 | 3.3 / 3.3 | 40 |


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# Street Hierarchy Plan

Exhibit
**7-4**

### 7.1.2 Recommended Cross Sections

The recommended cross section for each roadway is described below. The recommended plan facilitates the reconnection of the City to its waterfront, creates a more fine-grained road network, improves pedestrian and cycling conditions, and changes the vehicular circulation through the precinct to better balance regional and local traffic demands. The recommended cross sections are described below and shown in **Exhibits 7-1a to 7-1r**.

Harbour Street from Bay Street to Yonge Street

The proposed Harbour Street alignment has been designed as a three lane cross-section (two lanes eastbound / one lane westbound) using the existing roadway from Bay Street to mid-block. The existing S-curve will be removed and Harbour Street will be straightened to connect to Yonge Street in line with the current Harbour Street alignment between York Street and Bay Street. The lane arrangement includes 3.35 m traffic lanes and a new two-way off-street 3.00 m cycle track on the south side. On the north side of Harbour Street, a pedestrian clearway with at least 2.10 m width is separated from the roadway by a 1.80 m wide planting/furnishing zone. On the south side of Harbour Street, a pedestrian clearway with at least 2.10 m width is separated from the roadway by a 1.80 m wide planting / furnishing zone, the 3.00 m wide cycle track, and a 0.60 m buffer.

Harbour Street from Yonge Street to Freeland Street

The proposed Harbour Street from Yonge Street to Freeland Street alignment has been designed as a three lane cross-section (two lanes eastbound / one lane westbound) using the existing roadway. The lane arrangement includes 3.30 m traffic lanes, a new bi-directional off-street 3.00 m cycle facility, a 2.0 m furnishing / planting zone, and a 3.25 m pedestrian clearway on the south side. On the north side of Harbour Street, a 5.25 m pedestrian clearway is separated from the roadway by a 2.00 m wide planting / furnishing zone.

Harbour Street from Freeland Street to Lower Jarvis Street

The proposed Harbour Street from Freeland Street to Lower Jarvis Street alignment has been designed as a three lane cross-section (two lanes eastbound / one lane westbound). The lane arrangement includes 3.30 m traffic lanes. On the north side of Harbour Street, the 5.25 m wide pedestrian clearway is separated from the roadway by a 1.80 m wide planting / furnishing zone. On the south side of Harbour Street, the 3.25 m wide pedestrian clearway is separated from the roadway by a 1.80 m wide planting / furnishing zone, the 3.00 m wide bi-directional cycle track, and a 1.80 m wide planting / furnishing zone.

Lake Shore Boulevard East from Yonge Street to Lower Jarvis Street

Lake Shore Boulevard East located opposite the new Yonge Street off-ramp has been designed as a three lane cross-section to the north. The south side of Lake Shore Boulevard East has been

designed as a three lane cross-section. The pedestrian clearway on the south side would be separated from the roadway by a 2.50 m wide planting / furnishing zone.

Lake Shore Boulevard East at Cooper Street

To the north side of the Lake Shore Boulevard at Cooper Street alignment three westbound lanes are present. The 3.0 m westbound left turn lane will be provided when the Cooper tunnel is built. To the south side, the design includes a 3.0 future left turn lane, 3.5 m and 3.3 m through lanes, and a 3.5 m shared through-right curb lane. On the south side of Lake Shore Boulevard at Cooper Street, a 3.25 m pedestrian clearway would be separated from the roadway by a 2.50 m wide planting / furnishing zone.

Gardiner Off-ramp

The proposed Gardiner Expressway off-ramp to Yonge Street alignment has been designed as a four lane cross-section at the Yonge Street intersection with Lake Shore Boulevard East. The off-ramp will have a single lane exit and then widen to four lanes at the Yonge Street intersection. The lane arrangement includes the following lane configuration at Yonge Street: 3.3 m left turn lane, 3.35 m through-left turn lane, 3.35 m through lane, and a 3.5 m through-right turn lane.

Cooper Street from Queens Quay East to Lake Shore Boulevard East

The proposed Cooper Street alignment has been designed as a three lane cross-section (two lanes southbound / one lane northbound). The lane arrangement includes 3.30 m curb lanes, and a 3.00 m centre southbound drive lane. At the Harbour Street intersection, the northbound lane permits three movements: left-turn, through, and right-turn.

At the Lake Shore Boulevard East intersection, a northbound through-left and through-right turn lanes will be constructed to permit two northbound lanes to cross Lake Shore Boulevard in the future when the tunnel under the Metrolinx rail corridor is built. On-street 1.80 m wide bike lanes are proposed on either side of Cooper Street. On both sides of Cooper Street, the 2.10 m wide pedestrian clearway is separated from the roadway by a 1.80 m wide furnishing / planting zone. There is a promenade zone from the proposed face of curb to the proposed buildings on the east side of Cooper Street which includes a setback between the property line and the proposed buildings. There is no setback between the property line and the proposed buildings on the west side of Cooper Street.

Freeland Street: Queens Quay East to Harbour Street

The proposed Freeland Street alignment between Queens Quay East and Harbour Street has been designed as a three lane cross-section (two lanes southbound / one lane northbound) with a TTC bus layby on the east side. The lane arrangement includes 3.30 m drive lanes, a 3.00 m bus parking lane, and a 3.00 m southbound right turn lane. The pedestrian clearways would be 2.65 m wide on the west side of Freeland Street and 3.07 – 4.85 m wide on the east side. The

existing Freeland Street road allowance (20.12 m wide) and alignment are maintained, which reduces the opportunity for planting / furnishing zones to a single area on the east side of Freeland Street just south of Harbour Street.

Freeland Street: Harbour Street to Lake Shore Boulevard East

Freeland Street, north of Harbour Street, would be a two lane roadway (one lane in each direction) with on-street parking permitted on the east side about half way to Lake Shore Boulevard East. The driving lanes would be 3.30 m wide with 3.00 m parking spaces. On the west side of Freeland Street, there is a 2.65 m wide pedestrian clearway. On the east side of Freeland Street, there is a 1.80 m wide furnishing / planting zone between the roadway and a 3.07 m – 4.87 m wide pedestrian clearway. The proposed community park will be on the east side of Freeland Street. There is a 3.00 m wide setback from the existing property line to the proposed buildings on the east side of Freeland Street. There is no setback on the east side of Freeland Street. Freeland Street will connect Harbour Street to Lake Shore Boulevard East with a north-south alignment.

Cooper Street Tunnel

The proposed Cooper Street tunnel alignment has been designed as a four lane cross-section (two lanes southbound / two lanes northbound). The lane arrangement includes 3.30 m curb lanes, and a 3.00 m inside lanes. The tunnel will be a three span structure with 6.80 m – 14.70 m – 6.80 m span lengths. The cycling and pedestrian boulevard area will follow a different profile than the roadway to meet AODA requirements (5% maximum grade). Behind the central columns will be off-street 2.30 m wide bike lanes, 0.60 m buffers, and 3.00 m wide pedestrian clearways on both sides of Cooper Street. Cooper Street will connect Lake Shore Boulevard East to Church Street south of The Esplanade with a north-south alignment. There will be four lanes where the Cooper Street tunnel would connect at Lake Shore Boulevard. Southbound motorists will have two lanes that accommodate both through and turning movements, whereas, northbound traffic has two through lanes.

Church Street

The proposed Church Street alignment has been designed as a four lane cross-section (two lanes southbound / two lanes northbound). The lane arrangement includes 3.30 m curb lanes, and 3.00 m drive lanes. Off-street 2.30 m wide cycle paths are proposed on either side of Church Street immediately adjacent to the roadway. On both sides of Church Street, the 2.10 m wide pedestrian clearway is separated from the cycle tracks by a 1.20 m wide furnishing / planting zone. A setback is provided on the west side of Church Street only. Church Street will connect the Cooper Street tunnel to Church Street with a north-south alignment.

'New' Street

The proposed 'New' Street alignment has been designed as a two lane cross-section (one lane southbound / one lane northbound). The lane arrangement includes 3.30 m drive lanes, and a 2.20 m parking lane, where it can be accommodated. On both sides of 'New' Street, the 3.30 m wide pedestrian clearway is separated from the roadway by a 1.80 m wide furnishing / planting zone. There is a 3.00 m wide setback from the existing property line to the proposed buildings on both sides of 'New' Street. 'New' Street will connect Queens Quay to Lake Shore Boulevard East with a north-south alignment.

Lower Jarvis Street from Queens Quay East to Lake Shore Boulevard East

The proposed Lower Jarvis Street alignment has been designed as a four lane cross-section (two lanes southbound / two lanes northbound). The lane arrangement includes 3.30 m curb lanes, and 3.30 m inside lanes. Off-street 2.30 m wide uni-directional cycle tracks are proposed on either side of Lower Jarvis Street. On both sides of Lower Jarvis Street, the 2.30 m wide pedestrian clearway is separated from the cycle tracks by a 1.80 m wide furnishing / planting zone. There is a 10.0 m wide setback from the proposed face of curb to the proposed buildings on the west side of Lower Jarvis Street. There is a 3.00 m setback on the east side of Lower Jarvis Street. At the Harbour Street intersection, there is one through lane in each direction and a shared through-turning lane. At the Lake Shore Boulevard East intersection, the two lanes in each direction are designated as shared through-left and through-right lanes.

Yonge Street: South of Harbour Street

The proposed Yonge Street alignment, south of Harbour Street, has been designed as a three lane cross-section (two lanes southbound / one lane northbound). The lane arrangement includes 3.30 m curb lanes and a 3.20 m centre lane. Off-street 2.30 m uni-directional raised cycle tracks are located above the curb on both sides of Yonge Street. On the west side of Yonge Street, a pedestrian clearway with at least 2.10 m width is separated from the roadway by the cycle track and a 1.80 m wide planting / furnishing zone. There is a setback to the existing buildings on the west side of Yonge Street that will be maintained. On the east side of Yonge Street, a pedestrian clearway with at least 2.10 m width is separated from the roadway by the cycle track and a 1.80

m wide planting / furnishing zone. The proposed buildings on the east side of Yonge Street will be set back 10.00 m from the proposed face of curb to provide a tree lined promenade.

Yonge Street: North of Harbour Street to Lake Shore Boulevard East

The proposed Yonge Street alignment has been designed as a five lane cross-section (two lanes southbound / two lanes northbound and a northbound left turning lane approaching Lake Shore Boulevard). The lane arrangement includes 3.30 m curb lanes, 3.20 m inside through lanes and a 3.00 m turning lane. Off-street 2.30 m uni-directional cycle tracks are located above the curb on both sides of Yonge Street. On the west side of Yonge Street, a pedestrian clearway with at least 2.10 m width is separated from the roadway by the cycle track and a 1.80 m wide planting / furnishing zone. There is a setback to the existing buildings on the west side of Yonge Street that will be maintained. On the east side of Yonge Street, a pedestrian clearway with at least 2.10 m width is separated from the roadway by the cycle track and a 1.80 m wide planting / furnishing zone. The proposed buildings on the east side of Yonge Street will be set back 10.0 m from the proposed face of curb to provide a tree lined promenade.

Yonge Street from Lake Shore Boulevard to the Rail Corridor

The proposed Yonge Street alignment has been designed as a four lane cross-section (two lanes southbound / two lanes northbound). The lane arrangement includes 3.30 m curb lanes, 3.20 m inside through lanes and a 1.90 to 3.00 m centre median. Off-street 1.90 to 2.30 m uni-directional cycle tracks are located above the semi-mountable curbs on both sides of Yonge Street. On the west side of Yonge Street, a pedestrian clearway with at least 2.10 m width is separated from the roadway by the cycle track and a 0.60 m wide buffer. There is a setback to the existing buildings on the west side of Yonge Street that will be maintained. On the east side of Yonge Street, a pedestrian clearway with at least 2.10 m width is separated from the roadway by the cycle track and a 0.60 m wide buffer. Yonge Street will connect Lake Shore Boulevard East to the Metrolinx rail corridor bridge with a north-south alignment.

Yonge Street at the Rail Corridor

The proposed Yonge Street alignment at the rail corridor has been designed as a four lane cross-section (two lanes southbound / two lanes northbound). The lane arrangement includes 3.30 m curb lanes and 3.30 m through lanes. Off-street 1.90 m uni-directional cycle tracks are located above the semi-mountable curbs on both sides of Yonge Street. On the east and west sides of Yonge Street, the 2.10 m (minimum) wide pedestrian clearway is separated from the cycle track with a 0.60 m wide buffer.

Yonge Street from the Rail Corridor to Front Street

The proposed Yonge Street alignment from the rail corridor to Front Street has been designed as a five lane cross-section (two lanes southbound / two lanes northbound / centre turn lane). The lane arrangement includes 3.30 m outside lanes, 3.20m inside through lanes and a 3.00 m centre

lane. On-street 1.65 m wide uni-directional bike lanes are located adjacent to the drive lanes on both sides of Yonge Street. On the west and east side of Yonge Street, the 1.80 m and 1.90 m wide pedestrian clearways are provided respectively. A 0.65 m buffer is provided between the pedestrian clearway and bike lane on both the east and west side of Yonge Street. Yonge Street will connect the Metrolinx rail corridor bridge to Front Street with a north-south alignment.

### 7.1.3 Intersection Improvements

The Lower Yonge Precinct is anticipated to have a large number of pedestrians travelling to and from origins and destinations within the Precinct. Furthermore, a public school, daycare facilities, and a community recreation centre have been proposed within the Precinct. These uses typically generate high pedestrian volumes, which will likely trigger the upgrades to the initial traffic control measures.

As these developments move through the development review process, further analysis must be undertaken by the developers to determine pedestrian and cyclists volumes at the new Harbour Street intersections.

Nevertheless, given the potential for signalization in the future, it is recommended that sufficient space be reserved for traffic signal equipment installation within boulevards to address potential future traffic signalization needs.

### 7.1.4 Transportation Modelling

A Paramics traffic model was developed by Arup for the Lower Yonge TMP in 2014. The Lower Yonge TMP Paramics model was completed in 2014, at the time when the Gardiner Expressway & Lake Shore Boulevard Reconfiguration EA Study was underway. Therefore, the "Maintain" option (Status Quo option) was assumed.

City Council, on June 10, 2015, endorsed the "Hybrid" option as the preferred alternative solution for the Gardiner Expressway and Lake Shore Boulevard Reconfiguration EA Study. Under the "Hybrid" alternative, the existing expressway structure and alignment will remain generally the same, but there will be modifications to the on / off-ramps east of Lower Jarvis Street.

As a result of the decision made by City Council, the City retained Dillon Consulting in late 2015 to confirm the Lower Yonge TMP recommendations given the differences in traffic patterns between the Gardiner "Maintain" and "Hybrid" alternatives. Dillon tested various scenarios for their sensitivity on the Precinct, which included development density changes, lane configurations and Gardiner ramps modifications. Dillon's main conclusion was that the final design for the Gardiner "Hybrid" ramps and the exact alignment will not have a significant effect on the Precinct. Hence, a new EA Base Model (for Phases 3 and 4 of the EA) was derived from Dillon’s work.

A number of changes were applied to correctly represent other future improvements recently planned in the vicinity of the study area. This includes updating the transportation infrastructure

to match current plans, revising the land use assumptions to meet the latest targets, and revising the zone structure for the Precinct to better distribute traffic to the local roadways. A major piece of new infrastructure which was implemented in the model was the reconfiguration of of the Gardiner ramps east of Lower Jarvis Street.

The following three modelling scenarios were developed:

- Scenario 1 – EA Base Model (Aug 2014 TMP Preferred Alternative, with modifications)
- Scenario 2 – Preliminary Preferred Alternative Design (Full build out of Lower Yonge Precinct, no Cooper Street tunnel)
- Scenario 3 – Ultimate Scenario (Full build out of Lower Yonge Precinct with Cooper Street tunnel)

Scenario 1 assumed that the improvements identified in the TMP, and the modifications to the traffic simulation model as noted above, were complete. Scenario 2 represents an interim condition where the Cooper Street tunnel has not been completed, and Cooper Street is a “T-intersection” at Lake Shore Boulevard Eastbound. In addition, Scenario 2 modified the Gardiner eastbound off-ramp at Yonge Street to include 4 lanes instead of a 3 lane cross section, new intersection traffic controls along Harbour Street between Yonge Street and Lower Jarvis Street, revised lane configurations on Harbour Street between York Street and Bay Street, and additional modifications to signal timing and phasing plans at the Yonge Street/Lake Shore Boulevard and Lower Jarvis Street/Lake Shore Boulevard intersections. Scenario 3 added the Cooper Street tunnel to the Scenario 2 road network.

The revised land use for the Lower Yonge area is summarized in **Exhibit 7-5**.

**Exhibit 7-5: Lower Yonge - GFA, Unit, Population and Employee Estimates**

| | Pinnacle (1-7 Yonge Street) | LCBO/Menkes lands (55-95 Lake Shore and 2 Cooper) | Loblaw/ Choice REIT lands (10 Lower Jarvis) | Lower Yonge Precinct Totals |
|---|---|---|---|---|
| **Gross Land Area** | 6.7 acres (2.7 ha) 26,997m$^2$ | 11.3 acres (4.58 ha) 45,800m$^2$ | 4.1 acres (1.7 ha) 16,600m$^2$ | 22.1 acres (8.9 ha) 89,397m$^2$ |
| **Net Land Area** | 23,393m$^2$ | 28,165m$^2$ (w/o park) | 11,969m$^2$ | 63,527m$^2$ |
| **Proposed Density** | 16.5x | 14.5x | 12.5x | 14.86x (12.9 x including park) |
| **Proposed Total GFA** | 385,985m$^2$ | 408,393m$^2$ | 149,613m$^2$ | 943,991m$^2$ |
| **Residential GFA** | 231,591m$^2$ (based on Dec 2015 stats) | 245,036m$^2$ (based on 60% residential) | 89,768m$^2$ (based on 60% residential) | 566,395m$^2$ |
| **Residential Units** (based on 71m$^2$/unit) | 3,262 | 3,451 | 1,264 | 7,977 |
| **# of residents** (based on 1.6 people/unit) | 5,219 | 5,522 | 2,022 | 12,763 |
| **Commercial GFA** | 154,394m$^2$ (based on Dec 2015 stats) | 163,357m$^2$ (based on 40% non- residential) | 59,845m$^2$ (based on 40% non- residential) | 377,596m$^2$ |
| **# of employees** (based on 1 employee/ 25m$^2$ GFA) | 6,176 | 6,534 | 2,394 | 15,104 |

Modelling Results for Scenarios 1 and 2

These modifications to the traffic simulation model resulted in more refined results to use for future estimation of delays and queues. These results were used to determine whether the proposed infrastructure can accommodate the traffic projected from the Lower Yonge area. A summary of the level of service and delay information is provided in **Exhibit 7-6** below.

## Exhibit 7-6: Intersection Operations Analysis – Scenarios 1 and 2 Modelling Results

| Study Area Intersection | Scenario 1 – Base Future Conditions | | | | Scenario 2 – Revised Future Road Network | | | |
|---|---|---|---|---|---|---|---|---|
| | AM | | PM | | AM | | PM | |
| | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS |
| Bay St & Lake Shore Blvd WB | 18 | B | 20 | B | 14 | B | 52 | D |
| Bay St & Harbour St | 20 | C | 34 | C | 20 | C | 26 | C |
| Bay St & Queens Quay E | 25 | C | 29 | C | 27 | C | 30 | C |
| Yonge St & Lake Shore Blvd WB | 44 | D | 24 | C | 21 | C | 23 | C |
| Yonge St & Lake Shore Blvd EB | 39 | D | 42 | D | 65 | E | 60 | E |
| Yonge St & Harbour St | 18 | B | 23 | C | 19 | B | 19 | B |
| Yonge St & Queens Quay E | 8 | A | 14 | B | 7 | A | 12 | B |
| Freeland St & Lake Shore Blvd EB | 2 | A | 2 | A | 2 | A | 7 | A |
| Freeland St & Future Site Driveways for Lower Yonge Blocks 1 and 3 | 1 | A | 1 | A | 1 | A | 4 | A |
| Freeland St & Harbour St | 13 | B | 22 | C | 9 | A | 8 | A |
| Freeland St & Future Site Driveways for Lower Yonge Block 2 | 1 | A | 14 | B | 7 | A | 4 | A |
| Freeland St & Queens Quay E | 18 | B | 20 | C | 18 | B | 19 | B |
| Cooper St & Queens Quay E | 1 | A | 23 | C | 5 | A | 7 | A |
| Cooper St & Harbour St | 13 | B | 25 | C | 34 | C | 26 | C |
| Cooper St & Lake Shore Blvd EB | 0 | A | 0 | A | 1 | A | 23 | C |
| Cooper St & Lake Shore Blvd WB | 13 | B | 0 | A | 0 | A | 0 | A |
| New Street & Lake Shore Blvd EB | 6 | A | 2 | A | 4 | A | 40 | D |
| New Street & Future Site Driveways for Lower Yonge Blocks 5 and 7 | 3 | A | 1 | A | 7 | A | 28 | C |
| New Street & Harbour St | 17 | B | 33 | C | 31 | C | 21 | C |
| New Street & Future Site Driveways for Lower Yonge Blocks 6 and 8 | 1 | A | 11 | B | 11 | B | 4 | A |
| New Street & Queens Quay E | 1 | A | 9 | A | 7 | A | 6 | A |
| Lower Jarvis St & Queens Quay E | 18 | B | 40 | D | 38 | D | 34 | C |
| Lower Jarvis St & Harbour St | 15 | B | 42 | D | 46 | D | 68 | E |

| Study Area Intersection | Scenario 1 – Base Future Conditions | | | | Scenario 2 – Revised Future Road Network | | | |
|---|---|---|---|---|---|---|---|---|
| | AM | | PM | | AM | | PM | |
| | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS |
| Lower Jarvis St & Lake Shore Blvd EB | 40 | D | 31 | C | 52 | D | 63 | E |
| Lower Jarvis St & Lake Shore Blvd WB | 65 | E | 113 | F | 67 | E | 69 | E |
| Jarvis St & Front St | 40 | D | 43 | D | 26 | C | 41 | D |
| Church St & Front St | 25 | C | 25 | C | 23 | C | 31 | C |
| Yonge St & Front St | 11 | B | 30 | C | 10 | B | 15 | B |
| York St & Queens Quay E | 42 | D | 38 | D | 30 | C | 26 | C |
| York St & Harbour St | 24 | C | 31 | C | 26 | C | 28 | C |
| York St & Lake Shore Blvd WB | 37 | D | 56 | E | 45 | D | 66 | E |
| Queens Quay E & Harbourfront Centre | 122 | F | 6 | A | 1 | A | 1 | A |
| Lower Simcoe St & Queens Quay E | 540 | F | 41 | D | 40 | D | 41 | D |
| Lower Simcoe St & Lake Shore Blvd EB | 24 | C | 41 | D | 15 | B | 12 | B |
| Lower Simcoe St & Lake Shore Blvd WB | 23 | C | 26 | C | 12 | B | 22 | C |

The majority of intersections operate at acceptable levels of service (LOS), between 'A' and 'D'. A number of key intersections operate with a LOS 'E', including Lower Jarvis Street and Lake Shore Boulevard westbound, Lower Jarvis Street and Harbour Street, and Lower Jarvis Street and Queens Quay East under Scenario 2 PM peak hour conditions. It should be noted that the results for Scenario 1 and Scenario 2 are largely the same. In addition, the network outside of the Lower Yonge Precinct MCEA study area may operate differently between the three scenarios, which is not illustrated in the results shown above.

Overall, in both scenarios the road network within the Lower Yonge Precinct MCEA study area is expected to operate with some congestion, which is not uncommon in the downtown core. This congestion will further promote the use of alternative modes in the area, such as walking and cycling.

Modelling Results for Scenario 3

The Scenario 3 network builds upon the Scenario 2 network with the only material change of the addition of the Cooper Street Tunnel, and corresponding intersection of Cooper Street with Lake Shore Boulevard. The results for the Scenario 3 Paramics model are summarized in **Exhibit 7-7** below.

## Exhibit 7-7: Intersection Operations Analysis – Modelling Results for Scenario 3

| Study Area Intersection | Scenario 3 – Cooper Tunnel | | | | Scenario 2 | | | |
|---|---|---|---|---|---|---|---|---|
| | AM | | PM | | AM | | PM | |
| | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS |
| Bay St & Lake Shore Blvd WB | 14 | B | 60 | E | 14 | B | 52 | D |
| Bay St & Harbour St | 19 | B | 22 | C | 20 | C | 26 | C |
| Bay St & Queens Quay E | 26 | C | 27 | C | 27 | C | 30 | C |
| Yonge St & Lake Shore Blvd WB | 21 | C | 18 | B | 21 | C | 23 | C |
| Yonge St & Lake Shore Blvd EB | 74 | E | 44 | D | 65 | E | 60 | E |
| Yonge St & Harbour St | 14 | B | 15 | B | 19 | B | 19 | B |
| Yonge St & Queens Quay E | 8 | A | 9 | A | 7 | A | 12 | B |
| Freeland St & Lake Shore Blvd EB | 8 | A | 11 | B | 2 | A | 7 | A |
| Freeland St & Future Site Driveways for Lower Yonge Blocks 1 and 3 | 2 | A | 4 | A | 1 | A | 4 | A |
| Freeland St & Harbour St | 7 | A | 2 | A | 9 | A | 8 | A |
| Freeland St & Future Site Driveways for Lower Yonge Block 2 | 6 | A | 1 | A | 7 | A | 4 | A |
| Freeland St & Queens Quay E | 23 | C | 14 | B | 18 | B | 19 | B |
| Cooper St & Queens Quay E | 14 | B | 2 | A | 5 | A | 7 | A |
| Cooper St & Harbour St | 28 | C | 16 | B | 34 | C | 26 | C |
| Cooper St & Lake Shore Blvd EB | 54 | D | 51 | D | 1 | A | 23 | C |
| Cooper St & Lake Shore Blvd WB | 33 | C | 25 | C | 0 | A | 0 | A |
| New Street & Lake Shore Blvd EB | 71 | E | 19 | B | 4 | A | 40 | D |
| New Street & Future Site Driveways for Lower Yonge Blocks 5 and 7 | 5 | A | 16 | B | 7 | A | 28 | C |
| New Street & Harbour St | 24 | C | 9 | A | 31 | C | 21 | C |
| New Street & Future Site Driveways for Lower Yonge Blocks 6 and 8 | 12 | B | 1 | A | 11 | B | 4 | A |
| New Street & Queens Quay E | 12 | B | 3 | A | 7 | A | 6 | A |
| Lower Jarvis St & Queens Quay E | 38 | D | 32 | C | 38 | D | 34 | C |
| Lower Jarvis St & Harbour St | 43 | D | 65 | E | 46 | D | 68 | E |
| Lower Jarvis St & Lake Shore Blvd EB | 83 | F | 58 | E | 52 | D | 63 | E |
| Lower Jarvis St & Lake Shore Blvd WB | 70 | E | 67 | E | 67 | E | 69 | E |
| Jarvis St & Front St | 26 | C | 41 | D | 26 | C | 41 | D |
| Church St & Front St | 23 | C | 33 | C | 23 | C | 31 | C |
| Yonge St & Front St | 11 | B | 15 | B | 10 | B | 15 | B |
| York St & Queens Quay E | 30 | C | 27 | C | 30 | C | 26 | C |

| Study Area Intersection | Scenario 3 – Cooper Tunnel | | | | Scenario 2 | | | |
|---|---|---|---|---|---|---|---|---|
| | AM | | PM | | AM | | PM | |
| | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS |
| York St & Harbour St | 26 | C | 28 | C | 26 | C | 28 | C |
| York St & Lake Shore Blvd WB | 44 | D | 67 | E | 45 | D | 66 | E |
| Queens Quay E & Harbourfront Centre | 1 | A | 2 | A | 1 | A | 1 | A |
| Lower Simcoe St & Queens Quay E | 39 | D | 41 | D | 40 | D | 41 | D |
| Lower Simcoe St & Lake Shore Blvd EB | 14 | B | 11 | B | 15 | B | 12 | B |
| Lower Simcoe St & Lake Shore Blvd WB | 12 | B | 21 | C | 12 | B | 22 | C |

The Paramics results indicate under Scenario 3 study area intersection are expected operate very similar to Scenario 2. All study area intersections are expected to operate similarly within generally acceptable operating thresholds. The new full-move signalized intersection of Lake Shore Boulevard and Cooper Street is expected to operate adequately in both the AM and PM peak hours.

Further details on the above are provided in the Transportation Modelling Memo (**Appendix K**).

### 7.1.5 Weaving Analysis

Given the proposed reconfiguration of some of the Gardiner Expressway on- and off-ramps, a weaving analysis was conducted for the Gardiner Expressway between the Rees on-ramp and the Yonge off-ramp. The analysis used the HCM 2010 weaving methodology.

The Rees Street on-ramp becomes an additional mainline eastbound lane, and the Rees Street on-ramp traffic does not have to make a single lane change to access the Gardiner Expressway mainline (ramp-to-freeway weaving volumes are zero). The length of the weaving segment constrains the time and space in which drivers have to make the required lane changes. The weaving segment between Rees Street on-ramp and the Yonge Street off-ramp is 242 m (794 feet).

The results of the weaving analysis show that the Gardiner Expressway weaving segment between the Rees Street on-ramp and the Yonge Street off-ramp is expected to operate at LOS ‘E’ and ‘D’ during the AM and PM peak hours.

### 7.1.6 Transit Infrastructure

Staff from TTC met with the Project Team on several occasions to provide input into the future transit routing and transit amenities within the Lower Yonge Precinct area. Based on the TTC's future plans, accommodations have been made for transit routes that would enter into the Precinct from Bay Street, Yonge Street, Cooper Street (after the tunnel under the rail corridor is constructed), and Lower Jarvis Street. Refer to **Exhibit 7-8** for the proposed routing through the Lower Yonge Precinct. It should be noted that all of these routes may not be provided, but provisions have been made to permit the routing as currently envisioned.

Bay Street

The current Bay Street bus route (Route 6) runs along Bay Street to Queens Quay and then along Queens Quay to Dockside Drive. The future Bay Street bus route may be revised to turn east on Queens Quay, north at Freeland Street, west along Harbour Street, and then return north on Bay Street.

Yonge Street

The current Yonge Street bus route (Route 97B) operates during the peak periods, from Monday to Friday only between Steeles Avenue and Queens Quay. The current route runs south on Yonge Street and then west on Wellington Street West, south on Bay Street, and east on Queens Quay West to Yonge Street before returning northbound on Yonge Street. The future Yonge Street route would travel south on Yonge Street to Queens Quay East, east to Freeland Street, west on Harbour Street, and then return northbound on Yonge Street.

Cooper Street

There is no route currently along Cooper Street. Once the tunnel under the rail corridor is built, it is possible to create a new route that would run southbound on Church Street / Cooper Street to Harbour Street, east on Harbour Street, south on Lower Jarvis Street, west on Queens Quay East, north on Freeland Street, east on Harbour Street, and then return northbound on Cooper Street / Church Street.

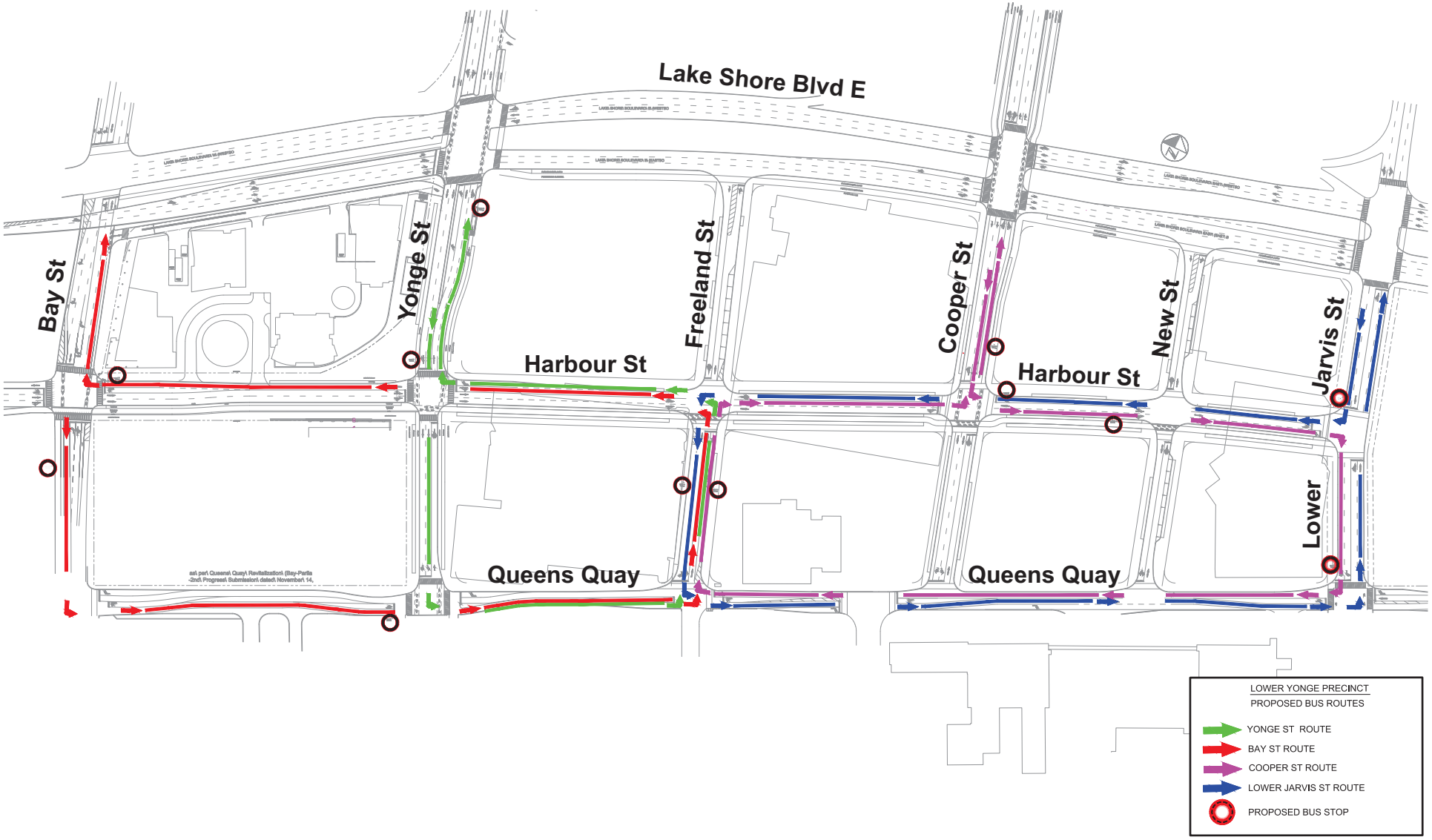
Lower Jarvis Street

There is no service along Lower Jarvis Street presently, except for the Sherbourne (Route 75) bus that stops on the east side of Lower Jarvis Street just north of Queens Quay East. The Sherbourne route currently runs southbound on Lower Sherbourne Street to Queens Quay East, west on Queens Quay East, north on Lower Jarvis Street, west on The Esplanade, and then returns northbound on Lower Sherbourne Street. A future Lower Jarvis Street route would run southbound on Lower Jarvis Street, west on Harbour Street, south on Freeland Street, east on Queens Quay East, and then return northbound on Lower Jarvis Street.

Bus Stops within the Precinct

Proposed bus stops are shown on **Exhibit 7-8**. The exact location and nature of the future bus stops will be determined during detail design as proposed roadways are constructed, and as ridership volumes increase. The proposed bus stops are as follows:

| Route(s) | Location | Comments |
|---|---|---|
| Bay | West side of Bay Street, south of Harbour Street | No comments |
| Bay | North side of Harbour Street, east of Bay Street | No comments |
| Yonge | West side of Yonge Street, north of Harbour Street | No comments |
| Yonge | East side of Yonge Street, north of Harbour Street | Opportunity to incorporate shelter into redevelopment of Plaza at the southwest corner of Yonge Street and Lake Shore Boulevard |
| Jarvis | West side of Freeland Street, north of Queens Quay East | No comments |
| Bay<br>Yonge<br>Cooper | East side of Freeland Street, north of Queens Quay East | Incorporate shelter into park<br>Bus lay-by on east side of Freeland Street |
| Cooper | East side of Cooper Street, north of Harbour Street | No comments |
| Cooper | South side of Harbour Street, west of New Street | No comments |
| Cooper | West side of Lower Jarvis Street, north of Queens Quay E. | No comments |
| Jarvis | North side of Harbour Street, east of Cooper Street | No comments |
| Jarvis | West side of Lower Jarvis Street, north of Harbour Street | No comments |




**Lower Yonge Precinct**
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# Proposed Bus Routes

Exhibit
**7-8**

### 7.1.7 Pedestrian and Cycling Infrastructure

Among the primary objectives of this EA is creating a pedestrian and cycling friendly environment and realm. This includes sidewalk zones, safe crossings, and separation from other modes of travel, effective and safe lighting levels, street furnishings, enhancing microclimate through the seasons, and accommodating users of different abilities through meeting AODA requirements.

It is anticipated that there will be a significant number of trips made by pedestrians within the Lower Yonge Precinct. It is essential that the pedestrian realm provides a comfortable, barrier free space that is set back from the roadway and is separated from cyclists with a tactile buffer strip that is preferably 0.60 m wide. Pedestrian clearways have been designed to be a minimum of 2.10 m wide throughout the Precinct. Special considerations should be reviewed with the Toronto Transit Commission during detail design of the proposed bus stops to review the interaction of transit patrons with pedestrians and cyclists.

#### 7.1.7.1 Yonge Street Cycling Facility Type Considerations

The preferred facility type for each segment of Yonge Street is described below, along with a brief rationale for the selection.

Queens Quay to Harbour Street

Raised 2.30 m one-way cycle tracks are the preferred facility type for this segment based on the following considerations:

- there is sufficient space for the cycling facility (1.80 m) and a buffer zone (0.50 m); and
- the raised design with a barrier curb provides very effective motor vehicle encroachment deterrence, minimizes maintenance costs and provides a comfortable cycling experience by avoiding catch basins and minimizing debris accumulation in the cycling facility.

Harbour Street to Lake Shore Boulevard

Raised 2.30 m one-way cycle tracks are the preferred facility type for this segment based on the following considerations:

- there is sufficient space for the cycling facility (1.80 m) and a buffer zone (0.50 m); and
- the raised design with a barrier curb provides very effective motor vehicle encroachment deterrence, minimizes maintenance costs and provides a comfortable cycling experience by avoiding catch basins and minimizing debris accumulation in the cycling facility.

Lake Shore Boulevard to North of the Rail Corridor

This segment is more constrained (especially under the Rail Corridor) and the roadway includes a centre median between Lake Shore Boulevard and the Rail Corridor and centre median

structural supports through the Rail Corridor. Raised 1.90 to 2.30 m wide cycle tracks separated from the roadway with a fully mountable curb are preferred based on the following considerations:

- a fully mountable curb is required as the cycling facility narrows from 2.30 m to 1.90 m (including the 0.50 m buffer) under the Rail Corridor, requiring cyclists to ride closer to the curb. In these constrained conditions, a cyclist will be positioned closer to the curb and a fully mountable curb is preferred as it reduces the risk of cyclists losing control of their bicycle in the event that they travel over the curb. A mountable curb also satisfies the emergency services requirement for a minimum roadway width of 8.20 m as a motor vehicle could enter into the cycling facility to make way for an emergency vehicle. It is recommended that flex bollards be mounted to the curb at 6.00 m intervals allowing motorists to encroach in order to make way for an emergency vehicle but generally discouraging encroachment relative to the use of a mountable curb with no bollards. The flex bollards would also increase the visibility of the cycle track separation in the low light conditions under the Rail Corridor.

North of the Rail Corridor to Front Street

This segment is more constrained since a northbound left turn lane must be provided at Front Street. Conventional bicycle lanes with a width of 1.65 m are the preferred facility type for this segment based on these considerations:

- space for a raised cycle track is not available; and
- there is not sufficient sidewalk width in the east boulevard to expand the width of the roadway by shifting the curb further into the boulevard.

#### 7.1.7.2 Summary of Preliminary Preferred Yonge Street Facility Types

A summary of the preliminary preferred Yonge Street facility types for each designated segment is provided below:

- **Queen Quay East to Harbour Street**: 2.30 m raised cycle track in between a 1.80 m planting / furnishing zone and a 3.30 m travel lane
- **Harbour Street to Lake Shore Boulevard**: 2.30 m raised cycle track in between a 1.80 m planting / furnishing zone and a 3.30 m travel lane
- **Lake Shore Boulevard to the Rail Corridor**: 2.30 m cycle track with a fully mountable curb in between a 0.60 m pedestrian buffer / tactile strip and a 3.30 m travel lane
- **Rail Corridor**: 1.90 m cycle track with a fully mountable curb in between a 0.60 m pedestrian buffer / tactile strip and 3.30 m travel lane
- **Rail Corridor to Front Street**: 1.65 m bicycle lane in between a 0.65 m pedestrian buffer and a 3.30 m travel lane

### 7.1.8 Parking

As mentioned previously, there are currently 60 permanent on-street parking spaces within the Lower Yonge Precinct that are used by TICA. Currently, the TICA are issued permits to park on Freeland Street and Cooper Street for a subsidized rate. With the implementation of the Recommended Plan, permanent on-street parking dedicated to the TICA will no longer exist.

In consultation with Councilor Pam McConnell, the Project Team reviewed the existing conditions, developed alternatives and evaluated alternatives. The Alternatives and Evaluation are described in more detail below.

#### 7.1.8.1 Permit Parking

Given the vision for the Lower Yonge Precinct, urban design / public realm and land use / socio-economic implications of maintaining permit parking on the Freeland and Cooper Street. The existing permit parking spots will be eliminated as development occurs.

A number of alternative arrangements for the existing permit holders have been considered, including:

- Alternative 1: On-Street Parking dedicated to the TICA (via a permit) within the Precinct Area
- Alternative 2: Toronto Parking Authority Lots (outside of the Precinct Area)
- Alternative 3: Private lots in future developments within the Precinct Area
- Alternative 4: Private lots within 500 m of the Ferry Terminal
- Alternative 5: Create private parking lots under the Gardiner Expressway for the TICA (via a permit)

A simplified set of evaluation criteria was developed that addresses both the needs of the TICA and vision for the Lower Yonge Precinct. These criteria include the following:

- Availability
- Transportation
- Urban Design and Public Realm
- Land Use / Socio-economic Environment
- Distance from Ferry Terminal
- User Costs

The assessment and conclusion for each of the permanent permit parking alternatives for the TICA is summarized in **Exhibit 7-9**.

The existing parking spots will be eliminated as development proceeds. It is anticipated that parking accommodations can be provided for a period of up to 10 years, subject to the timing of development and agreement with landowners.

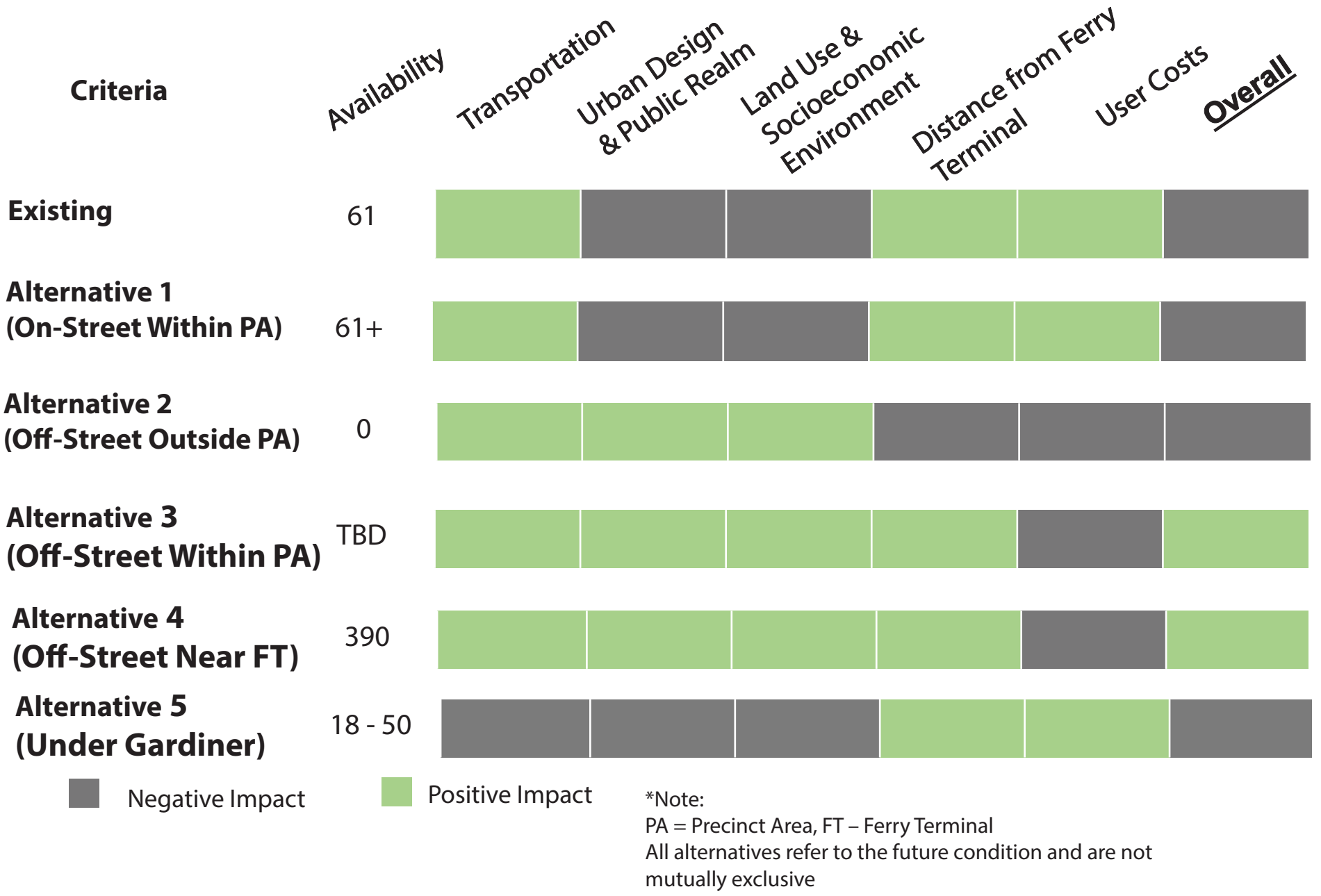
It is recommended that current permit holders enter into lease-arrangements with the owners of nearby commercial parking facilities, as may be appropriate to the specific situation of the permit holder.

As full build-out of the Lower Yonge Precinct is anticipated to occur over a number of years, existing permit parking holders can continue to use Freeland Street and Cooper Street for on-street permit parking and would be notified prior to any changes being implemented. During periods in which the use of Freeland Street and Cooper Street are impacted due to construction activities, the City is committed to work with the adjacent landowners and the permit holders to explore interim parking accommodations during periods of disruption. Menkes, the owner of the central block within the precinct, has also agreed to offer permit holders a preferred rate for overnight parking in the commercial parking facility that will be constructed as part of their first phase of construction. It is also understood that any parking spaces that remain unsold by Menkes could be offered to the permit parking holders for purchase.

#### 7.1.8.2 On-Street Parking

Short-term and/or off peak hour on-street parking has been identified along the following streets within the Precinct:

- East side of Freeland Street between Queens Quay and Lake Shore Boulevard.
- East side of New Street between Queens Quay and Lake Shore Boulevard, once Loblaws redevelops.
- Interim condition of Cooper Street - there is the possibility of introducing parking on both sides of Cooper Street prior to the construction of the Cooper Street Tunnel.


Criteria
Availability
Transportation
Urban Design & Public Realm
Land Use & Socioeconomic Environment
Distance from Ferry Terminal
User Costs
Overall
Existing
61
Alternative 1 (On-Street Within PA)
61+
Alternative 2 (Off-Street Outside PA)
0
Alternative 3 (Off-Street Within PA)
TBD
Alternative 4 (Off-Street Near FT)
390
Alternative 5 (Under Gardiner)
18 - 50
Negative Impact
Positive Impact
*Note:
PA = Precinct Area, FT – Ferry Terminal
All alternatives refer to the future condition and are not mutually exclusive

## 7.2 Property Impacts

Implementation of the Recommended Plan will result in impacts to 10 Yonge Street, 16-18 Harbour Street, 33 Bay Street, 16 Yonge Street , 55 The Esplanade and portions of the Metrolinx-owned USRC. A strategy to mitigate these impacts has been developed and is described below.

### 7.2.1 10 Yonge Street

The pedestrian clearway on the south side of Harbour Street would be shifted closer to the northern property line of the 10 Yonge Street, when the recommended plan is implemented.

Realigning Harbour Street may necessity the need to remove the existing set of stairs and pedestrian ramp and install protective measures. Protective measures may include a retaining wall and railing at the property line to protect pedestrians from the elevation change between the Harbour Street right-of-way and private property. Opportunities may exist to reduce (or eliminate) the height of any retaining wall by further lowering the profile of Harbour Street. This would be further explored during the Detail Design Study. During Detail Design minimizing the grade change along the 10 Yonge Street frontage would be explored, along with improving the integration of the public right-of-way and the ground floor retail establishments. The City will continue to explore options that minimize property impacts with the management and residents of 10 Yonge Street during detailed design.

### 7.2.2 16 – 18 Harbour Street, 33 Bay Street, 16 Yonge Street

16-18 Harbour Street, 33 Bay Street, 16 Yonge Street is occupied by four (4) residential condominium towers with ground floor retail uses and a commercial parking facility. The existing laneway will be impacted by the recommended design of the new Yonge Street off-ramp that would land immediately north of the Yonge Street. The new ramp landing location results in limited space for pedestrians walking on the west side of Yonge Street to take refuge because of the location of the driveway serving 16-18 Harbour Street, 33 Bay Street, and 16 Yonge Street. Given the existing and forecasted pedestrian volumes, the size of the refuge space between the driveway and the ramp has been identified as a safety concern.

The recommended design of the new Yonge Street off-ramp from the Gardiner Expressway would impact laneway access for the 16-18 Harbour Street, 33 Bay Street, and 16 Yonge Street property, currently provided to / from Yonge Street. Mitigation measures are necessary to manage the impacts of the recommended plan by providing alternate site access arrangements. The City will continue to explore laneway configuration options with the management and residents of 16-18 Harbour Street, 33 Bay, 16 Yonge Street prior to, and during, detailed design to mitigate lane access concerns.

### 7.2.3 55 The Esplanade

Extending Cooper Street to Church Street via a below grade crossing of the rail corridor would impact lands owned by the TCHC at 2 Church Street and Metrolinx-owned USRC.

The Cooper Street extension is a long-term objective contingent on the redevelopment of the existing TCHC-owned residential building and TPA parking facility. The lands required for the Cooper Street extension would be secured as a condition of development at such time as the TCHC site is redeveloped. Metrolinx-owned lands would be the subject of future negotiations at such time as the TCHC site is redeveloped and funding for the Cooper Street extension secured.

## 7.3 Public Realm

A Public Realm Plan will be developed to create vibrancy, and streetscape for all users within the Precinct. The Public Realm Plan will be developed based on the policies and visions summarized in **Section 3.4**. More details about the Public Realm Plan are provided in the sub-sections below.

#### 7.3.1.1 Open Space Network

The Public Realm Plan for the Lower Yonge Precinct contains several key features, all aimed at enhancing the pedestrian and aesthetic experience within the Precinct, improving connections to the water's edge, and increasing the amount of public amenity space. The Plan has considered the evolution of the public realm within the established waterfront areas to the west, and the emerging parks and open space areas to the east. Critical to the Public Realm Plan are the notions of connectivity between existing parks and open spaces, wide tree-lined sidewalks and a diversity of spaces to attract as broad an array of users as possible. The Lower Yonge Public Realm Plan focuses on streetscapes, parks and open spaces, and POPS, which are privately owned publicly-accessible spaces.

A network of streets and blocks was developed to ensure the community is connected by public streets and offers a variety of transportation modes. To enhance the pedestrian environment, the streets have been designed to accommodate persons of all ages and individuals with disabilities. Where possible, additional space has been allocated to the pedestrian clearway to exceed the City’s minimum standard of 2.10 m. On several roadways, the building setbacks will provide additional pedestrians clearways on private property.

The PATH Master Plan shows future pedestrian links north and south of the rail corridor extending as far east as Yonge Street. A connection further south along Yonge Street to Queens Quay is shown as a long-term PATH opportunity. The Lower Yonge Precinct Site and Area Specific Policy (SASP) noted that there is a need for an extension of the City’s existing PATH network into the Lower Yonge Precinct. Connections to the Precinct may be above grade, below grade or at grade, but they should be weather-protected.

Streets within the Precinct have been categorized based on the City's road hierarchy. The street types are listed below.

- Arterial Roads – Yonge Street, Lower Jarvis Street, Queens Quay East and Lake Shore Boulevard East
- Collector Roads - Harbour Street and Cooper Street
- Local Roads - Freeland Street and New Street

The Open Space Network Map was developed as part of the Precinct Plan (**Exhibit 7-10**) to highlight the Precinct's connections to the broader open space network within the City.

Lower Yonge Park

To support the proposed intensification and enhance the public realm, a park will be centrally located in the Precinct. The park will be approximately one hectare in size and bounded by Harbour Street, Freeland Street, Cooper Street and the Queens Quay. The park will host both active and passive recreational uses, and act as the focal point of the Precinct. The Lower Yonge Public Realm Concept Plan will not address the design of the park.

**Privately Owned Publicly Accessible Spaces (POPS)**

The Precinct Plan identified several east-west and north-south mid-block pedestrian connections throughout the Precinct. It is anticipated that developments will incorporate some form of open spaces and/or pedestrian connection POPS (Publicly Accessible Open Space) within all mixed use blocks It is anticipated that that POPS will take the form of enhanced sidewalk zones, pedestrian promenades, mid-block pedestrian connections, PATH connections, plazas and/or courtyards. The exact location of mid-block connections and open space areas will be determined through the development application process.

**Ground Floor Animation**

A Ground Floor Animation Zone has been included in the Lower Yonge Precinct OPA. This is to ensure that key areas of the ground floors of all buildings in the Precinct help to activate and enliven the adjacent public realm. Consistent with what has been incorporated in other waterfront precincts to the east, the ground floor animation zone is being introduced in Lower Yonge to ensure that both the uses and the design of these ground floor spaces are conducive to maximizing interaction with the sidewalk. This ensures that in addition to wide, spacious and well-landscaped sidewalk areas, individual buildings are also contributing to the pedestrian experience. With the expected levels of residents, employees and visitors to the area, it is important that high-visibility ground floor spaces enhance adjacent public spaces and foster pedestrian activity. In addition, it is expected that these zones will promote safety and visual interest.

The Ground Floor Animation Zone highlights certain areas abutting the public realm that should be prioritized for retail uses. Other areas for retail, including spaces above and below the ground floor, would be permitted, as long as the objective of animating adjacent public spaces is achieved.


**Lower Yonge Precinct**
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## Open Space Network

Exhibit
**7-10**

### 7.3.1 Materials and Techniques

Waterfront Toronto and City of Toronto standard palettes of materials and furnishings will be coordinated and used within the Precinct. The Lower Yonge Public Realm Concept Plan will provide further direction regarding streetscape public realm treatment and materiality.

It should be noted that the City's policy is that paver materials should comply with the City's new paver standard. Non-standard pavers require the following:

- approval by the General Manager of Transportation Services;
- a contribution of $55 per square metre of pavers as an upfront fee to maintenance reserve fund (fee is subject to change); and,
- the provision of pavers to the City by the developer to City whenever maintenance work is to be performed. The City will not store pavers on behalf of any developer or Waterfront Toronto.

Materials and techniques will be selected based on durability, ease of maintenance and longevity that meets the needs and abilities of the City's long-term asset management strategies.

### 7.3.2 Tree Planting Strategies

Tree species selection and locations of trees follow established Waterfront Toronto and City of Toronto guidelines. Regard to soil volume, methods for reducing soil compaction and ability to contribute to the overall reduction of heat island effect and to increase evapotranspiration for storm water control will drive the selection and location. Special consideration will be given to how trees influence micro-climate and to impacts to site lines.

The layout of trees reinforce precinct identity and increase pedestrian comfort while framing the street and masking the scale of surrounding development.

### 7.3.3 Lighting

Safe and efficient lighting is based on Waterfront Toronto and City of Toronto guidelines in coordination with Toronto Hydro criteria. Light pole selection and materiality will be used to reinforce precinct identity and increase pedestrian comfort and cycling and motorist safety, while framing the street and masking the scale of surrounding development while employing dark-sky measures. There is the potential that the Waterfront Toronto signature light poles may be installed in select locations. The potential locations will be further explored during Detail Design.

### 7.3.4 Under Gardiner Public Realm Deign

Areas under the Gardiner Expressway between Bay Street and Lower Jarvis Street will be impacted by the project and Under Gardiner public realm design will be coordinated with the Gardiner East Public Realm Implementation Plan. The design of these areas will be influenced by existing and planned north-south and east west pedestrian crossings and cycling facilities.

Lighting, hardscape and landscape materials will be selected to create visual interest and reinforce precinct identity, taking into consideration the broader public realm approach for the Gardiner. Public realm materiality and techniques will taking into consideration constraints such as limited solar exposure and winter maintenance requirements.

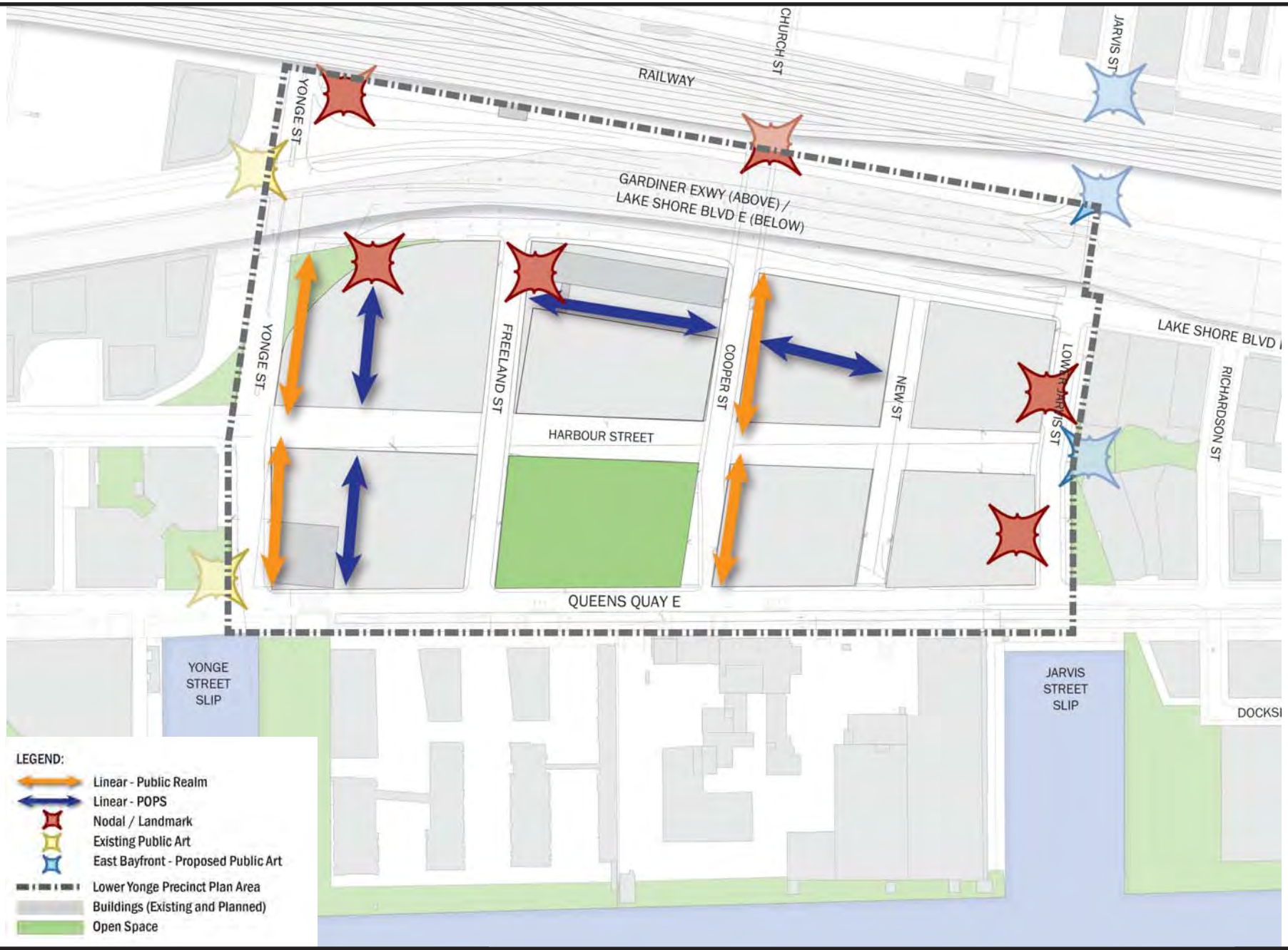
### 7.3.5 Public Art

Across the waterfront communities, public art has been planned and commissioned to enhance the public realm and revitalization efforts. Within the Precinct there are opportunities to include public art in both public and private high profile locations. Following the City's Percent for Public Art Guidelines and guided by the CWSP public art policies, a Lower Yonge Public Art Plan was developed as part of the Precinct Plan to identify locations for linear and nodal / landmark sites that will create an identity for this community (see **Exhibit 7-11**). During Detail Design of the Lower Yonge transportation infrastructure, Waterfront Toronto's guiding principles (http://sr.waterfrontoronto.ca/en/ highlights/whoweare.asp) should be implemented, and a public art consultant may be required to coordinate these elements.

### 7.3.6 Sustainability

Public realm sustainability is aligned with the Waterfront Toronto Resiliency and Innovation Framework, and the City of Toronto's sustainability guidelines. Within the public realm, the sustainability focus includes:

- Creating comfortable mobility options that reduce reliance on automobile travel and increase opportunities for human health through walking and cycling, such as bicycle sharing facilities and bicycle parking.
- Establishing low impact development storm water measures that promote on-site retention and evapotranspiration through the use of vegetation, including grass swales, vegetated filter strips, and green roofing.
- Increasing soil volume and reducing soil compaction through the use of soil cells and sidewalk bridging to promote healthy tree growth.
- Providing tree canopy coverage (using species from the Toronto Native Plant List) that reduces the impact of heat island-effect while providing habitat for urban wildlife.
- Using dark skies lighting techniques (i.e. reducing glare, light trespass, sky glow, and using a control system) to reduce impacts on migratory birds
- Employing high emissivity paving materials to reduce lighting levels
- Long term operations and maintenance considerations will drive the selection of sustainability measures during detail design.




**Lower Yonge Precinct**
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## Public Art Plan

Exhibit
**7-11**

## 7.4 Drainage

New trunk storm sewers will be required along Harbour Street between Yonge Street and Lower Jarvis Street and along 'New' Street between Queens Quay East and Lake Shore Boulevard East.

The storm sewer system within the Lower Yonge Precinct will be modelled during detail design using a dynamic model to simulate inflow hydrographs and the effect of storage attenuation. This will ensure that a minor storm with a 2-year return period can be accommodated without storage and confirm that the storm system will not surcharge in the event of a 100-year storm event.

All in-fill development within the Lower Yonge Precinct will be required to meet the City's Wet Weather Flow Management Guidelines. A separate sanitary sewer system will need to be designed and built by the Precinct developers to meet the ultimate requirements for residents and businesses in the Precinct. A Master Servicing Plan for the Precinct will be created by the developers, which will include servicing for water, wastewater, and stormwater. Management of stormwater will follow the concept of a treatment-train approach, including source, conveyance, and end-of-pipe, as indicated in the City's Wet Weather Flow Management Guidelines.

It is noted that there is a 3000 mm diameter Combined Sewer Outlet (CSO) within the Precinct that is expected to remain in service. The CSO extends from Church Street north of the Esplanade southerly under the Toronto Parking Authority garage at the end of Church Street, under the Metrolinx rail corridor, and outlets to Lake Ontario at the Lower Jarvis Street slip. The CSO operates as a siphon between Front Street East and Queens Quay East, with invert elevations ranging from 58.30 m to 51.30 m, respectively. The outfall to the slip is at approximately invert 71.0 m according to City archive plans C-416, though it is noted that TWAG model data indicates the discharge elevation at 57.00 m. Though the CSO operates in a surcharged condition it is incumbent upon proponent development teams within the Precinct to demonstrate that the hydraulic grade in the system remains greater than 0.30 m below surface elevation and that there will be no adverse impacts to surrounding property.

The minor system should be designed to accommodate flow spread within the road allowance without flow storage. It should be noted that bike lanes are not considered in the calculation of flow spread criteria.

For further details on drainage please refer to **Appendix B**.

### 7.4.1 Low Impact Development

The Toronto and Region Conservation Authority (TRCA) has developed a *Planning and Development Procedural Manual* (2007) that outlines landscape-based stormwater management strategies can be applied at various scales ranging from the community scale (e.g., Secondary Plan or Block Plan stages), neighbourhood scale (e.g., Draft Plan of Subdivision or Registered Plan stages) to the site scale. The most effective strategies are developed at larger scales and are subsequently refined at progressively more detailed scales in the planning and design

process. Stormwater management opportunities identified at the larger scales provide the basis for an overall stormwater management strategy that functions as a system of integrated facilities applied at the subdivision or site scales. In addition, the recent focus on intensification within existing urban areas dictates the need to identify opportunities to retrofit stormwater management practices into existing developments and service infrastructure contexts.

Throughout the full range of scales, there is a need to consider landscape and the elements of urban development as a cohesive unit in order to identify the most effective set of solutions for a particular site. Components of urban development such as built form, roads and services present opportunities to achieve stormwater quality and quantity control objectives through innovative design. For built form, alternatives include the incorporation of green roofs, permeable pavement, and rainwater harvesting systems. With respect to roads, options include reduced on-street parking, innovative road network designs, the installation of permeable pavement, the use of swales, vegetated filter strips and bio-retention areas in boulevards or the integration of perforated pipe systems beneath the road bed. The application of these alternatives can help reduce reliance on end-of-pipe facilities by reducing the quantity of impervious cover in a development and treating stormwater closer to where it is generated.

Opportunities to incorporate low impact development techniques should be explored further during the Detail Design phase of this project.

## 7.5 Utility Improvements and Relocations

The City has corresponded via letter to utility providers throughout the EA study. At this time, utility conflicts and/or relocations are anticipated, and have been identified based on the recommended plan. Utility conflicts are anticipated for work on the following streets: Harbour Street, Bay Street, Yonge Street, Freeland Street, Cooper Street, Church Street, Lake Shore Boulevard East and Lower Jarvis, as summarized below.

Anticipated conflicts include:

- Catch basin relocations to match new road alignments;
- Street lighting conduits are to be relocated to accommodate road widening and avoid conflicts with planting / furnishing zone;
- Watermain, sanitary sewer and storm sewer relocations based on conflicts with planting / furnishing zone;
- Toronto Hydro Electric System cable relocation based on conflicts with planting / furnishing zone;
- Bell duct relocation based on conflict with planting / furnishing zone;
- Gas main conflict with the new road alignment and encroachment with adjacent development;

- Rogers cable relocation based on conflict with planting / furnishing zone;
- Multiple conflicts (i.e. catch basins, storm sewer, watermain, Toronto Hydro Electric System conduit, and street light cable) with the removal of the Yonge Street ramp; and,
- Multiple conflicts (i.e. sanitary sewer, trunk sewer, and storm sewer) with the road profile for the Cooper Street tunnel.

As the EA progresses to Detail Design, the City will continue to engage utility service providers to review the detailed plan to confirm locations, potential impacts, relocation costs, and discuss mitigation measures during construction.

Further details on utilities are provided in the Utility Conflicts and Relocation Plan Memo in **Appendix L**.

## 7.6 Construction

### 7.6.1 Property Impacts

The recommended plan would result in property impacts to 10 Yonge Street, 16-18 Harbour Street, 33 Bay Street, 16 Yonge Street, 55 The Esplanade and portions of the Metrolinx-owned Union Station Rail Corridor (USRC). There is the potential that Temporary Limited Interests (TLIs) may be required for construction. TLIs will be identified and negotiated with property owners during Detail Design. More information about property impacts is available in **Sections 7.2** and **8.2.1**.

### 7.6.2 Construction Phasing

Traffic modelling has been undertaken to determine the appropriate construction phasing based on known implementation of the 1 – 7 Yonge Street (Pinnacle), LCBO (Menkes), and Lablaws redevelopments. In order to properly identify the need for “Regional” infrastructure, that is infrastructure outside of the immediate Lower Yonge Precinct area, it was assumed that only a base level of improvements would be in place, and the evaluation focused on how much development this base level of improvements could accommodate before the following recommended improvements from the TMP EA were needed:

1) Removal of the Bay Street on-ramp to the eastbound Gardiner Expressway;
2) Shortening of the Lower Jarvis Street off-ramp from the eastbound Gardiner Expressway to land west of Yonge Street;
3) Elimination of the eastbound "S-curve" on Harbour Street and normalization of the Yonge Street/Harbour Street and Yonge Street/Lake Shore Boulevard intersections;
4) Creation of one additional eastbound lane on Lake Shore Boulevard East from Yonge Street to Lower Jarvis Street; and
5) Conversion of Harbour Street from York Street to Yonge Street into two-way operation.

Three land use scenarios were evaluated based on information provided by the City. These three land use scenarios correspond to specific horizon years when these levels of development are expected to occur, and thus identify an approximate year at which point the regional road infrastructure would be required to support further development. It is important to recognize these land use development scenarios represent 'test' scenarios developed exclusively for the purpose of the sensitivity analysis, and that all proposed developments will be subject to the official development approval process. Additionally, as stipulated in the Lower Yonge draft OPA, adopted by City Council on June 7, 2016, the future developments will be subject to Holding bylaw provisions to ensure adequate infrastructure is planned and funded in advance of development proceeding. As a condition of lifting the holding provisions, a cost-sharing arrangement will be required.

The land use scenarios assessed are summarized in **Exhibit 7-12.**

**Exhibit 7-12: Development Phases and Land Use**

| Development | GFA (m2) | | | # Parking Stalls | # Residents | # Employees |
|---|---|---|---|---|---|---|
| | Residential | Office | Retail | | | |
| **Phase 1 - 2020** | | | | | | |
| 1-7 Yonge (Tower 1) / Pinnacle | 81,541 | 0 | 3,354 | 1974 | 1,075 | 70 |
| 1-7 Yonge (Tower 2) / Pinnacle | 69,588 | 0 | 4,671 | | 1,992 | 20 |
| 55 Lake Shore / Menkes (Block 1) | 0 | 49,333 | 9,057 | 577 | 0 | 1,730 |
| 55 Lake Shore / Menkes (Block 2) | 123,997 | 0 | 5,522 | 460 | 3,125 | 80 |
| **Phase 2 – 2021** | | | | | | |
| 1-7 Yonge (Tower 3) / Pinnacle | 39,749 | 0 | 677 | 1323 | 1,726 | 50 |
| 1-7 Yonge / Pinnacle | 0 | 142,925 | 10,200 | | 0 | 4,650 |
| 55 Lake Shore / Menkes (Block 3) | 0 | 0 | 3,569 | 0 | 0 | 40 |
| 55 Lake Shore / Menkes (Block 4) | 234,876 | 0 | 19,153 | 622 | 6,290 | 160 |
| **Phase 3 – Beyond 2021** | | | | | | |
| Loblaws | 0 | 48,338 | 12,000 | 750 | 0 | 1,600 |
| Loblaws | 106,500 | 4,490 | | | 2,752 | 150 |
| **Total** | | | | | | |
| | 656,251 | 245,086 | 68,203 | 4,688 | 16,960 | 8,550 |

Based on the analysis included in **Appendix M,** it is recommended that Phase 1 of the Lower Yonge Precinct proceed prior to construction of regional infrastructure, but further phases would require construction of these improvements. The results suggest that the improvement of shortening the Jarvis off-ramp to land west of Yonge Street does not need to be implemented after Phase 1, but it is required before Phase 2 could proceed. Based on current development construction schedule, this may occur as early as 2021. Furthermore, please note that this would preclude the possibility of providing the other improvements. The elimination of the 'S-curve' and the normalization of Yonge Street/Harbour Street should not be implemented before the Lower Jarvis Street off-ramp is shortened to terminate west of Yonge Street due to geometric design constraints. A two-way Harbour Street cannot be realized until the intersection of Yonge Street/Lake Shore Boulevard is normalized. Furthermore, the addition of an eastbound lane on Lake Shore Boulevard East from Yonge Street to Lower Jarvis is not necessary until the Lower Jarvis off-ramp is shortened. It is important to recognize that the timing of the shortening of the Lower Jarvis off-ramp will need to be considered in light of the Gardiner construction work. The recommended timing for the 'regional' improvements is as follows:

- Construct the Yonge Street off-ramp prior to Phase 2 of the Lower Yonge Precinct (currently estimated for 2021) or that arrangements, to the satisfaction of the City, be otherwise made to secure construction of the off-ramp;
- Reconstruct the Yonge Street/Harbour Street intersection, and eliminate the "S-Curve", concurrent with the construction of the Yonge Street off-ramp; and
- Reconstruct Yonge Street between Queens Quay East and Front Street.

There is a possibility that the removal of the 'S-curve" can occur before the Lower Jarvis Street off-ramp is shortened to terminate west of Yonge Street. This plan would require the section of Lake Shore Boulevard EB between Yonge Street and Freeland Street to be realigned to intersect with Yonge Street south of the existing Lower Jarvis Street off-ramp structure. However, when the new Yonge Street off-ramp the Lower Jarvis Street off-ramp is shortened, this temporary alignment of Lake Shore Boulevard EB east will have to be modified and moved northerly to align with the new Yonge Street off-ramp. Although feasible, this is not a practical option as it will result in the additional construction cost and traffic disruptions.

### 7.6.3 Construction Timing

Construction timing is subject to approval of this MCEA study, the subsequent Detail Design assignment, approvals and the allocation of funding. As development applications are approved and construction begins, there will be an interim transportation network, until the Precinct transportation network is fully constructed. The developers are responsible for preparing interim transportation plans, as part of the development application process.

### 7.6.4 Cost Estimate

The estimated cost of the transportation, streetscape and public realm improvements within the Lower Yonge Precinct, is approximately $122 million (2017 dollars) including design and property acquisition costs. The estimated cost includes utility relocations, construction of the road network, intersection improvements, landscaping, engineering and contingency. The cost estimate excludes the cost of the proposed Cooper Street extension, which has been identified as a long-term objective. A breakdown of the costs on road segment basis, including the Cooper Street tunnel, is included in **Appendix N.** There are three distinct responsibilities for the cost of the necessary infrastructure within the Precinct: local, regional, and the Cooper Street tunnel.

Local Infrastructure

Local infrastructure is the sole responsibility of the Lower Yonge Precinct developers. The developers will be responsible for the design and construction of the roads and services required for each phase of their redevelopments. Cost sharing agreements between adjacent developers may be effected to advance some elements that are mutually advantageous. The City may require Letters of Credit from the developers to ensure that the necessary infrastructure is in place prior to building occupancy.

Regional Infrastructure

Regional infrastructure includes contributions from the Precinct developers and the City's various funding mechanisms, the percentage of contributions from the developers is based on the transportation modelling, included in this report, which determined that about 14% of the traffic on the "regional" infrastructure associated with the Lower Yonge Precinct had either an origin or destination within the Precinct.

Discussions with area landowners are underway regarding mechanisms to fund regional infrastructure outside of the Lower Yonge Precinct (e.g. construction of the Gardiner Expressway off-ramp at Yonge Street; reconstruction of Harbour Street S-curve, the widening of Lake Shore Boulevard East, reconstruction of Yonge Street and Lower Jarvis Street) that are required to support, in part, the full build-out of the Lower Yonge Precinct, and not currently funded in the City's budget forecast.

Cooper Street Tunnel

The Cooper Street tunnel is currently the City's financial responsibility. All of the costs associated with the tunnel will be paid for from the City's various funding mechanisms, including other levels of government.

Funding for the Regional Infrastructure and the Cooper Street tunnel are not currently identified within the Transportation Services' 2017-2026 Approved Capital Budget and Plan. A strategy to

secure funding through the development review process and the Development Charge By-Law Review are being pursued.

# 8.0 POTENTIAL ENVIRONMENTAL EFFECTS, MITIGATION MEASURES, AND COMMITMENTS TO FUTURE WORK

This section focuses on the direct and indirect environmental effects associated with the project. It also describes the proposed mitigation measures that will be implemented to minimize the effects. Mitigation includes planning decisions, design features, construction requirements and construction constraints.

The key to ensuring effective environmental quality control and risk management during the project is the development and proactive implementation of an approach that:

- Identifies the environmental sensitivities;
- Presents the environmental protection measures in a way that can be translated into contractual requirements and for which compliance can be verified; and
- Includes a monitoring program that verifies that the environmental protection measures are being implemented and are effective.

## 8.1 Natural Environment

### 8.1.1 Vegetation

It is anticipated that the proposed transportation network, streetscape and public realm improvements will result in removals of existing vegetation and street trees. The natural environment impact assessment completed for this project identified potential effects to vegetation associated with the project, and developed mitigation measures to minimize or avoid any potential negative environmental effects. For full details on potential impacts on vegetation and mitigation measures please refer **Appendix A**

Given the urbanized nature of the natural environment the anticipated impacts are generally associated with construction activities. The following mitigation measures are recommended to minimize or avoid any potential negative environmental effects.

- Provide tree canopy cover distributed across the site area and the public boulevard at a minimum rate of one tree for every 66 $m^2$ of 40% of the site area.
- Provide all trees planted with a minimum volume of 30 m3 of high quality soil per tree.
- The minimum soil volume can be 20 $m^3$ per tree where the soil volume is shared.
- Plant large growing shade trees at the equivalent of 8 to 10 m intervals along all street frontages, including along private streets and in the public boulevard.
- Consult City Urban Forestry during the Detail Design phase regarding the removal of existing trees to accommodate new road cross section and alignment.

- Environmental inspections shall be conducted during construction to ensure that protection measures are implemented, maintained and repaired and that remedial measures are initiated where warranted.
- Some of the impacts can be mitigated by minimizing the encroachment of construction activities as much as possible.
- Tree protection fencing is recommended to be erected at the minimum tree protection distances required to protect trees that will be retained from construction activities.
- Should any work be required within a minimum Tree Protection Zone, the contract administrator should be notified and this work shall be done so in accordance with the guidelines in this report under 'Work within a Tree Protection Zone' and 'Tree Preservation / Mitigation Measures'.

Where possible, the following opportunities for enhancement should be applied:

- Include additional green areas planted with native species where possible to enhance benefits to migratory bird species and butterflies.
- Apply state-of-the-art techniques for maintaining the health of new and existing trees in the study area.
- Improve and increase available growing environments above ground to support long term tree growth and increased canopy coverage.
- Improve and increase available growing environments of healthy soil for trees below ground to support long term tree growth and canopy coverage.
- Increase biodiversity using appropriate tree, shrub and herbaceous plantings.
- Protect significant and healthy trees and their growing environments.

### 8.1.2 Wildlife

The buildings, bridges and small, isolated patches of vegetation are unsuitable habitat for most native species and particularly most species at risk, whose rarity can be attributed mainly to habitat loss. Given the lack of wildlife habitat, minor construction is not anticipated to have an effect on mammals, or affect birds or nests. The following mitigation measures should be applied to minimize the potential impacts:

- Wildlife incidentally encountered during construction shall not knowingly be harmed and shall be allowed to move away from the construction area on its own.
- In the event that wildlife encountered during construction does not move from the construction zone, the Contract Administrator shall be notified and shall contact Aurora District MNRF.
- If an active nest (with eggs or young birds) of a migratory bird as designated under the *Migratory Birds Convention Act* is identified within or adjacent to the construction site, the Contract Administrator will be contacted. The Contractor shall not destroy protected

migratory birds or their active nests and clearing will not proceed until the nest becomes inactive or the species is confirmed as not protected.

- For full details on potential impacts on wildlife and mitigation measures please refer **Appendix A**.

### 8.1.3 Species at Risk

There is the potential for the peregrine falcon to inhabit high-density urban environments, and in Toronto some have adapted to nesting on ledges of tall buildings. Given the limited potential for SAR and SAR habitat, to minimize the impact the following mitigation measures are recommended:

- If a SAR is encountered within or adjacent to the construction site, the Contractor will advise the Contract Administrator, who will contact MNRF.
- If construction activities are such that continuing construction in that area would result in a contravention of the ESA all activities will stop and the Contract Administrator will contact the MNRF SAR Biologist to discuss mitigation options.
- SAR or potential SAR will not be handled prior to consulting with the MNRF SAR Biologist, unless the handler has SAR training.
- It is recommended that the MNRF be contacted during Detail Design to confirm additional Species at Risk have not been 'up-listed.'
- For full details on potential impacts on SAR and mitigation measures please refer **Appendix A**.

### 8.1.4 Fish and Fish Habitat

As no surface water features are present within the Lower Yonge Precinct MCEA Study Area, no effects to fish and fish habitat are anticipated and no mitigation measures are proposed.

### 8.1.5 Landscape

Street trees located within the City's ROW will be removed during construction. This will cause temporary effects on the landscapes including providing shade for pedestrians. To remediate the situation, street trees and plantings are included in the recommended plan, which will enhance the landscape.

It is recommended that during Detail Design, further consultation be undertaken with the City's Urban Forestry department to determine the specific tree and shrubs that are planted within the Lower Yonge Precinct Area.

### 8.1.6 Surface Water

As mentioned in **Section 3.1.7**, Lake Ontario is located at the southern limit of the Lower Yonge Precinct, and all of the storm sewers drain in a southerly direction and outlet directly into the Lake.

Any additional discharge into the Lake will be subject to approvals from TRCA, MNRF, and DFO. The applicable permits and approvals will be required during Detail Design of the proposed roadways and storm sewer systems.

### 8.1.7 Drainage

**Section 3.1.8** provided an overview of the existing drainage design, and indicated that a 3000 mm diameter Combined Sewer Outlet (CSO) exists within the Precinct. For full details on drainage, please refer to **Appendix B**. The CSO extends from Church Street north of the Esplanade southerly under the Toronto Parking Authority's parking garage at the end of Church Street, under the Metrolinx rail corridor, and outlets to Lake Ontario at the Lower Jarvis Street slip.

The minor storm sewer system will be designed to accommodate flow spread within the road allowance without flow storage. Bike lanes are not considered in the calculation of flow spread criteria. The allowable flow spread is based upon the type of road. Within the Lower Yonge Precinct, there are local, collector, and minor and major arterial roads. There are also existing and future road underpasses at Yonge Street, Cooper Street (future), and Lower Jarvis Street crossings of the Metrolinx rail corridor north of the F. G. Gardiner Expressway.

The minor system flow spread shall accommodate the following design criteria outlined in **Exhibit 8-1**. The design criteria are based on the current version of the City's Design Criteria for Sewers and Watermains. The criteria should be reviewed at detailed design to ensure that the City's most up-to-date criteria are used.

The future Cooper Street underpass from Lake Shore Boulevard East under the Metrolinx rail corridor requires protection from a minimum minor flow for the 10-year to 25-year storm event due to its classification as a collector; the exact return period is to be specifically evaluated by the City. There is a large CSO immediately below the tunnel that may have capacity to accommodate a larger storm event; this should be further evaluated during the detail design of the tunnel. The storm sewer system for the Cooper Street underpass should be designed to drain to the greatest practical extent by gravity flows and minimize the need for the pumping of stormwater at the tunnel sag. For this reason, it is recommended that the minor storm system be sized to contain the 25-year event without the need for the major system. It will not be possible to meet the aforementioned design criteria solely through a gravity sewer system; alternative means such as underground storage detention or pumping will have to be considered during Detail Design. It is noted that underground storage may not be possible due to high lake levels.

Most of the Lower Yonge Precinct was previously developed and is therefore considered 'brownfield'. However, the Harbour Street extension and the future Cooper Street tunnel should be considered to be 'greenfield' developments. The major flow system for these two roads should be designed to accommodate up to the 100-year storm event. The maximum depth of flow on Harbour Street between Yonge Street and Lower Jarvis Street should be designed to be the lesser of 10 cm above the crown of the road or the water level up to the property line.

The rights-of-way within the Lower Yonge Precinct will be modestly narrowed as a result of development, and in addition, will include mountable curbs rather than standard height curb and gutter. The existing area is characterized by hardscaping and impervious areas, which is also descriptive of the proposed condition, and as such the post-development runoff response will be similar to the existing condition. In order to achieve the design criteria, it may be necessary to implement specific solutions such as:

- Oversized minor system: a sewer system which can contain rarer events than the 2-year storm;
- Oversized major system: rights-of-way which provide additional drainage capacity by introducing additional depth through steeper road sections; and / or
- Non-standard curbs: retaining walls up to 0.4 m high located at select low points which serve to protect private lands from major events.

**Exhibit 8-1: Drainage Design Criteria**

| Roadway | From | To | Proposed Classification | Minor Storm | Major Storm | Design Criteria |
|---|---|---|---|---|---|---|
| Lake Shore Boulevard EB | Yonge Street | Jarvis Street | Major Arterial | 10-year | > 10 up to 100-year | Note 3 |
| Harbour Street | Bay Street | Yonge Street | Major Arterial | 10-year | > 10 up to 100-year | Note 3 |
| Harbour Street | Yonge Street | Jarvis Street | Collector | 5-year | > 2 up to 100-year | Notes 2,5 |
| Bay Street | Queens Quay | Front Street | Minor Arterial | 10-year | > 10 up to 100-year | Note 3 |
| Yonge Street | Queens Quay | Lake Shore Boulevard | Major Arterial | 10-year | > 10 up to 100-year | Note 3 |

| Roadway | From | To | Proposed Classification | Minor Storm | Major Storm | Design Criteria |
|---|---|---|---|---|---|---|
| Yonge Street | Lake Shore Boulevard | Front Street | Major Arterial | 10-year | > 10 up to 100-year | Note 3 |
| Freeland Street | Queens Quay | Lake Shore Boulevard EB | Local | 2-year | > 2 up to 100-year | Note 1 |
| Cooper Street | Queens Quay | Lake Shore Boulevard EB | Collector | 5-year | > 2 up to 100-year | Note 2 |
| Church Street | Lake Shore Boulevard EB | The Esplanade | Collector | 25-year | > 2 up to 100-year | Note 3 |
| 'New' Street | Queens Quay | Lake Shore Boulevard EB | Local | 2-year | > 2 up to 100-year | Notes 1,4 |
| Lower Jarvis Street | Queens Quay | Lake Shore Boulevard EB | Minor Arterial | 10-year | > 10 up to 100-year | Note 3 |

Notes:

1. Minor system constraints: no barrier curb overtopping. Flow spread not to exceed one half of the lane width.
2. Minor system constraints: no barrier curb overtopping. Flow spread must leave at least one lane free of water.
3. Major and Minor system constraints: no barrier curb overtopping. Flow spread must have at least one lane free of water in each direction.
4. Major system constraints: maximum depth of flow shall be the lesser of 15cm above the crown of the road or the water level up to the right-of-way.
5. Major system constraints: maximum depth of flow shall be the lesser of 10 cm above the crown of the road or the water level up to the right-of-way.

Source: City of Toronto Design Criteria for Sewers and Watermains, 1st Edition, November 2009, pages 66 and 67

### 8.1.8 Contamination and Waste Management

As previously mentioned, a Phase I Environmental Site Assessment (ESA) was completed to determine the presence and significance of any actual or potential contamination within the Lower Yonge Precinct MCEA Study Area that may impact the Lower Yonge Precinct Public Realm Design, infrastructure improvements, and construction activities. The full Phase I ESA report is provided in **Appendix C**. Based on the findings of the Phase I ESA, potential environmental concerns are present within the study area from current and historical activities in the study area and surrounding areas. A summary of locations presenting high potential for environmental concern to the study area are presented in **Exhibit 8-2**.

Based on the findings from the Phase I ESA, it is recommended that a Phase II ESA be conducted to evaluate the extent soil and groundwater contamination is present in the study area.

Excess materials, such as asphalt, signs, street trees, concrete, etc. are anticipated to be generated during construction of the transportation infrastructure which will require appropriate management and/or disposal. These materials will be sorted and either reused if feasible, recycled, or disposed of at an approved landfill facility in accordance with OPSS 180. The Contractor can only reuse excess materials within the right-of-way if specified in the contract. Waste management shall be completed in accordance with the *Environmental Protection Act* (1999). The types and quantities of these materials will be determined during the subsequent Detail Design.

Standard mitigation will be used for dust control (i.e. water) during construction.

**Exhibit 8-2: Summary of Locations with High Potential Environmental Concern**

| Location Relative to Study Area | Environmental Concerns | Data Source |
|---|---|---|
| Southwest corner of Lower Yonge Precinct | This property has historically been occupied by the Toronto Star, Harbour Star Cleaners, and Kaspol Cleaning Service. Records have identified use of the property for PCB storage and transfer between 1992 and 2008. Between 1987 and 1990, it was registered as a receiving site for metals, fuels, solvents, waste oils, and phenolic wastes. In addition, a previous report identified solvent tanks located on the property. A Certificate of Approval issued to the property identified an emergency diesel generator in the building, therefore a fuel storage tank is likely located on the property. | ERIS report, Franz Environmental, January 2012 report, city directories |
| North portion of Lower Yonge Precinct | Railway tracks traverse east-west through the north portion of the Lower Yonge Precinct. The tracks have been aligned in this location from 1946 to present. | Fire insurance plans, aerial photographs, site reconnaissance |
| West portion of Lower Yonge Precinct | Dominion Rubber Co. Warehouse and Canadian Consolidated Rubber occupied the property between 1915 and 1950. It is interpreted that the property was used for rubber manufacturing and processing. | City directories, Franz Environmental, January 2012 report |
| Central portion of Lower Yonge Precinct | A spill of approximately 670 L of transformer oil occurred in 1992. The site was used for PCB storage between 1995 and 2003. | ERIS report, Franz Environmental, January 2012 report |
| South portion of Lower Yonge Precinct | Two former gasoline USTs reportedly existed on the property, registered to LCBO. | Franz Environmental, January 2012 report |
| South portion of Lower Yonge Precinct | Former railway tracks traverse through the south portion of the property, crossing Cooper Street, and entering the LCBO warehouse. The tracks are visible on aerial photographs from 1947, and evidence of the tracks was observed during the site visit, although they did not appear to be in use. | Aerial photographs, site reconnaissance |
| East portion of Lower Yonge Precinct | The property was used as a PCB transfer station from 1995 to 2008. It is also listed as an OPP garage from 1980 to 1990. | ERIS report, city directories |
| Southeast corner of Lower Yonge Precinct | The property was occupied by the Ontario Provincial Police Transportation and Supply Branch in the 1980s and 1990s. Two underground storage tanks were installed in 1982, and the organization is identified as an active waste generator from 1988 to 1998. The property was used for PCB storage in 1996. | ERIS, Franz Environmental, January 2012 report |
| North portion of Lower Yonge Precinct | The Esterbrook Pen Co. plant is identified in the city directories occupying this property in 1960. Former ink manufacturing is presumed to have occurred onsite. | City directories, Franz Environmental, January 2012 report |
| East portion of Lower Yonge Precinct | A former gasoline service station is reported to have occupied this property, prior to the realignment of Lake Shore Boulevard. | Franz Environmental, January 2012, city directories |
| East adjacent to Lower Yonge Precinct | A former fuel oil tank reportedly existed on the property. | Dillon, 2008 |
| East adjacent to Lower Yonge Precinct | Eaton Chemical & Dye is reported as a former occupant of the property. It is interpreted that chemical and dye manufacturing, processing and/or bulk storage occurred on the site. | Dillon, 2008 |
| South adjacent to Lower Yonge Precinct | A former waste disposal site is identified at the foot of Jarvis Street and Queens Quay East. The dump was active from 1947 to 1954. | ERIS report |
| South adjacent to Lower Yonge Precinct | Redpath Sugar refinery has occupied this property since approximately 1967. The property is currently operating as a refinery and a museum. Two fuel storage tanks, at least one of which is underground, are reported to exist on the property, and over fifty spills have been reported by the company. The company has been registered as an active waste generator since 1986. | ERIS report, aerial photographs, site reconnaissance |
| West adjacent to Lower Yonge Precinct, south adjacent to Harbour Street | Fashion Cleaners occupies a unit on the ground floor of the condominium on this property. There is the potential for the operation of dry cleaning equipment with the use of chemicals on this property. | ERIS report, site reconnaissance |
| West adjacent to Lower Yonge Precinct, north adjacent to Harbour Street | A previous report identified a former gas station and former dry cleaner occupying the property. During the site reconnaissance, Platis One-Hour Custom Cleaners was observed occupying a unit on the ground floor of the condominium on this property. There is the potential for the operation of dry cleaning equipment with the use of chemicals on this property. | ERIS report, Franz Environmental, January 2012 report |

| Location Relative to Study Area | Environmental Concerns | Data Source |
|---|---|---|
| West of Harbour Street | The John Street Roundhouse operated on this property prior to 1946 until 1987. The property was used as a rail yard for CNR and CPR during this time. | Aerial photographs |
| West of Harbour Street | Barber Machinery Co. is a former occupant of this property. Metal fabrication and iron and steel manufacturing are interpreted past uses of this property. | Franz Environmental, January 2012 |
| West of Harbour Street | A former gasoline service station occupied this property from 1955 to 1970. | Franz Environmental, January 2012 |
| South of Harbour Street | The Preener's Custom Fabricare occupies a unit on the ground floor of the condominium on this property. There is the potential for the operation of dry cleaning equipment with the use of chemicals on this property. | Site reconnaissance |
| East of Lower Yonge Precinct | Street Commissioners Dept. Corp. Yard is identified on the FIP for 1903. It is interpreted that onsite operations included railcar storage and maintenance. | FIPs |
| East of Lower Yonge Precinct | Polson Iron Works was identified in the FIPs from 1903 to 1913. Metal treatment and/or fabrication may have occurred onsite. | FIPs |
| East of Church Street | Northern Railway Depot occupied the property from 1884 to 1894. Onsite operations are interpreted to have included railcar storage and maintenance. | FIPs |
| East adjacent to Church Street | Conger Coal Co. Ltd and Milnes Coal Co. Ltd. occupied this area from 1913 to 1924. Coal storage and burning is interpreted to have occurred on this property during that time. | FIPs |
| East of Church Street | Pontieri Garage Limited occupied this property from 1980 to 1995. There is record of three historic fuel tanks on the property. The site is interpreted to have operated as a commercial auto body shop during this time. | City directories, ERIS report |
| West adjacent to Church Street | Mill Furnishing Works is identified in the FIPs from 1894 to 1903. Metal treatment and/or fabrication may have occurred onsite. | FIPs |
| East adjacent to Yonge Street | G.T.R. Freight Depot was identified to occupy this property between 1884 and 1924. Onsite operations are interpreted to have included railcar storage and maintenance. | FIPs |
| Northwest of Yonge Street | Former printing office occupied this location from 1894 to 1924. Bulk ink storage is interpreted to have occurred on this property during this time | FIPs |
| West adjacent to Yonge Street | The property is used as Union Station Bus Terminal. | Site reconnaissance |
| North of Harbour Street | Simcoe Cleaner occupies a unit on the ground floor of the condominium on this property. There is the potential for the operation of dry cleaning equipment with the use of chemicals on this property. | Site reconnaissance |
| North adjacent to Harbour Street | PCBs were reportedly stored on the property between 1995 and 1996. The PCBs were stored in drums for later disposal. | ERIS report |
| North of Harbour Street, west of Yonge Street | Canada Post, SC Letter Plant used the property as a transfer station for PCBs from 1987 to 2008. A gasoline tank registered to Dominion Government was installed in 1930. | ERIS report |
| North adjacent to Lower Yonge Precinct, east adjacent to Church Street | This site is registered to Ontario Hydro as a PCB transfer station. | ERIS report |
| Harbour Street | A diesel fuel spill occurred on the road in 2013. Approximately 300 L of diesel fuel spilled to the road and catch basin. | ERIS report |
| North adjacent to Harbour Street | A previous report identified a former gasoline service station and commercial auto body shop at this location. | Franz Environmental, January 2012 report |
| South of Harbour Street | Harbourfront Corporation used the property for PCB storage and reclamation between 1986 and 2000. | ERIS report |
| East adjacent to Church Street | Market Square Dry Cleaners is listed on the property in 1999. Armstrong Cleaners Mfrs., and Cleansaline Co. are listed as occupants in 1946, and Chemists Co. Ltd is listed on the property in 1910. There is the potential for the operation of dry cleaning equipment with the use of chemicals on this property, and the potential for chemical manufacturing, processing and bulk storage. | City directories |

| Location Relative to Study Area | Environmental Concerns | Data Source |
|---|---|---|
| North of Church Street | Kings Cleaners is listed on the property in 1999. There is the potential for the operation of dry cleaning equipment with the use of chemicals on this property. | City directories |
| East adjacent to Yonge Street | Premier Cleaners is listed as an occupant on the property from 1980 to 1995. There is the potential for the operation of dry cleaning equipment with the use of chemicals on this property. | City directories |
| North adjacent to Lower Yonge Precinct, east adjacent to Yonge Street | Nova Dry Cleaners is listed as an occupant on the property in 1995. There is the potential for the operation of dry cleaning equipment with the use of chemicals on this property. | City directories |
| West adjacent to Yonge Street | Public Works Canada used the site for storage and transfer of PCBs between 1991 and 2008. Two gasoline tanks were installed on the property in the 1920s. | ERIS report |

### 8.1.9 Air Quality

An Air Quality Assessment was completed to assess existing and potential air quality impacts of the proposed transportation network within the Lower Yonge Precinct.

The air quality assessment determined that the future air pollutant emissions in the Lower Yonge Precinct MCEA Study Area are significantly reduced compared to the existing emissions. The reduction in emissions is due to ongoing improvement in vehicle tailpipe emissions as older, higher emitting vehicles are gradually replaced by newer, cleaner vehicles.

**Exhibit 8-3** provides a summary of the total emissions within the entire study area during the AM peak hour.

## Exhibit 8-3: Total Study Area AM Peak Hour Emission Rates

| Contaminant | Total Existing (2016) Emissions (g/hour) | Total Future (2031) Emissions (g/hour) | % Difference |
|---|---|---|---|
| Arterial Roads Only (Excludes Gardiner Expressway) | | | |
| CO | 13,226 | 4,959 | -63% |
| NOx | 3,689 | 856 | -77% |
| PM2.5 | 279 | 177 | -37% |
| PM10 | 696 | 661 | -5% |
| Benzene | 26.5 | 6.1 | -77% |
| 1,3-Butadiene | 2.90 | 0.09 | -97% |
| Formaldehyde | 21.2 | 7.7 | -64% |
| Acrolein | 1.46 | 0.44 | -70% |
| Acetaldehyde | 12.0 | 3.0 | -75% |
| Benzo(a)Pyrene | 0.0447 | 0.0121 | -73% |
| Arterial Roads and Gardiner Expressway from Bay Street to Jarvis Street | | | |
| CO | 20,608 | 7,721 | -63% |
| NOx | 6,115 | 1,318 | -78% |
| PM2.5 | 392 | 228 | -42% |
| PM10 | 946 | 842 | -11% |
| Benzene | 37.3 | 8.4 | -78% |
| 1,3-Butadiene | 4.00 | 0.11 | -97% |
| Formaldehyde | 29.6 | 9.8 | -67% |
| Acrolein | 2.04 | 0.56 | -73% |
| Acetaldehyde | 16.7 | 3.9 | -77% |
| Benzo(a)Pyrene | 0.0676 | 0.0163 | -76% |

Since the future air pollutant emissions along all roadways are significantly reduced compared to the existing emissions; therefore the air quality along all existing roadways is expected to improve.

Three new roadways that will be constructed to accommodate the new residential buildings and traffic demand in the area. In general, future emissions from these new roadways were found to be lower than the existing emissions from similar nearby roadways and therefore no mitigation measures are recommended. For more information, refer to air quality screening assessment in **Appendix D**.

Air Quality during Construction

Construction activities potentially generate considerable amount of air pollution. Construction activities may involve heavy equipment that generates air pollutants and dust; however, these impacts are generally considered “temporary”. The emissions are typically highly variable and prediction is difficult, depending on the specific activities that are taking place and the effectiveness of the mitigation measures.

Mitigation of construction emissions is normally achieved through diligent implementation of operating procedures such as application of dust suppressants, reduced travel speeds for heavy vehicles, efficient staging of activities and minimization of haul distances, and covering up stockpiles. It is recommended that to minimize potential air quality impacts during construction, the construction tendering process should include requirements for implementation of emissions management.

To minimize impacts during construction it is recommended that the following mitigation measures are applied:

- Use of reformulated fuels, emulsified fuels, exhaust catalyst and filtration technologies, cleaner engine repowers, and new alternative-fuelled trucks to reduce emissions from construction equipment.
- Regular cleaning of construction sites and access roads to remove construction-caused debris and dust.
- Dust suppression on unpaved haul roads and other traffic areas susceptible to dust, subject to the area being free of sensitive plant, water or other ecosystems that may be affected by dust suppression chemicals.
- Covered loads when hauling fine-grained materials.
- Prompt cleaning of paved streets/roads where tracking of soil, mud or dust has occurred.
- Tire washes and other methods to prevent trucks and other vehicles from tracking soil, mud or dust onto paved streets or roads.
- Covered stockpiles of soil, sand and aggregate as necessary.
- Compliance with posted speed limits and, as appropriate, further reductions in speeds when travelling sites on unpaved surfaces.

- Environmental Compliance Approvals (ECAs) from the Ministry of the Environment and appropriate dust controls/suppression for any portable crushers, asphalt plants or concrete batching plants.

## 8.2 Socio-Economic Environment

### 8.2.1 Land Use

The Lower Yonge Precinct is to be transformed from low-density office, warehouse and commercial area to high density office and mixed-use residential neighbourhood. Residential development has occurred adjacent to the Precinct, as described in **Section 3.2.2.4.** Growth and the existing land uses within the Precinct will continue to evolve as land owners submit applications to the City for review.

Property Requirements

Transportation, public realm and streetscape improvements within the Precinct require land from the adjacent property owners to construct the proposed road network. Property is required as outlined in **Exhibit 8-4** below.

**Exhibit 8-4: Property Requirements**

| Roadway | From | To | Existing Width | Proposed Width | Property Required |
|---|---|---|---|---|---|
| **East – West Streets** | | | | | |
| Queens Quay | Yonge Street | Freeland Street | 27.4m | 38.0m | 2387 m² |
| | Freeland Street | Cooper Street | 27.4m | 29.0m | 62 m² |
| | Cooper Street | 'New' Street | 27.4m | 29.0m | 148 m² |
| | 'New' Street | Lower Jarvis Street | 27.4m | 29.0m | 150 m² |
| Harbour Street | York Street | Bay Street | 26.2m | 26.2m | - |
| | Bay Street | Yonge Street | 26.2m | 26.2m | - |
| | Yonge Street | Freeland Street | - | 27.0m | 3851 m² |
| | Freeland Street | Cooper Street | - | 27.0m | 3854 m² |
| | Cooper Street | 'New' Street | - | 27.0m | 3023 m² |
| | 'New' Street | Lower Jarvis Street | - | 27.0m | 2465 m² |
| Lake Shore Boulevard E. | Bay Street | Yonge Street | 50.4 to 48.2m | 50.4 to 48.2m | - |
| | Yonge Street | Freeland Street | 169.5 to 79.7m | 169.5 to 79.7m | - |
| | Freeland Street | Cooper Street | 76.7 to 73.7m | 76.7 to 73.7m | - |
| | Freeland Street | Cooper Street | 73.7 to 73.2m | 73.7 to 73.2m | - |
| | Cooper Street | 'New' Street | 73.2 to 72.6m | 73.2 to 72.6m | - |

| | | | | | |
|---|---|---|---|---|---|
| | 'New Street | Lower Jarvis Street | 72.4 to 71.9m | 72.4 to 71.9m | - |
| **North – South Streets** | | | | | |
| Bay Street | Harbour Street | Lake Shore Boulevard E. | 29.9 to 30.5m | 29.9 to 30.5m | - |
| Yonge Street | Queens Quay | Harbour Street | 24.4m | 27.21m | 255 m² |
| | Harbour Street | Lake Shore Boulevard. E. | 27.8m | 30.61m | 123 m² |
| | Lake Shore Boulevard E. | The Esplanade | 24.3m | 24.3m | - |
| | The Esplanade | Front Street | 24.3m | 24.3m | - |
| Freeland Street | Queens Quay | Harbour Street | 20.12m | 20.12m | - |
| | Harbour Street | Lake Shore Boulevard E. | 20.12m | 20.12m | - |
| Cooper Street | Queens Quay | Harbour Street | 20.12m | 21.0m | 112 m² |
| | Harbour Street | Lake Shore Boulevard. E. | 20.12m | 21.0m | 82 m² |
| | Lake Shore Boulevard E. | N. Side of MX Corridor | - | 31.6m | 4760 m² |
| Church Street | N. Side of Metrolinx Corridor | The Esplanade | 20.12m | 31.6 to 23.8m | 1560m² |
| | The Esplanade | Front Street | 20.12m | 20.12m | - |
| 'New' Street | Queens Quay | Harbour Street | - | 19.0m | 1549 m² |
| | Harbour Street | Lake Shore Boulevard. E. | - | 19.0m | 1458 m² |
| Lower Jarvis Street | Queens Quay | Harbour Street | 19.6m | 25.6m | 213 m² |
| | Harbour Street | Lake Shore Boulevard E. | 20.1m | 26.0m | 213 m² |

The need for temporary limited interests (TLIs) for construction staging will be reviewed in more detail during the Detail Design Phase.

### 8.2.2 Noise

As part of the Environmental Assessment process, the City conducts noise assessments, assessing noise impacts caused to any outdoor living area (OLA) by construction of any new roadway, or by the widening of an existing roadway. A noise assessment was undertaken to assess the proposed modifications within the Precinct and the potential noise impacts due to road traffic noise on the neighboring sensitive areas. The noise assessment was completed in accordance with the *MTO Environmental Guide for Noise* (hereafter referred to the MTO Noise Guide) (2006).

Receptors located in close proximity to the Gardiner Expressway and rail corridor are anticipated to experience noise levels exceeding 55 dBA. These noise levels are attributed to the existing operations of these two transportation facilities, and not the proposed transportation network in the Precinct.

Within the Precinct, traffic volumes were developed based on the existing and forecasted annual average daily traffic (AADT) for each roadway adjacent to the receptors. Based on the volume increases, the noise assessment determined there would slight increases in noise levels. Dominant sources of noise are expected to occur along the major arterials, including: Yonge Street, Queens Quay East, and Lake Shore Boulevard, all streets which are expected to have greater AADTs.

Mitigation measures aimed at achieving a 5 dBA reduction is not technically feasible, given the receptors are outdoor living areas elevated from the roadways (i.e. podiums). Noise level changes at all receptor locations is less than 5 dBA based on the implementation of the preferred plan. Any sound level increases of less than 3 dB represent an imperceptible difference in human hearing. No further mitigation measures are required. The noise assessment is included in **Appendix E.**

Vehicle Noise

Future road transportation sound levels are expected to be stable with or without the construction of the York-Bay-Yonge ramp reconfiguration (that is currently under construction) since the future noise levels are expected to be dominated by the daily road noise from the Gardiner Expressway. The noise is also influenced by an urban hum which includes natural and man-made sounds.

Construction Noise

During construction, the Contractor will be required to abide by the Contract Operational Constraints and the City's noise control by-laws. The Contractor will be required to keep idling of construction equipment to a minimum and to maintain equipment in good working order to reduce noise from construction activities. The following summarizes the commitments for Detail Design and recommendations relating to the management of construction noise during construction.

- In conjunction with the City's Public Consultation Unit (PCU), the contractor should notify adjacent property owners (i.e., residents, businesses, etc.) in advance of construction.
- The contractor should obtain copies of the current noise control by-laws from the City of Toronto. Where adherence of the laws is not possible and mitigation is not feasible, an exemption from the City of Toronto should be obtained before the start of construction work.
- Unnecessary noise emission by faulty or non-operating components of equipment should be minimized by regular maintenance of the equipment. Idling of construction equipment should be restricted to the least minimum time necessary to complete any specific task.

- The construction equipment should be operated with effective muffling devices that are in good working condition.
- Regular maintenance of construction equipment must be undertaken for minimizing the noise level.
- In case of complaints, the contractor must work with the City of Toronto to investigate the noise concerns and subject to the result, further alternative noise control measures may be tried. Verification should be carried out whether or not the "general noise control measures" agreed to, are in effect.
- Subject to the results of a field investigation, alternative noise control measures may be required, where these are reasonably available. In selecting the appropriate construction noise control and mitigation measures, the City will give consideration to the technical, administrative, and economic feasibility of the various alternatives.

## 8.3 Cultural Environment

### 8.3.1 Archaeological Resources

As noted in **Section 3.3.1**, an Archaeological Inventory was completed that included background review and database search to determine the potential for archaeological resources. The full Inventory of Archaeological Resources is provided in **Appendix F**. Ten (10) previously inventoried archaeological resources existing within the Lower Yonge Precinct MCEA Study Area. Six (6) of these features require further archaeological assessment by archaeological monitoring, and three (3) are present within the study area that require monitoring.

The following summarizes the mitigation measures and commitments to future work identified as a result of the archaeological assessment:

- Any transportation improvement initiatives that will involve excavations approaching or exceeding an elevation of approximately 76.00 m above sea level in the locations of the inventoried features should be subject to archaeological monitoring.
- A Stage 1 Archaeological Assessment should be undertaken for any transportation initiatives.
- Should deeply buried archaeological materials be encountered during construction, all work should be stopped and a professionally licensed archaeologist consulted to assess the cultural heritage value and significance of the archaeological deposits.

### 8.3.2 Built Heritage and Cultural Heritage Landscapes

A Heritage Inventory was completed to identify and document existing listed or designated structures, or identified cultural heritage landscapes within or adjacent to the study area (refer to **Section 3.3.2**). As part of this study, potential direct and indirect impacts to cultural heritage resources were identified, and general mitigation were recommended for affected built heritage

resources and cultural heritage landscapes. The heritage inventory recommended that Heritage Impact Assessments (HIA) are completed for 55 Lake Shore Blvd East and the modifications to the Gardiner Off-Ramp. An individual HIA was completed for both assets as discussed below.

55 Lake Shore Blvd East

Direct impacts refer to the demolition or removals. A direct impact was identified for 55 Lake Shore Blvd East (i.e., demolition to identified heritage resources) as a result of the extension of Harbour Street easterly to Lower Jarvis Street, and the shortening of the Gardiner Off-Ramp that presents ends at Lower Jarvis Street to Yonge Street.

The recommendations for 55 Lake Shore Boulevard East are outlined in the Heritage Impact Assessment (HIA) available in **Appendix G**, and summarized below:

- Future alternations to the architectural fabric of the original structures should be based on historical documentation such as existing photographs found in the existing CHERs.
- Future maintenance of the original structures at 55 Lake Shore Boulevard should emphasize repair (i.e. cleaning and mending of brick, glass ad metal) and conservation rather than replacement. Building retention measures should be consistent with OPA 199 Heritage Policies.
- If repairs are deemed unavoidable by both a heritage specialist and engineer, the repairs should be undertaken using sympathetic materials, such as brick, concrete and metal, where appropriate.
- Later additions should not be destroyed soley to restore the property to an earlier, single period.
- Alternations should be reverisble, and this principle should be appled once the alignment is completed.
- A Cultural Heritage Documentation Report should be completed for the property (55 Lake Shore Boulevard) by the Detail Design team prior to development, and should include the sections outlined in the HIA.
- The HIA should be submitted to the City's Heritage Preservation Services and to Infrastructure Ontario.

Gardiner Off-Ramp

The HIA (provided also in **Appendix G**) assessed that the three (3) suggested alternatives for the removal of the Gardiner Off-Ramp have comparable impacts to the heritage value. The removal does not significantly impact the heritage value of the resource, and in fact, shortening the Off-Ramp may offer increased views of the resource. Indirect impacts which include temporary impacts during construction such as the introduction of physical, visual, architectural or modern elements that are not in keeping with their character and/or setting. Some of the cultural resources

may be indirectly impacted by the introduction of modern infrastructure that is not keeping with the historical or cultural context.

It is recommended that the Gardiner Off-Ramp HIA be submitted to the City's Heritage and Preservation Services.

Recommendations Applicable to Both 55 Lake Shore Blvd and Gardiner Off-Ramp

Based on the results of background data collection and assessment of impacts of the study area and proposed development, the following recommendations were developed, applicable to both assets:

- During Detail Design, suitable mitigation measures such as landscaping, buffering or other forms of mitigation should be investigated to minimize the impacts on cultural heritage features.
- Ensure construction activities and development boundaries are consistent with these recommendations during Detail Design.
- Where Cultural heritage resources are expected to be impacted through alteration to their setting, a resource-specific cultural heritage impact assessment should be conducted at the earliest possible stage of the Detail Design stage, to evaluate the cultural heritage value of the resource, identify cultural heritage attributes, and develop appropriate mitigation measures.
- Should future work require an expansion of the Lower Yonge Precinct MCEA Study Area then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential cultural heritage resources.
- This heritage overview report should be submitted to the Ministry of Tourism, Culture, and Sport and the City of Toronto, Heritage Preservation Services, for review and comment.
- Supporting Conservation Strategies would also be required as part of the development proposals of the resulting assets.

## 8.4 Technical Considerations

### 8.4.1 Emergency Vehicle Response

The Project Team will continue to consult with emergency services during Detail Design to determine appropriate mitigation measures for the construction phase. The following mitigation measures will be carried forward to the Detail Design phase:

- Traffic will be maintained on Yonge Street during construction with minor, temporary short-term closures during off-peak hours.

- Advance notification will be provided to inform emergency service providers of construction, local detours, and any lane closures to minimize delay in emergency response times during and after construction.
- Emergency access to all properties will be maintained during construction.

### 8.4.2 Parking

Within the Precinct, short-term and/or off peak hour on-street parking has been identified along the following streets.

- East side of Freeland Street between Queens Quay and Lake Shore Boulevard.
- East side of New Street between Queens Quay and Lake Shore Boulevard, once Loblaws redevelops.
- Interim condition of Cooper Street – there is the possibility of introducing parking on both sides of Cooper Street prior to the construction of the Cooper Street Tunnel.

There will be impacts to the existing on-street parking during construction. Mitigation measures to minimize the impact will be further explored during the Detail Design stage.

#### 8.4.2.1 Permit Parking

As part of the redevelopment of the Lower Yonge Precinct, permit parking will be eliminated over a number of years as development occurs. It is anticipated that parking accommodations can be provided for a period of up to 10 years, but this timeline is subject to the timing of development and agreement with the landowners. The following mitigation measures have been developed in consultation with the TICA:

- Communication and consultation with TICA and the local Ward Councillor about the interim and long-term arranagements will continue to occur throughout the Detail Design and construction phases.
- It is recommended that current permit holders enter into lease-arrangements with the owners of nearby commercial parking facilities.
- During construction, the City will continue to work with the landowners and permit parking holders to explore temporary / interim accommodations during construction.
- A local landowner (Menkes) has agreed to offer permit holders a preferred rate for overnight parking in the commercial parking facility that will be constructed as part of the Phase 1. There is also the potential that any unsold parking spaces could be offered to permit holders for purchase.
- The City will explore opportunities to increase off-street and on-street car-share locations within the Precinct.
- Prior to permanent remoal of the on-street permit parking, a formal notice of the City's proposal to remove the permit parking spaces on Freeland Street and Cooper Street will

be issued to the residential permit holders, and a report seeking Council's authorization to remove the permits will be presented to the Toronto and East York Community Council for consideration.

## 8.5 Utilities

The existing utility locations and anticipated conflicts within the Lower Yonge MCEA Study Area are summarized in **Section 7.5**.

Further consultation with impacted local utility providers will be pursued during Detail Design to confirm the location/type of utility installations, the potential project impact, and mitigation and/or utility relocation. Where utility conflicts are present, relocation will occur. Utility service providers are responsible for obtaining their own environmental permits and approvals.

## 8.6 Construction Phasing

As discussed in **Section 7.6.2**, construction phasing will start with local transportation improvements in support of the phased redevelopment of the 1 – 7 Yonge Street and LCBO sites.

Preliminary construction staging concepts have been developed for the Lower Yonge Precinct, taking into consideration the existing land uses, proposed development applications, and the local and regional transportation needs of the neighbourhood.

The following elements comprise important principles of the construction staging strategy:

- A Construction Management Plan will be developed in consultation with the public, with a commitment to minimize impacts on residents, visitors and business owners.
- Maintain existing travel lanes on major arterials (i.e. Yonge Street, Lake Shore Boulevard East, Queens Quay East, and Lower Jarvis Street) during the peak hours as much as possible.
- Access to existing residential and businesses be maintained at all times. If a property has two entrances, one entrance will be kept open at all times.
- Most or all work would be completed during the day/evening.
- Emergency access will be maintained during construction.
- Safe pedestrian access will be maintained at all times.

Additional details about the construction staging strategy will be developed and presented to the public during the detail design stage.

## 8.7 Summary of Identified Concerns and Mitigation / Commitments to Future Work

**Exhibit 8-5** summarizes the identified concerns and the proposed mitigation measures, based on the identified environmental sensitivities and the proposed preliminary design plan. The proposed improvements to Lower Yonge Precinct Area may be subject to minor refinements during the development of the Detail Design plan. Any potential refinements, however, are not anticipated to increase impacts to the identified concerns.

A legend is provided below outlining the identified concerned agencies who will have an interest or be affected by the environmental issue / concern. During Detail Design it is the responsibility of the proponent and Contractor to ensure these agencies are contacted regarding proposed works and mitigation measures, where applicable, including permitting and approval requirements.

### Legend

| | |
|---|---|
| MNRF: Ministry of Natural Resources and Forestry | MTCS: Ministry of Tourism, Culture and Sport |
| MOECC: Ministry of the Environment and Climate Change | MUN: City of Toronto<br>WT: Waterfront Toronto |
| EMS: Emergency Service Providers | Transit Authorities: GO Transit / Metrolinx, TTC |
| UTIL: Utilities | RES/BUS: Local Residents and/or business owners |
| TPA: Toronto Parking Authority | |

**Exhibit 8-5: Summary of Identified Concerns and Proposed Mitigation / Commitments to Future Work**

| Environmental Issue / Concern | Concerned Agencies | Proposed Mitigation / Commitments to Future Work |
|---|---|---|
| **GENERAL** | | |
| General environmental impacts. | WT / MUN<br><br>All Stakeholders | • Carry out ongoing consultation with stakeholders, agencies, property owners and the general public during Detail Design, including Public Information Centre(s).<br>• Obtain any necessary approvals or permits during Detail Design. |
| **NATURAL ENVIRONMENT** | | |
| **Terrestrial Ecosystems (See Sections 8.1.1 to 8.1.3 for further details)** | | |
| • Removal of street trees and adjacent vegetation<br>• Tree roots that may be exposed during construction<br>• Erosion and sediment control measures will be implemented adjacent to manicured lawns during construction to prevent sediment laden runoff. | MUN<br><br>MOECC<br><br>MNRF | General<br>• All Erosion and Sediment Control (ESC) measures are to be inspected and maintained by the Contractor to ensure they are functioning as intended throughout the construction period (OPSS 805).<br>• Environmental inspections shall be conducted during construction to ensure that protection measures are implemented, maintained and repaired and that remedial measures are initiated where warranted.<br>• Vegetation clearing and grubbing should occur before April 1st to lessen the change of disturbing nesting migratory birds.<br>• If the construction activities are such that continuing construction in an area would result in a contravention of the MBCA (e.g. disturbing nesting migratory birds), all activities would stop and the Contract Administrator will develop and implement a mitigation / monitoring plan for the nest site.<br>*Wildlife*<br>• Wildlife incidentally encountered during construction shall not knowingly be harmed and shall be allowed to move away from the construction area on its own.<br>• In the event that wildlife encountered during construction does not move from the construction zone, the Contract Administrator shall be notified and shall instruct an Environmental Inspector to move the animal to a safe area.<br>• If vegetation clearing or grubbing occurs during the breeding bird period (generally April 1st to August 31st), this activity shall be preceded by a bird nest survey conducted by a qualified biologist to ensure no active nests (with eggs or young) are disturbed.<br>*Species at Risk*<br>• It is recommended that the MNRF be contacted during Detail Design to confirm additional Species at Risk have not been ‘uplisted.’<br>• If a SAR is encountered within or adjacent to the construction site, the Contractor will advise the Contract Administrator, who will contact MNRF and the City’s Project Manager.<br>*Vegetation*<br>• Some of the impacts can be mitigated by minimizing the encroachment of construction activities as much as possible.<br>• Tree protection fencing is recommended to be erected at the minimum tree protection distances required to protect trees that will be retained from construction activities.<br>• Should any work be required within a minimum Tree Protection Zone, the contract administrator should be notified and this work shall be done so in accordance with the guidelines in this report under ‘Work within a Tree Protection Zone’ and ‘Tree Preservation / Mitigation Measures’.<br>• Provide tree canopy cover distributed across the site area and the public boulevard at a minimum rate of 1 tree for every 66 m2 of 40% of the site area.<br>• Provide all trees planted with a minimum volume of 30 $m^3$ of high quality soil per tree.<br>• The minimum soil volume can be 20 $m^3$ per tree where the soil volume is shared.<br>• Plant large growing shade trees at the equivalent of 8 to 10 m intervals along all street frontages, including along private streets and in the public boulevard. |

| Environmental Issue / Concern | Concerned Agencies | Proposed Mitigation / Commitments to Future Work |
|---|---|---|
| | | • Consult City Urban Forestry during the Detail Design phase regarding the removal of existing trees to accommodate new road cross section and alignment. |
| **Fisheries (See Section 8.1.4 for further details)** | | |
| • As no surface water features are present within the study area, no effects to fish and fish habitat are anticipated. | MUN<br>DFO<br>MNRF | • Vehicular and equipment maintenance and refueling shall be undertaken in designated areas a minimum of 30 m from any watercourse / waterbody and shall be controlled to prevent any discharge of equipment fuels and fluids onto the ground or into watercourse / waterbody (OPSS 805).<br>• Machinery must arrive on site in a clean condition and maintained free of fluid leaks. |
| **Landscape (See Section 8.1.5 for further details)** | | |
| • Vegetation removals could impact the existing landscape.<br>• Opportunities to add landscaping within the Precinct. | WT / MUN<br>Area residents | • Subject to further consultation with the City's Urban Forestry department during Detail Design, it is also recommended that native trees and shrubs are planted in the landscaped median and along Yonge Street. |
| **Surface Water (See Section 8.1.6 for further details)** | | |
| • Surface water conditions are anticipated to be similar to the existing conditions. All surface water drains to the south into the Lake. | WT / MUN<br>TRCA<br>MNRF<br>DFO | • Any additional discharge into the Lake will be subject to approvals from TRCA, MRNF, and the DFO.<br>• The applicable permits and approvals will be required during detail design of the proposed roadways and storm sewer systems. |
| **Drainage (See Section 8.1.7 for further details)** | | |
| • The ROW will be modestly narrowed as a result of development, and in addition, will include mountable curbs rather than standard height curb and gutter. | MUN | • Site specific solutions, such as oversized minor system, oversized major system, and non-standard curbs will be explored to achieve the required design criteria. |
| **Contamination and Waste Management (See Section 8.1.8 for further details)** | | |
| • Areas have been identified within the study area where the high and moderate potential for contamination may be present, these sites may or may not be impacted by construction.<br>• Actual contamination of soil and groundwater exist within portions of the study area.<br>• Proper techniques should be used for disposal of excess material and waste. | WT / MUN<br>MOECC | • All of Harbour Street and the Lower Yonge Precinct are south of the original waterfront, and therefore it is likely that soils in these areas consist of poor quality fill materials.<br>• Excess materials will be sorted and either reused if feasible, recycled, or disposed of at an approved landfill facility in accordance with OPSS 180.<br>• It recommended that a Phase II ESA be conducted to evaluate the extent soil and groundwater contamination is present in the study area. |
| **Air Quality (See Section 8.1.9 for further details)** | | |
| • An air quality assessment study was undertaken which determined that emissions are anticipated to | WT / MUN | • Standard construction practices for the control of dust will be implemented during construction to minimize the generation and spread of dust. |

| Environmental Issue / Concern | Concerned Agencies | Proposed Mitigation / Commitments to Future Work |
|---|---|---|
| decrease compared to the existing conditions based on technology improvements.<br>• Some minor impacts (construction equipment emissions and dust) are anticipated during construction. | MOECC<br><br>Area Residents | • Implementation of Construction Code of Practice, operating procedures such as application of dust suppressants, efficient staging of construction activities and minimization of haul distances, covering up stockpiles, etc.<br>• The use of dust suppressants to ensure dust is effectively managed and kept to a minimum.<br>• The use of reformulated fuels, emulsified fuels, exhaust catalyst and filtration technologies, cleaner engine repowers, and new alternative-fuelled trucks to reduce emissions from construction equipment.<br>• Regular cleaning of construction sites and access roads to remove construction-caused debris and dust.<br>• Ensure loads hauling fine-grained materials are covered.<br>• Compliance with posted speed limits and, as appropriate, further reductions in speeds when travelling sites on unpaved surfaces.<br>• Restrictions on the idling of construction equipment unnecessarily should be kept to a minimum. |
| **SOCIO-ECONOMIC ENVIRONMENT** | | |
| **Land Use (See Section 8.2.1 for further details)** | | |
| • Property outside of the City's right-of-way is required for the road network.<br>• Impacts on access. | WT / MUN<br><br>Area residents | • Property is required from property owners for the streets in the road network.<br>• The need for temporary limited interests (TLIs) for construction staging will be reviewed in more detail during the Detail Design Phase.<br>• Impacts to access for businesses and emergency service providers during construction will be minimized.<br>• The City will continue to explore options that minimize property impacts with the management and residents of 10 Yonge Street during detailed design.<br>• The City will continue to explore laneway configuration options with the management and residents of 16-18 Harbour Street, 33 Bay, 16 Yonge Street prior to, and during, detailed design to mitigate lane access concerns. |
| **Noise (See Section 8.2.2 for further details)** | | |
| • The predicted increases in future noise levels are anticipated to be less than 5 dBA for all receiver locations.<br>• Potential for elevated noise levels during construction. | WT / MUN<br><br>MOECC<br><br>Area residents | • In conjunction with the City's Public Consultation Unit (PCU), the contractor should notify adjacent property owners (i.e., residents, businesses, etc.) in advance of construction.<br>• The contractor should obtain copies of the current noise control by-laws from the City of Toronto. Where adherence of the laws is not possible and mitigation is not feasible, an exemption from the City of Toronto should be obtained before the start of construction work.<br>• If construction is to occur outside of the normal working hours, as stipulated by the local noise bylaws, then a noise by-law exemption should be pursued in advance of the work.<br>• All equipment should be properly maintained to limit noise emissions. As such, all construction equipment should be operated with effective muffling devices that are in good working order. |
| **CULTURAL ENVIRONMENT** | | |
| **Archaeological Resources (See Section 8.3.1 for further details)** | | |
| • An Archaeological Inventory was undertaken that concluded that additional investigations (monitoring and Stage 1 AA) are required. | WT / MUN<br><br>MTCS | • Any transportation improvement initiatives that will involve excavations approaching or exceeding an elevation of approximately 76.0 m above sea level in the locations of the inventoried features should be subject to archaeological monitoring.<br>• A Stage 1 Archaeological Assessment should be undertaken for any transportation initiatives.<br>• Should deeply buried archaeological materials be encountered during construction, all work should be stopped and a professionally licensed archaeologist consulted to assess the cultural heritage value and significance of the archaeological deposits. |

| Environmental Issue / Concern | Concerned Agencies | Proposed Mitigation / Commitments to Future Work |
|---|---|---|
| **Built Heritage and Cultural Heritage Landscapes (See Section 8.3.2 for further details)** | | |
| • Direct or indirect impacts to built heritage resources and cultural heritage landscapes have been identified.<br>• In particular, direct impacts have been identified for 55 Lake Shore Blvd and the existing Gardiner Off-Ramp that will be shortened to land at Yonge Street. | WT / MUN<br><br>MTCS | • Specific conservation strategy details summarized in **Section 8.3.2** and outlined in the HIS for 55 Lake Shore Blvd need to be reviewed and considered during Detail Design.<br>• A Cultural Heritage Documentation Report should be completed for the property at 55 Lake Shore Blvd by the Detail Design team prior to development.<br>• During Detail Design, suitable mitigation measures such as landscaping, buffering or other forms of mitigation should be investigated to minimize the impacts on cultural heritage features.<br>• Ensure construction activities and development boundaries are consistent with these recommendations during Detail Design.<br>• Where Cultural heritage resources are expected to be impacted through alteration to their setting, a resource-specific cultural heritage impact assessment should be conducted at the earliest possible stage of the Detail Design stage.<br>• Should future work require an expansion of the Lower Yonge Precinct MCEA Study Area then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential cultural heritage resources. |
| **ENGINEERING** | | |
| **Emergency Vehicle Response (See Section 8.4.1 for further details)** | | |
| • Emergency Service Vehicles may experience delays during construction. | WT / MUN<br><br>EMS<br><br>Area Residents | • The Project Team will continue to consult with emergency services in Detail Design to ensure that the preliminary preferred design options are acceptable and the lane widths can accommodate vehicles.<br>• Traffic will be maintained on Yonge Street during construction with minor, temporary short-term closures during off-peak hours.<br>• Advance notification will be provided to inform emergency service providers of construction, local detours, and any lane closures to minimize delay in emergency response times during and after construction. |
| **Parking (See Section 8.4.2 for further details)** | | |
| • The Project Team has reviewed alternatives for permanent parking for the TICA. | WT / MUN<br><br>TPA<br><br>TICA | • Communication and consultation with TICA and the local Ward Councillor about the interim and long-term arrangements will continue to occur throughout the Detail Design and construction phases.<br>• It is recommended that current permit holders enter into lease-arrangements with the owners of nearby commercial parking facilities.<br>• During construction, the City will continue to work with the landowners and permit parking holders to explore temporary / interim accommodations during construction.<br>• A local landowner (Menkes) has agreed to offer permit holders a preferred rate for overnight parking in the commercial parking facility that will be constructed as part of the Phase 1. There is also the potential that any unsold parking spaces could be offered to permit holders for purchase.<br>• The City will explore opportunities to increase off-street and on-street car-share locations within the Precinct.<br>• Prior to permanent removal of the on-street permit parking, a formal notice of the City's proposal to remove the permit parking spaces on Freeland Street and Cooper Street will be issued to the residential permit holders, and a report seeking Council's authorization to remove the permits will be presented to the Toronto and East York Community Council for consideration. |
| **Illumination (See Section 8.4.3 for further details)** | | |
| • New illumination will be constructed to meet the transportation, pedestrian and public realm requirements. | WT / MUN<br><br>Area Residents | • Safe and efficient lighting is based on Waterfront Toronto and City of Toronto guidelines in coordination with Toronto Hydro criteria. |

| Environmental Issue / Concern | Concerned Agencies | Proposed Mitigation / Commitments to Future Work |
|---|---|---|
| **Utilities (See Section 8.5 for further details)** | | |
| • There are potential conflicts with the existing utility locations. | WT / MUN<br><br>TTC<br><br>UTIL | • Further consultation with the utility agencies will be pursued during Detail Design.<br>• Special provisions will be included in the contract to ensure that care and precautions are taken to safeguard existing utilities from damage during construction. |
| **Construction Staging (See Section 8.6 for further details)** | | |
| • Motorists may experience delays and disruption during construction. | WT / MUN<br><br>Area Residents | • Access for emergency vehicles will be maintained during construction.<br>• Where possible, construction should be completed during the off-peaks hours during the day / evening.<br>• Advance road signage notifying motorists and the community of the construction will be provided prior to the start of construction and before each construction phase. |
| **Intersection Improvements (See Section 9.2 for further details)** | | |
| • Monitoring has been recommended for all intersections, in particular the intersection at Freeland Street and Harbour Street where traffic signals are not warranted today. | WT / MUN<br><br>Area Residents | • Given the adjacent land uses adjacent to Freeland Street and Harbour Street will include a community centre and school, it is recommended to monitor this intersection to determine when traffic signals are warranted. |

# 9.0 MONITORING

Following the filing of the Environmental Study Report (ESR) and Environmental Clearance, the City may proceed to Detail Design and construction stages as outlined in the MCEA.

## 9.1 Potential Changes during Detail Design

Detail Design refines the work completed during Preliminary Design and further develops that work to a more detailed level. While the intent of the work approved during Preliminary Design will not change, there is the potential for new issues to be identified during Detail Design.

Any minor design modifications or refinements made by the Project Team, or that stem from discussions with agencies (such as regulatory agencies) made during Detail Design will be documented. These refinements could result in environmental benefits, or impacts that may not have been anticipated during Preliminary Design and documented in this ESR.

Detail Design and construction activities will include:

- Commencement of Detail Design public notice;
- Complete Drawings and Tender Documents;
- Cross section details;
- Resolution of all utility conflicts;
- Construction; and,
- Monitor for Environmental Provisions and commitments.

## 9.2 Monitoring Program

Following implementation of the recommended plan, the City of Toronto will monitor a number of effects resulting from this project, to help in the planning process for other similar projects.

There are a number of effects that can be monitored, which include (but are not limited to) the following:

- Collision data (for pedestrians, cyclists and vehicles);
- Schedule regular traffic counts (including pedestrians and cyclists) at key locations to build a database;
- On-street loading and parking activity;
- Monitor local transit activity along with the TTC to obtain information on ridership, passengers, and traffic volumes,

- Transportation mode used by residents and visitors (walking, cycling, transit, driving, ride-share, other);
- Traffic operations (including reviewing intersections); and,
- Obtain information about population, employment and types of residential units to provide context for growth in the Precinct and density.

## References


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# Appendix A: Natural Environment Memo and Tree Inventory

# Appendix B: Drainage Memo

# Appendix C: Phase I ESA

# Appendix D: Air Quality Screening Assessment

# Appendix E: Noise Memo

# Appendix F: Inventory of Archaeological Resources

# Appendix G: Heritage Inventory and Heritage Impact Assessments

# Appendix H: Consultation Record

# Appendix I: PIC Summary Report and Displays

# Appendix J: Freeland Street – Revised Alternatives

# Appendix K: Transportation Modelling Memo

# Appendix L: Utility Conflicts and Relocation Plan Memo

# Appendix M: Construction Phasing

# Appendix N: Cost Estimate Breakdown