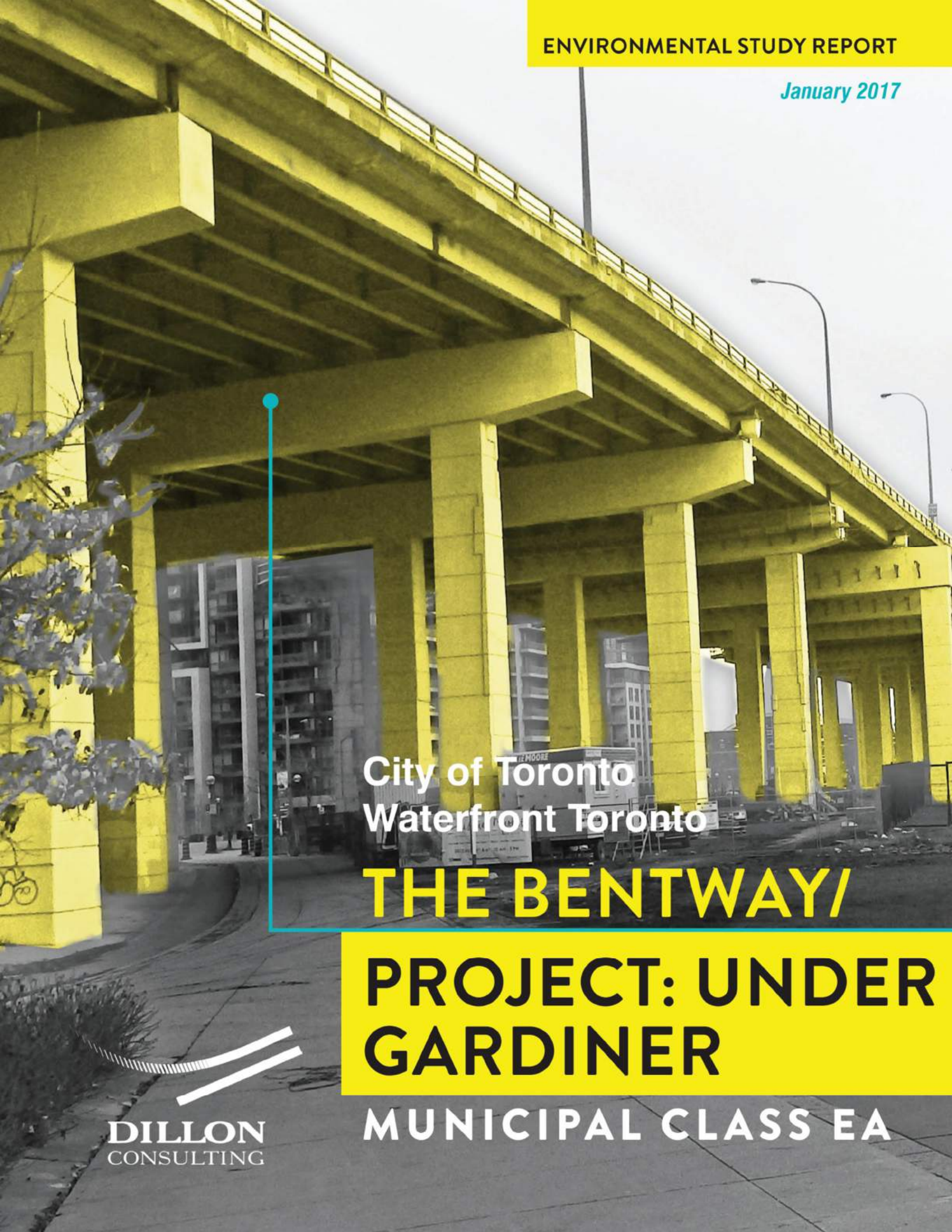
ENVIRONMENTAL STUDY REPORT

January 2017



City of Toronto
Waterfront Toronto

THE BENTWAY/ PROJECT: UNDER GARDINER

MUNICIPAL CLASS EA

DILLON CONSULTING

WATERFRONToronto

January 13, 2017

Honorable Glen R. Murray
Minister of the Environment and Climate Change
Ferguson Block, 11th Floor
77 Wellesley Street West
Toronto, ON M7A 2T5

Dear Minister Murray,

On behalf of Waterfront Toronto, the City of Toronto and the Matthews Foundation, it is my pleasure to submit the Environmental Study Report for The Bentway.

The Bentway is a new dynamic public space that knits together communities within a 1.75km continuous public space located underneath the Gardiner Expressway from Strachan Avenue to Spadina Avenue. A generous philanthropic gift from Wil and Judy Matthews will fund The Bentway. The project will transform this area into vibrant community spaces that will play host to a range of cultural, heritage and arts programming – creating a new outdoor living room for local residents and visitors to the amenities and attractions nearby. These spaces will be stitched together by a continuous trail from Strachan to Spadina Avenue, a connection across Fort York Boulevard and a grand staircase at Strachan Avenue.

At the centre of the corridor today, Fort York Boulevard bisects the area and presents a physical gap in the continuous public space and overall connectivity of the project. Making an important community connection such as the Fort York Boulevard crossing requires not only a strong vision, but also a rigorous process of testing alternatives and obtaining feedback. To determine how to best address the connectivity challenge presented by Fort York Boulevard, the project's co-proponents (City of Toronto and Waterfront Toronto) have undertaken a Municipal Class Environmental Assessment (MCEA). This Environmental Study Report (ESR) presents the results of the MCEA process that was completed.

The recommended design for a new pedestrian/cycling crossing of Fort York Boulevard results in the greatest benefit to the community with the least impact on the natural and social environment. The MCEA was completed in accordance with the provincially approved Municipal Class Environmental Assessment.

The Bentway represents an exciting opportunity to transform a forgotten urban space into a vital part of Toronto's public realm, creating a world class destination. The new pedestrian/cycling crossing of Fort York Boulevard is a key linking element for not only the project, the many surrounding neighbourhoods, but also the city as a whole.

Sincerely,

W. K. Fleissig

William K. Fleissig
President & Chief Executive Officer

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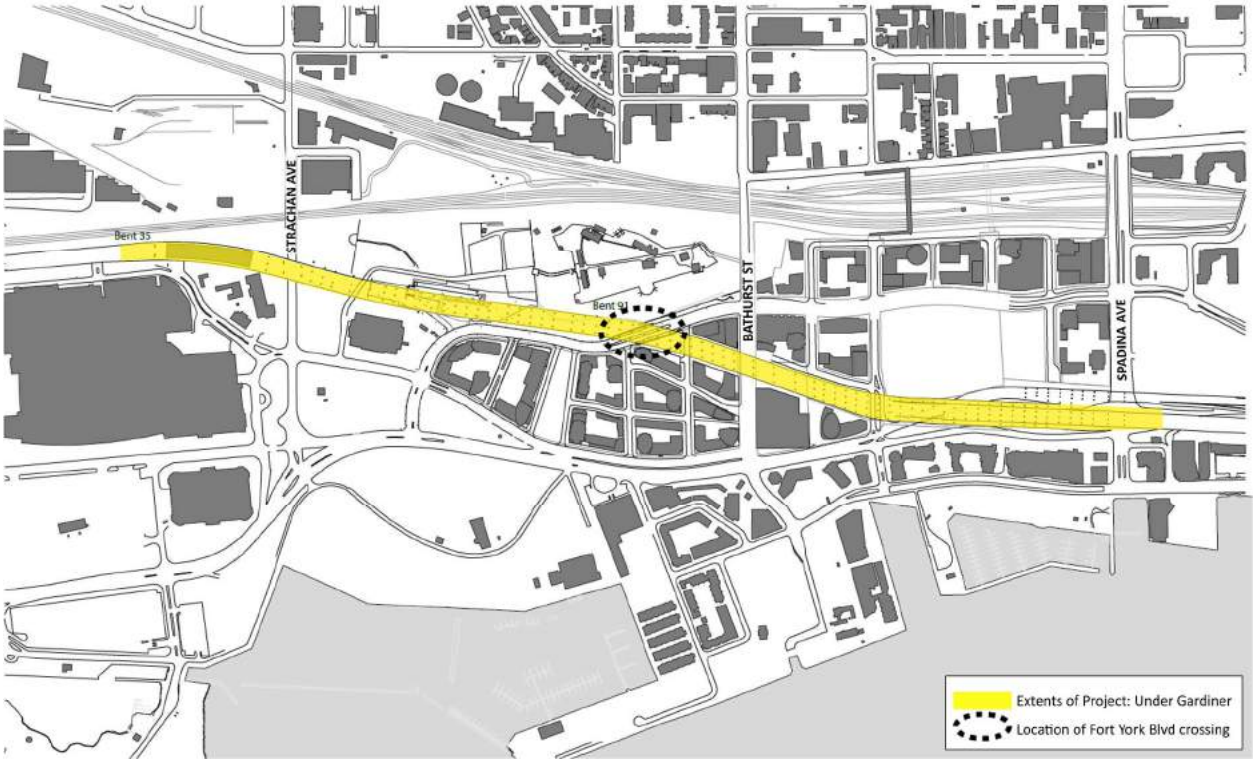
1.0 OVERVIEW: Project: Under Gardiner Municipal Class Environmental Assessment

Project: Under Gardiner (or "the Bentway") is a new dynamic public space that knits together communities within a 1.75km continuous public space located underneath the Gardiner Expressway from Strachan Avenue to Spadina Avenue as shown in **Figure 1.** At the centre of the corridor, Fort York Boulevard cuts across the area and presents a physical gap in the continuous public space and overall connectivity of the project. **Figure 1** indicates the location of the Fort York Boulevard crossing within the larger Under Gardiner corridor.

Figure 1: Location of Future Fort York Boulevard Crossing



To determine how to best address the connectivity challenge presented by Fort York Boulevard, the project's co-proponents (City of Toronto and Waterfront Toronto) have undertaken a Municipal Class Environmental Assessment (MCEA). This Environmental Study Report (ESR) presents the results of the MCEA process that was completed. The recommended design for a new pedestrian/cycling crossing of Fort York Boulevard, referred to as the undertaking, results in the greatest benefit to the community with the least impact on the natural and social environment. The MCEA was completed in accordance with the provincially approved *Municipal Class Environmental Assessment (Municipal Engineer's Association, October 2000, as amended in 2007)*.

The MCEA process completed was conducted as a Schedule "C" Class Environmental Assessment as there is the potential for the capital cost of the infrastructure to exceed $2.4 million. A Schedule "C" MCEA process follows five phases:

- Phase 1: Identify the problem and/or opportunity
- Phase 2: Identify and evaluate alternative solutions
- Phase 3: Identify and evaluate alternative design concepts to the preferred solution
- Phase 4: Prepare an Environmental Study Report
- Phase 5: Implementation

Appendix A includes a copy of the MCEA process flowchart as approved by the Ministry of Environment and Climate Change (MOECC). The process includes consultation with potentially affected stakeholders, agencies, Indigenous Peoples and the public. The process flowchart in Appendix A indicates key periods in the MCEA study process where consultation is a required activity. **Appendix B** provides a complete record of all consultation activities completed for the planning and design of Project: Under Gardiner. The record includes, but is not limited to, consultation completed for this EA regarding the Fort York Boulevard crossing (which is one component of Project: Under Gardiner).

The MCEA completed for the Project followed Phases 1 through 4, including:

- Phase 1:
  - Identification of project problem and opportunity;
  - Identification of existing environmental conditions in the study area;
- Phase 2:
  - Consideration of a reasonable range of alternative solutions;
  - Identification and consideration of the impacts of the alternative solutions on the environment;
  - Evaluation of the alternative solutions that led to the selection of a recommended preferred solution;
- Phase 3:
  - Identification of alternative designs (also known as design concepts) for the preferred solution;
  - Identification and assessment of the impacts of the alternative designs on the environment;

- Evaluation of the alternative designs that led to the selection of a recommended preferred design concept (referred to as the undertaking);
- Completion of the effects assessment and mitigation recommendations for the undertaking;

· Phase 4:

- Documentation of the process and findings of work completed in phases 1 through 3 in this ESR; and,
- Release of the ESR for public and agency review.

Throughout all of these phases consultation was completed with affected agencies, the public, stakeholders, property owners and other interest groups. This consultation included in-person landowner and agency meetings, notices/letters, online consultation, stakeholder workshops and public meetings.

The following chapters of this ESR provide a summary of the tasks completed for Phases 1 through 4. Phase 5, Implementation, will commence subsequent to the required 30 day public review of the ESR. More information regarding the next steps of the Project is provided in **Section .0**.

1.1 Project: Under Gardiner Features and EA Components

In addition to the pedestrian/cycling crossing of Fort York Boulevard, Project: Under Gardiner includes a new multi-use trail, new landscaping elements, a defining performance space and grand staircase (referred to as the Strachan Gate), skating area and street furniture for public gathering and recreation. Visitors and commuters will encounter a series of outdoor civic 'rooms' formed by the Gardiner's structure of columns and beams (also known as bents). The project will be completed in phases, with the first phase expected to be opened on July 1, 2017. Project: Under Gardiner will connect seven neighbourhoods in the city to new and existing parks, open spaces as well as improving access to destinations such as BMO Field, the revitalized waterfront, the Harbourfront Centre, Ripley's Aquarium, and the CN Tower. The space's footprint crosses more than 70,000 residents across Exhibition Place, Liberty Village, Fort York, Niagara, Wellington Place, Bathurst Quay and City Place.

When planning new municipal infrastructure, it is the responsibility of the proponent to identify any projects for which the MCEA process applies. As noted in **Section 1.0** the 2015 MCEA requirements specifically include the necessity to complete a Schedule B or Schedule C Class EA process for the "Construction of underpasses or overpasses for pedestrian, cycling, recreational or agricultural use." As such, the Schedule C EA process has been completed for the Fort York Boulevard crossing, which is documented in this ESR.

The other components of Project: Under Gardiner, including the multi-use trail and various proposed public realm improvements throughout the corridor, do not require the completion of a Schedule B or Schedule C Class EA process. In particular, Project: Under Gardiner is occurring within an existing right-of-way which precludes many of the design elements, including the multi-use trail, from requiring a

Schedule B or Schedule C EA. **Table 1** outlines the MCEA interpretations that may apply to aspects of Project: Under Gardiner. Schedule A and A+ projects that are part of Project: Under Gardiner are preapproved and may proceed to implementation without following the full Class EA planning process. Streetscaping, roadside parks, resurfacing, and multi-purpose paths within an existing right of way are all A+ projects. These require informing the public of the location and construction timing of these works. Notification of Schedule A and A+ projects for Project: Under Gardiner will be made prior to the commencement of construction in early 2017.

Table 1: MCEA Schedule Assessment for Project: Under Gardiner

MEA Class EA coverage	Schedule
(3) Construction or removal of sidewalks or multi-purpose paths or cycling facilities within existing or protected rights-of-way.	A+
(5a) Urban: resurfacing, with no change to horizontal alignment	A+
(11) Streetscaping (e.g. decorative lighting, benches, landscaping) not part of another project	A+
(13) Installation, construction, or reconstruction of traffic control devices (signing, signalizing)	A (less than $9.5 million)
(16) establishment of a roadside park or picnic area	A+
(28) construction of underpasses or overpasses for pedestrian, cycling, recreational or agricultural uses	B (less than $2.4 million); C (more than $2.4 million)
(34) utility removal, modification or relocation for safety or aesthetic purposes	A

1.2 MCEA Project Team

The Project co-proponents, the City of Toronto and Waterfront Toronto, retained Dillon Consulting Limited to complete the MCEA study for Project: Under Gardiner. The alternative solutions and alternative designs considered in the MCEA to date have been prepared in coordination with Public Work, Greenberg Consultants and Blackwell Structural Engineers, the landscape architecture, urban design and structural engineering consulting team that is leading the design for Project: Under Gardiner.

1.3 Structure of the Report

The ESR is structured based on the phases of the MCEA process as follows:

- **Section 2.0: Phase 1:**
  - Description to the Problem / Opportunity

- Description of the Existing Environment and Study Area
- **Section 3.0: Phase 2:**
  - Development and Evaluation of Alternative Solutions
- **Section □.0: Phase 3:**
  - Development and Evaluation of Alternative Designs
  - Identification of Preferred Undertaking
- **Section □.0: Phase 3:**
  - Effects Assessment and Mitigation for Preferred Undertaking
- **Section □.0: Next Steps**
  - Review Period and Implementation

2.0 PHASE 1: Problem/Opportunity and Existing Conditions

2.1 Description of Problem and Opportunities

The MCEA for Project: Under Gardiner commenced in January 2016. Phase 1 of the study began with the identification of the problem and opportunities to be addressed through the undertaking. This was done through site analysis and in consultation with the project co-proponents, stakeholders, the public and the technical advisory committee (TAC) made up of staff from various divisions of the City of Toronto, including Waterfront Secretariat, Transportation Services, City Planning, Economic Development and Culture, Engineering and Construction Services, and Parks, Forestry and Recreation. The following text provides the problem/opportunity statement addressed in this MCEA:

Looking southwest along Fort York Boulevard.

Looking west across Fort York Boulevard.

Providing a safe and continuous connection between Strachan Avenue and Spadina Avenue is a critical element of Project: Under Gardiner. Crossing Fort York Boulevard presents a significant problem for achieving a safe and continuous pedestrian and cycling connection and is the reason for undertaking this MCEA. The location of this crossing is illustrated in **Figure 1**.

In its existing condition, Fort York Boulevard creates a physical gap that separates the planned public spaces of Project: Under Gardiner. To safely cross the road, users would need to leave the planned public spaces and travel to the nearest signalized crossing (either at Bathurst Street or June Callwood Park). Alternatively, some users may attempt to make the crossing illegally, which presents risks to pedestrians and cyclists due to high auto traffic volumes along Fort York Boulevard.

A new crossing of Fort York Boulevard presents an opportunity to imagine an iconic connection that would prioritize pedestrian and cycling traffic without compromising the function of the roadway. The project takes advantage of the opportunity to transform this underutilized public space by accommodating and attracting pedestrian and cycling traffic. Doing so provides an opportunity to enhance connectivity to the Fort York National Historic Site and link together seven Toronto neighbourhoods, connecting more than 70,000 residents.

Based on the problem/opportunity statement, the key challenges to be addressed by the undertaking include:

- Fort York Boulevard presents a significant gap separating the planned public spaces of Project: Under Gardiner;
- To cross Fort York Boulevard, pedestrians and cyclists using the Project: Under Gardiner multi-use trail would need to leave the trail to cross at the nearest signalized crossing; and,
- Some users may attempt to make the boulevard crossing illegally.

The problem opportunity statement was presented for review and input to stakeholders at a Stakeholder Advisory Committee (SAC) meeting on March 22, 2016, and to the public on April 7, 2016. Further details regarding these consultation events are provided in **Section 3.**

2.2 Description of the Existing Environment

The existing environmental components in the study area that have the potential to be impacted by the Project include:

- Transportation and Infrastructure including the conditions of the existing transportation network and identification of relevant services and utilities.
- Natural Environment including terrestrial species and habitat (including vegetation), surface water, soils and groundwater.
- Socio-Economic Environment including existing and planned land use, recreation and tourism, and local economics/businesses.
- Urban Design including the existing public realm, built form and planned public realm improvements.
- Cultural Environment including cultural and built heritage, archaeology and Indigenous Peoples.

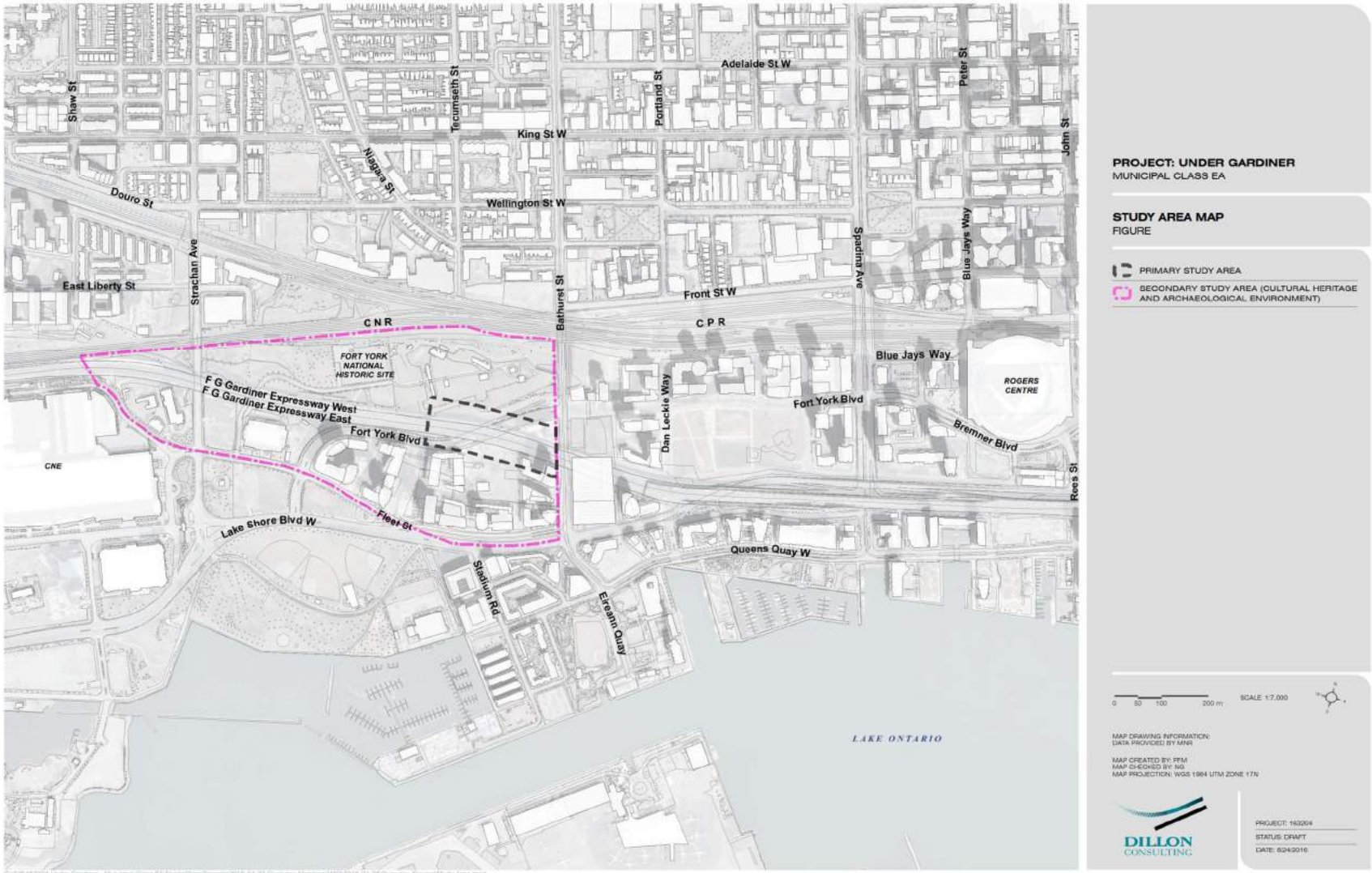
2.2.1 Study Area

The study area for the MCEA was identified based on the spatial boundaries of potential impacts of the location for the proposed pedestrian/cycling crossing over Fort York Boulevard between June Callwood Park and Bathurst Street. **Figure 2** illustrates the study area for the MCEA. The boundaries of the study area are June Callwood Park to the west, Fort York National Historic Site (Fort York NHS) to the north, Bathurst Street to the east, and residential development blocks on the south side of Fort York Boulevard to the south (approximately 165 to 209 Fort York Boulevard).

Figure 3 provides a wider secondary study area which was used for impact considerations related to cultural heritage and archaeology as the secondary study area includes the broader lands within the Fort York NHS.

Figure 2: Project: Under Gardiner MCEA Study Area

Figure 3: Project: Under Gardiner Secondary Study Area



2.2.2 Transportation and Infrastructure Environment

The description of the transportation environment includes the road network and existing and planned pedestrian and cycling facilities. The infrastructure environment describes the relevant services and utilities in the study area.

Road Network

The transportation right-of-ways included in the study area are Fort York Boulevard, the Gardiner Expressway, Bathurst Street, Iannuzzi Street, and Grand Magazine Street. These are indicated on **Figure 2: Study Area**. **Figure** below provides an excerpt from the *City of Toronto Road Classification Map* with the road hierarchy for the right-of-ways in the MCEA study area. The characteristics of the roads in the study area are presented in **Table 2**.

Figure : Road Classification System Trinity Spadina ard 1

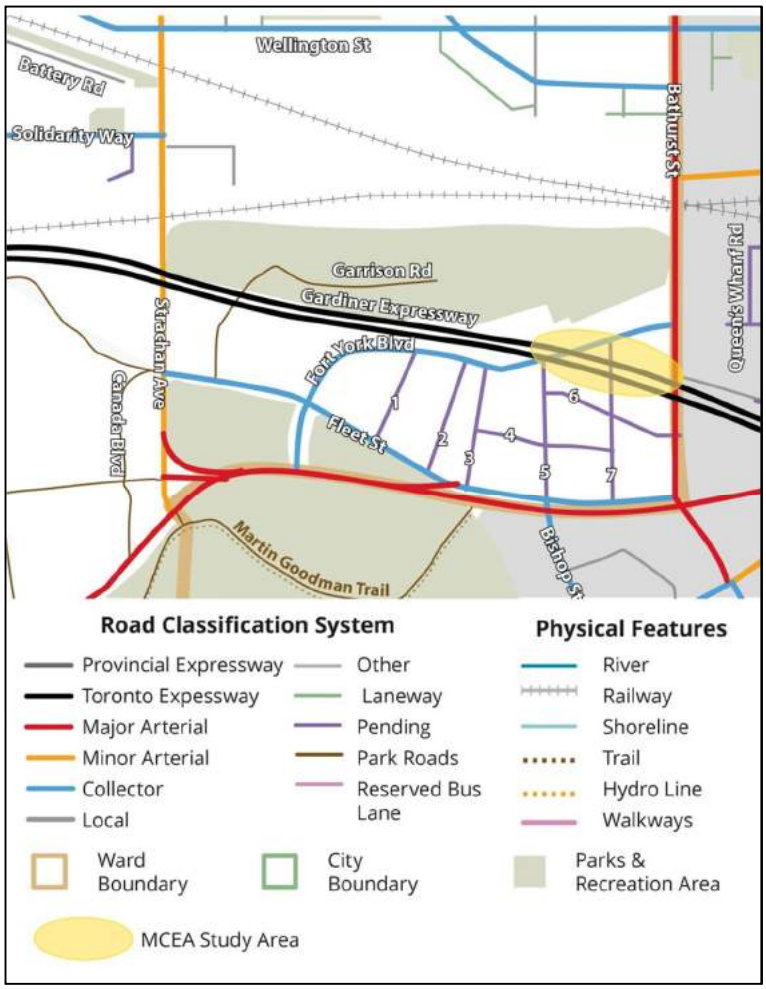


Table 2: Road Network Classification and Characteristics

Right□f□ ay	Road Classification	Description
Fort York Boulevard	Two-Way Collector Road	· four (4) lanes □ two eastbound and two westbound lanes · on-road painted bike lanes · sidewalks on both sides of the street · speed limit 50 km/hr · signalized intersections at arterial roads (Bathurst Street) · bus route 121 Fort York-Esplanade (transit plans include a light rapid transit line to be implemented in future)
Gardiner Expressway	Toronto Expressway	· elevated expressway with six (6) through lanes □ three eastbound and three westbound lanes. · speed limit 90 km/hr · no cycling, pedestrian or local transit facilities/routes
Bathurst Street	Two-Way Major Arterial Road	· four (4) lanes □ two southbound and two northbound lanes · sidewalks on both sides of the street · speed limit 50 km/hr · signalized intersections at collectors, arterials and some local roads · streetcar route 511 Bathurst
Iannu□□i Street	Two-Way Local Road	· two (2) lanes □ one southbound and one northbound lane · sidewalks on both sides of the street · speed limit 40 km/hr
Grand Maga□ine Street	Two-Way Local Road	· two (2) lanes □ one southbound and one northbound lane · sidewalks on both sides of the street · speed limit 40 km/hr

Given that the proposed crossing of Fort York Boulevard would be located underneath the elevated Gardiner Expressway (within the footprint of the Gardiner Expressway right-of-way), it is important to understand the characteristics of the Gardiner Expressway structure at-grade.

The Gardiner Expressway structure is composed of a series of concrete bridge deck slabs on girders held up by wide pier caps supported by rows of piers. In the study area the piers are three-legged. This

arrangement generally consists of reinforced concrete cap beams which support steel and concrete girders with rectangular vertical columns. The cap beam and supporting columns are generally referred to as a "bent". The bridge deck and piers are over 40 years old and are currently undergoing full rehabilitation as per the City of Toronto's Gardiner Expressway Rehabilitation Strategy. The rehabilitation program of the Gardiner Expressway in the study area is occurring in two segments. West of bent 91, at approximately Grand Magazine Street, the rehabilitation is anticipated to be completed in 2016. East of bent 91 the rehabilitation is anticipated to extend from 2018-2024.

Photos of elevated Gardiner Expressway over Fort York Boulevard (looking east).

Pedestrian and Cycling Network

Figure provides an excerpt from the *City of Toronto Ten Year Cycling Network Plan 2016-2025* showing the existing and planned cycling network in the MCEA study area.

Along Fort York Boulevard in the study area there are sidewalks and on-road painted bicycle lanes on either side of the street heading eastbound and westbound. The bicycle lanes are approximately 1.5 metres wide. Surrounding the study area are a number of cycling and trail connections that link the study area to the adjacent communities and waterfront. **Figure** presents the trails and linkages surrounding the Project: Under Gardiner corridor and connecting to the MCEA study area.

Pedestrian and cycling connections to and from the Fort York NHS are an important factor for integration with the proposed crossing of Fort York Boulevard. There are opportunities to enhance connections to the historic site and integrate existing and planned connections to further support mobility for all users.

Figure 2: Ten Year Cycling Network Plan 2016 2021 Trinity Spadina Ward 10

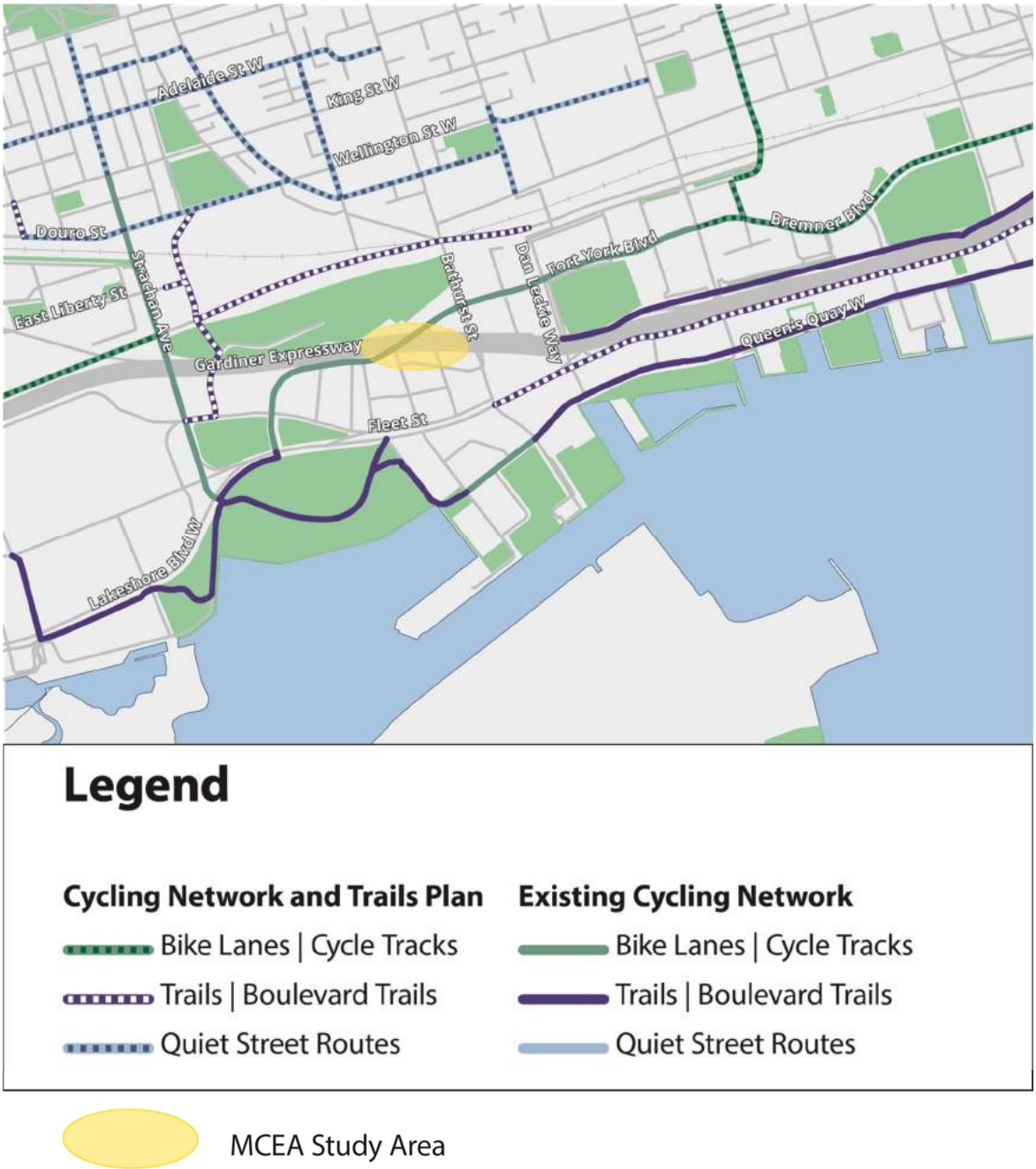
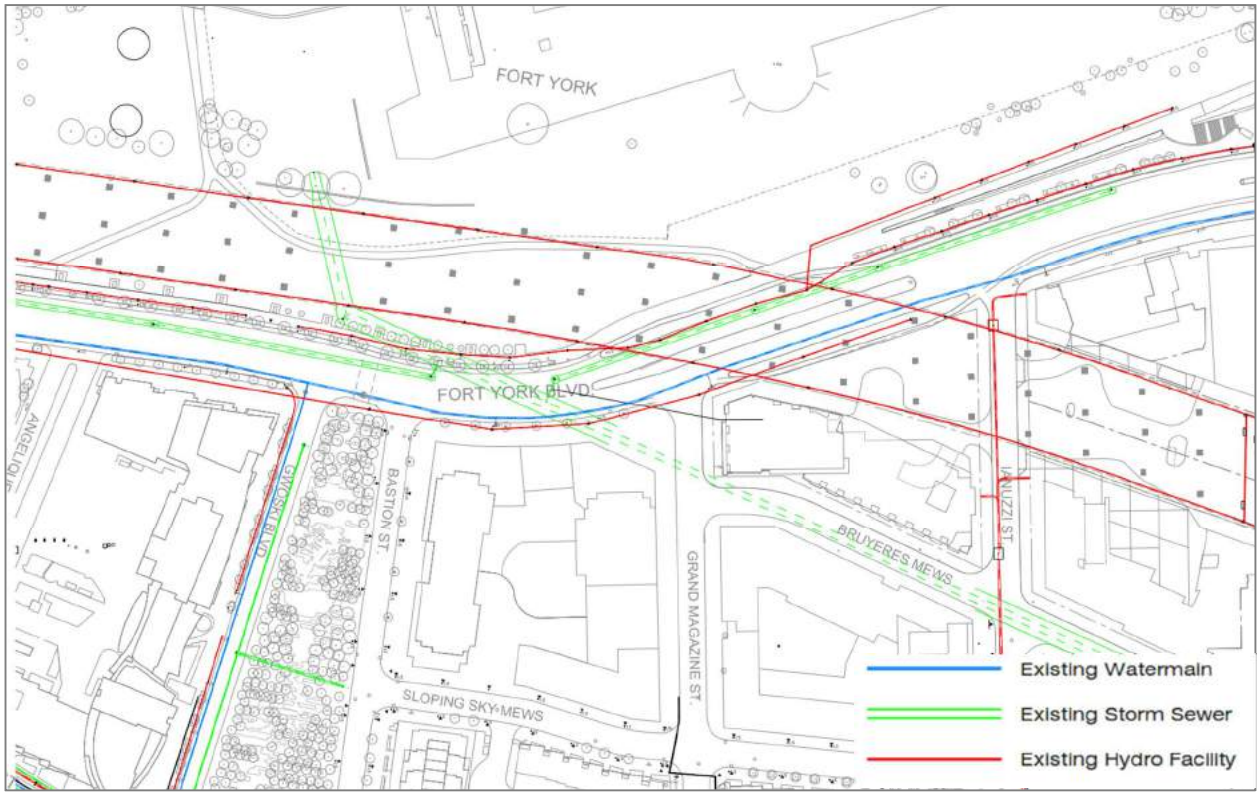


Figure ?: Context Area Trails and Linkages

Servicing and Utilities

Figure presents the underground services and utilities in the study area. Within the Fort York Boulevard right-of-way there is a 300mm water main, a 975mm x 1535mm concrete storm sewer, and two Toronto Hydro electrical conduits, one on either side of the right-of-way. Crossing Fort York Boulevard and the Project: Under Gardiner corridor just west of the Gardiner Expressway is also an 1800mm x 2400mm concrete twin storm sewer. Any sub-surface activity proposed through the undertaking will need to consider impacts to these services and utilities.

Figure : Existing Services and Utilities



2.2.3 Natural Environment

A review of the natural environment in the study area was completed to identify natural features that may be impacted by the proposed undertaking. The study area for the proposed pedestrian/cycling crossing is comprised of developed cityscape with no areas of remnant natural vegetation. In addition, there are no water features or surface water drainage features (stormwater ponds) and as such there is no potential for aquatic habitat ecosystem issues. The description of the natural environment therefore focuses on features relevant to the current conditions, which includes the terrestrial ecosystem only.

A review of secondary source data did not identify any significant natural environment features within, or in the vicinity of, the study area. No Natural Areas, Environmentally Sensitive Areas (ESAs), or Areas of Natural and Scientific Interest (ANSIs) exist in the study area. The site assessment confirmed that there were no significant natural environment features in the study area.

Terrestrial Species and □abitat

Within the terrestrial ecosystem a review of potential areas where loss of habitat for flora or fauna may occur as a result of the undertaking was completed. This included a review of the presence of, or potential habitat supporting, species-at-risk (SAR).

The landscape in the study area has experienced a high level of development and loss of natural vegetation cover, including any natural riparian or beach habitat along the historic shoreline. The site assessment concluded that suitable habitat was not present for SAR and no SAR were observed.

Based on previous studies completed in the study area, one SAR is known to occur within the study area. The Chimney Swift (*Chaetura pelagica*) is a federally threatened SAR (Species At Risk Public Registry, Government of Canada). Chimney Swifts are birds that communally breed and roost on buildings, primarily in chimneys, air vents or other similar structures. Nesting dates for Chimney Swifts in Ontario extend from late May through to the end of August.[1] Chimney Swifts are accustomed to the urban environment and can tolerate high levels of noise and disruption. As such, they are unlikely to be disturbed by the functioning of a pedestrian/cycling crossing of Fort York Boulevard. However, construction activities may cause abandonment of the area if the work is in close proximity to a nesting structure. Should construction activities occur during nesting periods (May through August) a survey should be completed to identify structures in the vicinity of the construction area that may contain Chimney Swifts and appropriate measures should be implemented to provide a sufficient buffer (25 metres) around these sites during construction.

There are street trees planted along Fort York Boulevard in the study area. However, directly underneath the Gardiner Expressway along Fort York Boulevard, there are no plantings. The existing street trees are semi-mature and have a low preservation priority. However, construction should avoid impact to trees wherever possible to promote the natural environment in the area given the current low ecological condition of the study area. Recent landscaping on the southern side of the Fort York NHS includes native grasses and meadow plants. This new landscaping is still taking form and is not currently host to a high level of terrestrial habitat. It is anticipated that the area will become host to more terrestrial habitat and species in the future as the area matures.

[1] Peck, G.□. and R.D. James. 1983. Breeding birds of Ontario, nidiology and distribution, Vol. 1: nonpasserines. Royal Ontario Museum, Toronto, 321 pp.

Surface ater and Stormwater Management

A desktop review of the surface water / stormwater management conditions was completed to identify potential effects that the proposed undertaking may have on surface water features and stormwater management. No surface water features exist within the site. The closest surface water feature is Lake Ontario to the south of the study area.

During rain events, water in the study area runs south towards Lake Ontario. As presented in the servicing and utilities description, **Section 2.2.3**, there is storm sewer infrastructure within the Fort York Boulevard right-of-way. It is not anticipated that the operation of a pedestrian/cycling connection across Fort York Boulevard would have a significant impact on surface water or the stormwater management infrastructure in the study area.

Soils and Groundwater

For Project: Under Gardiner, Amec Foster Wheeler conducted an Environmental Site Investigation (ESI) and a *Duty of Care Screening Level Risk Assessment and Proposed Risk Management Measures* analysis in May 2016. These two analyses included soil conditions sampling and testing, contaminant identification, and identified risk management measures where appropriate. The study area analyzed encompasses a broader area than the MCEA, but the findings and conclusions are generally valid uniformly throughout the area, including for the MCEA study area. ey findings and conclusions from these reports that are relevant to the MCEA are summarized below.

The subsurface soil conditions consist of brown silty sand and a sandy silty fill layer extending between 1.7 and 5.7 metres below grade surface, from land reclamation activities. Bedrock was encountered at depths of 4.3 to 10.8 metres below grade surface and consisted of a layer of weathered shale over competent shale interbedded with limestone of the Georgian Bay Formation. The observed stratigraphy confirmed the historical information regarding placement of fill in the area and that environmental samples collected are representative of the fill material present in the study area.

The ESI evaluated impacts in shallow fill material associated with the historical use and backfilling of the subject site. Several material concentrations were identified as exceeding the Table 3 Site Condition Standard (SCS) from the *Ontario Regulation 153/04 - Records of Site Condition*, *Part XV.1 of the Environmental Protection Act as amended ("O.Reg. 153/04")*, for coarse-textured soils based on a residential/ parkland/institutional land use:

- Petroleum Hydrocarbons (PHCs);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Volatile Organic Compounds (VOCs);
- Metals and electrical conductivity (EC); and
- Sodium adsorption ratio (SAR).

The exceedances are inferred to be attributed to the poor fill quality, historical industrial activities in the study area, and the historical and active de-icing of the Gardiner Expressway which is suspended above the study area.

For groundwater, the depth to groundwater varies and is thought to be situated between approximately 1.5 metres and 10 metres below ground surface with increasing depth towards to north (away from the historical lake front). There are no confirmed groundwater users in the area; however, dewatering may be required during construction depending on the type and depth of the foundation(s) recommended to support a grade-separated crossing of Fort York Boulevard if grade-separation is preferred. Best management practices should be applied for dewatering if required in order to manage threats to groundwater.

The Human Health Risk Assessment completed by Amec Foster Wheeler evaluated potential risks to recreational visitors, outdoor/ indoor workers and sub-surface construction / utility workers. In some of the areas of Project: Under Gardiner, unacceptable risks were identified from direct contact with various metals and PAHs, although not all the contaminants identified are present within the study area for the proposed pedestrian/cycling crossing of Fort York Boulevard. Amec Foster Wheeler recommended the implementation of risk management measures including hard and soil barriers to mitigate any potential health risks at the site. Waste characterization results indicated that the soil can be disposed of off-site as non-hazardous waste. Recommendations for managing soil removal resulting from the construction of the pedestrian/cycling crossing should be included in construction management plans.

2.2. Socio-Economic Environment

The study area is located in Trinity-Spadina Ward 19 in the City of Toronto. **Figure** illustrates the location of the study area within Ward 19.

Land Use

Land use in the study area is regulated through the following City of Toronto planning documents:

- City of Toronto Official Plan (Consolidated June 2015)
- City of Toronto City-wide Zoning By-law 569-2013
- Fort York Neighbourhood Secondary Plan

The study area is focused primarily around the Fort York NHS and the high density residential developments along Fort York Boulevard. The neighbourhood is known as the Fort York Neighbourhood and is bounded by Bathurst Street, Lake Shore Boulevard, Strachan Avenue and the CN rail corridor. The area includes the Fort York Heritage Conservation District as per By-Law 541-2004. This neighbourhood is in the process of transformation with an influx of both residential and commercial development south of Fort York Boulevard. This is consistent with the development trends along the Toronto waterfront as

previous industrial uses are redeveloped into high density mixed-use communities. Land use for the Fort York Neighbourhood is illustrated in **Figure □ Fort York Neighbourhood Secondary Plan□Map 13□□ Land Use Plan**.

Figure □: Study Area □ ard 1□

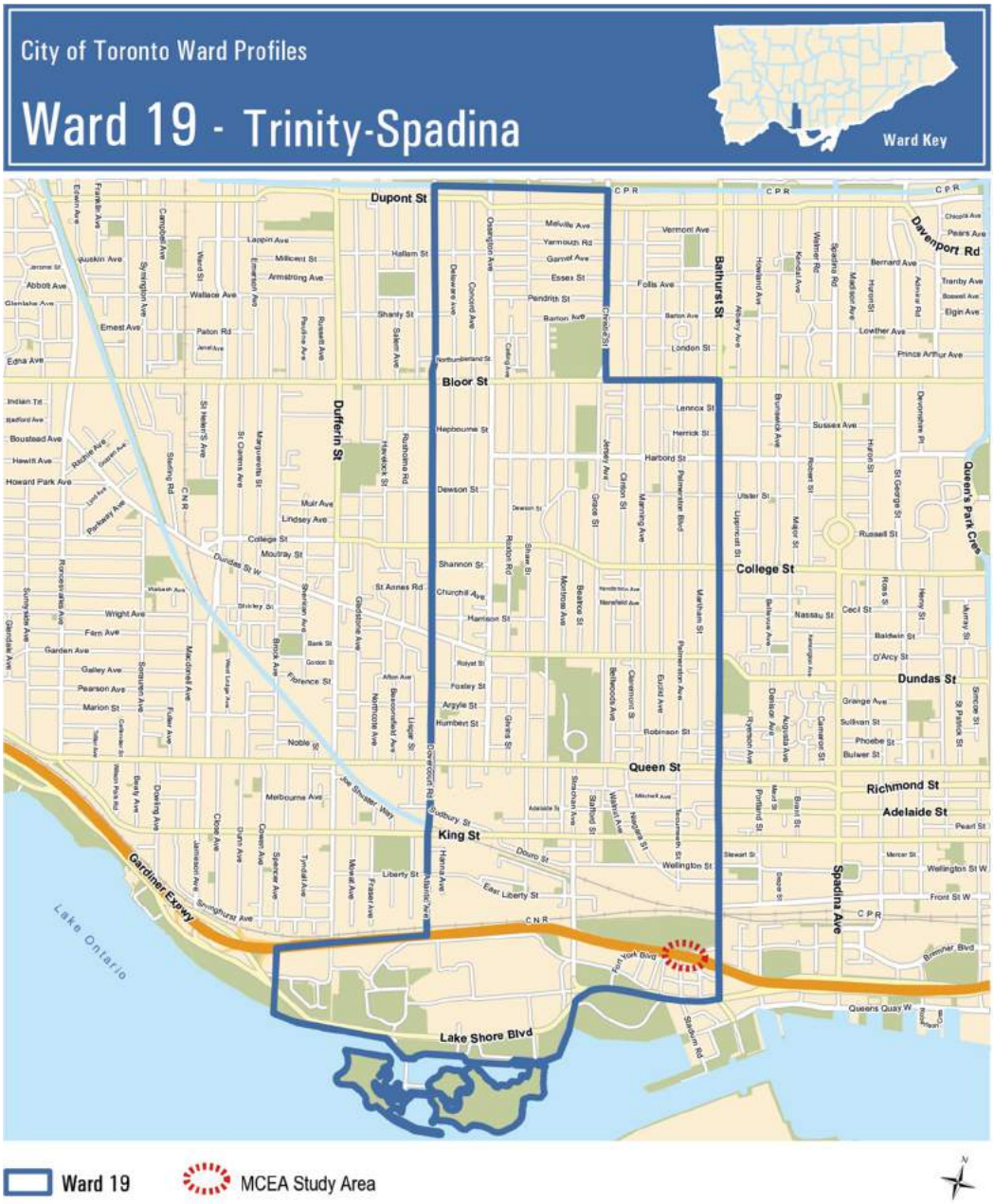


Figure 2: Fort York Neighbourhood Secondary Plan Map 13 Land Use Plan

Land use in the study area includes Parks, Other Open Space Areas, Mixed Use Areas, Apartment Neighbourhoods, and road right-of-way. The Fort York Neighbourhood Secondary Plan encourages efforts to mitigate the effect of the Gardiner Expressway through the implementation of "public art, improvements to the open space system and aesthetic improvements to the Expressway structure". As part of the development strategy, Policy 9.2.2 (c) states that the Public Realm Master Plan and Architectural Design Guidelines address issues for "interim and long-term solutions for the area beneath the Gardiner Expressway". Recent developments in the study area on the south side of the Gardiner Expressway have started to capture the intent of this policy by improving the at-grade experience of the space under the Gardiner through the use of lighting, paving materials, street furniture, and public art.

A new crossing of Fort York Boulevard underneath the Gardiner Expressway should consider how to complement the efforts underway by various developments to improve the experience of the Gardiner Expressway at-grade. Construction and operation impacts of new crossings should consider impacts to the residential population, including traffic impacts, noise and dust impacts.

Recreation and Tourism

Figure 10 identifies the parks and open spaces and trails and linkages in the study area and surrounding communities. There are multiple trails and links connecting Fort York Boulevard to the waterfront, downtown, Canadian National Exhibition grounds and neighbourhoods north of the rail corridor. Fort York is a central tourism and recreation site in the study area. Fort York is open year-round and offers tours, exhibits, education programs, period settings, and seasonal demonstrations. In the summer of 2016, Fort York will commence the construction of a new pedestrian and cycling bridge connecting the Fort to the communities north of the rail corridor. This connection will be an important part of connecting neighbourhoods north and south of the rail corridor. In addition, the Fort York Pedestrian and Cycling Bridge will provide a new connection to the Project: Under Gardiner corridor and the multi-use trail proposed as part of the new crossing of Fort York Boulevard.

Recreation and tourism in the area is also supported by links to the Toronto waterfront. Connections extend south of the study area to waterfront trails and communities east and west. The new crossing of Fort York Boulevard should consider opportunities to improve existing connections and add to the growing network of pedestrian and cycling infrastructure in the area. In addition, the new crossing should identify opportunities to enhance tourism to the area and further encourage visitors to Fort York. It is not anticipated that the construction or operation of a new crossing of Fort York Boulevard would negatively affect recreation and tourism opportunities.

Figure 10: Parks Open Space Trails and Linkages

Businesses and Local Economics

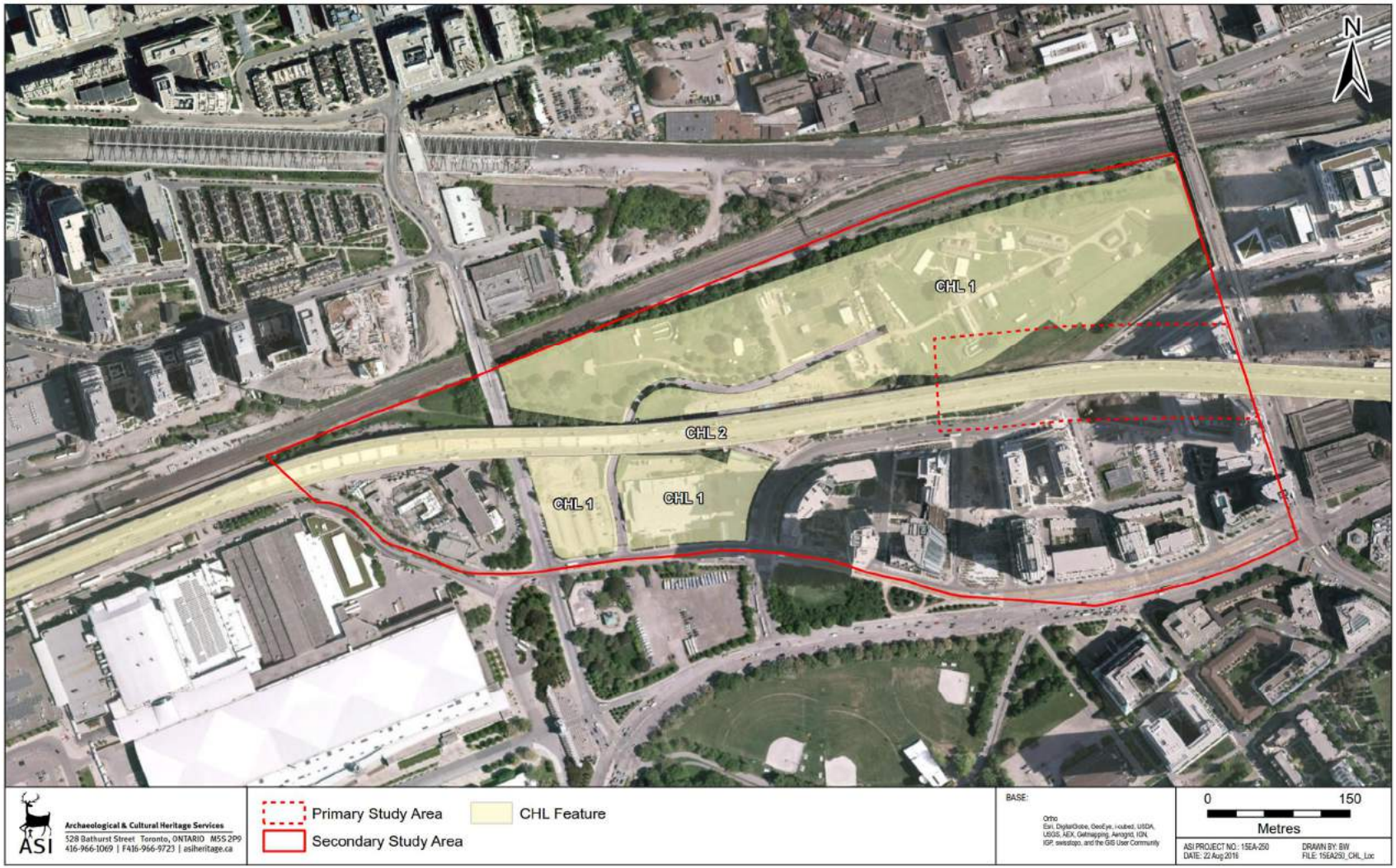
In the development blocks along the south side of Fort York Boulevard in the study area there are currently no operating businesses. There are land use permissions for mixed use with commercial/retail at-grade although most of the recently developed units are not yet occupied. On the north side of Fort York Boulevard in the study area is Fort York NHS. Fort York has opened a new visitors centre at the western edge of the study area. Although not entirely complete, the long term goal for the visitors centre is to include a caf and exhibit space. This would assist in attracting people to the area. It is not anticipated that a new crossing of Fort York Boulevard would negatively affect the visitors centre or other such business in the study area. Rather, a new crossing may assist in attracting additional people to the Fort York Visitors Centre, including to the future caf and exhibit space.

2.2. Cultural Environment

Archaeological Services Inc. (ASI) was retained by Dillon to conduct a *Cultural Heritage Resource Assessment* (CHRA) as part of the MCEA study**. Appendix C** provides a complete record of all CHRA activities completed for the planning and design of Project: Under Gardiner. CHRAs include an inventory of the built heritage and cultural landscape within a study area in order to assist in the identification of potential impacts from a planned development. The CHRA for the pedestrian/cycling crossing of Fort York Boulevard identified two Cultural Heritage Landscapes (CHL) within the study area, a designated heritage site under Part V of the *Ontario Heritage Act* (Fort York) and a potential cultural heritage resource (Gardiner Expressway), as shown in **Figure 11**:

- CHL 1 Fort York
- CHL 2 The Gardiner Expressway

Figure 11: Cultural Heritage Landscapes



Fort York (CHL 1) was first established as a military base in 1793. It was strategically positioned on the former shoreline of Lake Ontario, along an overland route used for the fur trade and to get to Lake Huron. Fort York was reconstructed in its current location after being destroyed in the Battle of York in 1813. A series of lake-filling projects prompted by waterfront development and industrialization have since created a greater separation between the fort and Toronto's current waterfront. The Monuments Board of Canada designated Fort York as a National Historic Site (NHS) in 1923 and in 1985 the Fort, along with Garrison Commons on the west side of the Fort, were designated as Toronto's first heritage conservation district under the *Ontario Heritage Act*.

The CHRA identified potential impacts to the Fort York site that could result from a new crossing of Fort York Boulevard. The primary impacts include:

- soil disturbance and grade changes to the southern earthworks; and
- restrictions to sightlines towards and from the Fort.

The Gardiner Expressway (CHL 2) was built between 1955 and 1966 by Toronto Metro Council and functions as a major thoroughfare in the City of Toronto. Although it is not designated as a heritage structure of cultural significance, the Gardiner Expressway was identified as having potential to be a cultural heritage resource. A new crossing of Fort York Boulevard within the Gardiner Expressway right-of-way should consider how to integrate the historic infrastructure. The preferred suspended bridge design will not result in direct impacts or alterations to the Gardiner Expressway. This potential impact has been mitigated through employment of a friction clamp (see **section ?.?**), an innovative technology designed as a failsafe system that uses the weight of the bridge to develop the compression against the column and the resultant friction. This technology requires no mechanical connections, puncturing of the bridge or the Gardiner Expressway.

2.2.? Archaeological Resources

ASI also completed a Stage 1 Archaeological Assessment Report for the MCEA. Archaeological Assessments are conducted to evaluate the archaeological potential of a study area and provide recommendations for further archaeological assessments.

Archaeological resources are commonly found near known areas of extended human occupation or settlement. These areas can be identified thorough historical records or predicted based on geographic features, such as potable water sources, elevated topography, and distinctive land formations. The study area of the proposed crossing is within the vicinity of Old Fort York which is defined as an Archaeological Sensitive Area (ASA) and has a rich history of indigenous and Euro-Canadian populations.

According to the Ontario Archaeological Sites Database (OASD) there are 17 previously registered archaeological sites within one kilometre of the study area. A Stage 1 property inspection was

conducted on March 29, 2016 to identify other indications of archaeological potential. The property inspection determined that there is no potential for archaeological resources within near-surface soils due to extensive soil disturbances resulting from grading and land-filling activities during the construction of the Gardiner Expressway. However, there is potential for deeply buried archaeological remains to exist in the vicinity of several known historical features, as shown in **Figure 12**. These features relate to the historical development and use of the Lake Ontario shoreline and include:

- the 1818 Lake Ontario shoreline;
- the 1858 Gzowski's Wharf;
- the 1884 Queen's Wharf;
- the 1890's Queen's Wharf; and
- the 1856-1910 Grand Trunk Railway Buildings.

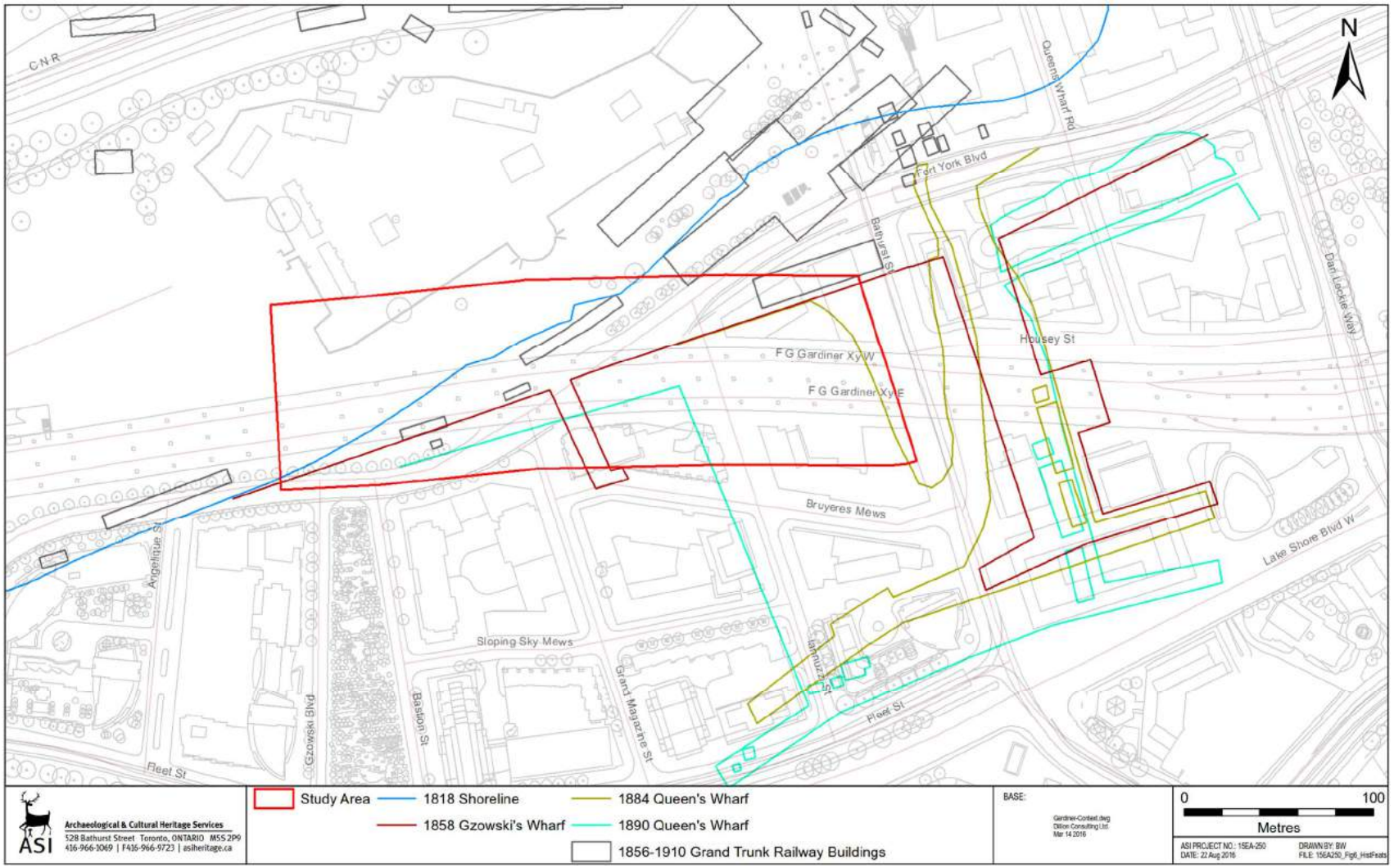
If these locations have archaeological remains they could be impacted by construction activities for the proposed Fort York Boulevard crossing. In light of the findings of the Stage 1 assessment, it is recommended that if construction of the preferred design includes subsurface excavation, a licensed archaeologist be present to monitor the removal of soil and document any archaeological findings. A Stage 2 Archaeological Assessment may be required in accordance with standards established by the Ministry of Culture.

Indigenous Peoples

Included in ASI's Stage 1 Archaeological Assessment Report, a review of Indigenous populations and traditional use of the study area was completed. Much of Southern Ontario was originally inhabited by nomadic populations after the retreat of the Laurentide glacier approximately 13,000 years before present (BP). Evidence of semi-permanent occupation has been dated to 10,000-5,500 BP; however, due to changes in water levels the study area would have been submerged under Lake Ontario for a significant portion of this time. Around approximately 1,000 BP the study area was occupied by Iroquoian speaking populations; however, the earliest human occupation of a specific cultural group was the Huron-Wendat in the fourteenth century. This area was later used by the Seneca, Mississaugas, and Metis peoples.

The study area was sold to the British as part of the 1804 Toronto Purchase and later became known for the military base of Fort York. The study area today consists of dense urban development and there is no known use of the study area today by Indigenous People.

Figure 12: Known Historical Features in the Study Area



2.2. Urban Design

Existing Public Realm

The existing public realm in the study area is limited and focused primarily around the Fort York NHS. Fort York NHS is in the process of improving the pedestrian experience at the southern edge of the site along Fort York Boulevard. This includes landscaping and planting improvements to provide a more natural balance to the built environment adjacent to and under the Gardiner Expressway that recalls the original Lake Ontario shoreline. The study area also includes the recently built June Callwood Park, streetscaping along Fort York Boulevard (primarily tree planting) and some recent aesthetic improvements made in the spaces underneath the Gardiner by developments on the south side of Fort York Boulevard to better utilize the space and make it more inviting for pedestrians and residents. The Fort York Neighbourhood is still in transition and as the area develops, more improvements to public realm are anticipated. Opportunities to enhance public realm through a new crossing should be coordinated with the Fort York NHS and land owners to ensure that a crossing would not limit future public realm.

Illustrative plan for Fort York National Historic Site.

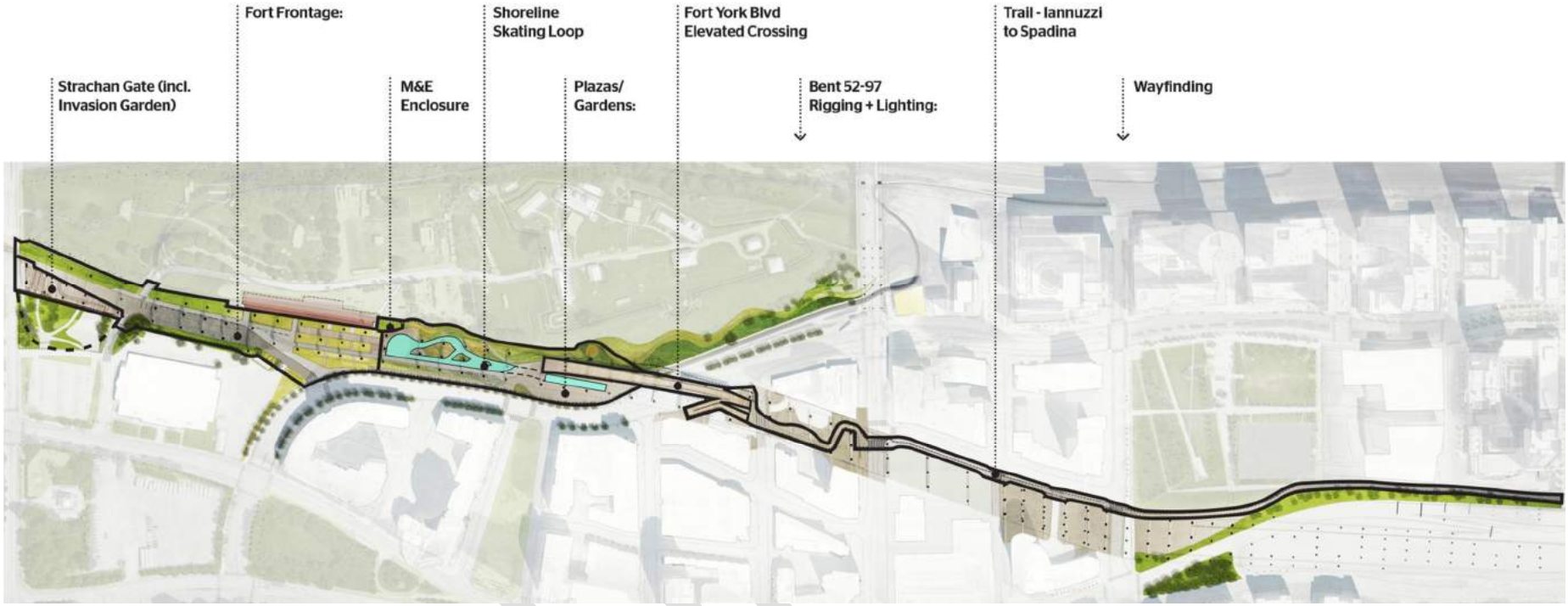
Planned Improvements to Public Realm

The planned improvements to public realm in the study area relate primarily to Project: Under Gardiner. **Figure 13** presents the public realm improvements being considered in the study area. Project: Under Gardiner is considering public spaces in the study area that will include music, food, theatre, art, education, civic events, dance, sports and recreation. There are themed areas with proposed programming that ranges from passive and contemplative spaces to creative hubs and marketplaces where visitors will find a mix of amenities. Project: Under Gardiner is being planned in coordination with the Fort York NHS in order to provide complementary and sensitive designs. A new crossing of Fort York

Boulevard should consider opportunities to enhance the public realm improvements being planned for Project: Under Gardiner.

Illustrative rendering of Project: Under Gardiner by Public Work.

Figure 13: Project: Under Gardiner Public Realm Improvements



3.0 PHASE 2: Development and Evaluation of Alternative Solutions

3.1 Identification of Alternative Solutions

The first task in Phase 2 of the MCEA process was to develop a range of alternative solutions to address the problem/opportunity. Developing alternative solutions included consideration of the existing conditions in the study area as described in **Section 2.2**. Key issues considered in the development of alternative solutions included:

- Pedestrian, cyclist and motorist safety
- General visibility/sightlines, obstructions
- Pedestrian and cyclist movement
- Crossing characteristics and facility standards
- Connecting pedestrian and cycling infrastructure
- Connecting with existing road infrastructure
- Constructability
- Alignment options in relation to the Gardiner Expressway structure
- Relationship with Gardiner Expressway structure
- Potential impacts to Gardiner Expressway structure
- Traffic operations
- Transit connections
- Urban design opportunities
- Economic opportunities
- Potential visual impact
- Activation/Animation opportunities
- Potential property impacts
- Quality of life and personal safety
- Potential natural environment impacts
- Potential cultural resources impacts
- Relationship with Fort York National Historic Site
- Adjacent land use

Alternative solutions were developed in a collaborative manner. The EA Team took into account the following considerations: the intent of Project: Under Gardiner, the design plans for the spaces surrounding the new crossing, the maintenance and operations of the Gardiner Expressway structure, agency, stakeholder and public input received, and constraints/opportunities within the study area. When compiled, four (4) alternative solutions were developed as illustrated in **Figures 1 through 1**:

- Do Nothing;
- At-Grade Crossing;
- Bridge Crossing; and
- Tunnel Crossing.

Figure 1: Option 1 – Do Nothing

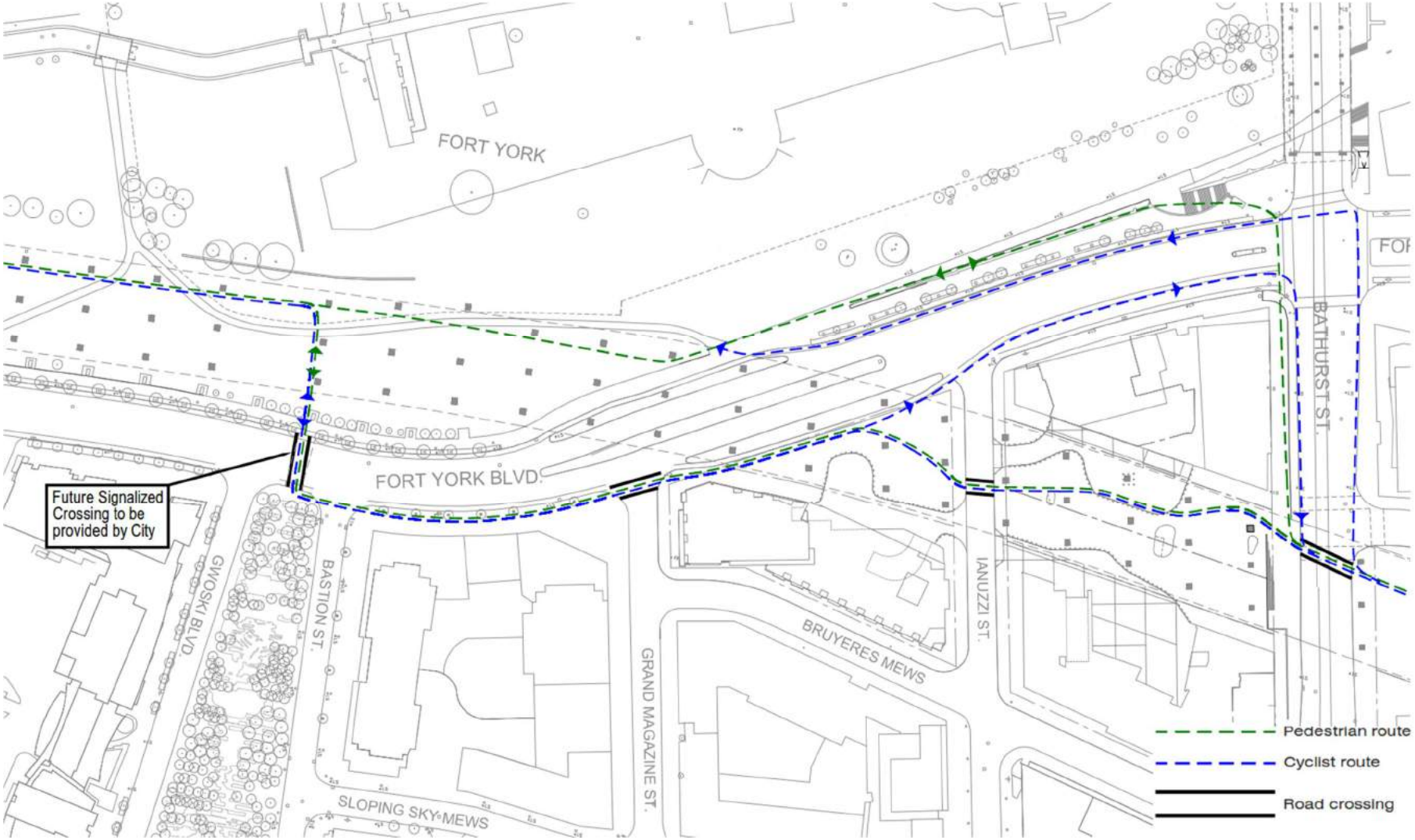


Figure 1: Option 2a – At-Grade Crossing – Grand Magazine Street

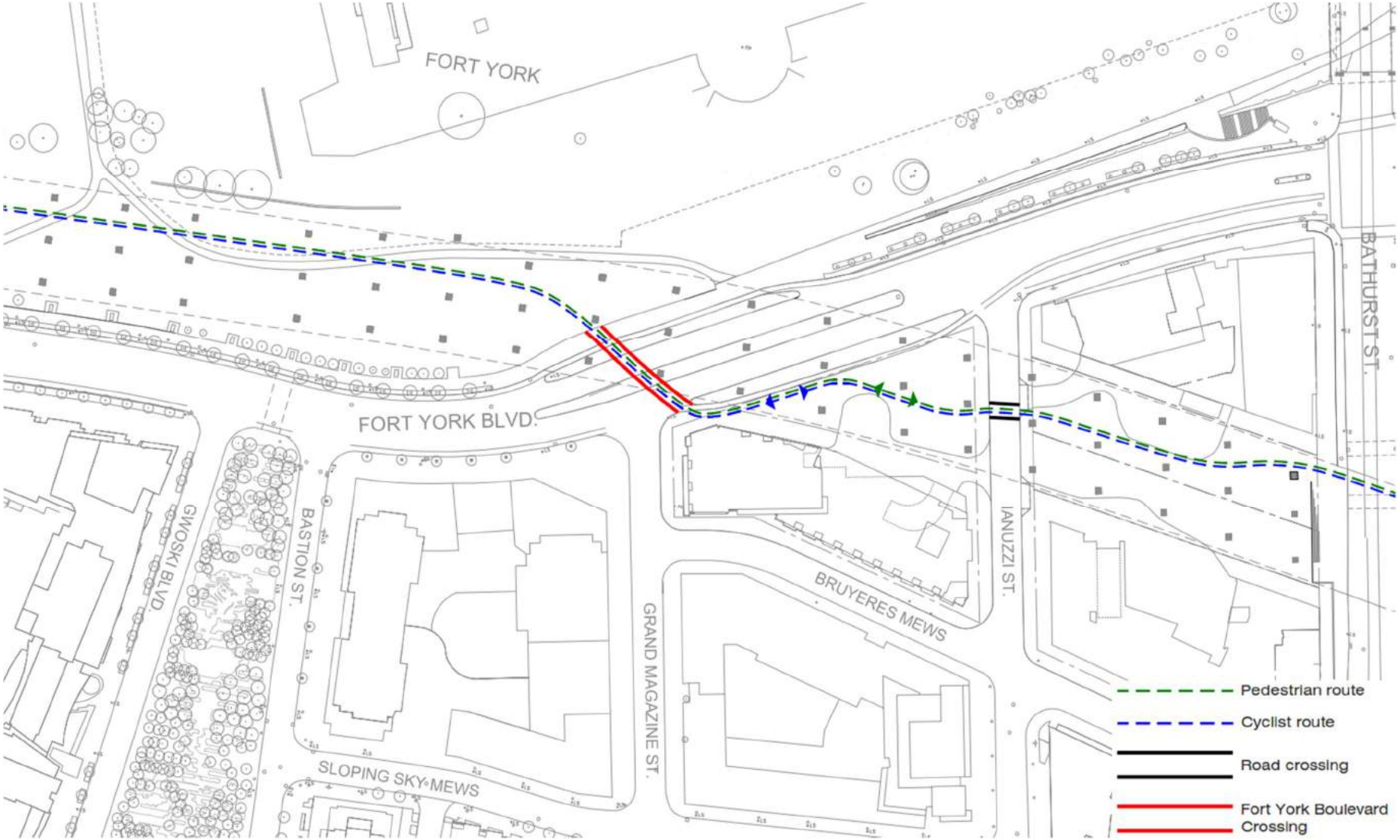


Figure 1: Option 2b – At-Grade Crossing Mid-Block

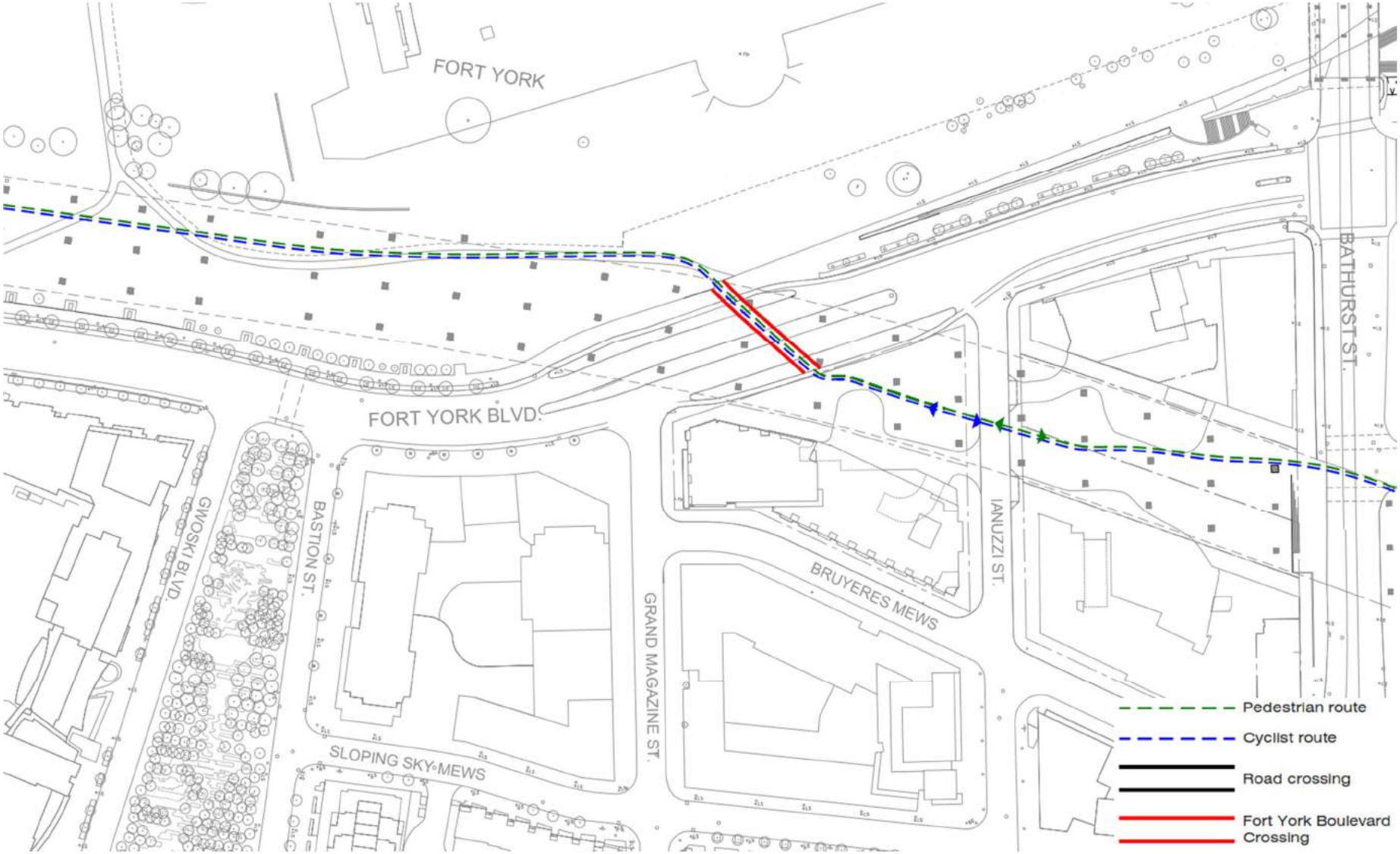


Figure 1 : Option 3 – Bridge Crossing

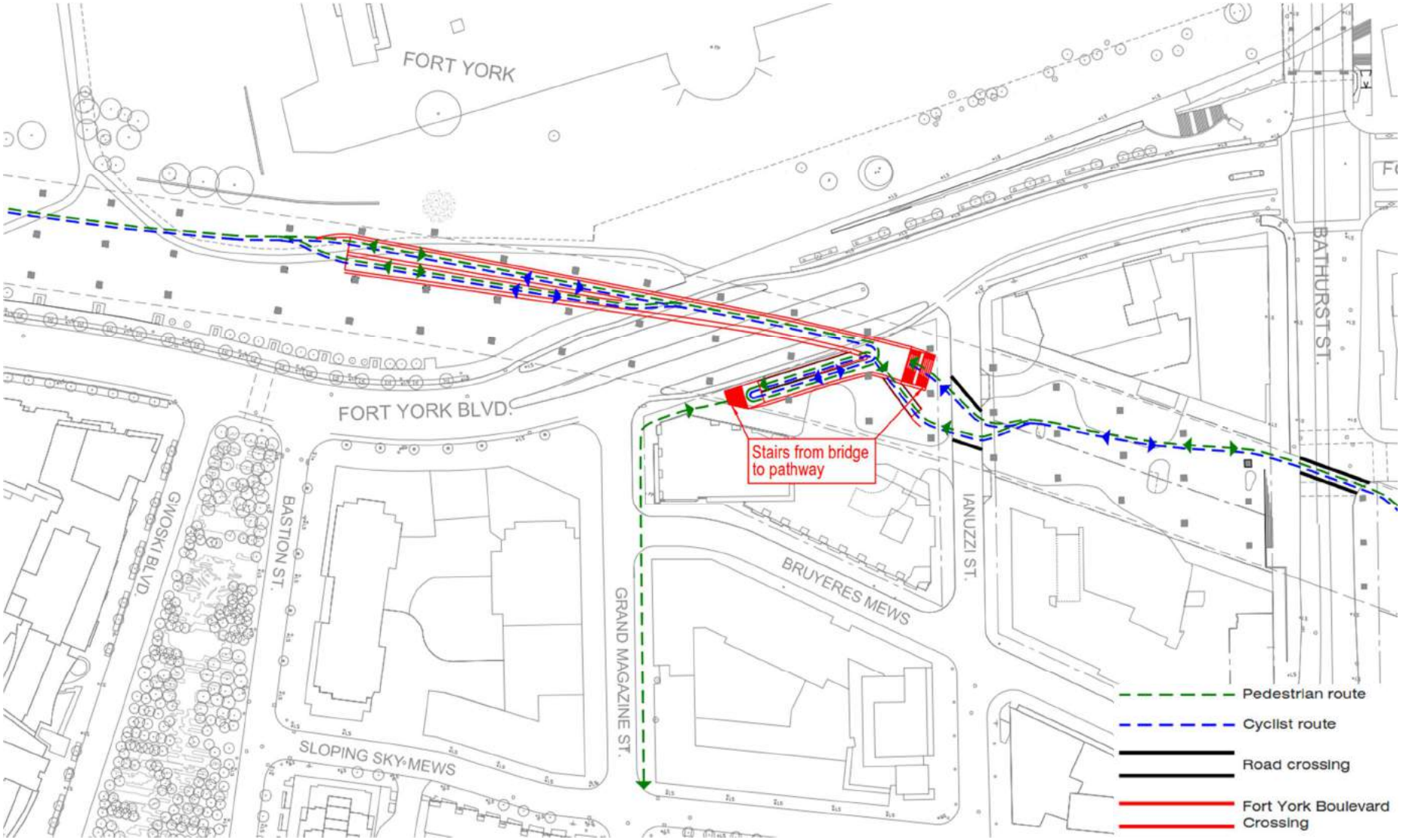


Figure 1: Option a – Tunnel Crossing – Straight

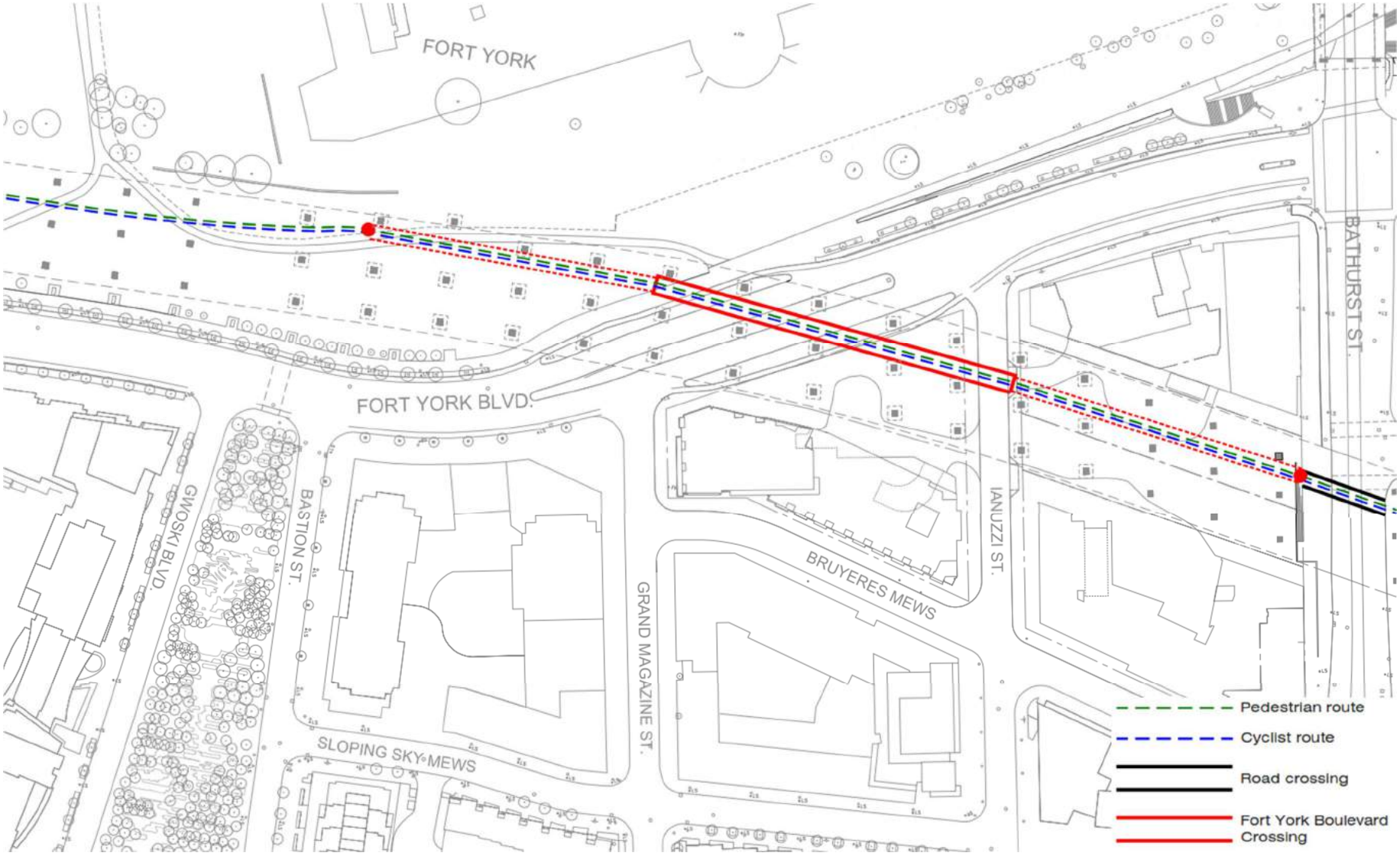
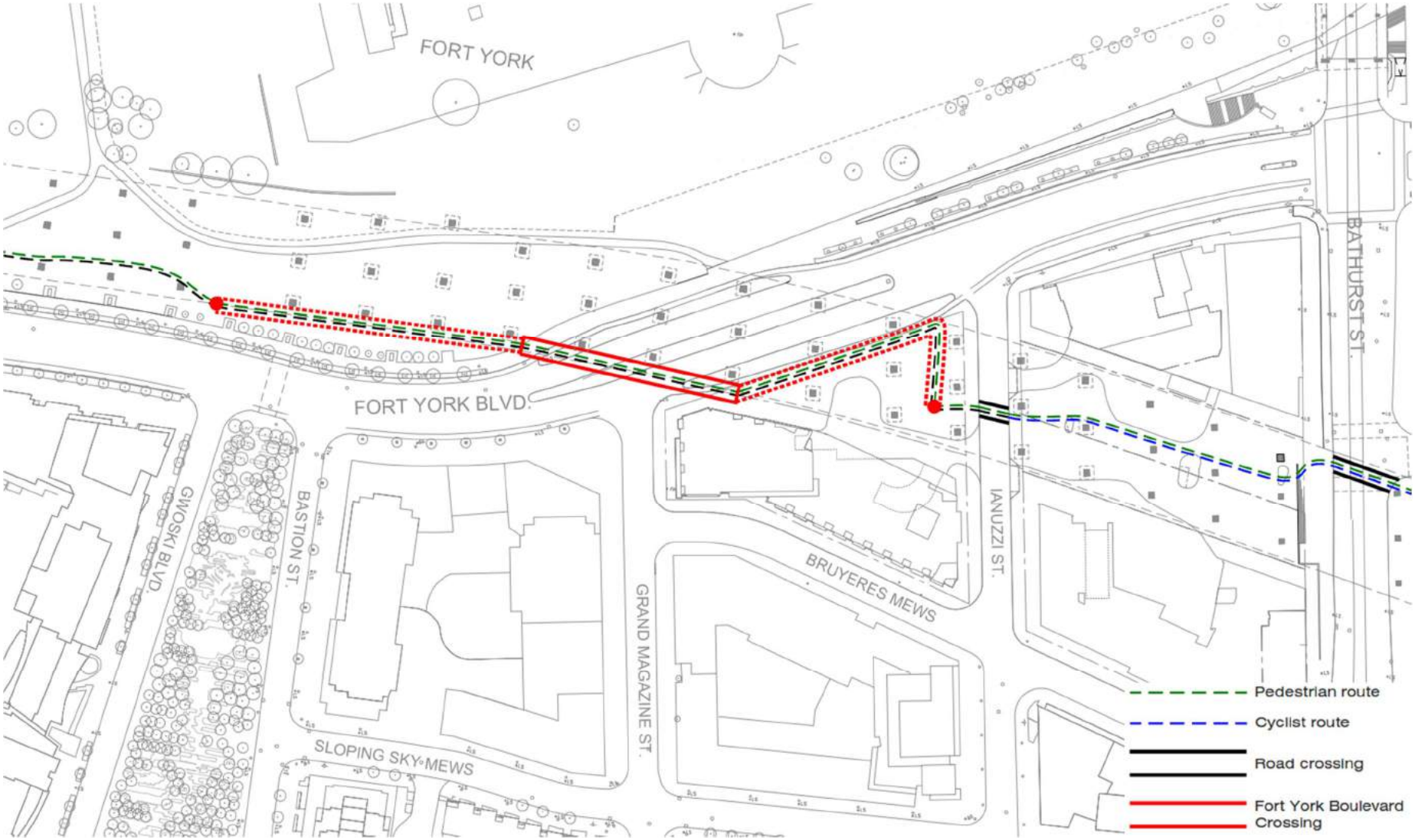


Figure 1: Option b – Tunnel Crossing/Switchback



3.2 Option 1: Do Nothing

The Do Nothing option includes no new facility or opportunity for the crossing of Fort York Boulevard. As shown in **Figure 1**, pedestrians and cyclists would have to travel outside of the Project: Under Gardiner space in order to safely cross at either June Callwood Park or Bathurst Street. Pedestrians/cyclists may also cross illegally within the Under Gardiner corridor.

3.3 Option 2: At Grade Crossing

A number of crossing options were considered in developing the at-grade crossing solutions. The technical analysis to identify at-grade crossing solutions considered:

- the alignment of the crossing given the Gardiner structure, in particular the locations of columns an impacts to sightlines;
- the location of the crossing and spacing requirements from the existing intersections and crossings at Bathurst Street and Fort York Boulevard and at June Callwood Park and Fort York Boulevard;
- the location of the crossing given the existing north-south street connections at Iannuzzi Street and Grand Magazine Street;
- Multi-Use Trail Guideline requirements of the City of Toronto; and,
- the crossing design and signal options, including whether the crossing would require a full traffic signal or pedestrian-actuated crossing signal.

Multiple alignments were developed and a technical review was completed to assess intersection separation distances required and sightline limitations around Gardiner columns. Minimum distances required from Bathurst Street were the primary constraint as traffic queuing would be a challenge with crossings located too close together. Further, due to the intersection distances, sightlines and traffic volume, it was determined that a full traffic signal would be required for the new at-grade crossing. The signal would need to be coordinated with the Bathurst Street signal in order to manage traffic flow.

As a result of this technical review, two at-grade crossing concepts were developed and carried forward as alternative solutions. These are illustrated in **Figure 1 At Grade Crossing Grand Maga ine Street**, and **Figure 1 At Grade Crossing Mid Block.**

3. Option 3: Bridge Crossing

The third alternative solution considered was a grade-separated pedestrian and cycling bridge (or overpass). The development of this alternative solution considered:

- the alignment of the crossing given the Gardiner structure, in particular the locations of columns;
- the opportunities and challenges of aligning a bridge structure within the footprint of the Gardiner right-of-way (ROW);

- the landing areas available for the crossing on either side of Fort York Boulevard given the size and dimensions of parcels available;
- the existing north-south street network connecting to Fort York Boulevard;
- clearance requirements over Fort York Boulevard as per the Ontario Geometric Design Standards, the Transportation Association of Canada Geometric Design Standards, and Toronto Transit Commission design requirements for light rail transit (LRT) corridors;
- Canadian Highway Bridge Design Code CSA-S6 2015 (bridge code) requirements that need to be met;
- Accessibility for Ontarians with Disabilities Act (AODA) requirements;
- City of Toronto Accessibility Design Guidelines; and,
- Multi-Use Trail Guideline requirements of the City of Toronto.

Public Work and Blackwell Engineering led the preparation of the bridge crossing solution. A number of options for the location and alignment of a bridge crossing were considered. However, given the constraints of the site, including the location of existing Gardiner columns, potential for surrounding property impacts, and guideline/code requirements, it was determined that there were very few alignment options available for a bridge crossing within the Under Gardiner study area. As a result of the technical analysis, it was determined that the alignment for a bridge crossing would require a switch-back design for the bridge approach/landing on the southeast side of Fort York Boulevard. The approach/landing on the northwest side of Fort York Boulevard could be achieved with a gradual straight connection. The concept works within the requirements noted above. The bridge crossing concept carried forward for the alternative solutions is presented in **Figure 1**.

Fort York Pedestrian and Cycling Bridge, Toronto , ON.

Puente de Luz (Bridge of Light), Toronto, ON.

3. Option : Tunnel Crossing

The fourth alternative solution considered was a grade-separated pedestrian and cycling tunnel (or underpass). The development of this alternative solution considered:

- the alignment of the crossing given the Gardiner structure, in particular the locations of columns and underground footings that support the columns;
- the landing areas available for the entrances/exists on either side of Fort York Boulevard given the size and dimensions of parcels available;
- the existing north-south street network connecting to Fort York Boulevard;
- design requirements for tunnels as per the Canadian Highway Bridge Design Code CSA-S6 2015 which includes requirements for cut and cover tunnels, and relevant international bridges and tunnels regulations;
- Accessibility for Ontarians with Disabilities Act (AODA) requirements;
- City of Toronto Accessibility Design Guidelines ;and,
- Multi-Use Trail Guideline requirements of the City of Toronto.

Public Work and Blackwell Engineering led the preparation of the tunnel crossing solution. A number of options for the location and alignment of a tunnel crossing were considered. However, given the constraints of the site, including the location of existing Gardiner columns and footings, potential for surrounding property impacts, and guideline/code requirements, it was determined that there were very few alignment options available for a tunnel crossing within the Under Gardiner study area.

As a result of the technical analysis, it was determined that the alignment for a tunnel crossing could have two potential layouts. Two different layouts for the tunnel were considered in alternative solutions in order to understand options for managing safety concerns related to having corners in a tunnel that would impact sightlines. For both concepts, the tunnel entrance/exist on the northwest side of Fort York Boulevard could be achieved with a gradual straight connection. On the southeast side of Fort York Boulevard two tunnel entrance/exit options are possible. The first (as shown in **Figure 1**) would involve a gradual straight connection for the tunnel entrance/exit. The eastern location of the entrance/exit for the straight connection would be near Bathurst Street, with the tunnel crossing under Iannuzzi Street as well as Fort York Boulevard. The second concept (as shown in **Figure 1**) would involve a switch-back design for the entrance/exit on the southeast side of Fort York Boulevard. Both concepts work within the requirements noted above and were carried forward as alternative solutions.

Union Station pedestrian tunnel, Toronto, ON

Cuyperspassage, pedestrian and cycling tunnel, Amsterdam, Netherlands

The alternative solutions were developed with input from the TAC. They were presented for review and input to stakeholders at a SAC meeting on March 22, 2016, and to the public at a public meeting on April 7, 2016. Further details regarding these consultation events are provided in **Section 3.**

3. Alternative Solutions Evaluation

The next step in Phase 2 of the study was to evaluate the alternative solutions. To evaluate the four (4) alternative solutions (**Figures 1 Figure 1**), four study lenses were used to frame the analysis. These study lenses are:

1) Transportation (which includes infrastructure)
2) Urban Design
3) Environment
4) Economics

Under each study lens, a series of criteria groups were developed. These criteria groups included:

1) Transportation: Safety, Connectivity, Transit Connections, Traffic Operations, Infrastructure and Constructability;
2) Urban Design: Public Realm;
3) Environment: Social and Health; Natural Environment; Cultural Resources; and,
4) Economics: Local Economics; Direct Cost and Constructability.

To complete the assessment, each criteria group was further defined with a series of individual criteria against which each alternative solution was assessed. The criterion considered the nature of the project and the study area and each was given a definition. The draft evaluation criteria were developed with

input from the TAC, SAC and the public. **Table 3** outlines the study lenses, criteria groups and the individual criteria that were used to evaluate the four (4) alternative solutions.

Table 3: Alternative Solutions Evaluation Criteria

Study Lens Criteria Group	Criteria	Definition
TRANSPORTATION		
Safety	Safety Risk for Pedestrians	Potential for pedestrian conflicts. Includes consideration of general visibility/sightlines, obstructions, crossing characteristics and facility standards.
	Safety Risk for Cyclists	Potential for cyclist conflicts. Includes consideration of general visibility/sightlines, obstructions, crossing characteristics and facility standards.
	Safety Risk for Motorists	Potential for road safety concerns for motorists/vehicles. Includes consideration of visibility/sightlines and potential conflict areas with pedestrians and cyclists.
Connectivity	Accessibility	Extent to which the alternative accommodates formal accessibility requirements. Extent, quantity and condition of accessibility.
	Pedestrians	Extent, quantity and condition of potential pedestrian connections. Includes assessment of opportunities to provide continuous pedestrian connections within the project site and to surrounding urban environment.
	Cyclists	Extent, quantity and condition of cycling facilities and opportunities to connect with existing and planned cycling facilities. Includes identification of opportunities to provide continuous cycling connections within the project site and to surrounding urban environment.
Transit Connections	Transit	Ability to protect space required along Fort York Boulevard for future transit connection (including LRT). Includes consideration of transit operation impacts.
Traffic Operations	Traffic	Extent and condition of road network traffic operations.
Infrastructure & Constructability	Construction Duration	Time needed to complete construction.
	Transportation Management during Construction	Extent of pedestrian and cycling facilities to be affected during construction. Level of traffic disruption during construction and potential for disruption to other roadways from traffic diversion.

Study Lens□Criteria Group	Criteria	Definition
	Construction Impact on Private Property	Extent of private property to be used during construction and potential access to private properties (e.g., driveways) to be impacted.
	Permanent Impact on Gardiner Expressway Structure	Extent to which the alternative may impact the Gardiner structure for the duration of the alternative's operation life.
	Temporary Impact to Gardiner Expressway Structure during the Construction Phase	Extent to which the alternative may impact the Gardiner structure during the construction phase.
	Gardiner Expressway Maintenance Program Impact	Extent to which the alternative may impact the ability to access the Gardiner structure to complete maintenance as needed.
URBAN DESIGN		
Public Realm	Urban Design Quality	Assess opportunity to enhance the urban design quality of the study area and surrounding neighbourhood. Assess opportunity to provide an iconic infrastructure element to signify the area.
	Visual Impact	Assess visual sightlines within, across and beyond the corridor to destinations and landmarks in and adjacent to the study area (e.g. views of the corridor, water and downtown skyline).
	Activation/Animation	Assess potential to enhance activation and animation of the public space in the study area for park programming, art exhibitions, public gatherings, performance, and free play.
	Project: Under Gardiner Design Continuity and Utility	Assess potential to create a continuous active corridor that will provide continuity for Project: Under Gardiner. Evaluate potential to improve space utility to provide more recreational space for programming.
EN□IRONMENT		
Social and Health	Quality of Life	Assess how well the alternatives improve the quality of life of local residents and users of the study area.
	Personal Safety/ Security	Potential for pedestrians to experience threat to personal security. Includes consideration for traveling at night, clear sightlines, and visible corridors.
Natural Environment	Terrestrial Environment	Conditions for land-based natural habitat, species and features.

Study Lens□Criteria Group	Criteria	Definition
	Aquatic Environment	Conditions for aquatic-based habitat, species and features.
	Water Quality & Quantity	Assess potential to change the water quality and quantity in the study area.
	Soil	Assess soil conditions as a resource and potential for disturbance to the resource.
Cultural Resources	Cultural Heritage Landscape	Assess the potential for direct/indirect impacts on a built or natural landscape that is valued by the community for its religious, artistic or cultural associations within the study area.
	Indigenous Peoples and Activities	Assess the potential for impacts on the use of the study area by Indigenous Peoples for traditional purposes.
	Archaeology	Assess the potential for impacts on known buried resources or artifacts within the study area.
ECONOMICS		
Local Economics	Visitor/Tourism Attractiveness	Change in the attractiveness of the study area for visitors to the area related to tourism.
Direct Cost & Constructability	Capital Cost	Capital cost to construct the alternatives in 2017$, including the cost to acquire private property (if required).
	Lifecycle Operations and Maintenance Cost	Net present value (2017) of 50-year operations and maintenance costs of the alternatives.
	Private property Impacts	Assess compatibility with adjacent projects and other City projects and programs.
	Maintenance Cost Impacts for Gardiner Structure	Potential to increase maintenance costs for Gardiner Expressway.

Using the evaluation criteria in **Table 3**, a draft evaluation of the alternative solutions was completed and reviewed with members of the TAC. The evaluation was refined and then presented to the SAC along with the alternative solutions on March 22, 2016. SAC members provided feedback on the alternative solutions and the draft evaluation. The majority of feedback received was in support of the bridge crossing with some questions related to cycling connections, alternatives to switchback landing designs, cost, and temporary at-grade crossing options. Further details regarding consultation feedback are provided in Section 3.7. This feedback further refined the alternative solutions evaluation before the draft was presented to the public at the first public meeting on April 7, 2016. Following the public meeting and based on input received through online consultation and from stakeholders, the evaluation was finalized to identify a preferred alternative solution. **Table □** presents the Alternative Solutions Evaluation Matrix.

Table : Alternative Solutions Evaluation Matrix

ALTERNATIVE SOLUTIONS								
Study Lens Criteria Group	**Criteria**	**Definition**	**1. Do Nothing**	**2a. At Grade Crossing Grand Magazine Street**	**2b. At Grade Crossing Mid Block**	**3. Bridge Crossing**	**a. Tunnel Crossing Straight**	**b. Tunnel Crossing Switchback**
TRANSPORTATION								
Safety	**Safety Risk for Pedestrians**	Potential for pedestrian conflicts. Includes consideration of general visibility/sightlines, obstructions, crossing characteristics and facility standards.	**Less Preferred** No opportunity for pedestrian road crossing under Gardiner. Requires pedestrians to travel to crossings at June Callwood Park or Bathurst Street that may result in illegal pedestrian crossings of Fort York Blvd under the Gardiner.	**Less Preferred** Avoids crossing Fort York Blvd at Bathurst Street or June Callwood Park. Somewhat unconventional location for a ped signal with sightline restrictions due to Gardiner columns and proximity to Fort York Blvd T-intersection with Grand Magazine Street.	**Less Preferred** - Avoids the intersection conflicts that Option 2a has. Avoids crossing Fort York Blvd at Bathurst Street or June Callwood Park. Somewhat unconventional location for a ped signal with sightline restrictions due to Gardiner columns.	**Preferred** - Eliminates at-grade crossing of Fort York Blvd. Switchback on south side has some sightline concerns while on bridge (minor blind spots) but allows for full view of corridor to determine safe route to continue.	**Preferred** Eliminates at-grade crossing of Fort York Blvd. No sightline issues. Tunnel extends under Iannuzzi Street eliminating further crossing conflicts.	**Preferred** Eliminates at-grade crossing of Fort York Blvd. Switchback on south side has some sightline concerns (minor blind spots).
	Safety Risk for Cyclists	Potential for cyclist conflicts. Includes consideration of general visibility/sightlines, obstructions, crossing characteristics and facility standards.	**Less Preferred** - Potential for considerable on-road segments of bike travel. Directing cycling traffic to Bathurst Street that has no cycling lanes poses a greater safety risk. Cyclists may attempt to illegally cross Fort York Blvd in between Bathurst and June Callwood Park.	**Less Preferred** Reduces on-road segments of do nothing but presents sightline concerns while crossing Fort York Blvd due to Gardiner columns.		**Preferred** Eliminates at-grade crossing of Fort York Blvd. Switchback on south side has some sightline concerns while on bridge (minor blind spots) but allows for full view of corridor to determine safe route to continue.	**Preferred** No concerns.	**Preferred** Eliminates at-grade crossing of Fort York Blvd. Switchback on south side has some sightline concerns (minor blind spots).
	Safety Risk for Motorists	Potential for road safety concerns for motorists/vehicles. Includes consideration of visibility/sightlines and potential conflict areas with pedestrians and cyclists.	**Less Preferred** - Has road segments shared with cyclists and there is potential for conflicts with pedestrians/cyclists making illegal crossing attempts of Fort York Blvd.	**Less Preferred** - Requires motorists to stop without having full view of crossing length. Sightlines may be compromised for motorists. Sightlines approaching crossing compromised by Gardiner columns.		**Preferred** No concerns.		
Safety Evaluation Summary			X	**Equally Less Preferred**		✓	**Equally Preferred**	

ALTERNATIVE SOLUTIONS								
Study Lens/Criteria Group	**Criteria**	**Definition**	**1. Do Nothing**	**2a. At-Grade Crossing – Grand Magazine Street**	**2b. At-Grade Crossing – Mid-Block**	**3. Bridge Crossing**	**4a. Tunnel Crossing – Straight**	**4b. Tunnel Crossing – Switchback**
Connectivity	**Accessibility**	Extent to which the alternative accommodates formal accessibility requirements. Extent, quantity and condition of accessibility.	**Less Preferred** – Improvements and standardization (O. Reg. 191/11) possible given infrastructure development. Option can accommodate Provincial and City accessibility requirements. Requires users to travel outside of project site to cross at Bathurst Street or June Callwood Park.	**Preferred** – Improvements and standardization (O. Reg. 191/11) possible given infrastructure development. Option can accommodate Provincial and City accessibility requirements.		**Moderately Preferred** – Improvements and standardization (O. Reg. 191/11) possible given new infrastructure. Option can accommodate Provincial and City accessibility requirements. Options create an accessible crossing, but to a lesser extent than Options 2a and 2b require maneuvering new infrastructure.		
	Pedestrians	Extent, quantity and condition of potential pedestrian connections. Includes assessment of opportunities to provide continuous pedestrian connections within the project site and to surrounding urban environment.	**Less Preferred** - Existing constraints do not enable direct connectivity via existing substandard sidewalks. Option disconnects pedestrians from the corridor/project site to cross Fort York Blvd.	**Moderately Preferred** - Options enables direct continuous pedestrian connection within the corridor/project site and surrounding urban environment. However, crossings of Fort York Blvd disrupt the continuous flow of movement as the ped activated lights require queuing.		**Preferred** - Option enables direct connectivity. New bridge crossing will be in good condition. Allows for full sightlines through corridor to identify further connections while on bridge.	**Moderately Preferred** – Option enables continuous pedestrian connection within the project site, but to a lesser extent than the Bridge alternative. Options physically divide the corridor/project site from the surrounding urban environment. Options do not enable continuous sightlines through the corridor while in tunnel limiting views of further connections. Tunnel 4a bypasses a large part of the project site/corridor.	
	Cyclists	Extent, quantity and condition of cycling facilities and opportunities to connect with existing and planned cycling facilities. Includes identification of opportunities to provide continuous cycling connections within the project site and to surrounding urban environment.	**Less Preferred** – Existing cycling facilities are discontinuous and in a poor state of repair. Option requires cyclists to travel out of project site/corridor to cross Fort York Blvd.	**Moderately Preferred** - Options enable direct continuous cycling connection within the corridor/project site and surrounding urban environment. However, crossings of Fort York Blvd disrupt the continuous flow of movement as the ped activated lights require queuing.		**Preferred** - Option enables direct connectivity. New bridge crossing will be in good condition. Allows for full sightlines through corridor to identify further connections while on bridge.	**Moderately Preferred** – Option enables continuous cycling connection within the project site, but to a lesser extent than the Bridge alternative. Options physically divide the corridor/project site from the surrounding urban environment. Options do not enable continuous sightlines through the corridor while in tunnel limiting views of further connections. Tunnel 4a bypasses a large part of the project site/corridor.	
Connectivity Evaluation Summary			✗ **Equally Less Preferred**			✓ **Preferred**	● **Moderately Preferred**	
Transit Connections	**Transit**	Ability to protect space required along Fort York Blvd for future transit connection (including LRT). Includes consideration of transit operation impacts.	**Moderately Preferred** - Limited impact to potential transit connection.	**Less Preferred** - Options can accommodate future Fort York Blvd transit but to a lesser extent than Options 3, 4a and 4b. Options impact future transit as LRTs will experience delays due to queuing for at-grade signalized traffic lights and crossing integration requirements following City of Toronto mitigation measures for traffic controls.		**Preferred** - No impact to transit. Highest overall transit capacity.		
Transit Connections Evaluation Summary			● **Moderately Preferred**	✗ **Less Preferred**		✓ **Equally Preferred**		
Traffic Operations	**Traffic**	Extent and condition of road network traffic operations.	**Moderately Preferred** - Limited impact to traffic operations.	**Less Preferred** - Increase in traffic queuing and congestion with additional crossing. Potential increase in traffic diversion to surrounding road network connections, particularly during peak periods - warmer months and rush-hour.		**Preferred** - No impact to level of traffic and congestion. Highest overall road capacity.		
Traffic Operations Evaluation Summary			● **Moderately Preferred**	✗ **Less Preferred**		✓ **Equally Preferred**		

ALTERNATIVE SOLUTIONS								
Study Lens/Criteria Group	**Criteria**	**Definition**	**1. Do Nothing**	**2a. At-Grade Crossing - Grand Magazine Street**	**2b. At-Grade Crossing - Mid-Block**	**3. Bridge Crossing**	**4a. Tunnel Crossing - Straight**	**4b. Tunnel Crossing - Switchback**
Infrastructure - Constructability	**Construction Duration**	Time needed to complete construction.	**Preferred** - No additional construction.	**Preferred** - 1 month.		**Moderately Preferred** - 4-6 months (one construction season).	**Less Preferred** - 12 months (two construction seasons).	
	Transportation Management during Construction	Extent of pedestrian and cycling facilities to be affected during construction. Level of traffic disruption during construction and potential for disruption to other roadways from traffic diversion.	**Preferred** - No disruption.	**Preferred** - Minor traffic disruption only.		**Moderately Preferred** - Utility relocations maybe required (electrical conduit/ local storm sewer). Local lane reductions and one-way detours of Fort York traffic likely required (i.e. reduce Fort York Blvd to one lane in each direction, move westbound lanes to south side, construct/erect north side bridge elements/supports, shift traffic to the north side and repeat process on the south side bridge elements).	**Less Preferred** - Utility relocations will be required (electrical conduit/storm sewers). Local lane reductions and one-way detours of Fort York traffic likely required (i.e. reduce Fort York Blvd to one lane in each direction, move westbound lanes to south side, construct tunnel working slab, footing and enclosure, shift traffic to the north side and repeat process on the south side tunnel elements). Likely also requires closure of Iannuzzi Street.	**Less Preferred** - Utility relocations will be required (electrical conduit/storm sewers). Local lane reductions and one-way detours of Fort York traffic likely required (i.e. reduce Fort York Blvd to one lane in each direction, move westbound lanes to south side, construct tunnel working slab, footing and enclosure, shift traffic to the north side and repeat process on the south side tunnel elements).
	Construction Impact on Private Property	Extent of private property to be used during construction and potential access to private properties (e.g., driveways) to be impacted.	**Preferred** - None.	**Preferred** - None.		**Moderately Preferred** - Bridge south side switchback adjacent to private property - some potential for proximity/construction staging impacts.	**Less Preferred** - Minimal direct impact on private property. Likely closure of Iannuzzi Street will disrupt access to private property.	**Moderately Preferred** - Minimal direct impact on private property.
	Permanent Impact on Gardiner Expressway Structure	Extent to which the alternative may impact the Gardiner structure for the duration of the alternative's operation life.	**Preferred** - None.	**Preferred** - None.		**Less Preferred** - Depending on the bridge design, alternations to the Gardiner structure may be required for the operation of the bridge crossing. This may include reinforcement of the Gardiner structure should the bridge be connected to the Gardiner in some way.	**Preferred** - None anticipated based on the alignment of the tunnel(s) and the technology used for construction and maintenance.	
	Temporary Impact to Gardiner Expressway Structure during the Construction Phase	Extent to which the alternative may impact the Gardiner structure during the construction phase.	**Preferred** - No disruption.	**Preferred** - Limited interaction during construction to alter barriers surrounding Gardiner columns on Fort York Blvd. No disruption to Gardiner operations/traffic.		**Less Preferred** - Depending on the bridge design, construction may impact Gardiner structure to secure bridge in place. If bridge has no physical connection to the Gardiner structure than minimal construction disruption is anticipated.	**Moderately Preferred** - Construction of tunnel(s) requires advanced technologies to build tunnel without disruption to Gardiner column footings - construction is feasible without disrupting the Gardiner structure but reflected in cost (see Direct Cost evaluation).	
	Gardiner Expressway Maintenance Program Impact	Extent to which the alternative may impact the ability to access the Gardiner structure to complete maintenance as needed.	**Preferred** - No disruption.	**Preferred** - No interaction.		**Less Preferred** - Potential for a more technically challenging maintenance program for the Gardiner structure in this area. May require different maintenance tools/machinery/procedures.	**Moderately Preferred** - Minimal disruption to Gardiner maintenance activities. May require modifications to maintenance procedures on the Gardiner structure for the areas around tunnel entrances/exits.	
Infrastructure - Constructability Evaluation Summary			✓ **Equally Preferred**			✗ **Less Preferred**	**Moderately Preferred**	
OVERALL TRANSPORTATION EVALUATION RANKING			**MODERATELY PREFERRED**	✗ **LESS PREFERRED**		✓ **EQUALLY PREFERRED**		

ALTERNATIVE SOLUTIONS								
Study Lens/Criteria Group	**Criteria**	**Definition**	**1. Do Nothing**	**2a. At-Grade Crossing - Grand Magazine Street**	**2b. At-Grade Crossing - Mid-Block**	**3. Bridge Crossing**	**4a. Tunnel Crossing - Straight**	**4b. Tunnel Crossing - Switchback**
URBAN DESIGN								
Public Realm	**Urban Design Quality**	Assess opportunity to enhance the urban design quality of the study area and surrounding neighbourhood. Assess opportunity to provide an iconic infrastructure element to signify the area.	**Less Preferred** - Options provide minimal opportunity to enhance the urban design quality of the study area. Options provide no opportunity for iconic infrastructure. Options provide no improvement to the design identity/character of the community.			**Preferred** - Option provides significant opportunity to enhance urban design quality of study area and surrounding urban environment. Option provides significant opportunity for iconic infrastructure to provide design identity/character for community. Continuous connection supports the public realm priority of pedestrians and cyclists.	**Less Preferred** - Options provide minimal opportunity to enhance the urban design quality of the study area. Options provide limited opportunity for iconic infrastructure. Options impact urban design of Project: Under Gardiner space.	
	Visual Impact	Assess visual sightlines within, across and beyond the corridor to destinations and landmarks in and adjacent to the study area (e.g. views of the corridor, water and downtown skyline).	**Less Preferred** - Options provide no opportunities to increase visual sightlines through and beyond the corridor. Options provide no opportunity to mitigate the visual barriers of the Gardiner columns and elevated deck.			**Preferred** - Option mitigates visual barriers with a new, higher perspective within, across and beyond the corridor. Higher structure provides alternate views around the columns, minimizing visual barriers and optimizing sightlines.	**Less Preferred** - Options impact sightlines within, across and beyond the corridor by eliminating visual sightlines when in tunnel.	
	Activation/Animation	Assess potential to enhance activation and animation of the public space in the study area for park programming, art exhibitions, public gatherings, performance, and free play.	**Less Preferred** - Option does not provide potential for enhanced activation and animation. Option significantly removes users from programmable spaces reducing opportunities for animation and activation.	**Less Preferred** - Options do not provide potential for enhanced activation and animation. No opportunity to provide additional space for lighting, seating, or opportunities to celebrate/activate the heritage of the public space.		**Preferred** - Option provides significant opportunity to enhance activation and animation through complementary uses via an elevated structure. Includes seating, lighting and if designed appropriately, opportunity to celebrate the cultural heritage of the area and active users heritage experience. Elevated structure offers extensive opportunity to experience programming across the corridor, concurrently.	**Less Preferred** - Options provide opportunity to enhance activation and animation when in the tunnel through tunnel design and lighting. However, options remove potential for users to concurrently experience programming across corridor or to activate heritage experience in the area.	
	Project: Under Gardiner Design Continuity and Utility	Assess potential to create a continuous active corridor that will provide continuity for Project: Under Gardiner. Evaluate potential to improve space utility to provide more recreational space for programming.	**Less Preferred** - Options limit continuous active corridor and do not provide additional utility to the design of public space for Project: Under Gardiner.			**Preferred** - Option provides opportunity to enhance continuous active corridor. Option provides opportunity to enhance recreational space for programming by using the structure for complementary activities.	**Less Preferred** - Options limit recreational space for programming, remove users from experiencing continuous programming throughout public space, and do not enhance programming opportunities.	
OVERALL URBAN DESIGN EVALUATION RANKING			**X EQUALLY LESS PREFERRED**			**✓ PREFERRED**	**X LESS PREFERRED**	

ALTERNATIVE SOLUTIONS								
Study Lens/Criteria Group	**Criteria**	**Definition**	**1. Do Nothing**	**2a. At-Grade Crossing – Grand Magazine Street**	**2b. At-Grade Crossing – Mid-Block**	**3. Bridge Crossing**	**4a. Tunnel Crossing – Straight**	**4b. Tunnel Crossing – Switchback**
ENVIRONMENT								
Social – Health	**Quality of Life**	Assess how well the alternatives improve the quality of life of local residents and users of the study area.	**Less Preferred** - No improvement to corridor/project site does not improve the quality of life of local residents and users of study area.	**Less Preferred** - Options provide opportunity to advance walkability/active transportation and minimally improve connections from the project site/corridor into the surrounding community that can enhance quality of life for area residents and users.		**Preferred** - Option improves the quality of life for local residents and users of study area by providing continuous connection and advancing walkability/active transportation in the area. Option offers improvement in aesthetic of community and assists in defining the character of the area which enhances quality of life in area. Option provides views and vistas of surrounding area, improving legibility of community which enhances quality of life for users.	**Moderately Preferred** - Option improves the quality of life for local residents and users of study area by providing continuous connection and advancing walkability/active transportation in area. Option offers improvement in aesthetic of community and assists in defining the character of the area which enhances quality of life in area.	
	Personal Safety/ Security	Potential for pedestrians to experience threat to personal security. Includes consideration for traveling at night, clear sightlines, and visible corridors.	**Moderately Preferred** - Options create potential for pedestrians to experience a poor level of personal security when crossing Fort York Blvd due to reduced visibility caused by the Gardiner infrastructure on Fort York Blvd. Options limit sense of personal security due to reduced sightlines/visibility through the corridor which can create difficulty navigating the project site/corridor, particularly at night.			**Preferred** - Option provides improved sightlines along the corridor/project site creating a more comfortable and easily navigable environment. Provides high level of personal security due to high visibility of bridge.	**Less Preferred** - Potential for pedestrians to experience a low level of personal security and increased anxiety when travelling at night through the tunnel. Less comfortable environment to travel alone with reduce visibility upon entrance and exit of tunnel.	
Social – Health Evaluation Summary			✗ **Equally Less Preferred**			✓ **Preferred**	✗ **Less Preferred**	
Natural Environment	**Terrestrial Environment**	Conditions for land based natural habitat, species and features.	**Equally Preferred** - Limited existing terrestrial environment. Moderate potential to create new terrestrial habitat/ natural features.					
	Aquatic Environment	Conditions for aquatic based habitat, species and features.	**Equally Preferred** - No impacts/disturbances to aquatic based habitat, species and features.					
	Water Quality – Quantity	Assess potential to change the water quality and quantity in the study area.	**Equally Preferred** - No impacts/disturbances to water quality and quantity in the study area.				**Less Preferred** - During minor storm events water can be directed into existing local storm sewer. During major storm events, tunnel would likely need to accept flooding and be closed.	
	Soil	Assess soil conditions as a resource and potential for disturbance to the resource.	**Equally Preferred** - The soil conditions in the study area are poor. The soil consists of lake fill and is not ecologically valuable. As such, although there is potential for some soil disturbance through grading or excavation, there will be no impacts to ecologically valuable soil conditions nor is erosion considered a potential concern.					
Natural Environment Evaluation Summary			✓ **Equally Preferred**				✗ **Less Preferred**	

ALTERNATIVE SOLUTIONS								
Study Lens/Criteria Group	**Criteria**	**Definition**	**1. Do Nothing**	**2a. At-Grade Crossing – Grand Magazine Street**	**2b. At-Grade Crossing – Mid-Block**	**3. Bridge Crossing**	**4a. Tunnel Crossing – Straight**	**4b. Tunnel Crossing – Switchback**
Cultural Resources	**Cultural Heritage Landscape**	Assess the potential for direct/indirect impacts on a built or natural landscape that is valued by the community for its religious, artistic or cultural associations within the study area.	**Less Preferred** – No negative impacts to the Fort York National Historic Site (NHS) and Heritage Conservation District (HCD) are identified. However, given that Project: Under Gardiner will increase and encourage pedestrian access to Fort York, a positive impact, this option is not preferred.	**Preferred** – No direct/indirect impacts to the Fort York NHS and HCD are identified.		**Moderately Preferred** - This option will result in the following direct impacts to Fort York NHS and HCD: alteration to the former Lake Ontario shoreline and to the site through introduction of a new structure; alteration to identified views from the Fort south; and soil disturbance associated with construction of the bridge. In addition, potential direct impacts to the Gardiner Expressway, a potential cultural heritage resource. However, option enhances views from the perimeter of the site into the Fort and encourages engagement with the cultural resource.	**Moderately Preferred** – This option will result in the following direct impacts: alteration to the former shoreline of Lake Ontario through introduction of grade change associated with the western entrance to the tunnel; alteration to the site through introduction of a tunnel; more substantial soil disturbance than would be required for construction of a bridge.	
	Indigenous Peoples and Activities	Assess the potential for impacts on the use of the study area by First Nations for traditional purposes.	**Equally Preferred** – No Impact: Previous 19th and 20th century developments have removed resources related to traditional uses of lands by Indigenous Peoples and substantial portions of the project area are made land.					
	Archaeology	Assess the potential for impacts on known buried resources or artifacts within the study area.	**Preferred** – No potential archaeological resources within existing right-of-ways affected by options. Any archaeological resources beyond the right-of-way limits will survive as deeply buried deposits below depths potentially affected by trail construction.			**Moderately Preferred** – Potential archaeological resources may be affected by soil disturbances associated with construction of the bridge.	**Less Preferred** – Potential archaeological resources may be affected by soil disturbances associated with construction of the tunnel. These options have greatest ground disturbance.	
Cultural Resources Evaluation Summary			X Less Preferred	✓ Preferred		Moderately Preferred	X Less Preferred	
OVERALL ENVIRONMENT EVALUATION RANKING			X LESS PREFERRED	MODERATELY PREFERRED		✓ PREFERRED	X LESS PREFERRED	

ALTERNATIVE SOLUTIONS								
Study Lens/Criteria Group	**Criteria**	**Definition**	**1. Do Nothing**	**2a. At-Grade Crossing - Grand Magazine Street**	**2b. At-Grade Crossing - Mid-Block**	**3. Bridge Crossing**	**4a. Tunnel Crossing - Straight**	**4b. Tunnel Crossing - Switchback**
ECONOMICS								
Local Economics	**Visitor / Tourism Attractiveness**	Change in the attractiveness of the study area for visitors to the area related to tourism.	**Equally Less Preferred** - No improvement to visitor/tourism attractiveness.			**Preferred** - Iconic bridge crossing can attract visitors to area and increase tourism potential as a symbol of the neighbourhood and Project: Under Gardiner public space.	**Equally Less Preferred** - No improvement to visitor/tourism attractiveness.	
Local Economics Evaluation Summary			✗ **Equally Less Preferred**			✓ **Preferred**	✗ **Less Preferred**	
Direct Cost / Constructability	**Capital Cost**	Capital cost to construct the alternatives in 2016$, including the cost to acquire private property (if required).	**Preferred** - No cost.	**Preferred** - Approximate cost range of $125,000 - $150,000, including line painting, signals, lighting and signage.		**Moderately Preferred** - Bridge deck area, ramps/retaining walls and landing/switchback, miscellaneous costs (utilities, contaminated materials, traffic staging, etc.). Approximate comparative cost = $5.0 - $6.0 (+/- 20%).	**Less Preferred** - Tunnel, ramps/retaining walls, allowance for lighting, contaminated soils, ground water management, miscellaneous costs (traffic staging, engineering, utilities, etc.). Approximate comparable cost = $11.0 - $13.0 million (+/- 20%).	**Less Preferred** - Tunnel, ramps/retaining walls, allowance for lighting, contaminated soils, ground water management, miscellaneous costs (traffic staging, engineering, utilities, etc.). Approximate Comparable Cost = $9.0 - $11.0 million (+/- 20%).
	Lifecycle Operations and Maintenance Cost	Net present value of 50-year operations and maintenance costs of the alternatives.	**Preferred** - No cost.	**Preferred** - Minimal maintenance.		**Less Preferred** - Periodic maintenance required. Assume rehab costs at year 25 and 50.	**Less Preferred** - Ongoing maintenance required (leak management). Assume tunnel design lifespan of 50 years.	
	Private property Impacts	Assess compatibility with adjacent projects and other City projects and programs.	**Preferred** - None.	**Preferred** - No concerns identified.		**Preferred** - No concerns identified.		
	Maintenance Cost Impacts for Gardiner Structure	Potential to increase maintenance costs for Gardiner Expressway.	**Preferred** - No cost.			**Less Preferred** - Depending on the design of the bridge, may require additional maintenance of Gardiner structure in area of bridge crossing. May make maintenance program more challenging around bridge and therefore more costly.	**Moderately Preferred** - Minimal potential to require a change to the Gardiner maintenance costs but may make maintenance program more challenging around tunnel entrances/exits and therefore more costly.	
Direct Cost / Constructability Evaluation Summary			✓ **Preferred**			● **Moderately Preferred**	✗ **Less Preferred**	
OVERALL ECONOMICS EVALUATION RANKING			✓ **PREFERRED**			● **MODERATELY PREFERRED**	✗ **LESS PREFERRED**	

OVERALL EVALUATION RANKING	**1. Do Nothing**	**2a. At-Grade Crossing - Grand Magazine Street**	**2b. At-Grade Crossing - Mid-Block**	**3. Bridge Crossing**	**4a. Tunnel Crossing - Straight**	**4b. Tunnel Crossing - Switchback**
	● **MODERATELY PREFERRED**			✓ **PREFERRED**	✗ **LESS PREFERRED**	

The following provides a summary of the alternative solutions evaluation and identification of a preferred solution.

Option 1 - Do Nothing - NOT PREFERRED: Option 1 (Figure 14) does not provide new pedestrian/cyclist crossing opportunities to connect the planned Project: Under Gardiner multi-use trail and public amenities and thus does not solve the problem of a safe and continuous connection. Doing nothing means that pedestrians and cyclists have the choice to cross Fort York Boulevard either at Bathurst Street or June Callwood Park; both of which require a detour and therefore may inspire users to illegally cross Fort York Boulevard posing significant safety concerns. Option 1 is zero cost in regards to capital costs, lifecycle operations and maintenance costs, and maintenance cost impacts for the Gardiner structure.

Option 2 - At-Grade Crossings - NOT PREFERRED: At-grade crossings (Figures 15 and 16) provide the most affordable connection (approximate cost range of $125,000 - $150,000, including line painting, signals, lighting and signage), however, these options would significantly disrupt traffic and offer limited urban design enhancements. The at-grade crossing alternatives (Options 2a: At-grade crossing at Grand Magazine; and 2b: At-grade Mid-block) enable direct connectivity within the Under Gardiner corridor for pedestrians and cyclists. However, the crossings would require a full traffic signal that would be coordinated with the Bathurst Street and Fort York Boulevard intersection traffic signal. Pedestrians and cyclists would have to wait in queue for green crossing time which may prompt individuals to attempt to cross outside of green time. This would present a significant safety risk to users and could result in conflicts with moving auto traffic, particularly as sightlines across the corridor and along Fort York Boulevard at-grade are very poor due to the Gardiner columns. Distance and visibility issues could be mitigated through the installation of traffic controls such as simultaneous amber indications on system control. For auto traffic, the addition of traffic lights on Fort York Boulevard would impact auto traffic and potentially result in spill-over onto surrounding local streets. Finally, an at-grade crossing would affect operations of a potential future LRT along Fort York Boulevard and contribute to additional traffic queuing that may result in impacts to the Bathurst Street and Fort York Boulevard intersection.

Option 3 - Proposed Bridge - PREFERRED: A bridge crossing (Figure 17) achieves a safe and separated connection, with no impacts to traffic while significantly enhancing urban design opportunities for the study area; however, it is more costly than an at-grade solution. This option provides full opportunity for a future LRT along Fort York Boulevard and has no impact to vehicular sightlines. There is some minor impact to the Fort York NHS landscape where the northwest landing of the bridge would be located. This can be mitigated through design and landscaping to be sensitive to the heritage site. The bridge would impact the view from Fort York looking south; however this is a fairly disrupted view due to recent condominium development in the area and is considered a minimal impact. In contrast to the potential impacts to Fort York NHS, the bridge would provide a cultural benefit to support the Fort in that users of

the bridge would have enhanced views of the Fort which are not currently available through other locations. Regarding sightlines, the bridge also presents opportunities for new views through the Project: Under Gardiner corridor and to the surrounding neighbourhood to provide additional legibility for the area. Finally, the bridge presents an opportunity to introduce an architectural landmark for the community, which is unique, can be seen from surrounding sites, and can be highlighted as a symbol of Project: Under Gardiner. This option is a moderately affordable connection (approximate comparative cost = $5.0 - $6.0 +/- 20%) that may require additional maintenance of Gardiner structure in the area of the bridge crossing. This option may make the Gardiner maintenance program more challenging around the bridge and therefore more costly.

Option 4 - Proposed Tunnel - NOT PREFERRED: Tunnel crossings (Figures 18 and 19) are technically challenging and costly (TUNNEL STRAIGHT: Approximate Comparable Cost = $11.0 - $13.0 million +/- 20%; TUNNEL SWITCHBAC: Approximate Comparable Cost = $9.0 - $11.0 million +/- 20%). Options 4a and 4b achieve separated crossings that would not impact auto traffic on Fort York Boulevard but they provide minimal urban design benefits or opportunities. A tunnel would remove the user from the space temporarily and disrupt the continuity of the public space being planned around the crossing. Personal security is also a concern with a tunnel, particularly at night. A tunnel would also impact underground utilities and surface and groundwater in the area which would need to be mitigated through design and can be costly. A tunnel also yields the greatest potential impact to cultural heritage due to the need to disturb soils in the area. This would not be consistent with the long-term planning related to the Fort York NHS. Finally, a tunnel may make the Gardiner maintenance program more challenging around bridge and therefore more costly.

3. Summary of Phase 2 Consultation

The information from phases 1 and 2 was presented to the SAC on March 22, 2016. Feedback from the SAC included:

- Overall there was support for the bridge alternative solution, however concerns included:
  - Consider connectivity across the site for cycling, in particular for a bridge crossing at Fort York Boulevard that requires switchbacks:
    - The possibility of needing to dismount reduces accessibility of the cycling route for all cyclists, but especially those who may experience difficulty walking their bikes – e.g. people with disabilities, parents with kids in trailers, etc.; and,
    - May need to look at alternative, at-grade routes for cyclists;
- There was some support to continue to consider at-grade, signalized crossing options:
  - May be more cost-effective solution than grade-separated options;
- There was limited to no support for the tunnel options due to concerns for personal safety and security and the higher capital costs.

The alternative solutions and draft evaluation were revised where possible to address the input received. This included:

- Revisions to the draft evaluation table to reflect the potential impacts that the switchback design for the bridge and tunnel crossings may have on cyclists.
- Should the bridge or tunnel options be carried forward to alternative designs, a commitment was made to consider the impacts and increased challenges cyclists face with switchback designs.

The revised information was then presented at a public meeting on April 7, 2016. Feedback included:

- Strong support for the bridge alternative solution, however issues included:
  - Consider an at-grade crossing as a more affordable option until scope and budget refinement has been completed;
  - Consider decreasing 5% slope of ramps to 1% or 2% to accommodate manual wheelchair users;
  - Concern for switchback design as it relates to:
    - Upright adult tricycles;
    - Bike wagons; and,
    - Consider increasing width of switchbacks to accommodate various users.
- Minimal support for tunnel alternative solution for crossing Fort York Boulevard considering winter conditions; however, there were concerns about flooding and personal safety.

Following the public meeting, the alternative solutions and draft evaluation were confirmed.

3. Preliminary Preferred Solution

As described, throughout Phase 2, technical EA analysis was combined with the input of the SAC, the TAC and the public. Based on the evaluation results and the consultation input received, Option 3, the Bridge Crossing, was confirmed as the preferred alternative solution. The preferred alternative solution performed best overall in the evaluation criteria (see Table 4) and was supported by stakeholders and the public.

4.0 PHASE 3: Development and Evaluation of Alternative Designs

Phase 3 of the study focused on the identification and evaluation of conceptual alternative designs for the preferred solution. There were a number of ways that the crossing could be designed to implement the preferred bridge solution. Through this phase of work, alternative design concepts that were reasonable and possible were developed, and the potential adverse impacts and benefits of those alternative designs were assessed. Public Work and Blackwell Engineering led the preparation of the alternative design concepts that were considered in this assessment. The designs were prepared to a conceptual level of detail for the completion of the assessment. Detailed designs for the bridge crossing are to be prepared for the preferred alternative design following the completion of the MCEA.

.1 Identification of Alternative Designs

Following the identification of the preferred alternative solution, the next step in a Schedule ' MCEA process involves the development of alternative designs. For the preferred bridge solution, there were a number of bridge designs that could be considered for the undertaking. The alternative designs were developed considering the findings of the alternative solutions phase and technical designs constraints.

During the evaluation of the alternative solutions, it was identified that the following considerations needed to be addressed in the alternative designs phase:

- Cycling connections a switchback design for the landing on the southeast side of Fort York Boulevard may require some cyclists to dismount which is not ideal for cyclists using the trail and crossing connection.
- Interaction with the Gardiner Expressway structure impacts to the operations (load bearing capacity) and routine maintenance (access for Gardiner deck and columns for maintenance) of the Gardiner Expressway present challenges for design.

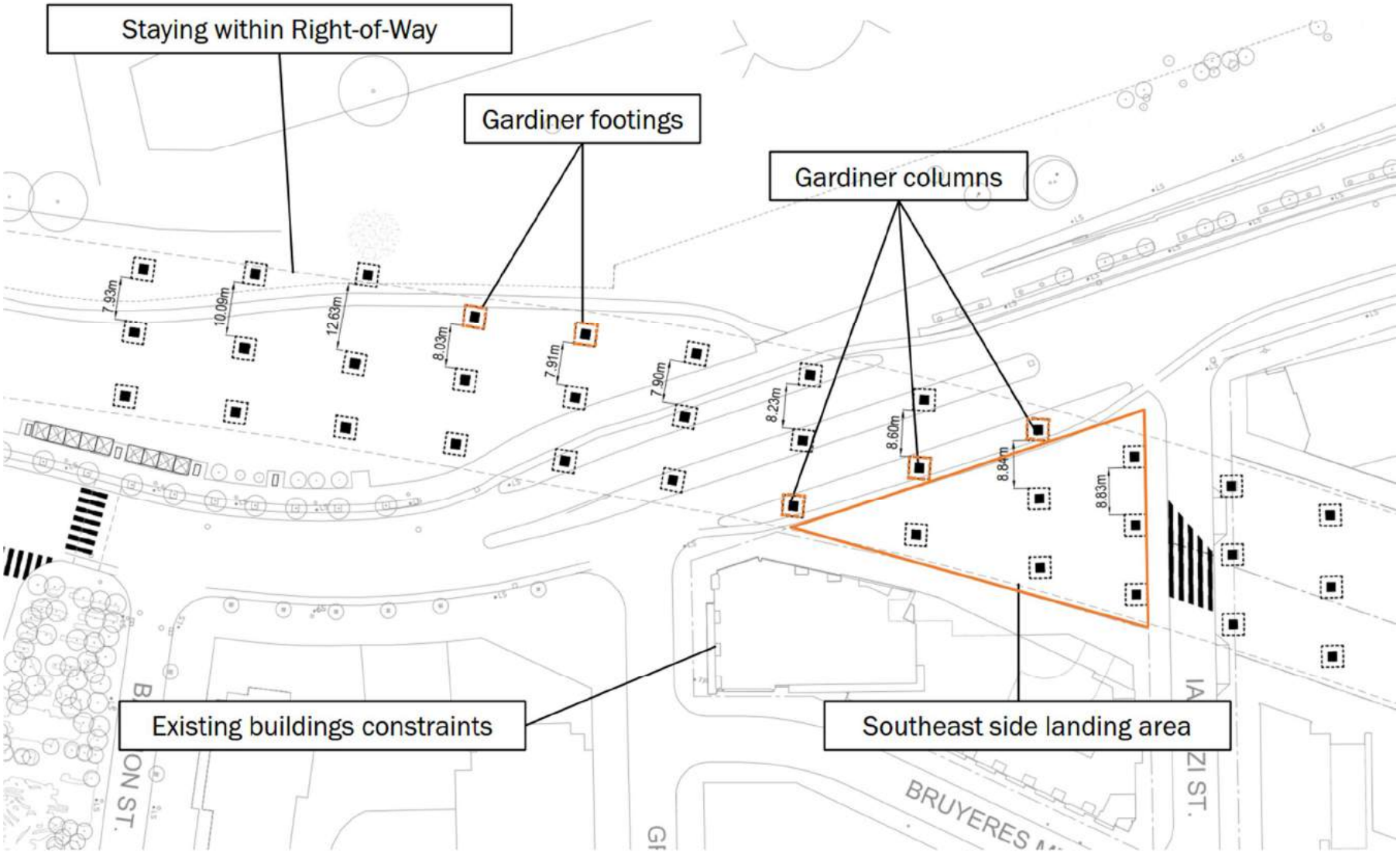
In addition to the above two considerations, the following was considered in the development of the alternative designs:

- **Alternative alignments**, including:
  - Different bridge structure alignments located within the Project: Under Gardiner site;
  - Options that minimize impacts to surrounding properties, including to Fort York NHS; and,
  - Whether a straight bridge landing may be achieved on the southeast side of Fort York Boulevard to relieve the need for a switchback landing.
- **Alternative structural systems**, including:
  - A suspended bridge; and
  - A grounded bridge.

- **Gardiner structure interaction**, including:
  - Options that would reduce impacts to the Gardiner operations and maintenance program; and
  - Options that would highlight the relationship between the Gardiner and the new bridge crossing.

Figure 20 presents existing physical constraints for the bridge alignment in the area. The primary challenges to bridge alignment options related to the width of the right-of-way, the location of the Gardiner columns, and the landing area on private property on the southeast side of Fort York Boulevard.

Figure 20: Study Area Physical Constraints for Bridge Alignment



.2 Considerations for Alternative Alignments

Staying within the Gardiner Expressway right-of-way within the project site (under the structure) is important for minimizing impacts to surrounding properties. If the alignment strays outside the right-of-way, impacts to surrounding properties are much greater, including impacts to the Fort York National Historic Site. To stay within the right-of-way, the alignment is also constrained by the Gardiner columns which are located in bent configurations of three columns each. Within each bent, the columns are spaced apart to varying degrees ranging from 7.9 meters to 12.6 meters as indicated on **Figure 20**.

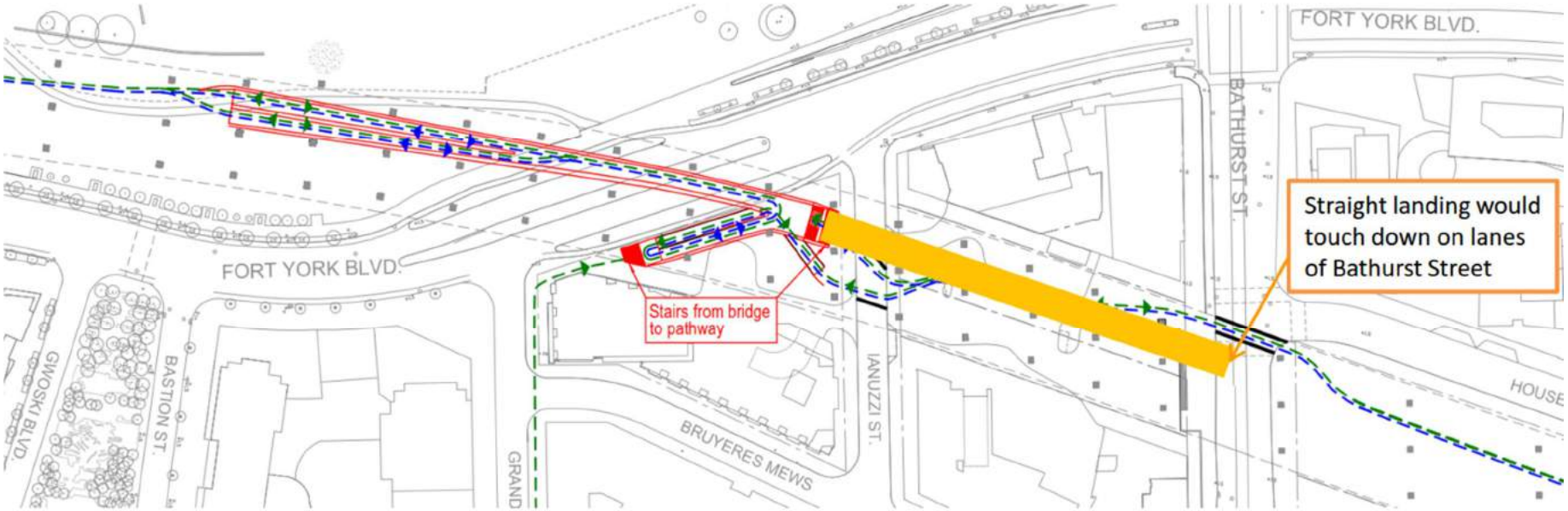
On the southeast side of Fort York Boulevard, the landing area for the bridge is constrained by existing development to the south, Iannuzzi Street to the east and Grand Magazine Street to the west. The alignment of the southeast side landing of the bridge was assessed to determine if there were design options that would allow for a straight bridge landing and relieve the need for a switchback landing in this area. It was determined that due to the five metre clearance requirements over Iannuzzi Street, and the need to maintain the 5 grade for the switchback, the design of the straight landing would extend all the way to Bathurst Street. There is only approximately 85 metres of space to land the ramp past Iannuzzi Street; to achieve the 5 grade, at least 100 metres are needed. A straight ramp would also compromise a significant portion of the public space design between Fort York Boulevard and Bathurst Street. Figure 21 illustrates the constraints of a straight landing. Due to the landing constraints, a straight landing for the bridge on the southeast side of Fort York Boulevard was not carried forward.

Further considerations were made to the switchback landing design for the bridge in order to address some of the concerns of cyclists. In particular, the width of the switchback was broadened so that in no location is the width less than three metres. This is in keeping with the City of Toronto's Multi-Use Trail Design Guidelines. The concerns of cyclists related to the design of the bridge crossing were discussed with the City's cycling infrastructure staff. It was confirmed that the wider switchback improvement was in keeping with the City's requirements for a multi-use trail crossing and would be suitable given the intent for this crossing to support a primary multi-use trail that allows for a mix of pedestrians and cyclists.

Figure 21: Straight Landing Option for Bridge Design at Southeast End

Southeast Landing Design

- Consideration of straight landing
- Clearance requirements over Iannuzzi Street are minimum 5 metres
- Only have approximately 85-90 metres from Iannuzzi clearance to Bathurst Street – need at least 100 metres to provide a 5% grade in the landing
- Columns limit alignment alternatives for extended landing



.3 Considerations of Alternative Structural Systems and Gardiner Structure Interaction

There are a variety of structural systems that exist for pedestrian/cycling bridges. In the case of Project: Under Gardiner, there are essentially two structural systems that could be proposed. One is a grounded structure which is based on supporting the bridge deck with columns or retaining walls. Grounded bridge structures are standard structures for bridges in Toronto.

Example of Grounded Bridge - Riverdale Park Pedestrian Bridge, Toronto, ON

The second structural system that is possible in the study area is a structure suspended from the existing Gardiner Expressway. This is a more unique structural system as it requires infrastructure with the capacity to handle the suspension of a pedestrian/cycling bridge. The design of a suspended bridge can be accomplished with various suspension techniques using clamps, cables, struts, etc. Important considerations for a suspended structure include:

- Load bearing capacities of the Gardiner structure including residual capacity of each column plus the overall Gardiner structure capacity. Consideration of the weight/load of the new bridge, including the live load with users on the bridge, is included in a load bearing capacity review;
- The need for design features to manage wind loads in order to minimize movement of the suspended bridge (this can be done using dampening cables and telescoping struts); and,
- Structural integrity of the Gardiner structure in the locations where attachments are proposed.

Both structural systems also need to consider the interaction with the Gardiner Expressway maintenance program. This includes how maintenance of the Gardiner deck and columns would be completed in the area around the new bridge crossing. For both the suspended and the grounded structural systems, the new bridge may complicate access needed for Gardiner maintenance activities resulting in additional costs.

?.? Proposed Alternative Designs for Bridge Crossing

Based on the physical and technical considerations for alternative designs, including alignment, structural system and Gardiner Expressway interaction, two alternative design concepts were developed and carried forward for evaluation: Suspended Bridge and Grounded Bridge. The plan, design and renderings for the suspended bridge were prepared by Public Work and Blackwell Engineering. **Figure 22** presents the plan view of the suspended bridge. **Figure 23** presents the suspended bridge structural components. **Figure 2?** presents renderings of the suspended bridge in the study area.

The plan, design and renderings for the grounded bridge were prepared by Public Work and Blackwell Engineering with support from Dillon Consulting to initially draft the grounded plan layout. **Figure 2?** presents the plan view of the grounded bridge. **Figure 2?** presents renderings of the grounded bridge in the study area. The new columns supporting the grounded bridge deck would be approximately 1.2 metres in diameter.

The plan views shown for each bridge design concept in **Figures 22** and **2?** illustrate that the alignments for the alternative designs are very similar. This is due to the physical constraints in the study area that restrict alignment options (as illustrated previously in **Figure 20**). The two alternative designs largely differ in their structural/support systems proposed. Both bridge design concepts would provide the same bridge length (approximately 168 metres, including the landings) and bridge height over Fort York Boulevard (5.5 metres from surface of Fort York Boulevard to bottom of bridge fascia). Both designs also include a switchback landing as well as stairway access on the south side of Fort York Boulevard.

Suspended Bridge Design Overview

The suspended bridge, as designed by Public Work and Blackwell Engineering, consists of two parallel steel girders supporting a mass timber deck. The steel girders would be suspended by galvanized cables connected directly to the concrete bents at the bent column/beam intersection. The cables would be connected to the bent column by means of a friction clamp attachment. The friction clamp is a system that uses the weight of the bridge to develop the compression against the column and the resultant friction. This system requires no mechanical connections to the suspended bridge.

Lateral support of the bridge would be achieved with horizontal struts to the bents, which also require no mechanical connection. No part of the suspended bridge structure would touch the tops of the

concrete beams which form the top of the bents. Nor would any parts of the suspended bridge structure connect to the steel beams supporting the Gardiner deck. **Figure 23** illustrates the suspended bridge structural components.

Grounded Bridge Design Overview

The grounded bridge consists of the same bridge deck design as the suspended bridge but is supported by six individual concrete columns with a diameter of 1.2 metres each. The columns would be constructed on piles bearing on bedrock. The spacing of columns is based on the deck spans possible between columns given the weight and design of the bridge deck. **Figure 2** outlines the grounded bridge structural components.

Figure 22: Plan View Alternative Design 1 – Suspended Bridge

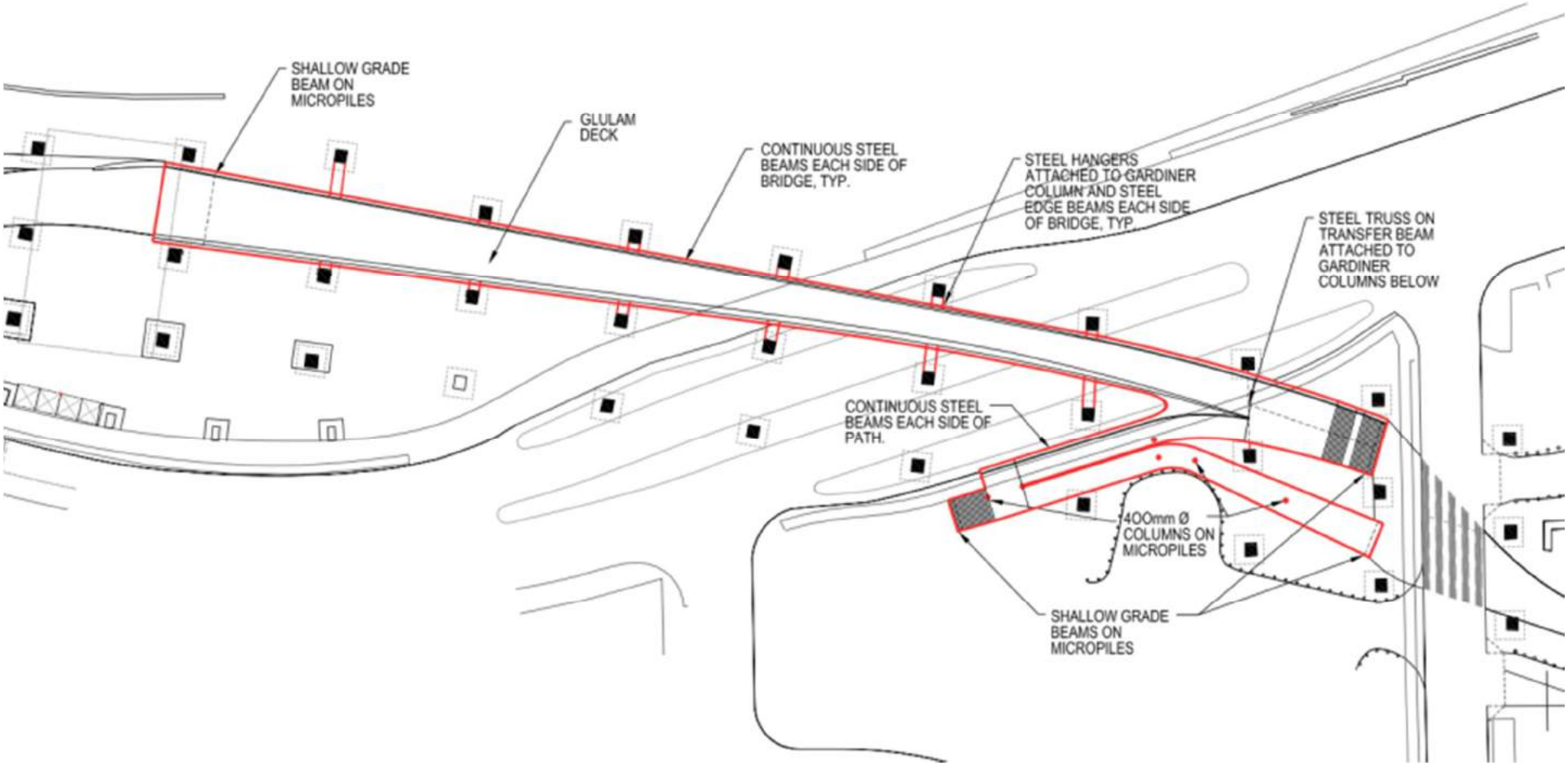


Figure 23: Suspended Bridge Structural Components

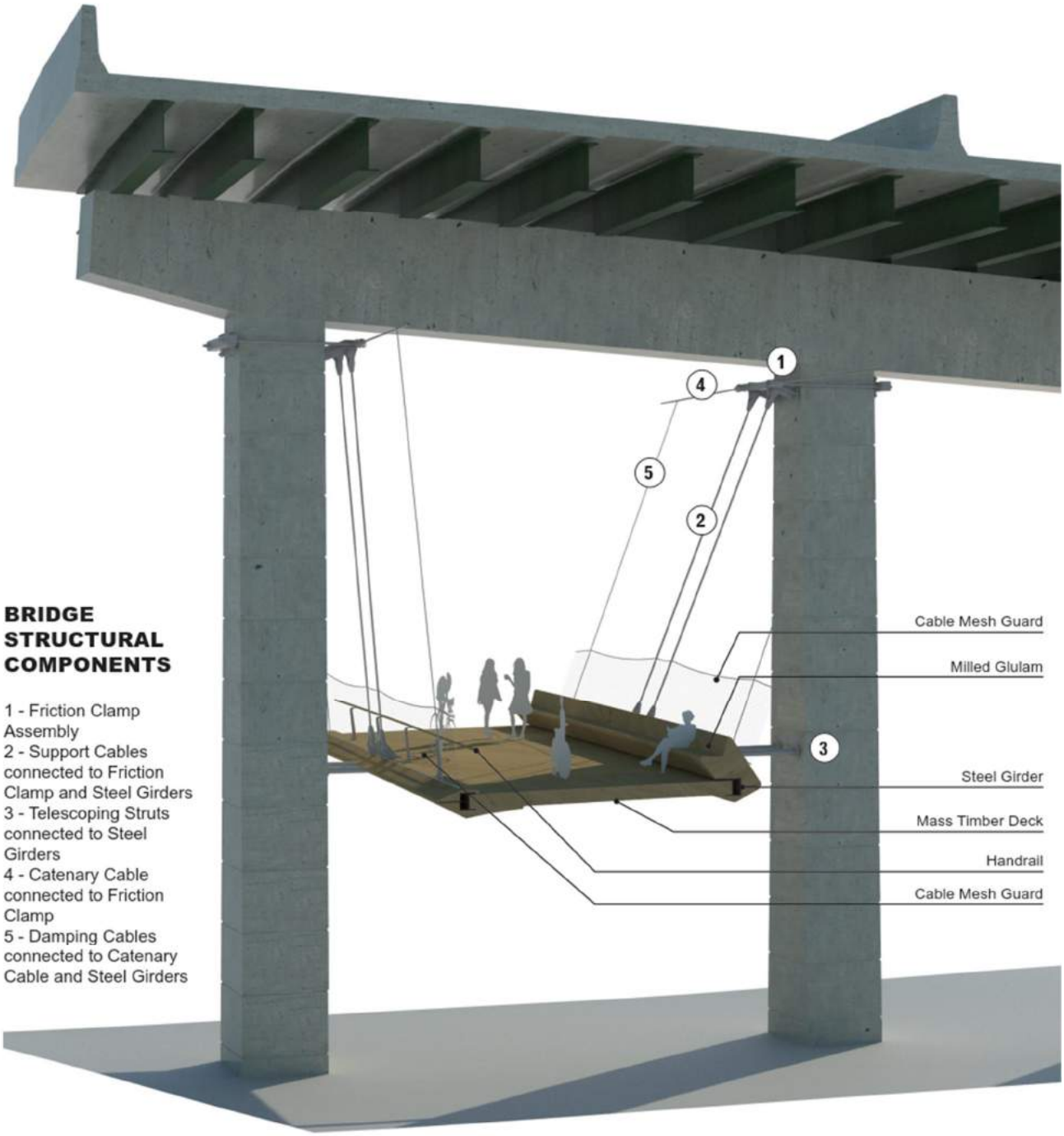
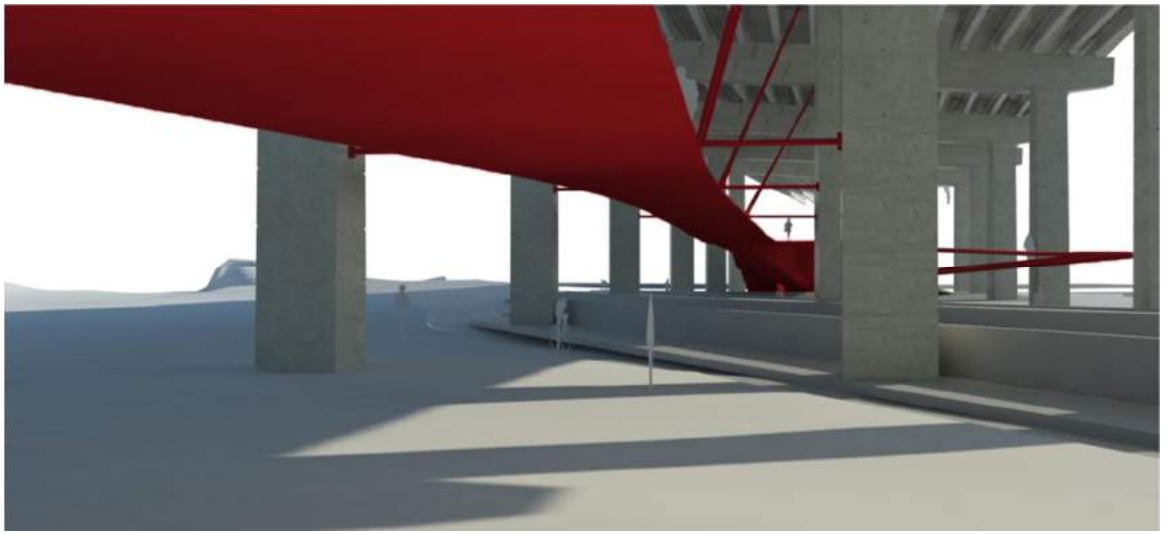


Figure 2: Conceptual Renderings Suspended Bridge



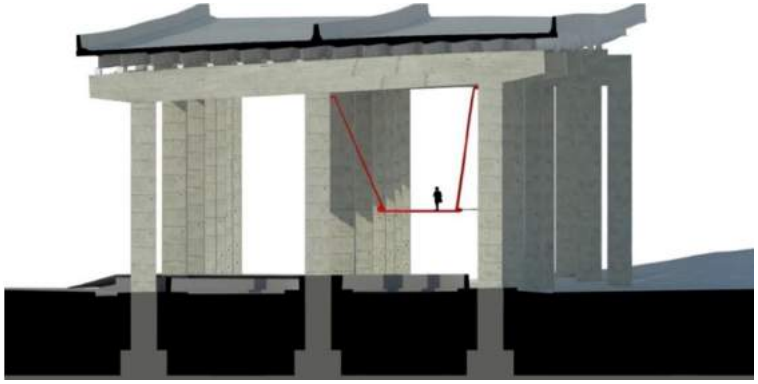


Figure 2□: Plan □iew alternative Design 2 □Grounded Bridge

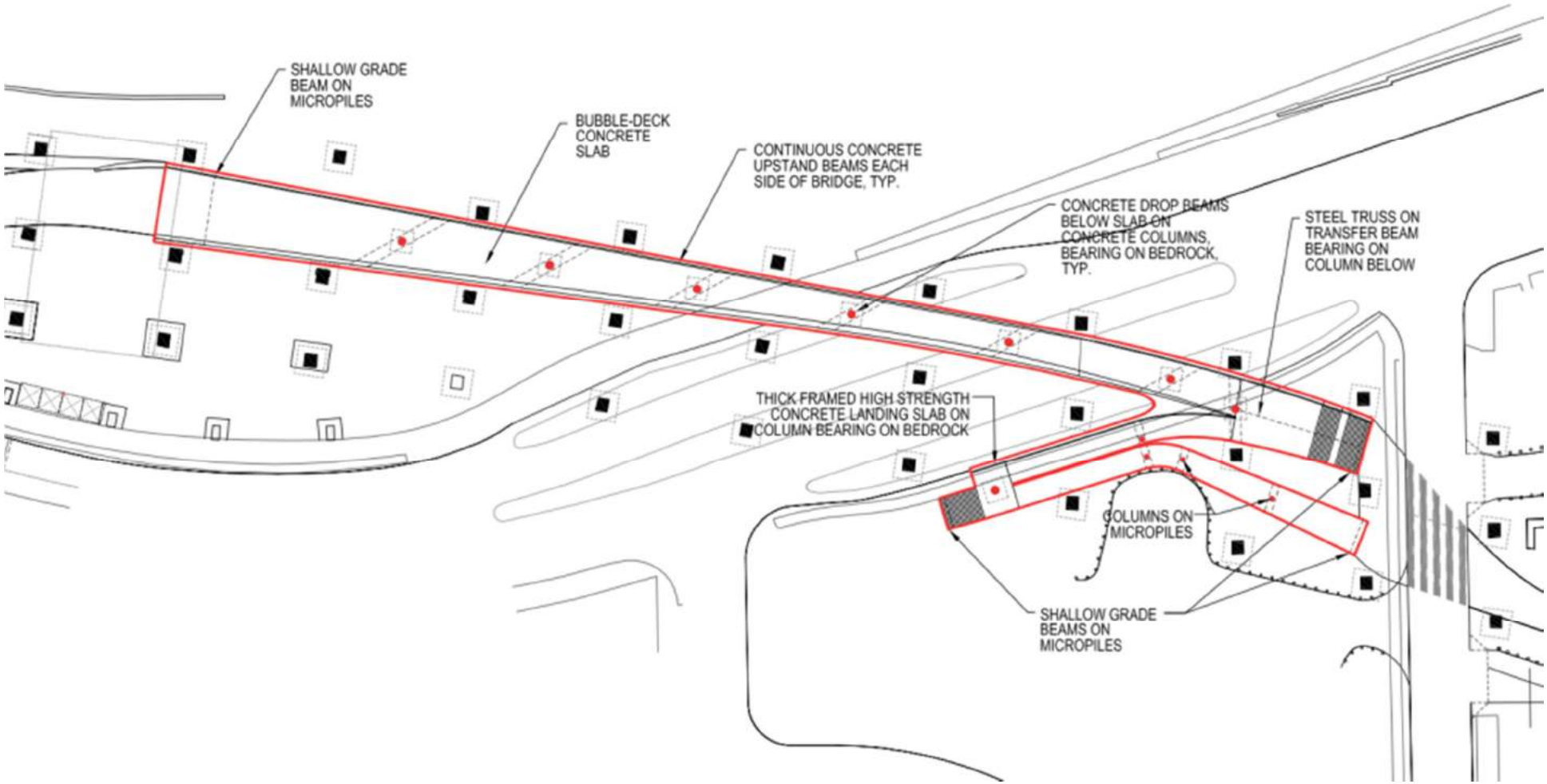
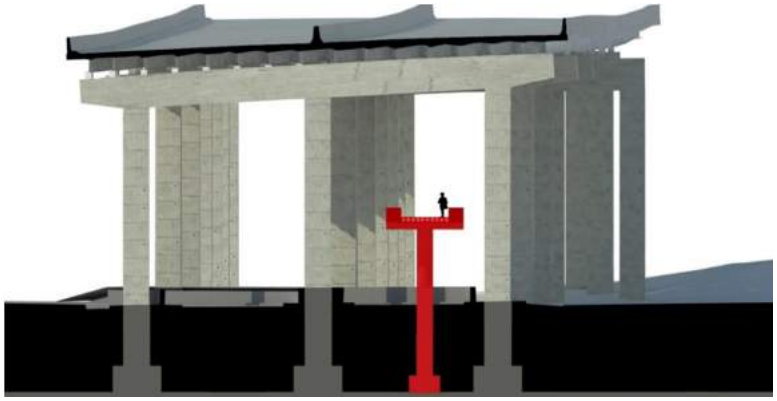


Figure 2: Conceptual Renderings Grounded Bridge



?.? Alternative Designs Evaluation

The next step in Phase 3 of the EA was the evaluation of the alternative designs. The four study lenses (Transportation, which includes infrastructure, Urban Design, Environment and Economics) and most criteria groups under each study lens that were established during the alternative solutions phase of work were used in the analysis. Some modifications to the evaluation criteria were made. These modifications were made for one of two reasons:

1. Either the criterion was removed because it was no longer applicable or helpful in differentiating between the two alternative designs; or,
2. Criterion was added to identify impacts and benefits of the different designs and assist in differentiating between the two alternative designs.

Some of the modifications made to the criteria include:

- The removal of consideration of aquatic environment impacts as it was determined in the alternative solutions phase that there are no aquatic features in the study area that could be impacted by a bridge crossing.
- The removal of the transit connections criteria as both alternative designs achieve the same accommodation of future transit on Fort York Boulevard which was determined for the bridge solution through the alternative solutions evaluation.
- The addition of Public Realm and Infrastructure Footprint criteria because one of the important urban design impacts to be considered is related to the nature of the relationship that the new infrastructure has with the ground and public space around the structure.

The draft alternative designs and draft alternative designs evaluation criteria were developed with input from members of the TAC, SAC and the public. The draft information was presented to the SAC on May 19, 2016. Feedback from the SAC included:

- Support for suspended bridge design; and,
- Request that the alternative designs evaluation consider whether the bridge crossing (suspended or grounded) can be accessible to users during the maintenance of the Gardiner Expressway.

The alternative designs draft evaluation criteria was revised to address the input received. This included:

- Revising the Gardiner Maintenance Program Impact criterion under the Infrastructure and Constructability criteria group to consider the impacts and availability to users of the bridge crossing during maintenance periods for the Gardiner Expressway.

Table ? outlines the study lenses, criteria groups and the individual criteria that were used to evaluate the two (2) alternative designs.

Table □: Alternative Designs Evaluation Criteria

Study Lens□Criteria Group	Criteria	Definition
TRANSPORTATION		
Safety	Safety Risk for Pedestrians, Cyclists, Motorists	Potential for pedestrian conflicts. Includes consideration of general visibility/sightlines, obstructions, crossing characteristics and facility standards.
	Safety of Infrastructure Design	Ability to achieve design that meets bridge code and does not compromise the safe operation of the Gardiner Expressway or the new bridge connection.
Connectivity	Accessible Connections	Ability to provide pedestrian and cycling connections designed to meet accessibility standards while not compromising auto connections.
Infrastructure & Constructability	Construction Duration	Time needed to complete construction.
	Construction Impact on Pedestrians, Cyclists and Auto Traffic	Effect of construction activities on pedestrian and cycling facilities on Fort York Boulevard. Level of traffic disruption during construction and potential for disruption to other roadways from traffic diversion.
	Construction Impact on Private Property	Potential for private property encroachment during construction, and effect on access to private properties (e.g., driveways).
	Construction Impact to Gardiner Structure	Extent to which the alternative may impact the Gardiner structure during the construction phase
	Permanent Impact on Gardiner Structure	Extent to which the alternative may impact the Gardiner structure for the duration of the alternative's operational life.
	Gardiner Expressway Maintenance Program Impact	Extent to which the alternative may impact the ease of access to the Gardiner structure to complete maintenance as needed, and potential for public to access bridge crossing during Gardiner maintenance periods.
URBAN DESIGN		
Public Realm	Urban Design Quality	Assess opportunity to enhance the urban design quality of the study area and surrounding neighbourhood, recognizing the architectural significance of the Gardiner Expressway structure itself.
	Public Space and Infrastructure Footprint	Assess the potential to minimize the footprint of any new infrastructure in the study area in order to enhance the design and experience of new public spaces.
	Visual Impact	Assess visual sightlines within, across and beyond the corridor to destinations and landmarks in and adjacent to the study area (e.g., views of the corridor, water and

Study Lens□Criteria Group	Criteria	Definition
		downtown skyline). Includes views of the alternative and views from the alternative.
	Activation/Animation	Assess potential to enhance activation and animation of the public space.
	Project: Under Gardiner Design Continuity	Assess potential to provide continuity with other elements of the Project: Under Gardiner design that surrounds the alternative so as to assist in achieving the overall design intent for Project: Under Gardiner.
EN□IRONMENT		
Social and Health	Quality of Life	Potential for the alternatives to provide improvement to the quality of life of local residents and users of the study area. Includes consideration for opportunities to encourage community gathering, social interaction, physical activity, etc.
Natural Environment	Terrestrial Environment	Potential to impact land based natural habitat, species and features.
	Water Quality & Quantity	Potential to change the water quality and quantity in the study area.
	Soil	Potential to disrupt or impact soil conditions.
Cultural Resources	Cultural Heritage Landscape	Potential for direct/indirect impacts on a built or natural landscape that is valued by the community for its religious, artistic or cultural associations within the study area.
	Indigenous Peoples and Activities	Potential for impacts on the use of the study area by Indigenous Peoples for traditional purposes.
	Archaeology	Potential for impacts on known buried resources or artifacts within the study area.
ECONOMICS		
Local Economics	Visitor/Tourism Attractiveness	Opportunities for the alternative designs to enhance the attractiveness of the study area and become a feature of the community that draws visitors/tourism.
Direct Cost & Constructability	Capital Cost	Capital cost to construct the alternatives in 2017$.
	Lifecycle Operations and Maintenance Cost	Net present value (2017) of 50-year operations and maintenance costs of the alternatives.
	Change/Impact to Maintenance Costs for Gardiner Structure	Potential to increase/impact maintenance costs for the Gardiner Expressway structure.

Using the evaluation criteria in **Table □**, a preliminary evaluation of the alternative designs was completed and reviewed with members of the TAC. Based on input received, additional work was

completed and the preliminary evaluation was revised for the final evaluation and identification of preferred design.

5.5.1 Summary of Findings of the Preliminary Evaluation

Through the preliminary assessment of alternative designs a number of trade-offs were identified between the two alternative bridge design concepts. These trade-offs have been summarized in **Table 5-5 Summary of Preliminary Alternative Designs Evaluation Trade-Offs**.

Table □: Summary of Preliminary Alternative Designs Evaluation Trade□Offs

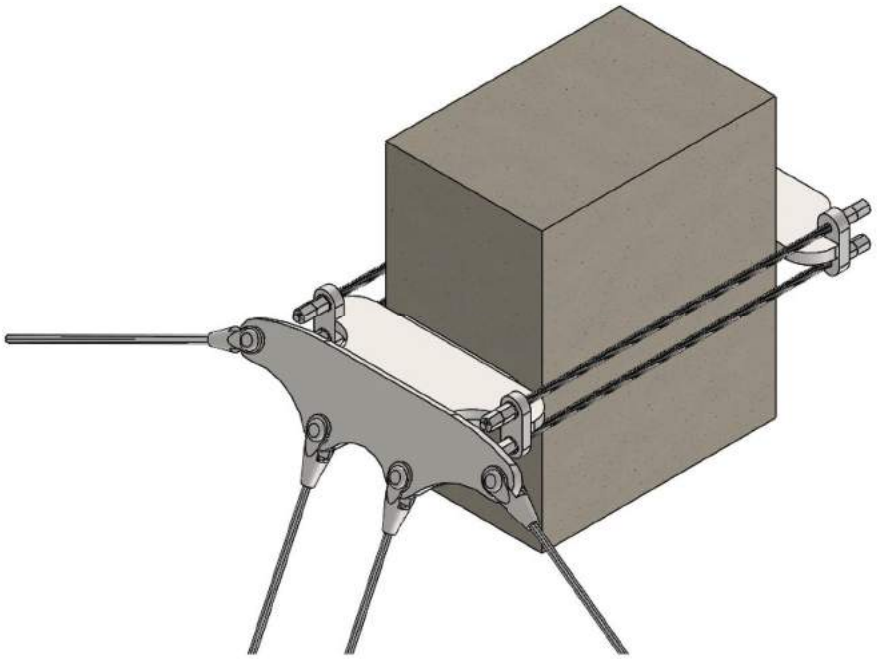
Preliminary Alternative Designs Evaluation Trade□Offs		
Lens	Suspended Bridge	Grounded Bridge
Transportation	**Less Preferred** - The suspended bridge option would result in minimal construction impact to traffic and private property as the majority of the suspended structure would be constructed off-site, brought on site and suspended in segments. It is anticipated that the suspended bridge would have a shorter construction period than the grounded option. The suspended bridge would have greater impacts on the Gardiner Expressway maintenance activities. These impacts would be manageable and would not impact the technical feasibility of the design.	**Preferred** □ The grounded option has greater on-site construction impacts to traffic and private property as the grounded structure needs to be primarily built on-site. This would likely result in greater temporary impacts to traffic and property surrounding the site that may be required for construction staging. Subsurface work related to the columns may also impact underground utilities in the area. Alternatively this option has less impact on the operation of the Gardiner as it would not be attached to the Gardiner structure. However, the Gardiner maintenance activities would be impacted due to access constraints.
Urban Design	**Preferred** - Project: Under Gardiner presents a new way of seeing and experiencing the space beneath the Gardiner Expressway, which is today underutilized. The design intent for Project: Under Gardiner, including the bridge crossing of Fort York Boulevard, is rooted in the relationship that the space has with the Gardiner Expressway structure. The Suspended Bridge provides a unique design opportunity that celebrates the Gardiner structure and is consistent with the intent of Project: Under Gardiner. The suspended bridge design utilizes the Gardiner structure, using existing infrastructure to support new, and imagines a new complementary purpose for the Gardiner structure.	**Less Preferred** - The Grounded Bridge offers a more conventional design that does not capture the design intent of Project: Under Gardiner to the same extent that the suspended bridge does. Although the bridge would be designed to a high standard of quality using similar materials to the design for the suspended bridge, the grounded structural system does not present a new relationship or unique experience with the Gardiner structure. The bridge footings would not enhance the public space around the crossing location and furthermore, the six new supporting columns would present a visual obstacle at ground level.

Preliminary Alternative Designs Evaluation Trade-Offs		
Lens	Suspended Bridge	Grounded Bridge
	The relationship between the structures provides a unique experience. The bridge itself also provides users with seating and viewing areas to experience the surrounding space.	
Environment	**Preferred** - The suspended option presents a design that is sensitive to the heritage context of the area and is designed to minimize impacts to the Fort York National Historic Site landscape by minimizing the ground disturbance required to support the structure.	**Less Preferred** - The grounded option would result in greater heritage impacts as the footprint of the structure would alter the surrounding landscape, including the landscape of the Fort York NHS. The impact of the columns also results in greater surface and sub-surface disruption which could affect stormwater runoff and ground water as well as requires the management of a greater amount of soil for disposal.
Economics	**Less Preferred** - Relatively equal construction cost - slightly lower capital cost (Approximate Comparative Cost = $5.0 - $6.0 million). Due to the relationship of the suspended bridge to the Gardiner structure, there would be greater impacts to the Gardiner structure maintenance program. - Some impact due to more complicated access for routine Gardiner maintenance. Presence of new bridge crossing will complicate routine maintenance of Gardiner due to encroachment of new bridge structure in area. There will also be minor impact to costs required to shore-up/support suspended bridge during Gardiner column maintenance. There is also potential for minor impact to Gardiner column locations for friction clamp	**Preferred** - Relatively equal construction cost - slightly higher capital cost (Approximate Comparative Cost = $5.5 - $6.5 million additional cost for managing soils and underground utilities). The primary benefit of the grounded bridge design is related to its limited impact on the Gardiner Expressway structure, both for maintenance and operations. The grounded bridge would complicate access to the Gardiner structure for maintenance which would have some cost impacts. However, with no physical attachments to the Gardiner structure, the grounded option would impact the costs of the Gardiner maintenance program less than the suspended bridge design. The management of anticipated contaminated soils and utility

Preliminary Alternative Designs Evaluation Trade-Offs		
Lens	Suspended Bridge	Grounded Bridge
	attachments. Due to these impacts, a premium on normal maintenance costs of the Gardiner is anticipated which would be slightly greater than for the grounded bridge design. However, the unique suspended design would serve as a signature feature of Project: Under Gardiner, increasing the attractiveness of the Project and potentially drawing more visitors to the area. The potential for the suspended bridge to attract more visitors to the area may off-set some of the cost impacts by attracting new investment into the community and local businesses.	impacts during construction of the grounded bridge would increase the cost of construction, although the capital cost difference between the two options is not anticipated to be significant.

Based on the preliminary evaluation, the trade-offs between the two alternative design options demonstrated that the suspended bridge was preferred for the Urban Design and Environment lenses and the grounded bridge was preferred for the Transportation/Infrastructure and Economics lenses. The primary challenge with the suspended bridge design concerned the relationship with the Gardiner structure. Concerns raised by members of the TAC and stakeholders related to impacts on the load bearing capacity of the Gardiner, how maintenance of the Gardiner could occur in the location of the suspended bridge (including where the suspended bridge attachments sit on the columns) and the technical feasibility of the design. Additional technical work was completed to address these concerns. An innovative technology, the friction clamp, was designed as a failsafe system that uses the weight of the bridge to develop the compression against the column and the resultant friction; so the greater the demand, the greater the capacity and requires no mechanical connections to the bridge (see **Figure 2**).

Figure 2: Friction Clamp Graphic



For the grounded option, the primary concerns raised in the preliminary evaluation concerned the Urban Design and Environment lenses and the impacts of adding more columns to the corridor to support a grounded bridge crossing. The design team for the grounded bridge, including Public Work and Blackwell Engineering, reviewed opportunities to minimize the size and number of columns supporting the grounded bridge in order to reduce the urban design and environmental impacts. The conceptual grounded bridge plan put forward as an alternative design is based on a light and minimal column arrangement given the dimensions being sought for the bridge deck, which match the suspended bridge deck design.

The draft alternative designs, evaluation criteria and preliminary alternative designs trade-offs were presented at a public meeting on May 31, 2016. Feedback from the public meeting included:

- Overwhelming support for the suspended bridge alternative design;
- Concern for the relationship between the suspended bridge and the Gardiner Expressway (related to permanent impact and maintenance impact);
- Concern that the specified construction duration period does not seem realistic; and
- Questions related to potential impacts of wind on the suspended bridge design and user experience.

Recognizing that the presentation of the preliminary evaluation results for the alternative designs was draft, following the public meeting on May 31 and input from members of the TAC, additional work was completed in order to address the evaluation concerns of each alternative design and finalize the evaluation so as to identify a preferred alternative design. The additional work and findings are described in the following section, **Section ?.?.**

?.? Additional ? ork Completed to Address Alternative Design Concerns and Impacts

Following the review of the preliminary evaluation results, additional work required to complete the analysis of the alternative designs related to the following items:

- For the suspended bridge design, further review of the design to confirm the structural system and relationship with the Gardiner Expressway and assess impacts to the Gardiner Expressway maintenance program; and,
- For the grounded bridge design, further review of the design to minimize the urban design and environmental impact of the grounded columns.

The following summarizes the findings of the additional work completed. Blackwell Engineering led the completion of additional technical reviews for the suspended bridge structural system. This included an investigation into the approach for Gardiner Expressway maintenance around the suspended bridge.

For the suspended bridge design, investigations by Blackwell Engineering concluded that the suspension of the new bridge to the Gardiner Expressway was technically feasible, safe, and could be achieved without compromising the Gardiner structure. The suspended bridge would be designed in conformance with the pedestrian bridge provisions of the Canadian Highway Bridge Design Code CSA-S6 2015 including all requirements for live load, vibration, guards and access vehicles. For those parts of the bridge where Code CSA-S6 2015 might not provide specific provisions, the Ontario Building Code 2012 would be considered to govern.

Based on the analysis of the construction staging approach to complete the Gardiner maintenance program, it was concluded that maintenance of the Gardiner structure can be completed with the suspended bridge in place. The maintenance program would be more complicated and take slightly longer but modifications to the program to accommodate the suspended bridge would not compromise the life of the Gardiner structure. Impacts to the Gardiner maintenance program would include:

- More restricted access to the bents where the friction clamps are attached to the top of the bent columns and the suspension cables connect. Cables and clamp assemblies could be

removed to enable access to the columns but this would require the temporary shoring of the suspended bridge.

- Increased number of structural inspections to review the integrity of the columns where the attachments are located. There would likely be some additional patch/reseal work required at these locations but this is not anticipated to be needed more frequently than every 10-15 years.
- More complicated bent maintenance where the bridge itself would restrict the area available to access the columns. The sections of the columns where maintenance would be more complicated related to access would occur from the height of the bridge deck to ground level. The grounded bridge would also have the same access impact for these columns.

Based on the above, both bridge designs would have an impact on the Gardiner maintenance program due to restricted areas of access for column maintenance work. The suspended bridge also has some additional costs related to needing to shore-up the suspended bridge during Gardiner maintenance periods when the friction clamp attachments and suspension cables would be detached. Due to these impacts, for the suspended bridge a premium on normal/historical maintenance costs of the Gardiner's support columns is anticipated which would be slightly greater than for the grounded bridge design. It is estimated that the additional Gardiner column maintenance costs with the suspended bridge would be in the range of 20-30 more than the existing program maintenance costs in the location of the new bridge. Approximately 12 columns would be affected with this potential cost increase. For the grounded bridge it is estimated that the additional maintenance costs would be in the range of 10-20 more than the existing program for the impacted columns.

For the grounded bridge design, additional analysis was completed to address the impact of the footprint of the columns on urban design and the environment. It was concluded that the proposed number and size of the additional columns (six columns, 1.2 metres in diameter) provided as little impact as possible. Further reductions to the columns would not be technically feasible to support the bridge deck.

Based on the additional work completed for both the suspended bridge and the grounded bridge designs, the alternative designs evaluation matrix was completed. The matrix includes adverse impacts and benefits identified for the construction and operation of the alternative bridge design options. **Table** presents the alternative designs evaluation matrix.

Table : Alternative Designs Evaluation Matrix

ALTERNATIVE DESIGNS				
Study Lens Criteria Group	**Criteria**	**Definition**	**1. Suspended Bridge Crossing**	**2. Grounded Bridge Crossing**
TRANSPORTATION				
Safety	**Safety Risk for Pedestrians**	Potential for pedestrian conflicts. Includes consideration of general visibility/sightlines, obstructions, crossing characteristics and facility standards.	**Equally Preferred** - Both options provide a safe connection that minimizes the potential for conflicts with traffic on Fort York Blvd as pedestrians and cyclists would be separated from auto traffic. Both options are being designed in accordance with the City of Toronto Multi-Use Trail Guidelines which consider the safe passage of pedestrians and cyclists through a shared trail connection. Regarding conflicts at-grade along Fort York Blvd, the grounded option introduces new columns at ground level, but these would not present a significant change to pedestrian safety/potential for conflicts given the existing conditions and of Gardiner columns already in place.	
	Safety Risk for Cyclists	Potential for cyclist conflicts. Includes consideration of general visibility/sightlines, obstructions, crossing characteristics and facility standards.	**Equally Preferred** - Both options provide a safe connection that minimizes the potential for conflicts with traffic on Fort York Blvd as pedestrians and cyclists would be separated from auto traffic. Both options are being designed in accordance with the City of Toronto Multi-Use Trail Guidelines which consider the safe passage of pedestrians and cyclists through a shared trail connection. Regarding conflicts at-grade along Fort York Blvd., the grounded option introduces new columns at ground level, but these would not present a significant change to pedestrian safety/potential for conflicts given the existing conditions of Gardiner columns already in place.	
	Safety Risk for Motorists	Potential for road safety concerns for motorists/vehicles. Includes consideration of visibility/sightlines and potential conflict areas with auto traffic, pedestrians and cyclists.	**Equally Preferred** - Both options provide a safe connection that minimizes the potential for conflicts with pedestrians and cyclists on Fort York Blvd as pedestrians and cyclists would be separated from auto traffic. There would be no change to auto traffic operations with the implementation of either bridge design and as such the bridge designs would not impact safety for motorists. The grounded option introduces new columns at ground level, but these would not present a significant change to motorist safety/potential as the new columns would not additionally disrupt sightlines given the existing conditions of Gardiner columns already in place.	
	Safety of Infrastructure Design	Ability to achieve design that meets bridge code and does not compromise the safe operation of the Gardiner Expressway or the new bridge connection.	**Equally Preferred** - Both options provide a safe connection that would be in accordance with bridge code and applicable building code. Both structures would allow for the continued safe operation of the Gardiner Expressway without compromising the structure or its use.	
Safety Evaluation Summary			✓ **Equally Preferred**	
Connectivity	**Accessible Connections**	Ability to provide pedestrian and cycling connections designed to meet accessibility standards while not compromising auto connections.	**Equally Preferred** - Both options provide accessible connections. These bridges would both be designed to meet accessibility standards (O. Reg. 191/11) and bridge code.	
Connectivity Evaluation Summary			✓ **Equally Preferred**	
Infrastructure Constructability	**Construction Duration**	Time needed to complete construction.	**Equally Preferred** - Construction duration for the two design alternatives is relatively equal given that both structures can be constructed in one construction season. The suspended bridge would have a slightly shorter duration of construction on-site (approximately less than one month). Construction of structural components would occur primarily off-site. Components would be brought on-site for installation in sections. Given that the construction of this structure involves a unique approach, additional construction time may be required for on-site installation. As a result, the construction duration is considered to be similar.	**Equally Preferred** Construction duration for the two design alternatives is relatively equal given that both structures can be constructed in one construction season. The grounded bridge would have a slightly longer duration of construction for on-site work (less than two months). Construction would occur primarily on-site. Bridge deck can be constructed in pieces off-site but construction of columns/footings and landing areas would occur on-site. Given that the construction of this structure involve a conventional bridge construction approach, the duration for construction is relatively predictable.

ALTERNATIVE DESIGNS				
Study Lens – Criteria Group	**Criteria**	**Definition**	**1. Suspended Bridge Crossing**	**2. Grounded Bridge Crossing**
Infrastructure – Constructability	**Construction Impact on Pedestrians–Cyclists and Auto Traffic**	Effect of construction activities on pedestrian and cycling facilities on Fort York Blvd. Level of traffic disruption during construction and potential for disruption to other roadways from traffic diversion.	**Preferred** – Less impact to pedestrians, cyclists and auto traffic of Fort York Blvd is anticipated during construction period. Construction of bridge deck occurs primarily off-site; installation on-site possible with minimal disruption to movement along Fort York Blvd. Work to be done outside of peak travel periods and would be temporary.	**Less Preferred** - Greater impact due to on-site work to construct a new pier/column in the median of Fort York Blvd (may disrupt road traffic for a short period of time). The need to relocate utilities may create impacts to other corridor users (pedestrians, cyclists, auto traffic). Concrete pours may disrupt road users. Work to be done outside of peak travel periods and would be temporary.
	Construction Impact on Private Property	Potential for private property encroachment during construction, and effect on access to private properties (e.g., driveways).	**Preferred** – Minimal potential impact to private properties anticipated during construction. Construction of bridge deck occurs primarily off-site with minimal staging areas required on-site.	**Less Preferred** - Greater potential impact on private properties on the southeast side, west of Iannuzzi Street, due to the need for staging areas to erect formwork to construct bridge and landings. Concrete pours may need to encroach on private property.
	Construction Impact on Gardiner Expressway Structure	Extent to which the alternative may impact the Gardiner structure during the construction phase	**Less Preferred** - Impact to Gardiner columns at location of friction clamp attachments and cables (temporary construction impact to columns. Gardiner deck would not be affected).	**Preferred** - Minimal impact may occur around existing Gardiner columns due to new column construction.
	Permanent Impact on Gardiner Expressway Structure	Extent to which the alternative may impact the Gardiner structure for the duration of the alternative's operational life.	**Less Preferred** - Gardiner impact is anticipated due to physical connection to Gardiner columns and reduced excess load capacity; however, the impact to load capacity would not compromise the Gardiner structure and would have no sustained impact of concern. The suspended bridge will be designed to meet bridge code requirements. The design of the friction clamp attachments to the Gardiner columns can be removed to complete maintenance of Gardiner columns.	**Preferred** - No impact anticipated on Gardiner structure.
	Gardiner Expressway Maintenance Program Impact	Extent to which the alternative may impact the ease of access to the Gardiner structure to complete maintenance as needed, , and potential for public to access bridge crossing during Gardiner maintenance periods.	**Less Preferred** - Greater impact on Gardiner maintenance due to bridge attachments to columns and encroachment around Gardiner structure in the area required for Gardiner maintenance activities. Maintenance of Gardiner columns will likely require removal of attachments that support the suspended design. During Gardiner column maintenance suspended bridge will need to be supported to allow for removal of attachments in sections as needed (Gardiner column maintenance is anticipated in 2 cycles over the course of 50 years).	**Preferred** - Minor impact on Gardiner maintenance due to encroachment around Gardiner structure in the area required for Gardiner maintenance activities. However, with no attachments to the Gardiner columns, grounded option has less impact to the existing Gardiner maintenance program than with the suspended option.
Infrastructure – Constructability Evaluation Summary			X **LESS PREFERRED**	✓ **PREFERRED**
OVERALL TRANSPORTATION EVALUATION RANKING			X **LESS PREFERRED**	✓ **PREFERRED**

ALTERNATIVE DESIGNS				
Study Lens – Criteria Group	**Criteria**	**Definition**	**1. Suspended Bridge Crossing**	**2. Grounded Bridge Crossing**
URBAN DESIGN				
Public Realm	**Urban Design Quality**	Assess opportunity to enhance the urban design quality of the study area and surrounding neighbourhood, recognizing the architectural significance of the Gardiner Expressway structure itself.	**Preferred** - Suspension system is unique and presents greater opportunity to enhance urban design quality by enhancing the identity and character of the area with a unique structural design. The option provides a complementary design symbology with the Gardiner structure that unifies the old and the new. The new structure utilizes the existing Gardiner structure and presents a unique opportunity to enhance the design experience of the Gardiner itself as a supporting framework for new infrastructure.	**Less Preferred** - Structure can be designed with high urban design quality but does not present a unique structural design. The new structure adds columns to an area that already has the bold Gardiner columns as a signature of the space.
	Public Space and Infrastructure Footprint	Assess the potential to minimize the footprint of any new infrastructure in the study area in order to enhance the design and experience of new public spaces.	**Preferred** - Lighter infrastructure footprint means reduced impact on public space and allows the public space around the bridge to be porous and uninterrupted which will enhance the experience of the space. Design of suspended structure achieves intent of creating infrastructure that has a minimal infrastructure footprint.	**Less Preferred** - Bridge footings present a greater infrastructure footprint on surrounding public space which does not enhance the experience of the public space around the crossing.
	Visual Impact	Assess visual sightlines within, across and beyond the corridor to destinations and landmarks in and adjacent to the study area (e.g. views of the corridor, water and downtown skyline). Includes views of the alternative and views from the alternative.	**Preferred** - Option provides unobstructed views through the bridge and beyond the study area when on the bridge. Option provides minor view obstructions from the bridge due to suspension cables; however, these cables may provide viewing "windows" that frame new views and enhance the experience of the crossing. Views of the bridge will enhance the experience of the public space as a suspended structure presents a unique architectural experience.	**Less Preferred** - Columns present greater visual obstacle through the bridge. Option provides enhanced views from the bridge due to lack of suspension cables. However, views of the bridge will be less impactful as a grounded bridge option presents a less unique architectural experience. Views on the ground will also be disrupted by additional columns, although much less significant that the existing Gardiner columns, to support the bridge structure.
	Activation/Animation	Assess potential to enhance activation and animation of the public space.	**Equally Preferred** - Options provide similar animation opportunities for the public space, particularly through the use of the lighting.	
	Project: Under Gardiner Design Continuity	Assess potential to provide continuity with other elements of the Project: Under Gardiner design that surrounds the alternative so as to assist in achieving the overall design intent for Project: Under Gardiner.	**Preferred** - Option reflects the intent of Project: Under Gardiner to provide a unique relationship between the user and the Gardiner structure. Design reflects the intent to utilize the Gardiner structure in a new way to showcase the potential it provides for the public realm. Design also achieves the goal of enhancing the experience of the Fort York National Historic Site without impacting the heritage landscape.	**Less Preferred** - The intent of Project: Under Gardiner is to develop new relationships and ways of experiencing the Gardiner structure. The grounded option separates the new bridge and the existing Gardiner structure and is not in keeping with the design intent of Project: Under Gardiner. Design has a less noticeable relationship with the Gardiner structure. With the introduction of columns, will have a greater impact on the heritage landscape of the Fort York National Historic Site.
OVERALL URBAN DESIGN EVALUATION RANKING			✓ **PREFERRED**	X **LESS PREFERRED**

ALTERNATI E DESIGNS				
Study Lens Criteria Group	**Criteria**	**Definition**	**1. Suspended Bridge Crossing**	**2. Grounded Bridge Crossing**
EN IRONMENT				
Social ealth	**uality of Life**	Potential for the alternatives to provide improvement to the quality of life of local residents and users of the study area. Includes consideration for opportunities to encourage community gathering, social interaction, physical activity, etc.	**E ually Preferred** - Options contribute to improvements to the quality of life for local residents and users of study area by providing a new connection that supports the proposed Project: Under Gardiner multi-use trail, thus encouraging walkability/active transportation in area. Options provide gathering spaces on bridge to observe and experience the Fort York National Historic Site (NHS). Options provide views and vistas of surrounding area, improving legibility of community which enhances quality of life for users.	
Social ealth Evaluation Summary			✓ **E ually Preferred**	
Natural Environment	**Terrestrial Environment**	Potential to impact land based natural habitat, species and features.	**E ually Preferred** - Limited potential for impacts as there is limited existing terrestrial environment and as such minimal difference between the two options related to impact on natural habitat, species and features.	
	ater uality uantity	Potential to change the water quality and quantity in the study area.	**Preferred** - No columns creates reduced impact with smaller ground footprint. Reduced impact to water quality and quantity in the study area as the structure is primarily suspended with minimal ground surface/sub-surface supporting components.	**Less Preferred** - New columns will have larger but minimal ground surface and sub-surface impact due to reduction of permeable ground area (250sq.m.) Option affects water quantity directed to existing catchment sewers. Impact will not be significant but will be greater than a suspended design. This area has been identified as needing more permeability as water retention in soils is currently poor. While the amount of change to the permeable surface imposed by new columns supporting a grounded bridge might not be that meaningful in other areas, in this area it is as maintaining any permeability is valuable.
	Soil	Potential to disrupt or impact soil conditions.	**Preferred** - Less impacts/disturbances to soil in the study area. No impacts expected to erosion or to soil as a resource. Soil consists of lake fill and is not ecologically valuable.	**Less Preferred**- Greater impacts/disturbances to soil in the study area as option requires greater excavation for columns/footings/piles. No impacts expected to erosion or to soil as a resource. Soil consists of lake fill and is not ecologically valuable.
Natural Environment Evaluation Summary			✓ **Preferred**	X **Less Preferred**
Cultural Resources	**Cultural eritage Landscape**	Potential for direct/indirect impacts on a built or natural landscape that is valued by the community for its religious, artistic or cultural associations within the study area.	**Preferred** - Option has less impact to cultural landscape and design is sensitive to historical setting. Option will result in the following direct impacts to Fort York NHS and Heritage Conservation District (HCD): alteration to the former Lake Ontario shoreline and to the site through introduction of a new structure; alteration to identified views from the Fort south. However, given the minimal infrastructure footprint, there will be minimal disturbance on land that is valued for cultural heritage. When on the bridge, option enhances views from the perimeter of the site into the Fort and encourages engagement with the cultural resource.	**Less Preferred** - Option has a greater impact due to physical ground footprint. Option will result in the following direct impacts to Fort York NHS and HCD: alteration to the former Lake Ontario shoreline and to the site through introduction of a new structure; alteration to identified views from the Fort south. Given the additional infrastructure footprint, there will be some disturbance on land that is valued for cultural heritage. When on the bridge, option enhances views from the perimeter of the site into the Fort and encourages engagement with the cultural resource.
	Indigenous Peoples and Activities	Potential for impacts on the use of the study area by Indigenous Peoples for traditional purposes.	**E ually Preferred** - Limited potential for impact: Previous 19th and 20th century developments have removed resources related to traditional uses of lands by Indigenous Peoples and substantial portions of the project area are made land.	
	Archaeology	Potential for impacts on known buried resources or artifacts within the study area.	**Preferred** - No impacts anticipated to archaeological resources as there will be limited sub-surface soil disturbance.	**Less Preferred**- Potential archaeological resources may be affected due to excavation associated with construction of the columns to support the grounded bridge option.
Cultural Resources Evaluation Summary			✓ **Preferred**	X **Less Preferred**
O ERALL EN IRONMENT E ALUATION RANKING			✓ **PREFERRED**	X **LESS PREFERRED**

ALTERNATIVE DESIGNS				
Study Lens – Criteria Group	**Criteria**	**Definition**	**1. Suspended Bridge Crossing**	**2. Grounded Bridge Crossing**
ECONOMICS				
Local Economics	**Visitor/Tourism Attractiveness**	Opportunities for the alternative designs to enhance the attractiveness of the study area and become a feature of the community that draws visitors/tourism .	**Equally Preferred** - Both options present opportunities to support Project: Under Gardiner and attract visitors to the area. There may be more potential for economic advantages and additional value capture with the suspended bridge design because of the unique structural system which will be a design landmark for the community. The magnitude of the added value of the suspended bridge is difficult to measure given that visitors will likely be attracted to the entire Project: Under Gardiner site once developed.	
Local Economics Evaluation Summary			✓ **Equally Preferred**	
Direct Cost / Constructability	**Capital Cost**	Capital cost to construct the alternatives in 2017$.	**Equally Preferred** - Relatively equal construction cost - slightly lower capital cost. Bridge deck area, suspension attachments, landings/switchback, miscellaneous costs (utilities, contaminated materials, traffic staging, etc.). Approximate Comparative Cost = $5.0 - $6.0 million	**Equally Preferred** - Relatively equal construction cost - slightly higher capital cost. Bridge deck area, columns, footings, landings/switchback, miscellaneous costs (utilities, contaminated materials, traffic staging, etc.). Approximate Comparative Cost = $5.5 - $6.5 million (additional cost for managing soils and underground utilities)
	Lifecycle Operations and Maintenance Cost	Net present value of 50-year operations and maintenance costs of the alternatives.	**Equally Preferred** – Relatively equal - no significant differences in maintenance costs for bridge components identified between the options. Maintenance of options will include column maintenance for the Grounded option and Gardiner column attachment maintenance for the Suspended option.	
	Maintenance Cost Impacts for Gardiner Structure	Potential to increase/impact maintenance costs for the Gardiner Expressway structure.	**Less Preferred** – Some impact due to more complicated access for routine Gardiner maintenance. Presence of new bridge crossing will complicate routine maintenance of Gardiner due to encroachment of new bridge structure in area. There will also be come minor impact to costs required to shore-up/support suspended bridge during Gardiner column maintenance. There is also potential for minor impact to Gardiner column locations for friction clamp attachments. Due to these impacts, a premium on normal/historical maintenance costs of the Gardiner is anticipated which would be slightly greater than for the grounded bridge design.	**Preferred** – Some impact due to more complicated access for routine Gardiner maintenance. Presence of new bridge crossing will complicate routine maintenance of Gardiner due to encroachment of new bridge structure in area. Due to the more challenging work space that results from the presence of the bridge, a premium on normal/historical maintenance costs of the Gardiner is anticipated, although overall cost impacts are anticipated to be less than for the suspended option.
Direct Cost / Constructability Evaluation Summary			X **Less Preferred**	✓ **Preferred**
OVERALL ECONOMICS EVALUATION RANKING			X **LESS PREFERRED**	✓ **PREFERRED**

7.7.1 Summary of Alternative Designs Evaluation

Based on the findings in the evaluation matrix the following has been concluded:

LENS	ALTERNATIVE DESIGN PREFERENCE
Transportation	Grounded Bridge is Preferred
Urban Design	Suspended Bridge is Preferred
Environment	Suspended Bridge is Preferred
Economics	Grounded Bridge is Preferred

Transportation

The grounded bridge option is preferred for the Transportation lens. Both bridge options are technically feasible and provide safe and accessible connections. For infrastructure and connectivity criteria, the two designs present different trade-offs. The construction of the suspended bridge has fewer impacts to residents, traffic and property. However, the grounded design has fewer impacts to the Gardiner structure. It was found, through analysis completed by Blackwell Engineering, that the capacity of the Gardiner structure to facilitate the safe suspension of a pedestrian/cycling bridge was present and that a suspended bridge would not compromise the integrity or operations of the Gardiner Expressway structure. Impacts of the suspended bridge on the Gardiner would primarily be related to maintenance as the function and operation of the Gardiner Expressway itself would not be altered. The grounded bridge has no attachments that interact with the Gardiner structure and as such has no structural impact on the Gardiner. However, the grounded option would also have some impacts to the Gardiner maintenance program.

Urban Design

The suspended bridge is preferred for urban design as it meets the overall design intent of Project: Under Gardiner and presents greater opportunities to facilitate an improved public realm. Project: Under Gardiner is rooted in creating a new relationship with the Gardiner Expressway; enhancing the value that the Gardiner presents to the community beyond transportation. A suspended bridge structure that has a direct connection with the Gardiner Expressway better embodies the design vision for Project: Under Gardiner as a whole: Using the existing infrastructure to support new public space and new infrastructure. In addition, the suspended structure allows for more public space possibilities in the space under and around the new bridge connection. The grounded bridge presents additional columns that would impact the permeability of the new public space and limit opportunities to create inviting public spaces around the new bridge connection. Further, the uniqueness of the suspended

structure presents an opportunity to achieve a bridge connection that is light and sensitive to at-grade impacts and that provides a completely unique crossing experience for users.

Environment

The minimal footprint of the suspended bridge is the defining factor that achieves the environmental preference for the suspended bridge. The columns of the grounded bridge structure result in greater impacts to the surface and subsurface environment including soils, water, heritage and archaeology. The grounded option was designed to present as minimal an impact as possible but it is not able to provide as light a footprint as the suspended bridge and therefore has greater environmental impacts.

Economics

The grounded option is preferred for economics as it has lower long-term costs in relation to the Gardiner Expressway maintenance costs; however, it may present less potential for long-term economic benefits. The construction costs of the two bridge options are relatively similar given the magnitude of the capital costs being considered (ranging from $5-$6.5 million). Both the suspended bridge and the grounded bridge will impact the space available to complete Gardiner maintenance in the area around the new bridge crossing which presents some minor cost implications. However, managing the suspension system connected to the Gardiner structure will have some minor additional maintenance cost implications. From an economic benefits perspective, there may be greater potential for local economic benefits and additional value capture as a result of the suspended bridge. The unique bridge design has greater potential to attract visitors to the site and become a landmark for the area. This has the potential to result in spin-off benefits for local businesses and add value to the area. As such, the suspended bridge has the potential to create more value for the community and the City.

Summary

Overall, the two bridge designs present different trade-offs that result in the suspended bridge being preferred for the Urban Design and Environment lenses and the grounded bridge being preferred for the Transportation and Economics lenses. Feedback from the public and stakeholders in the local community indicated a strong preference for the suspended bridge due to the urban design, environmental and local economic benefits. The suspended bridge provides a new connection that would be a signature landmark for the community and for the city. The public and stakeholders appreciated the sensitivity of the suspended design on Fort York and the opportunity to utilize the Gardiner structure in an innovative way. In addition, the City has confirmed that the impacts to the Gardiner structure and the maintenance costs that result from the suspended design are manageable. Given that the Transportation and Economic trade-offs of the suspended bridge design are manageable and given the consultation input from the public, stakeholders and the City, the suspended bridge design is preferred.

5.0 Effects Assessment and Mitigation for Preferred Design

Based on the findings of the alternative designs evaluation (**Table**), and input from TAC, SAC and the public, the preferred design recommended through the MCEA process is the suspended bridge. This section describes the potential environmental effects of the preferred design (referred to as the undertaking). The effects assessment takes into account the physical construction and operation works/activities of the undertaking and the potential impacts to the baseline environmental conditions in the study area. **Table Identification of Environmental Impacts of the Undertaking** outlines the potential interactions of the construction and operation activities and the environmental components. These interactions provided the basis for the assessment of project effects. **Table Effects Assessment and Mitigation Measures** then details the effects assessment based on the interactions identified in **Table** . Mitigation measures and potential net effects of the undertaking are included in **Table** . Recommended mitigation includes construction site management (e.g., dust and noise abatement) and operations management (e.g. regular structural inspections of the bridge connection to ensure safe operations).

.1 Assessment and Mitigation Tables

Based on the environmental impacts identified in **Table** , **Table** presents the potential project effects, recommended mitigation measures, and resulting potential net effects of the undertaking.

Table : Identification of Environmental Impacts of the Undertaking

Environmental Component *Note:* *+ Potential positive interaction* *- Potential negative interaction* *If blank, no interaction*	Transportation and Infrastructure		Natural Environment			Socio-Economic Environment							Urban Design	Cultural Environment		
	Transportation Operations (road corridor users)	Servicing / Utilities	Terrestrial Species and Habitat	Surface Water	Soils and Groundwater	Planned Land Use	Businesses and Residents	Recreation and Tourism	Private Property	Air Quality / Dust	Noise + Vibration	Public Safety	Existing Public Realm + Planned Improvements	Cultural and Built Heritage	Archaeological Resources	Indigenous Peoples
Construction Activities																
Preparation for Construction (fencing site and staging areas) / Prepare Landing Areas (clearing, grading)				-	-		-	-	-	-	-	-		-	-	
Construct Landing Areas (columns/beams on micropiles, and bridge deck connections)		-		-	-		-	-		-	-	-		-	-	
Temporary Road/Lane/Sidewalk/Bike Lane closures	-						-	-				-				
Install Friction Clamp Assembly (attachments to columns)											-					
Install Suspended Bridge Deck (deck assembled in segments, attach cables and struts)							-	-		-	-	-				

Environmental Component *Note:* *+ Potential positive interaction* *- Potential negative interaction* *If blank, no interaction*	Transportation and Infrastructure		Natural Environment			Socio‐Economic Environment							Urban Design	Cultural Environment		
	Transportation Operations (road corridor users)	Servicing / Utilities	Terrestrial Species and Habitat	Surface Water	Soils and Groundwater	Planned Land Use	Businesses and Residents	Recreation and Tourism	Private Property	Air Quality / Dust	Noise + Vibration	Public Safety	Existing Public Realm + Planned Improvements	Cultural and Built Heritage	Archaeological Resources	Indigenous Peoples
Install Bridge Finishings (cable mesh guard, seating, handrails, etc.)							-	-		-	-					
Operations																
Suspended Bridge Operation	+					+	+	+	+			+	+	+/-		
Suspended Bridge Maintenance (inspections and maintenance every 10 years)	-						-	-	-	-	-	-		-		

Table ⍰: Effects Assessment and Mitigation Measures

Environmental Component and Effect	Recommended Mitigation Measure	Net Effects
Transportation Operations		
· Temporary lane closures may be required during construction. These lane closures, and resulting traffic delays, will impact users of Fort York Blvd.	o Prior to construction, prepare a Traffic Management Plan (including emergency provisions) in consultation with stakeholders to address delays and alternative routes associated with closures. o Provide advance notification of road lane closures and delays and implement clear signage for detours and delays. o Continue to engage Toronto Emergency Services (who have been part of the TAC for the EA) through to completion of construction to identify and address emergency access and operations issues related to construction and maintenance o Maintain continuity of sidewalks and walkways to extent possible. Where necessary, provide temporary walkways and delineate or fence off areas that may conflict with vehicular traffic. o Maintain continuity of transit bus service to extent possible and continue to engage Toronto Transit Commission (TTC) through the completion of construction. Work with TTC to provide transit detour routes if necessary and ensure advance notification of transit service impacts.	Minimal traffic disruption, no significant net effect.
· Bridge provides a new connection / route option for pedestrians and cyclists	o Positive effect. No mitigation required	None
· Potential for maintenance activities to impact user accessibility of bridge	o Prepare a Bridge Maintenance Access Plan in consultation with stakeholders to address access restrictions and identify alternative routes where necessary. Maintain bridge access to extent possible during maintenance activities. This Access Plan is to address both bridge and Gardiner maintenance activities. o Provide advance notification of bridge maintenance activities and temporary bridge closures/detours.	Minimal detours/restrictions during maintenance, no significant net

Environmental Component and Effect	Recommended Mitigation Measure	Net Effects
	o Continue to engage local residents and businesses throughout the maintenance period to address user access issues.	effect.
Servicing Utilities		
· Installation of piles/micropiles for the landing areas may impact underground utilities	o Prior to construction, undertake utility locates to identify underground utilities/services (known utilities include storm sewer, water main and Toronto Hydro electrical cable). In Construction Management Plan include process for working around utilities. No impact to operation of services/utilities during construction is anticipated.	None
Terrestrial Species and abitat		
· No critical or significant habitat will be affected by the project. No tree removal is anticipated	No mitigation required.	None
Surface ater		
· Potential to impact surface water runoff / stormwater runoff during construction due to site preparation, grading and construction of landing areas	o Surface water / stormwater management best practices to be implemented during construction to minimize uncontrolled runoff to storm sewer system. o Adopt storm water management practices in accordance to City of Toronto and provincial guidelines. o Define construction setbacks, secondary drainage measures, and refueling precautions. o Ensure all construction equipment in good working order. o Construction Management Plan to include standard construction practices to minimize potential for fuel spills from equipment/machinery. In event of spill, a spill containment and contingency plan is to be followed.	None

Environmental Component and Effect	Recommended Mitigation Measure	Net Effects
Soils and Groundwater		
· Potential to expose contaminated soils during construction due to grading and excavation for construction of landing areas	o For excavation of contaminated soils, work with MOECC to develop a contingency plan for how and where soils will be disposed. A specific soils management program should be developed as part of the Construction Management Plan.	None
· Potential for construction activities to result in erosion	o With project being primarily located under the Gardiner, the quantity of stormwater to manage is reduced. o As with surface water, best management practices to be implemented during construction to minimize uncontrolled runoff and erosion to storm sewer system.	None
· Potential to contaminate groundwater during construction	o Define construction setbacks, secondary drainage measures, and refueling precautions. o Ensure all construction equipment in good working order. o Construction Management Plan to include standard construction practices to minimize potential for fuel spills from equipment/machinery. In event of spill, a spill containment and contingency plan is to be followed.	None
Planned Land Use		
· No change in land use, consistent with Official Plan and Fort York Neighbourhood Secondary Plan. Positive effect provides a new pedestrian/cycling connection within the right-of-way	No mitigation required.	None

Environmental Component and Effect	Recommended Mitigation Measure	Net Effects
Businesses and Residents		
· Potential for construction and maintenance activities to impact local businesses and residents on Fort York Blvd due to nuisance effects from temporary noise, dust, and road/sidewalk/bike lane closures	o Notify local businesses and residents to inform them of the timing of construction, coordination/communications throughout the construction period. o Use community liaison staff to communicate with the local businesses and residents during construction. o Implement Traffic Management Plan including signage and temporary parking (if required). o See air quality and noise mitigation measures for mitigation to limit nuisance effects.	Minimal nuisance effects, no significant net effects.
· Positive operations effects include improved connections and public space in the community	No mitigation required.	None
Recreation and Tourism		
· Potential for construction and maintenance activities to impact local recreation and tourism due to nuisance effects from temporary noise, dust, and road/sidewalk/bike lane closures	o Hold ongoing discussions with Fort York NHS operators during construction planning and implementation to minimize effects to visitors accessing Fort York through the study area. o Notify local businesses and residents of construction periods and post notices to inform visitors in the area of the timing of construction, coordination/communications throughout the construction period. o Implement Traffic Management Plan including signage, temporary re-routing for cyclists and walkers, and temporary parking (if required). o See air quality and noise mitigation measures for mitigation to limit nuisance effects.	Minimal nuisance effects, no significant net effects.
· Positive operations effects include improved recreational connections, access to new public	No mitigation required.	None

Environmental Component and Effect	Recommended Mitigation Measure	Net Effects
space, exposure of visitors to Fort York, and encouragement of tourism through unique design		
Private Property		
· Potential for construction and maintenance activities to impact private property for staging areas and construction around southeast landing area	o Hold ongoing discussions with land owners during construction planning and implementation. o Maintain access to all properties. o Install and maintain fencing and screening at construction sites. Employ good housekeeping practices. o See air quality and noise mitigation measures for mitigation to limit nuisance effects.	Minimal effect, no significant net effect.
· Positive operations effects include improved connection over Fort York Blvd and enhanced public realm for private property on southeast side of Fort York Boulevard	No mitigation required.	None
Air □ uality □ Dust		
· Potential for reduced air quality due to airborne dust and migration during construction and maintenance of bridge	o Monitor dust emissions during construction o Use dust control and suppression measures o Ensure all equipment in good working order o Minimize vehicle traffic on exposed soils o Avoid excavation and other construction activities that may generate dust during periods of high winds o Follow City by-laws regarding vehicle/construction equipment idling	Minimal nuisance effects, no significant net effects.

Environmental Component and Effect	Recommended Mitigation Measure	Net Effects
Noise and □ibration		
· Potential for nuisance effects from noise and vibration during construction and maintenance of bridge (from vehicles and equipment)	o Follow City by-laws and practices regarding hours of construction o Avoid unnecessary idling of construction equipment o Ensure all equipment in good working order o Assign construction trucking routes	Minimal nuisance effects, no significant net effects.
Public Safety		
· Potential for construction and maintenance activities to impact public safety due to operation of equipment and machinery	o Prior to construction, prepare a Health and Safety Plan that includes construction management practices to ensure public safety around the site. o Install barriers to prevent public from accessing construction site. o Ensure appropriate signage and notification to communicate construction activities.	None
· Positive effect as a result of grade-separated crossing (pedestrians/cyclists separated from Fort York Blvd auto traffic)	No mitigation required.	None
Existing Public Realm and Planned Improvements		
· Potential for maintenance activities to limit access to future public spaces that are part of Project: Under Gardiner	o Ensure appropriate signage and notification of maintenance activities. o Limit site fencing to area necessary for maintenance (including staging areas). Maintain fencing and screening at construction sites. Employ good housekeeping practices. o Coordinate maintenance of wider Project: Under Gardiner public space.	Minimal effect on access, no significant net effect.
· Positive effect as a result of providing new connection and signature bridge design for	No mitigation required.	None

Environmental Component and Effect	Recommended Mitigation Measure	Net Effects
Project: Under Gardiner		
Cultural and Built Heritage		
· Potential for construction and maintenance activities on northwest side of Fort York Blvd to impact cultural landscape and heritage views of Fort York NHS	o Hold ongoing discussions with Fort York NHS operators to confirm low impact construction techniques to be utilized during construction (e.g., minimize site grading, minimize staging area on Fort York lands, etc.).	Minimal effect, no significant net effects.
· Positive operational effects as a result of improved access to, and view of, Fort York NHS	No mitigation required.	None
· Potential negative operational effect of bridge impacting view from Fort York NHS	o Confirm detailed design of bridge in consultation with Fort York NHS operators to limit visual impact of bridge (e.g., minimize bridge deck width and dimensions, use of transparent materials where possible, etc.). Given existing condition of built-up environment around Fort York, potential impact is considered to be minimal.	Minimal effect, no significant net effect.
Archaeological Resources		
· Potential for construction activities to impact potential archaeological features through grading and excavation for landing areas (unlikely given limited archaeological potential of site)	o Contact the Heritage Operations Unit of the Ministry of Culture immediately if any potential archaeological artifacts are uncovered.	None

Environmental Component and Effect	Recommended Mitigation Measure	Net Effects
Indigenous Peoples		
· No interactions or impacts expected	No mitigation required.	None

.2 Mitigation Commitments Based on Effects Assessment

Tables 8 and 9 identify potential effects and mitigation recommendations. There are no to minimal temporary effects anticipated if the mitigation measures are implemented. Given the existing conditions in the study area and that the footprint of the infrastructure proposed is within the right-of way underneath the Gardiner Expressway, there are minimal environmental components that would be impacted by the undertaking. The undertaking will result in a net benefit for the community as it will provide a new connection that improves the public realm in the area. Where there are potential effects, ongoing communication with the public, Agencies and stakeholders will be an important element of the mitigation program. Proposed mitigation also includes the preparation of the following studies/reports prior to construction implementation:

- Construction Management Plan, including a Construction Best Management Practices Guide
- Traffic Management Plan
- Health and Safety Plan
- Bridge Maintenance Access Plan

Construction Management Plan
The Construction Management Plan should provide details of the construction activities, process, communications and schedule. It should also include best management practices to be followed to minimize impacts to soils, surface water, groundwater, residents and businesses. This includes protocols for equipment operations, spill management, dust and noise management.

The Construction Management Plan should also include a construction communications plan for consulting and communicating with local stakeholders, residents and businesses throughout the construction period.

Traffic Management Plan
The Traffic Management Plan should identify requirements and routes for traffic detours and/or lane restrictions along Fort York Boulevard during construction. The plan should also identify the process for notifying the public of traffic detours, including detours for transit. The plan should be prepared in consultation with TTC and Toronto Emergency Services.

ealth and Safety Plan
A Health and Safety Plan should be prepared to address safety during construction for construction workers and the public. Details should include identification of potential safety hazards, safety equipment that is required on site, fencing requirements around the site and communication plans in the event of a safety hazard or malfunction.

Bridge Maintenance Access Plan
It is recommended that an access plan for trail users and visitors to Project: Under Gardiner be developed to identify restrictions, limitations and/or detours required during bridge maintenance. The

maintenance approach should attempt to keep some access of the bridge open for users to travel through the area. The plan should be communicated publicly prior to the commencement of maintenance activities.

7.3 Climate Change Considerations

Climate change is an important consideration when conducting environmental assessments of planned projects. There is currently no MOECC policy or regulation regarding how climate change is to be considered in EAs although it is understood that guidance materials are forthcoming. Recent direction from the MOECC is however clear in that the assessment of environmental effects of planned infrastructure projects needs to consider climate change. Climate change impacts can be assessed in two distinct ways: 1) by assessing the effect of the project on climate change; and 2) by assessing the effect of climate change on the project. Regarding the project's effect on climate change, there is the potential that the project will support a greater use of active transportation modes by commuters in the study area through the development of the bridge crossing to support the new multi-use trail. Infrastructure support for active transportation may reduce automobile use. Reducing automobiles use may contribute to a reduction in greenhouse gas generation.

Regarding the effects of climate change on the project, major storm events are predicted to increase in the City of Toronto which may impact the user experience but are not anticipated to alter or influence the infrastructure itself. It is likely that during major storm events, users of the bridge crossing will avoid the area. The design of the bridge crossing has little impact on the ground given the suspension technique being utilized. Further, as the crossing will be located underneath the much larger Gardiner structure, there will be limited non-permeable surface area added to the site. As such there will be little influence on stormwater management infrastructure during major storm events. Given the scale and size of the project, it has been determined that climate change impacts are unlikely as a result of the project and that the project will not be significantly impacted by climate change.

7.4 Accessibility

Project: Under Gardiner contributes to the development of improved accessible public space following the Accessibility for Ontarians with Disabilities Act (AODA) Urban Design Guidelines. The project is an accessible gateway to the waterfront, while providing access to important attractions and destinations – from the Molson Amphitheatre to the Rogers Centre and Harbourfront Centre. This dynamic new urban corridor will activate the community with a continuous accessible multi-use trail providing access to year-round activities and events, including gardens, a skating rink, recreational amenities, public markets, public art, special exhibitions, festivals, theatre and musical performances and more. There are significant opportunities to improve the public realm and experience for persons with disabilities. It is anticipated that Project: Under Gardiner's multi-use trail will be accessible for persons with disabilities.

The project is being designed in accordance with the AODA Design of Public Space Standards. The aim is to provide continuous access for all users from Strachan to Spadina. All exterior paths of travel are designed as stable surfaces with maximum running slope of 5%. Where staircases are provided as an alternative to the primary path the staircases are AODA compliant and equipped with required tactile warning and high tonal contrast. Along the primary path and within the flexible plaza spaces, site furnishings such as benches and water fountains are designed to take all users into account.

5.5 The Bentway Conservancy

The Bentway Conservancy is a new not-for-profit organization that will manage operations, programming and maintenance of the Project: Under Gardiner study area. The Conservancy provides administrative and operational leadership, ensuring that the space engages the surrounding community and city as a whole, offers a broad spectrum of events and programming, is safe and accessible, and is financially sustainable. The organization is responsible for mapping out a schedule of year-round events, activities and opportunities for residents, community members and visitors. The Bentway Conservancy is committed to accessibility and openness, while cultivating a culture of discovery and community participation. The Bentway Conservancy works in partnership with the City of Toronto, Fort York National Historic Site, the seven adjacent neighbouring communities and other stakeholders and partners across the City of Toronto and beyond.

6.0 Next Steps – Review Period and Implementation

As part of the final steps in the MCEA process this ESR will be posted on public record for a 30 calendar day agency and public review period. Official appeals can be made during this period which will be addressed as needed. Notification of the posting and appeals process includes information on how to submit an appeal.

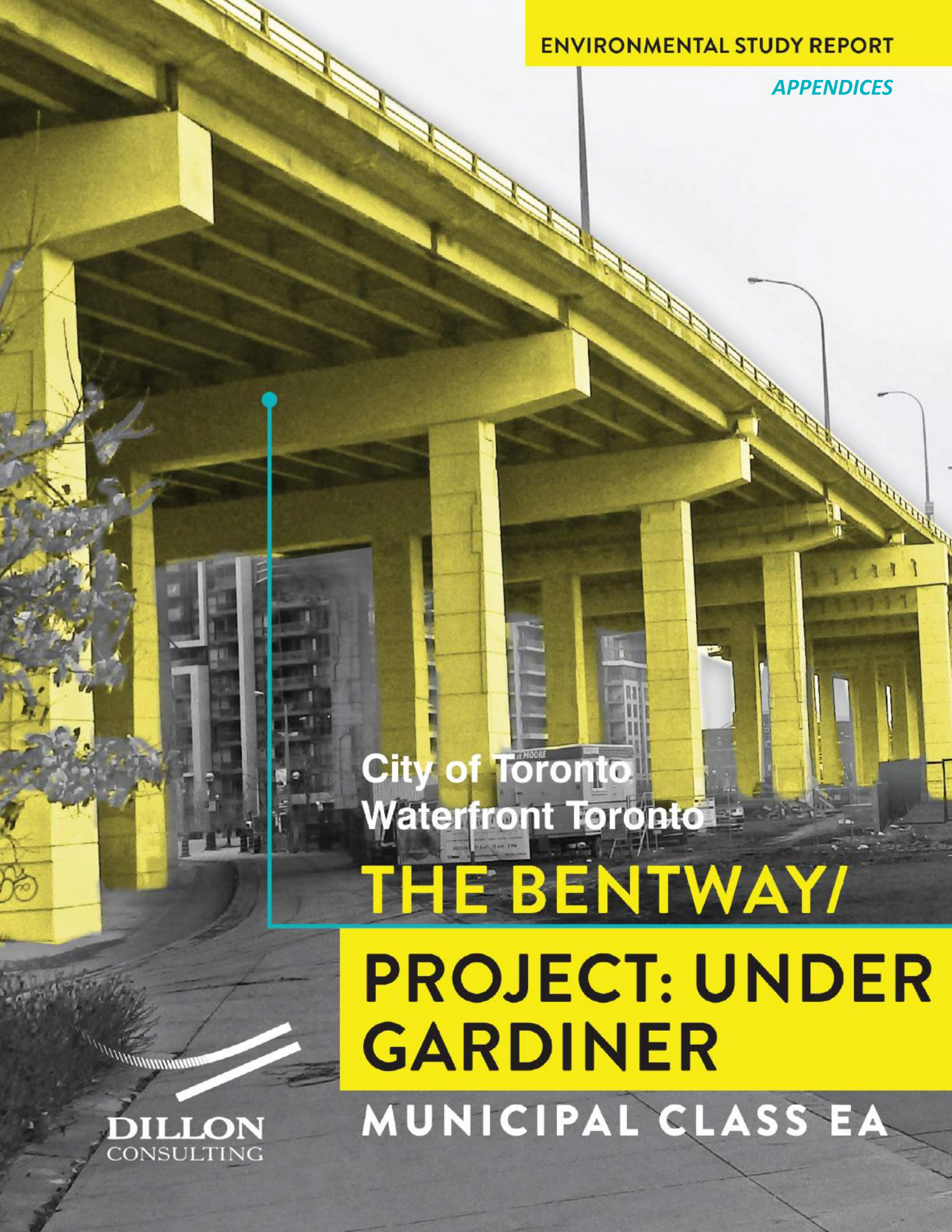
Following the 30-day review period, the project co-proponents will issue a Notice of Study Completion, to notify the public and government agencies of the completion of the study. The completion of the final detailed design for the preferred undertaking and the implementation phase may then commence.

During the completion of the detailed design of the project, the project co-proponents will continue to work with the TAC to address Gardiner Expressway maintenance plans in the area around the suspended bridge. This includes identification of how maintenance of the Gardiner columns will be completed given the space constraints with the bridge in place. Once the detailed design is confirmed, implementation, Phase 5 in the MCEA process, includes the following steps:

- TAS 1: Complete contract drawings and documents (based on final detailed design).
- TAS 2: Proceed to construction and operation of the project.
- TAS 3: Monitor construction and operations for environmental provisions and commitments as necessary.

ENVIRONMENTAL STUDY REPORT

APPENDICES



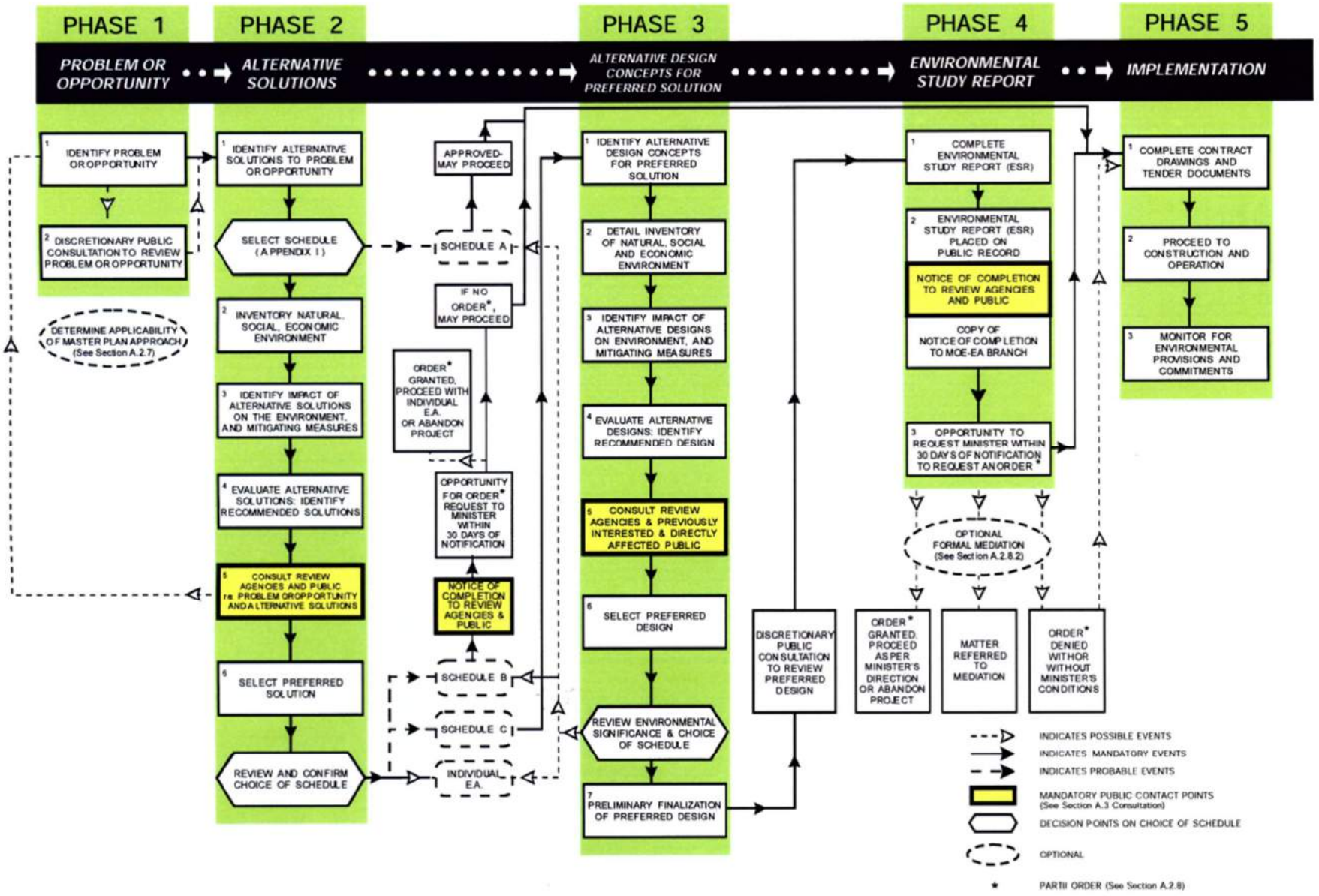
City of Toronto
Waterfront Toronto

THE BENTWAY/ PROJECT: UNDER GARDINER

MUNICIPAL CLASS EA

DILLON CONSULTING

Appendix A
Municipal Class EA Process Flowchart


PHASE 1
PROBLEM OR OPPORTUNITY
PHASE 2
ALTERNATIVE SOLUTIONS
PHASE 3
ALTERNATIVE DESIGN CONCEPTS FOR PREFERRED SOLUTION
PHASE 4
ENVIRONMENTAL STUDY REPORT
PHASE 5
IMPLEMENTATION
1 IDENTIFY PROBLEM OR OPPORTUNITY
2 DISCRETIONARY PUBLIC CONSULTATION TO REVIEW PROBLEM OR OPPORTUNITY
DETERMINE APPLICABILITY OF MASTER PLAN APPROACH (See Section A.2.7)
1 IDENTIFY ALTERNATIVE SOLUTIONS TO PROBLEM OR OPPORTUNITY
SELECT SCHEDULE (APPENDIX I)
2 INVENTORY NATURAL, SOCIAL, ECONOMIC ENVIRONMENT
3 IDENTIFY IMPACT OF ALTERNATIVE SOLUTIONS ON THE ENVIRONMENT, AND MITIGATING MEASURES
4 EVALUATE ALTERNATIVE SOLUTIONS: IDENTIFY RECOMMENDED SOLUTIONS
5 CONSULT REVIEW AGENCIES AND PUBLIC re: PROBLEM OR OPPORTUNITY AND ALTERNATIVE SOLUTIONS
6 SELECT PREFERRED SOLUTION
REVIEW AND CONFIRM CHOICE OF SCHEDULE
APPROVED-MAY PROCEED
SCHEDULE A
IF NO ORDER*, MAY PROCEED
ORDER* GRANTED, PROCEED WITH INDIVIDUAL E.A. OR ABANDON PROJECT
OPPORTUNITY FOR ORDER* REQUEST TO MINISTER WITHIN 30 DAYS OF NOTIFICATION
NOTICE OF COMPLETION TO REVIEW AGENCIES & PUBLIC
SCHEDULE B
SCHEDULE C
INDIVIDUAL E.A.
1 IDENTIFY ALTERNATIVE DESIGN CONCEPTS FOR PREFERRED SOLUTION
2 DETAIL INVENTORY OF NATURAL, SOCIAL AND ECONOMIC ENVIRONMENT
3 IDENTIFY IMPACT OF ALTERNATIVE DESIGNS ON ENVIRONMENT, AND MITIGATING MEASURES
4 EVALUATE ALTERNATIVE DESIGNS: IDENTIFY RECOMMENDED DESIGN
5 CONSULT REVIEW AGENCIES & PREVIOUSLY INTERESTED & DIRECTLY AFFECTED PUBLIC
6 SELECT PREFERRED DESIGN
REVIEW ENVIRONMENTAL SIGNIFICANCE & CHOICE OF SCHEDULE
7 PRELIMINARY FINALIZATION OF PREFERRED DESIGN
DISCRETIONARY PUBLIC CONSULTATION TO REVIEW PREFERRED DESIGN
1 COMPLETE ENVIRONMENTAL STUDY REPORT (ESR)
2 ENVIRONMENTAL STUDY REPORT (ESR) PLACED ON PUBLIC RECORD
NOTICE OF COMPLETION TO REVIEW AGENCIES AND PUBLIC
COPY OF NOTICE OF COMPLETION TO MOE-EA BRANCH
3 OPPORTUNITY TO REQUEST MINISTER WITHIN 30 DAYS OF NOTIFICATION TO REQUEST AN ORDER*
OPTIONAL FORMAL MEDIATION (See Section A.2.8.2)
ORDER* GRANTED, PROCEED AS PER MINISTER'S DIRECTION OR ABANDON PROJECT
MATTER REFERRED TO MEDIATION
ORDER* DENIED WITH OR WITHOUT MINISTER'S CONDITIONS
1 COMPLETE CONTRACT DRAWINGS AND TENDER DOCUMENTS
2 PROCEED TO CONSTRUCTION AND OPERATION
3 MONITOR FOR ENVIRONMENTAL PROVISIONS AND COMMITMENTS
INDICATES POSSIBLE EVENTS
INDICATES MANDATORY EVENTS
INDICATES PROBABLE EVENTS
MANDATORY PUBLIC CONTACT POINTS (See Section A.3 Consultation)
DECISION POINTS ON CHOICE OF SCHEDULE
OPTIONAL
* PART II ORDER (See Section A.2.8)

Appendix B
Project: Under Gardiner Consultation Record

PROJECT:
UNDER
GARDINER

CONSULTATION SUMMARY & PUBLIC FEEDBACK REPORT

August 19, 2016

1. Background

In November 2015, the City of Toronto, together with philanthropists Judy and Wil Matthews and Waterfront Toronto announced a $25 million partnership that will create a new public landscape beneath a section of the Gardiner Expressway. The Matthews' generous gift is funding design and construction of more than four hectares (10 acres) of new public space and 1.75 kilometres of multi-use trail beneath the elevated expressway from just west of Strachan Avenue to Spadina Avenue.

Project: Under Gardiner envisions a dynamic new public space that creates connections between some of Toronto's newest and most dense neighbourhoods, including Liberty Village, Niagara, Fort York Neighbourhood, CityPlace, Bathurst Quay and Wellington Place. The project will knit these communities together with innovative programmable spaces that will showcase Toronto's unique cultural and related offerings – music, food, theatre, visual arts, education and civics, dance, sports and recreation. These spaces have been conceived as "rooms" that are defined by the series of concrete post-and-beam structural elements supporting the Gardiner. Up to 55 civic rooms can be fashioned to house a wide variety of year-round programming.

For more information, please visit www.undergardiner.com.

2. Promotion of the Project

As the project manager – in charge of overseeing design, construction and public consultation – Waterfront Toronto has made a concerted effort to inform the public about the project, to encourage people to share their views and engage in the design development and creative visioning of this important public space project. These efforts were comprised of three main approaches:

Media Relations

Press releases, media pitches and statements published by Waterfront Toronto resulted in wide coverage by major news outlets (*The Toronto Star, The Globe and Mail, Toronto Sun, CityNews, CP24, CTV News, Global News, CBC News, 680 News, Newstalk 1010, Metro News)*, feature coverage (*The Toronto Star, The Globe and Mail*), blog and specialty coverage (*Toronto Life*, *BlogTO, Torontoist, Inside Toronto, Urban Toronto, Yonge Street Media, Architecture Lab, Azure Magazine, Canadian Architect, CityLab, Design Lines, Open City Projects, Curbed, Dezeen, FastCo.Exist, Gizmodo*) and broadcast radio coverage (CBC Radio's *Metro Morning,* CBC Radio's *Here and Now*, AM640's *Bill Carroll Show*).

Notable quotes from media coverage include:

> *Toronto's parks and public spaces have never seen a donation this large, or that sort of partnership. In an interview on the weekend, Mayor John Tory said Under Gardiner might set an example for other collaborations between the city and private donors, including some kind of park conservancy model.*
> ***-Alex Bozikovic, The Globe & Mail***

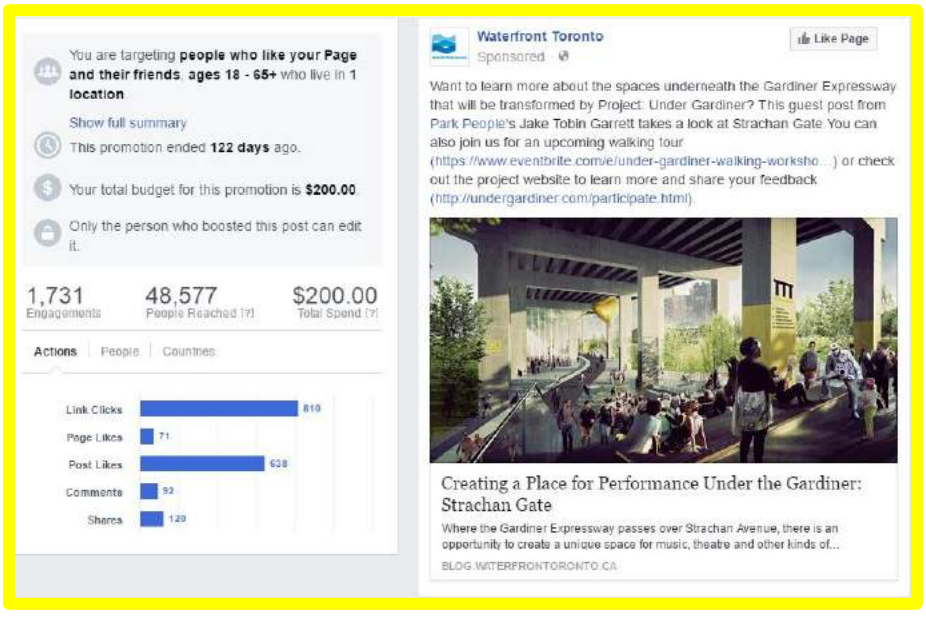
> *A wildly ambitious, innovative, even revolutionary scheme unveiled earlier this week proposes turning the land beneath the western stretch of the Gardiner into a 1.75-kilometre multi-purpose linear extension of the public realm [...] It goes without saying that this is Toronto at its most enlightened.*
>
> ***-Christopher Hume, Toronto Star***

For more, see Appendix 1 – Selected Media Coverage.

Social Media Promotion and Engagement

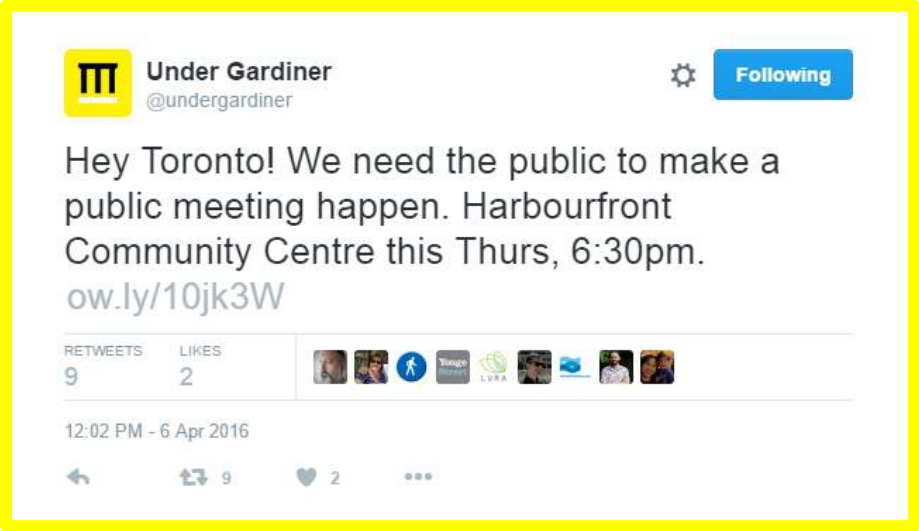
Waterfront Toronto used its social media channels to promote the project, including the project-specific social media accounts, website and public feedback mechanisms. Social media were also used to generate discussion and amplify news media coverage.

Facebook – Boosted posts on Waterfront Toronto's page reached more than 170,000 individuals, were shared more than 500 times, received more than 2,400 likes and generated over 600 conversations between November 2015 and June 2016.



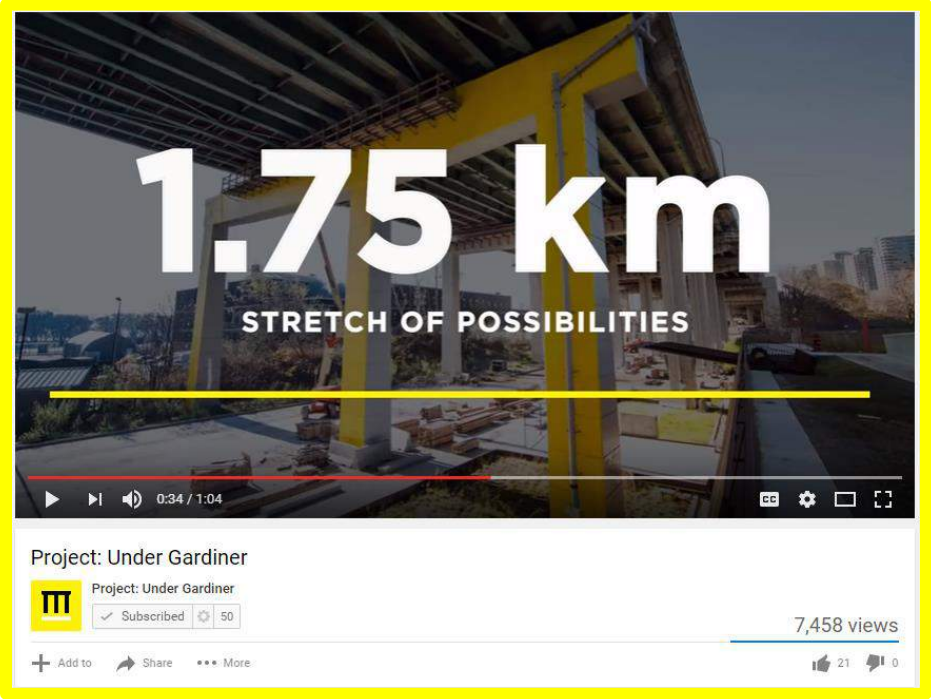
Left: Sample result of Facebook promotion.

Twitter – The project's Twitter account generated more than 505,000 impressions. Cumulatively, tweets from the account were retweeted more than 800 times between November 2015 and June 2016.



Left: Sample tweet promoting the project's first public meeting.

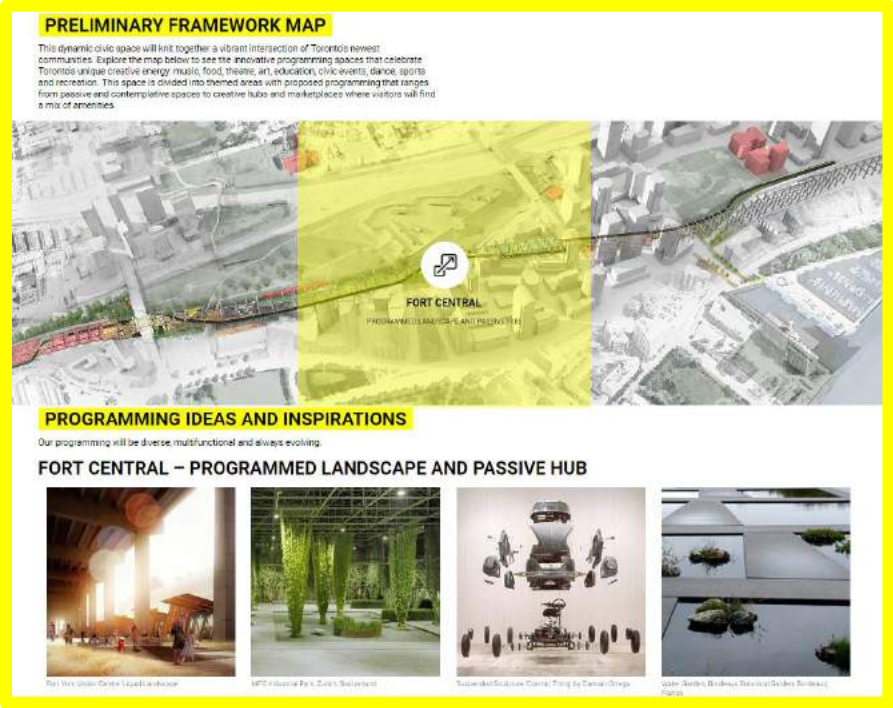
YouTube – A short video explaining and promoting the project was viewed more than 7,000 times. Four short videos advertising the campaign to choose a new name for the project were each viewed more than 10,000 times. Overall, the project-specific YouTube Channel has received over 47,000 views since launch in November 2015.



Left: Sample of YouTube video promoting the project.

Project Website & Email Newsletter

Between November 2015 and June 2016, the project website was viewed more than 90,000 times. The site was used to communicate the vision and design framework for the project, as well as to advertise public meetings and walking tours. Online methods of public consultation were also presented on the site.



Sample page from project website at www.undergardiner.com.

The project's email newsletter reaches over 1,400 individuals. Emails to Waterfront Toronto's newsletter list reached an additional 7,000 individuals.

View email newsletters attached in Appendix 7 – Email Newsletters Distributed.

3. Public Consultation on the Municipal Class Environmental Assessment

A portion of the project's public engagement activities was devoted specifically to meeting the public consultation requirements for the associated Municipal Class Environmental Assessment, which determined how best to create a new pedestrian/cycling crossing at Fort York Boulevard under the Gardiner Expressway. The details of the environmental assessment were communicated through a series of mandatory notices, notifications, online presentations and meetings. Public feedback related to the scope and content of the Environmental Assessment was formally received through stakeholder meetings, public information centres, through an online comment form, as well as submissions made by email. Figure 1 outlines the public engagement and formal consultation activities undertaken.

Figure 1. Key consultation activities as part of the Project: Under Gardiner Municipal Class Environmental Assessment.

Activity	Description

Public Notices	Formal notices regarding the Notice of Study Commencement and public information centres were published in local newspapers, online and distributed by email. A formal notice calling for community members interested in serving on the stakeholder advisory committee was circulated by email notice and on social media.
	
	- Call for Stakeholder Advisory Committee Members
	  o Issued: 2 December 2016 on Waterfront Toronto's website
	
	- Notice of Study Commencement
	  o Issued: 24 February 2016 on Waterfront Toronto's website and published in *The Toronto Star*
	
	- Public Information Centre #1
	  o Notice: 1 April 2016 on Waterfront Toronto's website and published in *The Toronto Star*
	
	- Public Information Centre #2
	  o Notice: 19 May 2016 on Waterfront Toronto's website and published in *The Toronto Star*

Public Forums	Two public information centres were held during the course of the environmental assessment to provide project updates, information about the EA and opportunities for public input. Both public meetings included an Open House component where members of the public had an opportunity to ask questions directly of project team members.
	
	- Public Information Centre #1
	  o Notice: 1 April 2016 on Waterfront Toronto's website and published in *The Toronto Star*
	  o Presentation: 12 April 2016

	○ Display Boards – Environmental Assessment: 12 April 2016 - Public Information Centre #2 ○ Notice: 19 May 2016 on Waterfront Toronto's website and published in *The Toronto Star* ○ Presentation: 31 May 2016 ○ Display Boards – Environmental Assessment: 31 May 2016
Aboriginal Communities	In accordance with the City's First Nation Consultation Protocol, a formal study notice was sent to the Mississaugas of New Credit First Nation. This correspondence invited the nation to participate and engage directly in the EA consultation. - Letter to Mississaugas of the New Credit First Nation ○ Dated: 21 March 2016
Stakeholder Advisory Committee (SAC) Meetings	The SAC was formed in January 2016 and composed of local residents' associations, business improvement areas, adjacent landowners and real estate developers, advocates for walking, cycling, and accessibility, as well as five community-members-at-large. Three meetings were held to review project progress – including design, the environmental assessment, programming framework and governance structure. - Stakeholder Advisory Committee Meeting #1 ○ Presentation: 11 January 2016 ○ Minutes: 11 January 2016 - Stakeholder Advisory Committee Meeting #2 ○ Presentation: 22 March 2016 ○ Minutes: 22 March 2016 - Stakeholder Advisory Committee Meeting #3 ○ Presentation: 19 May 2016 ○ Workshop Comments: 19 May 2016
Technical Advisory Committee (TAC) Meetings	The TAC was formed in January 2016 to provide input at key milestones in the study process. The committee included representation from various City Divisions. The TAC met a total of three times during the study. Numerous meetings were held with key City Divisions throughout the EA process. - Technical Advisory Committee Meeting #1 – February 11, 2016 ○ Agenda ○ Presentation - Technical Advisory Committee Meeting #2 – March 11, 2016 ○ Agenda - Technical Advisory Committee Meeting #3 – July 15, 2016

	○ Agenda
Individual Stakeholder Meetings	Face-to-face meetings with specific organizations or groups (e.g. property owners, land developers, interest groups) were held as needed throughout the study. - ONNI: the eastern portion of the suspended bridge meets the ground on lands that are privately owned by the ONNI Group. The City Planning Division is working with ONNI to convey these lands for nominal consideration and at no cost to the City as a condition of condominium approval. - Exhibition Place - Canadian National Exhibition - Citizens with Air Quality Concerns: a meeting was organized by Waterfront Toronto to provide the interest group with an opportunity to discuss air quality matters with Waterfront Toronto, the consultant team and the City. The meeting also included a discussion of the project team's intended air quality monitoring and modelling program.
Committee and Council Meetings	Executive Committee and Toronto City Council reviewed the study. These meetings were publicly advertised, open to the public and in the case of Executive Committee there was an opportunity for members of the public to depute. Two Project: Under Gardiner reports have been considered by City Council since December 2015: 1. **Private Donation to Animate the F.G. Gardiner Expressway from Approximately Strachan Avenue to Spadina Avenue** Executive Committee on December 1, 2015 City Council on December 9, 2015 http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.EX10.7 2. **Governance and Funding Options for Project: Under Gardiner and Class Environmental Assessment for Crossing of Fort York Boulevard** Executive Committee on June 28, 2016 City Council on July 12, 2016 http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.EX16.12
Waterfront Toronto Board Meetings	The project team provided regular updates about the Project Under Gardiner EA to the Waterfront Toronto Board throughout the study. - Board Meetings ○ December 15, 2015 – Presentation ○ April 27, 2016 – Presentation ○ June 29, 2016 – Presentation

Online Engagement	The project website serve and Waterfront Toronto's website served as the portal to information and engagement activities during the consultation process. Alongside face-to-face consultation activities, online options were provided after each public information centre to encourage further participation. Email newsletters, social media and promoted posts were used to promote stakeholder and public awareness of consultation activities.
Walking Workshops	A series of four guided walking tours were hosted by Park People as a method of gathering public feedback on the project. The tour leader used a standard script that provided project overview, important context, and details of the Environmental Assessment and the project design. The walks were used as an opportunity to receive informed feedback from members of the public while in-situ. - Walking Workshops o April 10, 2016 – Comments & Questions o May 8, 2016 – Comments & Questions o June 2, 2016 – Comments & Questions o June 22, 2016 – Comments & Questions

4. Summary of Public and Stakeholder Feedback

In order to receive public feedback, Waterfront Toronto used a variety of in-person and online public consultation formats, including public meetings, a stakeholder advisory committee, online presentations and surveys, and guided walking tours. The City of Toronto ran a technical advisory committee, feedback from which can be found in the links above in Figure 1.

4.1 Stakeholder Advisory Committee

Formed in January 2016. Three meetings were held to review project progress – including design, the environmental assessment, programming framework and governance structure.

Composed of local residents' associations, business improvement areas, adjacent landowners and real estate developers, and advocates for walking, cycling and accessibility, as well as five community-members-at-large.

Feedback received from stakeholders.

- Excitement about the project, new programming spaces and community amenities
- Desire to see more and understand the evolving design
    - Especially as it relates to:
        - Pedestrian experience
        - Cycling experience and safe cycling infrastructure

        - Universal design (i.e. inclusive design) and accessibility
- Generally supportive of bridge alternative solution for Fort York Boulevard pedestrian and cycling crossing, however:
    - Consider connectivity across the site for cycling, in particular a bridge crossing at Fort York Boulevard that requires switchbacks
        - Any requirement to dismount reduces accessibility of the cycling route for all cyclists, but especially those may have difficulty walking their bikes – e.g. people with disabilities, parents with kids in trailers, etc.
        - May need to look at alternative, at-grade routes for cyclists
    - Consider at-grade, signalized crossing options
        - May be more cost-effective solution than grade-separated options
- Consider transportation requirements for this new programming space
    - Improved transit
    - Taxi queueing locations
    - Parking requirements
- Find ways to weave indigenous stories and history of the land into the design and programming
- Ensure supporting amenities are in place for visitors
    - Warming areas, bathrooms, food & drink, furniture
- Need a playground and spaces for kids to play close to Fort York Neighbourhood
    - Don't repeat mistakes of June Callwood Park
- Desire to understand what model will be used to deliver enhanced operations and maintenance over the long-term
    - Including maintenance of landscape elements, as well as fixtures and features of the public spaces

4.2 Public Meetings

Public information centres were held on April 7, 2016 and May 31, 2016. These two meetings consisted of presentations from the project team on the evolving design, the environmental assessment, ideas for a future programming framework and the governance structure that will support enhances maintenance and operations of the site.

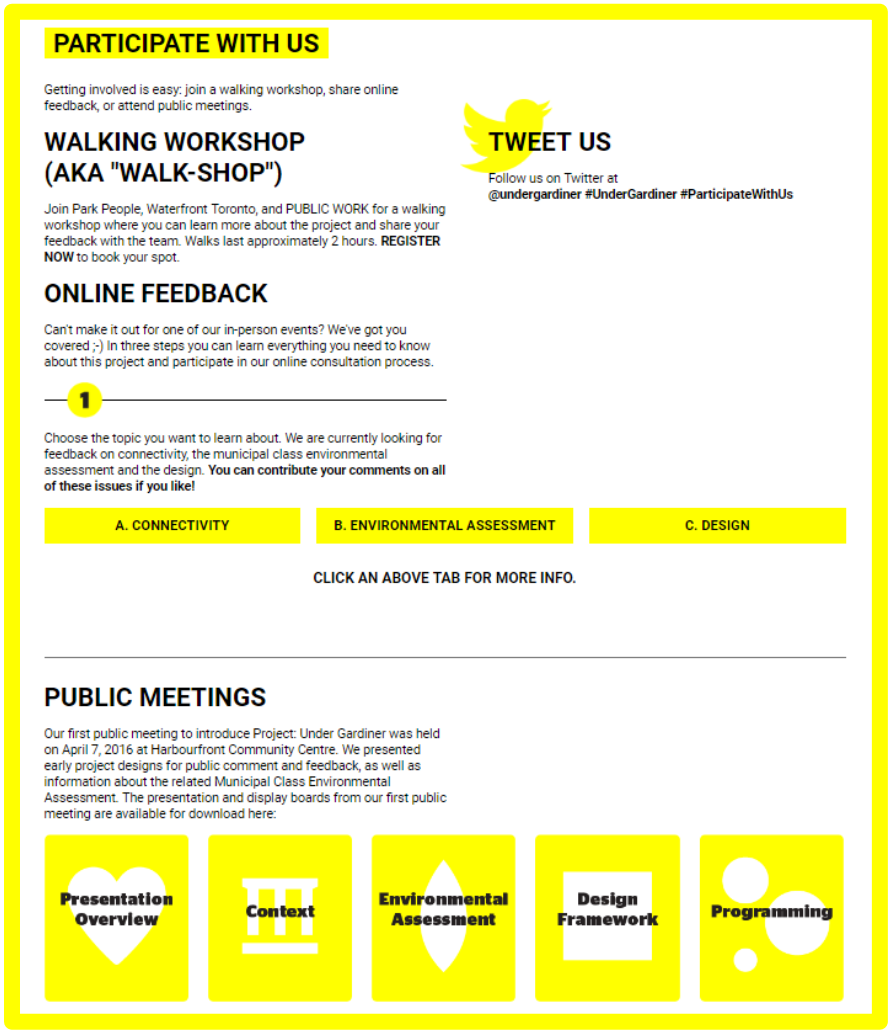
At both meetings, members of the public were invited to submit comment cards with their feedback and suggestions.

Feedback received from members of the public.

- High level of excitement for this project
- Lots of interest in how the plazas and public spaces will be programmed
    - Top program suggestions include: Skating, farmers markets, film nights, theatre, music, public art, basketball courts, climbing walls
- Strong support for the bridge alternative for the Fort York Boulevard crossing
- Air quality is a major concern for many people
- Concern that this project could result in displacement of people experiencing homelessness
- Questions about how to balance comfort and safety of pedestrians and cyclists in shared spaces
    - Calls to learn from how other shared spaces are working in Toronto (e.g. Kensington Market, Queens Quay, parks and trails)
    - Desire for separation of cycling and walking
- Strong support for improving north-south connections through the site and down to the waterfront
- Need to include lots of public washroom facilities
- Strong desire for food programming, cafes and restaurant spaces
- Positive response to design, including water features and lighting
- Some skepticism that ambient noise from Gardiner Expressway and nearby roadways can be sufficiently mitigated for performance spaces
- Many respondents felt the City of Toronto would not maintain the high standard of public realm proposed in the design framework
    - Multiple suggestions that maintenance duties be managed through a private entity or not-for-profit organization
- Strong support for creating kid-friendly play areas to serve Liberty Village, Fort York Neighbourhood,

4.3 Online Presentations

An online consultation module was delivered via the project website at www.undergardiner.com. The module was designed to replicate the content and prompt questions delivered at the public information centre meetings and stakeholder meetings. The page was also used to advertise the guided walking tours, publicly called "Walking Workshops." To the right is a screengrab of the consultation page from the website, which was available online from May 2016 to June 2016.



4.4 Guided Walking Tours

A series of four guided walking tours were hosted by Park People as a method of gathering public feedback on the project. The tour leader used a standard script that provided project overview, important context, and details of the Environmental Assessment and the project design. The walks were used as an opportunity to receive informed feedback from members of the public while in-situ.

Members of the public attend a guided tour of the project and provide their feedback. Photo credit: Dave Harvey, Park People

Participants who joined the walk hailed from across the City of Toronto, including the immediate area around the project site, as well as surrounding communities and further afield like North York, East York, Scarborough and Etobicoke.

Walk participants' comments tended to group along ten thematic lines:

1. **Water and storm run-off** – Many participants expressed a desire to see water conservation and stormwater management be incorporated into the project.

2. **Sound mitigation** – A major recurring comment from participants across all four walking tours was the importance of planning and designing the space to reduce excess noise from traffic on the Gardiner Expressway above and from adjacent routes, such as Strachan Avenue.

3. **Barrier-free access across the site** – Ensuring the design embraces principles of universal design and ensures broad physical accessibility of the space.

4. **Need for washrooms** – Many participants noted that increased programming activity in the area would necessitate the addition of more washrooms along the site. Currently the only public washrooms nearby are at Fort York's visitor centre, but those cannot handle much increased activity.

5. **Questions about air quality** – Many participants wanted to know more about the air quality in the area, being beneath an expressway, adjacent to a railway that runs diesel trains, and within 250 metres of other busy motor vehicle routes (Lake Shore Boulevard, Strachan Avenue, Fort York Boulevard).

6. **Landscaping and gardens** – At the walking tours held in the warmer months, there was a considerable amount of interest in the proposed planting and gardens, particularly in using native plants and possibilities for community gardens.

7. **Indigenous history** – Many participants expressed a desire to see the Indigenous history on the land be incorporated into the design of these new public spaces.

8. **Separation of walking and cycling traffic** – One of the most common comments/requests heard during the walking tours related to creating separation between cyclists and pedestrians moving through the space.

9. **Effect on people experiencing homelessness** – A number of walking tour participants hoped that the project would examine ways to ensure that people experiencing homelessness are not displaced by the project or excluded from using the new public spaces.

10. **Security, graffiti and vandalism** – Participants had many questions about how security of the site would be managed, with particular attention to illegal graffiti and vandalism.

Read complete transcripts of Walking Tour comments and questions in Appendix 6 – Guide Walking Tour Question & Comment Transcripts.

Attachments

- Appendix 1 – Selected Media Coverage
- Appendix 2 – Stakeholder Advisory Committee Minutes
- Appendix 3 – Technical Advisory Committee Minutes
- Appendix 4 – Correspondence Sent to Mississaugas of New Credit First Nation
- Appendix 5 – Guided Walking Tour Question & Comment Transcripts
- Appendix 6 – Email Newsletters Distributed

APPENDIX 1 – Selected Media Coverage

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Appendix 2 – Stakeholder Advisory Committee Minutes

WATERFRONToronto

Project: Under Gardiner

Stakeholder Advisory Committee Meeting #1

Monday, January 11, 2016
6:00– 8:00 pm

Location: Fort York Visitor Centre - 250 Fort York Boulevard, Toronto ON, M5V 3K9

DRAFT SUMMARY REPORT

On January 11, 2016, approximately 40 members of the Stakeholder Advisory Committee participated in the first of a series of stakeholder meetings for Project: Under Gardiner. The purpose of this meeting was to provide an overview of the project, to gather initial feedback, and approve the terms of reference for this committee.

MINUTES

Waterfront Toronto's vice president of planning and design, Chris Glaisek, opened the meeting with a welcome and brief introductory remarks.

Chris McKinnon, public engagement lead for the project, acted as chair and called the meeting to order at 6:07pm.

1. Consent Agenda

The committee unanimously supported the agenda as it was circulated.

2. Introductions

Committee members, project team members and City of Toronto staff introduced themselves. Committee members also explained what group, organization or community they were representing. See a complete list of organizations represented and project team members appended to the end of this report.

3. Stakeholder Advisory Committee

Pina Mallozzi, project manager for the project, reviewed the draft Stakeholder Advisory Committee Terms of Reference. A committee member pointed out that the draft stated the committee would meet on weekday afternoons. It was noted that this was in error and that the Terms of Reference should be revised to indicate that the committee will meet on weekday evenings. Members of the committee further requested to have the meetings start later, suggesting 7:00p.m.

Chris McKinnon requested a show of hands to indicate support for the terms of reference with those changes.

The terms of reference received unanimous support and are considered adopted by the committee. See attachment for the final Terms of Reference.

4. Overview of the project

Due to technical issues, the video produced by *The Globe and Mail* could not be played. Find a link to the streaming version online: http://www.theglobeandmail.com/news/news-video/video-is-torontos-new-frontier-under-the-gardiner-expressway/article27286323/

Marc Ryan from PUBLIC WORK provided an overview of the preliminary "framework plan" and design elements for Project: Under Gardiner. Find a summary of that presentation available for download here: http://www.waterfrontoronto.ca/uploads/documents/2016_01_11_project_under_gardiner_stakeholder_framework_presentation_1.pdf

** As the framework plan and design continue to evolve, all of the content in this presentation is subject to change. For this reason, we ask that you not to forward this presentation summary along. We provide it to you as a tool for use when consulting with your groups or organizations – so that you can collect feedback and questions to share with the project team and the rest of the committee.*

If you have questions, please contact Chris McKinnon or Meghan Hogan to discuss.

5. Review Project Timeline

Pina Mallozzi provided an overview of the project phases and timeline. This included a high-level look at the schedule for SAC and public meetings. The SAC and public meeting schedule depends on certain project milestones, including design phases, the considerations of the Municipal Class Environmental Assessment and City Council reviews.

The meeting schedule provided was very general. Chris McKinnon will distribute more information about the meeting schedule as soon the schedule becomes more firm.

6. Questions from Committee Members

Will we have breakout groups where SAC members can have more in-depth discussions about issues of interest or expertise?

Chris McKinnon (Waterfront Toronto) explained that our meeting agendas are structured around the content and the objectives for the meeting. We anticipate that future meetings will offer greater opportunities for interactivity and sharing. Today's meeting was structured as an information sharing session to get everyone up to speed and hear initial questions.

Concerns about the process for launching a naming contest or competition, specifically related to intellectual property, possible trademark infringement, web domain squatting. What is the plan to safeguard against these things? What criteria will the public be given to help ensure they select a good name? How will we ensure the name selected meets the City of Toronto's criteria for naming public spaces?

Chris McKinnon (Waterfront Toronto) noted that Bespoke Cultural Collective is developing and overseeing the naming campaign. Sabrina Richard from Bespoke outlined the four phases for the process.

- **Public Brainstorm** - The public will be invited to help "brainstorm" a long list of new names for the space. Criteria will be provided to help guide people on important principles of public space naming (uniqueness, recognizable, local reference, etc.) and the City of Toronto's policies and procedures related to this. The process will be more of a campaign than a competition.
- **Jury Short List** - A jury will review the long list against the essential criteria and City requirements and select a short list of names.
- **Public Voting** - An online vote will be conducted to select the people's choice for the project's new name.
- **Final Name Launch** - The new name will be announced to the public before receiving endorsement from the City.

Follow-up note: The jury will play an important role in vetting the short list of names that go to public voting. The project team has reviewed these concerns raised at the meeting and will be working with Waterfront Toronto's Legal team to create additional campaign rules and disclaimers to limit liability.

Several members asked for clarification about the relationship between design, programming and governance. How will the space be operated? Who will maintain it? And how will it be funded?

Chris Glaisek (Waterfront Toronto) provided an outline of the relationship between the donors, the City and Waterfront Toronto.

The project is being funded by the Matthews' family's donation while the City of Toronto owns a significant portion of the study area. Waterfront Toronto has been hired by the City to manage the design, public consultation and construction of the project.

Part of the scope of the project is creating a set of recommendations for the governance, on-going operations, maintenance and programming of the project. Waterfront Toronto is hiring a consultant to research national and international best practices and make a recommendation to Council on what that model should look like.

The objective is to ensure that the project is properly funded, well-maintained and programmed appropriately and that the project vision is sustainable from a budgetary and maintenance perspective.

The results of this research will be brought to a future SAC meeting for input and feedback.

Recommendation: Ensure that adequate supporting facilities and infrastructure are in place to support the level of programming that is anticipated.

The project team heard from committee members that existing facilities and infrastructure at Fort York National Historic Site and around Exhibition Place and Ontario Place are already strained (taxi queuing, transit, public washrooms, etc.) during large-scale events. They urged the project team to carefully consider this when developing plans to create new programming spaces. The project team should evaluate all of these elements and take them into consideration early in the design process, to ensure that they have planned for the appropriate facilities on or along the site.

Can you explain or clarify what will be part of phase one of the project?

Marc Ryan (PUBLIC WORK) clarified the phasing of the project and budget. The first phase is currently being considered as the area from just west of Strachan to Bathurst. This will be the area with the greatest amount of visible transformation. The design team hopes to include trail connections to Exhibition GO Station and Spadina Avenue as part of that first phase and budget.

What can improve the quality of SAC discussions? How much influence and impact will members have?

A committee member suggestion that Waterfront Toronto provide an online forum for SAC members to share ideas and discuss the project.
ACTION: Chris McKinnon to investigate what tool might work for the group in this capacity.

Marc Ryan (PUBLIC WORK) described the infrastructure elements of the project (the grand staircase at Strachan, the pedestrian bridge over Fort York Boulevard) as fundamental to the project's vision. The design team has ideas for what these should look like, but they will want

feedback from the committee on these pieces. The team is also very eager to hear ideas on the design and programming of the individual “rooms” that can be created in the space.

The framework plan presented to the committee is not intended to be taken as a design, but as an illustration of the vision. The design team is about to begin the schematic design phase. That will be the subject of the next SAC meeting and there will be great opportunity to provide input and feedback at that stage and at subsequent stages.

A project budget of $25 million doesn’t seem like enough for a project of this ambition. How will you stretch the budget to get this whole project complete?

Mark Ryan (PUBLIC WORK) noted that typically a project like this would require upgrades and rehabilitation to all the surrounding and supporting infrastructure. That is one of the reasons a park like the High Line in New York City costs so much. The benefit here is that we are building on top of the existing expressway rehabilitation project. The $150 million Gardiner rehabilitation project will put nearly all of that major infrastructure in place. As a result, we believe that our $25 million budget will stretch much further. We are building on what already exists. Much of our work will be “finishing touches” from a public infrastructure perspective.

Will the project engage local artists?

Some committee members expressed that they thought it was important to engage artists on both international and local levels. Chris McKinnon (Waterfront Toronto) explained that a more in-depth programming advisory consultation will happen in the spring. This will include a large meeting open to any not-for-profit organizations or groups in Toronto – including music, food, theatre, art, education, civic events, dance, sports and recreation – that are interested in programming the space. This “town hall” style meeting will be followed up with numerous smaller breakout meetings by artistic discipline or type of programming.

Will we be engaging business community for sponsorship?

Many people are hoping that the Matthews’ generous gift will inspire others.

There has been interest from the business community and developers as a result of the Under Gardiner project. The governance and programming study is expected to explore options for receiving additional donations and sponsorships.

How will members of the public and local residents by engaged in the programming so that the design reflects what they actually want?

The membership of the SAC is composed of local representatives and community-at-large members to help accomplish this. For example, the SAC will preview public meeting presentations to provide feedback before they are presented at larger public meetings. This will

help to ensure that public meeting presentations are presenting the right information and answering the right questions.

SAC members will have opportunities to dig deeper into design issues at future meetings. It is expected that members will also actively consult their constituencies, in order to represent them effectively on the SAC.

Team should work with Metrolinx to address the accessibility issues around Exhibition GO Station

The project team will be reaching out to Metrolinx for a meeting.

7. Vision Exercise / Sharing

Chris McKinnon (Waterfront Toronto) invited each member to share with the group, a response to the following: *In one word, describe what would make this new space truly remarkable for you.*

Here is the list of the words shared by committee members:

- Continuous
- Accessible
- Flowing
- Free
- Open
- Creative
- Light
- Comfort
- Active
- Diverse
- Colour
- Green
- Warm
- Safe Access
- Discovery
- Loud
- Connections
- Engaging
- Accommodate Homeless
- Environmentally Friendly
- Collaborative
- Magical
- Welcoming
- Barrier-Free
- Socialist
- Hockey
- Indigenous
- Community
- Heritage
- Playful
- Meeting Place
- Timeless
- Ambitious
- Sound
- Amazing
- Green
- Engaging
- Connector
- Flow
- Connecting
- Innovative

APPENDIX A - Under Gardiner Project Team

Waterfront Toronto

Chris Glaisek, VP, Planning and Design
David Kusturin, Chief Operating Office
Project Manager: Pina Mallozzi, Director, Design
Public Engagement Lead: Chris McKinnon, Manager, Digital and Social Media
Andrew Hilton, Director, Communications & Public Engagement
Public Engagement Support: Meghan Hogan, Communications and Public Engagement Coordinator

City of Toronto

David Stonehouse, Project Director, Waterfront Secretariat
Project Manager: Pinelopi Gramatikopoulos, Project Manager, Waterfront Secretariat
David O'Hara, Manager, Fort York National Historic Site
Ashley Curtis, Transportation Services
Easton Gordon, Engineering & Construction Services
Naz Capano, Transportation Services
Gregg Uens, City Planning
Lynda MacDonald, City Planning
Nasim Adab, Urban Design, City Planning

Design Team

Ken Greenberg, Greenberg Consultants
Marc Ryan, PUBLIC WORK
Adam Nicklin, PUBLIC WORK
Lauren Abrahams, PUBLIC WORK

APPENDIX - Stakeholder Advisory Committee Membership

Residents Associations & Business Improvement Areas

Bathurst Quay Neighbourhood Association
CityPlace Residents Association
Fort York Neighbourhood Association
Liberty Village BIA
Liberty Village Residents Association
Waterfront BIA
Wellington Place Neighbourhood Assocation

Adjacent Residential Buildings & Landowners

35 Bastion Street
15 Bruyeres Mews
20 Bruyeres Mews
600 Fleet Street
628 Fleet Street
169 Fort York Boulevard
209 Fort York Boulevard
219 Fort York Boulevard
231 Fort York Boulevard
21 Grand Magazine Street
38 Grand Magazine Street
Concord Adex
Diamondcorp
ONNI
Wittington Properties Limited

Community Organizations, Institutions & Advocacy Groups

(STEPS) Initiative
Advisory Committee on Accessible Transit
Artscape
Canadian Hearing Society
Canadian National Exhibition
Civic Action DiverseCity Fellows
Cycle Toronto
Evergreen
Exhibition Place
Fort York Armoury
Fort York Library
Friends of Fort York
Harbourfront Community Centre
Jane's Walk
Manifesto Community Projects
Salvation Army Gateway
SKETCH
Stop Gap Foundation
Toronto Skateboard Committee

Project: Under Gardiner

Stakeholder Advisory Committee Meeting #2

Tuesday, March 22, 2016
7:00– 9:00 pm

Location: Harbourfront Community Centre – 627 Queens Quay West, Toronto ON, M5V 3G3

SUMMARY REPORT

On March 22, 2016, approximately 29 members of the Stakeholder Advisory Committee participated in the second stakeholder advisory meeting for Project: Under Gardiner. The purpose of this meeting was to provide an update on the Environmental Assessment process and the design, to gather feedback, and facilitate a brainstorming session for programming the space.

MINUTES

Waterfront Toronto's Director of Planning & Design, Pina Mallozzi, opened the meeting with a welcome and brief introductory remarks.

Chris McKinnon, public engagement lead for the project, acted as chair and called the meeting to order at 7:10pm.

1. Consent Agenda

The committee unanimously supported the agenda as it was circulated.

2. SAC #1 Meeting Minutes

The committee agreed that a free online tool to discuss the project was not deemed necessary at this time and the committee will continue to use email as the primary means to communicate. The minutes from January 11, 2016 were unanimously approved.

3. Environmental Assessment Update

Don McKinnon from Dillon Consulting gave an overview presentation on the environmental assessment for Project: Under Gardiner. He clarified that the Municipal Class EA focuses primarily on the Fort York Boulevard crossing and confirmed that the

notice of commencement was published in the Toronto Star and sent out electronically on February 24, 2016.

The presentation outlined the problem/opportunity statement, followed by four groups of planning alternatives and the evaluation criteria. The four groups of planning alternatives were Do Nothing, At-Grade Crossing, Bridge and Tunnel. The draft evaluation based on those criteria showed that a bridge alternative would be preferred.

4. Design Update

Ken Greenberg from Greenberg Consultants Inc. made introductory remarks on the design presentation. He provided context for the project, outlined the many connections that the project will make in downtown Toronto, as well as the project schedule and the master plan.

Marc Ryan from PUBLIC WORK then provided an overview of the updated design and design elements for Project: Under Gardiner.

5. Operations & Maintenance

Jamie Springer from HR&A provided an overview of the operations and maintenance study that is currently underway. HR&A is tasked with identifying the costs for operating and maintaining the site, developing a funding strategy to meet the operating needs, and recommending a governance structure.

6. Questions from Committee Members

Are you taking into consideration that cyclists may have a preference for an at-grade crossing at Fort York Blvd over a bridge/tunnel? Whenever a cyclist has to dismount their bike to cross it becomes a barrier.

The project team noted this feedback and suggested that the EA's evaluation for "connectivity" could be adjusted for the cycling transportation mode.

Please clarify how a tunnel at Fort York Blvd would create a greater footprint than a bridge?

The design team explained that in order to avoid underground conflicts with the Gardiner Expressway's footings, the tunnel option would have to dig as much as five metres underground. This is a more considerable grade change than is required for the bridge. As a result, to maintain a slope no greater than five per cent, both ends of the tunnel would have to be set further out to accommodate the required depth. This would create a larger footprint for the bridge. Furthermore, to access the tunnel crossing long sections of open cut area would be required on each side of the roadway to provide ramp access to/from the tunnel.

Will there be a cost/benefit analysis for the Fort York Blvd crossing? Torontonians might want the money that is allocated for the crossing to be put towards other infrastructure components within the project.

A cost/benefit analysis is not a requirement under the Class EA process. While cost is a consideration in the evaluation of alternatives, the EA is also considering other considerations including the opportunity to create a piece of iconic infrastructure that improves the public realm,

attracts visitors (tourism), and provides new views of the city and the Fort York National Historic Site that otherwise would not exist. The other criteria consider how the different crossing alternatives create continuity with the rest of the project and whether the options deliver a continuous, unobstructed path from one end to the next. It was noted that all the presentations made to the SAC would be revisited to ensure that the presentations, slides and display boards at the Public Information Centre more fully explain the different alternatives and how they perform in the draft evaluation.

Could a signalized crossing not be very useful at the Fort York crossing to help slow down traffic in this busy area?

It was noted that signalized crossings would conflict with a future LRT line along Fort York Boulevard as it would introduce an additional signalized intersection that would hinder transit service. Both the bridge and tunnel options could be designed in order to ensure that a future LRT line could be integrated into Fort York Boulevard.

Does a decision need to be made on the Fort York crossing before the rest of the project is finalized?

The project team explained that the decision on the crossing needs to be made within the timeline outlined for the Environmental Assessment (EA). The design process is running in parallel to the EA process. Should the bridge be the recommended alternative, the design will need to be completed in order to begin construction in fall 2016, immediately following completion of the rehabilitation work on the expressway structure. The goal is to construct as much of the project before July 2017 as possible, including the crossing. The project team will report back on this matter at the May 2016 SAC Meeting, once the budget and schedule have been more refined.

Bathurst Street and Spadina Avenue crossings will also require signalized intersections – is this not part of the EA? Why does this EA only focus on the Fort York crossing?

Signalized intersections don't require Environmental Assessments and the crossings at Bathurst and Spadina should be easily implemented by Transportation Services. The intersection at Fort York Boulevard, however, is more challenging. The project team believes that a grade-separated crossing is required at this location, which is what triggers the need for a Municipal Class EA.

Is it possible to build a bridge where cyclists don't have to dismount? We'd like to see a truly continuous path for everyone, including cyclists.

The project team suggests that the design presentation will explore this in greater detail. The eastern abutment of the bridge will land on what is currently private property, owned by developer ONNI. In order to have a proposed bridge land here and not overshoot much of the site and land closer to Bathurst, a switchback may be required. This could create a design challenge for cyclists, which could possibly be mitigated at a later stage in the design.

The design plan appears to show a park at what is currently a parking lot at Strachan. Can you please clarify?

The project team is working with Fort York and Parks, Forestry and Recreation to create landscape improvements to this area. It is intended that the area would continue to be usable as

parking when required, but would also double as landscaped open space that will feel like park space when not in use as vehicle parking. This area is being considered as a future loading and unloading area for school buses, tour buses and charter buses.

Have you considered including recycled tire products in the design?

The design team is interested in using salvaged and recycled materials. Recycled tire products could be very useful in some areas, particularly in the children's adventure play zones or in the winter skating rink areas that require rubberized areas.

Is there a lighting consultant being engaged in this project? People's impression of this space is often that it's too dark.

The design team is excited about the potential to transform the space through light. They have brought on a lighting consultant. This consultant will be charged with considering light in the space both at night and during the day. There may be opportunities to use rigging in the upper canopy as a lighting structure, or opportunities to create reflective surfaces or mirrors to bound light into the space. Both artificial and natural light sources will be evaluated.

Will the Garrison Road Bridge be restored?

Fort York is currently in the process of improving the connections around the area of the fort. Garrison Road has been brought down to grade with the parking pushed down the road in order to restore the original battlefield. The upper section of the Fort is now pedestrian focused, which makes it more functional and accessible. In the future, the only vehicles accessing this road will be those needed for events or emergency vehicles.

In reference to potential funding models, will there be opportunities for naming spaces within the project? Discreet spaces/rooms that could be named present a great potential for funding.

Jamie Springer from HR&A Advisors – the consultants studying future programming, operations and maintenance options – suggested that this is something for them to consider. The City of Toronto has policies on space naming that must be taken into consideration. Naming opportunities could potentially be one of several methods of paying for the on-going costs associated with the space, however if it is it will be part of a mix of funding.

Is there some mechanism for evaluation once an operations and maintenance model has been selected? This is an important if we are to finding ongoing investment.

This depends on the type of model that is recommended to and approved by City Council. The specific model will help determine how best to evaluate it. For example: the High Line surveys users every year and gets information on where they come from, how much money they spend, and how often they come back. This information is then used to make adjustments to the model as necessary. The project team recognizes the importance of evaluating the model that is created.

Has there been any consideration to connect with international projects or installations?

The design team has been approached by the cofounders of the High Line and they are going to share their best practices with us. The design team will also be working with Lord Cultural Resources, who are familiar with programming. The objective is to create space that will be lively and animated, but the project team recognizes that these sorts of spaces can be difficult to activate sometimes.

It's important that once we design these spaces that we consider the upkeep. The renderings show lots of greenery, trees, etc. and we should ensure that we plan to follow through with this. If we are to include beautiful plantings and trees, then we must include a plan to maintain and replace them where necessary. Same with the roads, connections, etc. We show a lot of connections that don't currently exist and it's equally important to follow through with our promise to create and maintain them.

The project team acknowledges this. Recommending the best way to fund the on-going operations and maintenance is part of the scope of work being undertaken by HR&A Advisors. The project team will report further at the next SAC meeting in May.

7. Public Consultation and Naming Campaign Update

Due to time constraints, we were unable to provide these updates.

Action: Chris McKinnon will email SAC members these updates.

8. Group Brainstorm

Lauren Abrahams from PUBLIC WORK led a group brainstorm session where the committee was asked to form groups of 7-8 around tables. Each table was provided large maps of the project area.

Each group was then asked to write down programming they would like to see on post-its, and place them on the maps in areas they wish to see that programming take place. They were encouraged to think about what types of programming might be complementary or have the ability to share similar types of spaces at different times, and to group these activities together as they placed them on the map.

Finally, each group was charged with choosing their three top "groupings" of activity and placing those on a larger map alongside the top choices from the other tables.

All of the maps where photographed for record keeping.

View an album of those photographs here: https://goo.gl/photos/p5trUkiGxHnyF3WM7

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Design Team

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Liberty Village Residents Association
Waterfront BIA
Wellington Place Neighbourhood Association

Adjacent Residential Buildings & Landowners

35 Bastion Street
15 Bruyeres Mews
20 Bruyeres Mews
600 Fleet Street
628 Fleet Street
169 Fort York Boulevard
209 Fort York Boulevard
219 Fort York Boulevard
231 Fort York Boulevard
21 Grand Magazine Street
38 Grand Magazine Street
Concord Adex
Diamondcorp
ONNI
Wittington Properties Limited

Community Organizations, Institutions & Advocacy Groups

(STEPS) Initiative
Advisory Committee on Accessible Transit
Artscape
Canadian Hearing Society
Canadian National Exhibition
Civic Action DiverseCity Fellows
Cycle Toronto
Evergreen
Exhibition Place
Fort York Armoury
Fort York Library
Friends of Fort York
Harbourfront Community Centre
Jane's Walk

Manifesto Community Projects
Salvation Army Gateway
SKETCH
Stop Gap Foundation
Toronto Skateboard Committee

WATERFRONToronto

Project: Under Gardiner

Stakeholder Advisory Committee Meeting #3

Thursday, May 19, 2016
Location: Harbourfront Community Centre – 627 Queens Quay West, Toronto ON, M5V 3G3

DESIGN WORKSHOP

During the May 19, 2016, approximately 25 members of the Stakeholder Advisory Committee participated in 45-minute design workshop for Project: Under Gardiner. The purpose of the workshop was for members of the design team to engage directly with stakeholders, answer questions about the design, gather comments about the plans and facilitate problem-solving discussions for any issues that emerged.

TABLE #1 COMMENTS

- How do cyclists access the space under the Gardiner from Strachan?

From multiple routes. For example, going south through the park/parking lot will put you in front of the Strachan Gateway. Adam Nicklin marked out several routes on tracing paper in green. Other access points an connections were discussed. A bike path connection is planned for the intersection of Bathurst and Fort York Boulevard to be connected to the National Historic Site.

- Please extend the sidewalk along Lake Shore Boulevard north of the baseball diamonds.

Parks staff confirmed this is one of the plans they are working on.

- What does the skating space look like in the summer? It should be something interesting.

It will look like a path. [The plaza] can be flexible and used for different things.

- Could there be a crossing under the Strachan Bridge to improve connectivity [for cyclists]?

- How does the project/vision provide connections to Queens Quay?

Along the street that has the least distance from the Gardiner to Queens Quay, Dan Leckie Way, it is also an opportunity to connect to the largest park in the area [Canoe Landing].

Where are the service facilities / taxi stands, etc.? People don't want to park far from the skating area, for instance.

There could be drop-off areas close by and this way people will experience the space.

- How would those drop-off areas be regulated?

The demand is very high. The Bathurst study is looking at it, in addition to other long-term and short-term studies.

There may be some space along the north-side streets for pick-up and drop-off. There will also be a parking lot in front of the Fort York Visitor Centre, accessed from Fort York Boulevard, for when volumes are higher.

The Ward's Councillor also encouraged developments to have more parking spaces and that could be a way to resolve some of the drop-off issues. Some committee members speculated that there may be a way to convert some of that private parking to paid public parking, as a way for condominium boards to generate some revenue while also alleviating parking pressures.

- Four lights along Strachan in 250 metres is working, so we may need these pedestrian lights for better connectivity from the surrounding areas.

- Where is the playground for kids?

Someone mentioned that the Underpass Park playground is empty and mostly used for skateboarding.

- Library along Bathurst is like a focal point which connects to the Under Gardiner. It is a hub.

- We need playgrounds for kids.

- Water feature under the highway for kids.

What is missing in the area that you folks need?

- Space for kids!

TABLE #2 COMMENTS

- What about the stones [public art work] between Ianuzzi & Bathurst?

We designed the path around them.

- It's a short distance between Fort York Boulevard and the new signalized crossing at Bathurst. There's already lots of traffic that backs up in that area. Signalling has been an issue.

- Where will the children play?

The lot west of Strachan.

Think of the playground at the Brickworks or the adventure playground at High Park.

- A shared trail could be risky.

- Look at Atlanta's Beltline Trail. Lots of conflict between cyclists and pedestrians.

This is a different idea than Queens Quay, which attempts to segregate users. The Under Gardiner trail will be shared the whole way through.

- The three boulders offer a warning.

- Need to ensure historical references made through art are accurate

- Don't forget about the history of the Gardiner

- The Gardiner is the principal heritage structure on the waterfront.

- Is there any opportunity to coordinate with the TTC to rehab the TTC loop at Spadina?

- The western portion of the Under Gardiner was part of the 'Military Precinct'

- Create a 'map' you could essentially walk through of the historic area, with buildings you could sit on.

- What about security?

- How do we ensure eyes on the trail?

- An additional challenge in the interface with ordinary city functions / actions:
    - i.e. highway traffic barrier that exist near Dan Leckie Way – avoid this!
    - We should try to anticipate these points of conflict, with normal regulatory demands and defeat them.

TABLE #3 COMMENTS

Bathurst crossing ➔ important to maintain views to the lake down Bathurst

- Concern re: TTC and closeness between signals at Fort York Boulevard and Bathurst crossing.

Question about the cost of the bridge related to overall $25 million donation

- Lauren says bridge is estimated at cost of $4 to $5 million

Are there any provisions / considerations in the design for possible future removal of the Gardiner?

General feeling that phase one is moving in the right direction.

- Important to include elements related to unlocking programming space.

Again, comment about ensuring that we are thinking about dogs, including the materials that are used in the projects. [Reference to earlier discussion about materials being corroded by dog urine – need to avoid this.]

Need to focus on the Bathurst crossing and ensuring continuity and safety.

Interest in the idea of designing the skating trail so that it could also accommodate curling.

Importance to get lighting right initially, in order to make the space feel warm and inviting

Importance of leaving some unprogrammed flat surfaces for more spontaneous activity.

Appendix 3 – Technical Advisory Committee Members

NAME	CITY DIVISION	SECTION	ROLE
David Stonehouse	City Planning	Waterfront Secretariat	Project Director
Phyllis Berck	Toronto Office of Partnerships		Director
Pinelopi Gramatikopoulos	City Planning	Waterfront Secretariat	Program Manager, POM Lead
David O'Hara	Economic Development & Culture	Fort York National Historic Site - Museums & Heritage Services	Manager, POM Lead
Easton Gordon	Engineering & Construction Services	Bridges, Structures, & Expressways	Manager
Lynda MacDonald	City Planning	Community Planning, Toronto & East York District	Manager
Jennifer Tharp	Parks, Forestry and Recreation	Special Projects	Planner
Nasim Adab	City Planning	Urban Design	Planner
Nazzareno Capano	Transportation Services	Major Capital Infrastructure Coordination Office	Manager
Riad Rahman	Transportation Services	Infrastructure Planning	Project Manager
Bev Kurmey	City Manager's Office	Strategic Communications	Senior Advisor
Lorene Bodiam	Parks, Forestry and Recreation	Disability Advocate	Access and Diversity
Netami Stuart	Parks, Forestry and Recreation	Project Co-ordinator	
Riad Rahman	Transportation Services	Infrastructure Planning	Project Manager, Municipal Class EA
Jennifer Hyland	Transportation Services	Cycling Infrastructure	Project Manager
Ann Khan	Transportation Services	Traffic Operations	Manager
Candice Martins	Transportation Services		Operations Lead

NAME	CITY DIVISION	SECTION	ROLE
Mark Van Elsberg	Transportation Services	Public Realm, Pedestrian Projects	Project Manager
Negar Khalvati	Engineering & Construction Services	Bridges, Structures, & Expressways	Engineer
Avi Bachar	Engineering & Construction Services	Third-Party Review	Manager
John Minor	Engineering & Construction Services	Soil & Groundwater Quality	Manager
Sean Harvey	Engineering & Construction Services	Soil & Groundwater Quality	Project Manager
Brett Howell	City Planning	Waterfront Secretariat	Technical Coordinator
Graig Uens	City Planning	Community Planning, Toronto & East York District	Planner
Daniel Fusca	City Planning	Chief Planner's Office	Stakeholder Engagement
Joanna Swietlik	Real Estate Services	Real Estate Services	Property Officer
Ray Mickevicius	Legal Services	Legal: Real Estate	Solicitor
Sue Goodfellow	Shelter, Support and Housing	Streets to Homes	Manager
Les Arishenkoff	Toronto Water	Policy and Program Development	
Susan Ing	Toronto Fire Services	Fire Prevention	Plans Examiner
Doug Babock	Toronto Fire Services		Captain
Jane Perdue	City Planning	Urban Design	Public Art Coordinator
Kristina Reinders	City Planning	Urban Design	Senior Planner, TO Core
Barbara Lachapelle	Public Health	Healthy Environments	Research Consultant
Mary Macdonald	City Planning	Heritage Preservation Services	Senior Manager
Victor Araujo	Toronto Building	Plan Review	Manager

NAME	CITY DIVISION	SECTION	ROLE
Gord Reed	Toronto Police		
Chris Meulman	Toronto Police		
Sherif Samaan	Engineering & Construction Services	Development Engineering Toronto & East York	Senior Engineer

Appendix 4 – Correspondence Sent to Mississaugas of New Credit First Nation

WATERFRONToronto

TORONTO

March 21, 2016

Ms. Fawn Sault
Consultation Manager
Department of Consultation and Accommodation
Mississauga of the New Credit First Nation
2789 Mississauga Road, R.R. 6
Hagersville ON N0A 1H0

Dear Ms. Sault

Subject: **Notice of Study Commencement**
Project: Under Gardiner – Municipal Class EA

Waterfront Toronto and the City of Toronto, as co-proponents, are carrying out a Municipal Class Environmental Assessment (EA) to address current problems and opportunities for pedestrian and cycling connections in the Project: Under Gardiner study area. In particular, the EA will determine the future of a new pedestrian and cycling crossing at Fort York Boulevard between Fleet Street and Bathurst Street. Four crossing alternatives are being considered within the study area, including: maintaining what currently exists, adding a new at-grade crosswalk, adding a new grade-separated bridge, and adding a new grade-separated tunnel. Further details regarding the study are provided in the attached Notice of Commencement.

Public Consultation

The Project Team will be hosting a number of public forums, and will provide online engagement opportunities for interested persons, government agencies and Aboriginal communities to participate in the EA planning process. We invite you to the first public forum where you can review and comment on the alternative solutions and evaluation, as well as urban design concepts for the study area. You will also be able to ask questions and speak directly with members of the project team, offer input and submit comments. The first public forum is tentatively scheduled for April 7, 2016. A notice will be sent to you once the date and location have been confirmed.

Your input is important. If you have an interest in this project we would appreciate your participation. Information materials are available online and feedback can be submitted to the project team by email. If you would prefer, we would be pleased to hold an individual meeting with you at your earliest convenience to discuss the project in further detail.

Please let us know if you are interested in being involved with this study.

Contact:

Christopher McKinnon,
Public Consultation Lead
Waterfront Toronto
416-214-1344
cmickinnon@waterfrontoronto.ca

Jeffrey Dea,
Manager, Infrastructure Planning
City of Toronto
416-392-8479
idea@toronto.ca

On behalf of Waterfront Toronto and the City of Toronto, we look forward to hearing from you.

For further information, please visit the project web page at www.undergardiner.ca where you can learn about the project and contribute your insights, ideas, and views.

Sincerely,

David Kusturin
Chief Operating Officer
Waterfront Toronto

John Livey
Deputy City Manager
City of Toronto

Attachment: Notice of Study Commencement

In addition to this email, a letter has been mailed to you

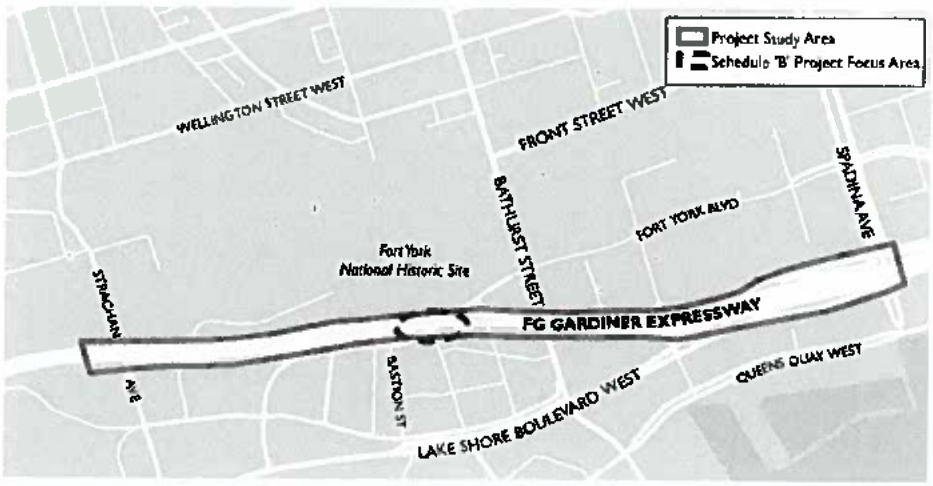
Project: Under Gardiner

Municipal Class Environmental Assessment

Notice of Study Commencement

Background

Waterfront Toronto and the City of Toronto are developing 4 hectares (10 acres) of new public space on underused land under the Gardiner Expressway. The space will connect seven neighbourhoods with a new 1.75-kilometre multi-use trail and spaces for cultural programming between Strachan Avenue and Spadina Avenue.



Study Overview

Waterfront Toronto and the City of Toronto have initiated a Schedule 'B' Municipal Class Environmental Assessment (EA) to study the municipal infrastructure required, including a new pedestrian crossing at Fort York Boulevard.

Study Process

The study will follow the requirements of Phase 1 and Phase 2 of the Municipal Class Environmental Assessment (EA) to examine the need for the infrastructure and evaluate alternative solutions. The need for additional Phases of the EA process will be evaluated once the preferred solution is selected.

In addition to the commencement of a Schedule 'B' Class EA process, the Under Gardiner project will include construction works that may include, but is not limited to, additional components such as:

- sidewalks or bike lanes in existing rights-of-way
- resurfacing or streetscaping
- utility modification or relocation for safety or aesthetic purposes

Further details regarding these components will be provided as the study progresses.

Public Consultation

A vital component of the Class EA process involves consultation with the public, stakeholders, and government review agencies. As part of this process, a Stakeholder Advisory Committee has been established that includes representation from the community-at-large. Waterfront Toronto will also host Public Information Centres and provide online engagement opportunities to inform the public and receive feedback. If you wish to be added to the project mailing list and receive updates, subscribe online at **www.undergardiner.com/connect.html** or contact:

Christopher McKinnon – Public Consultation Lead
Waterfront Toronto
20 Bay Street, Suite 1310
Toronto ON M5J 2N8
Phone: 416-214-1344 Email: hello@undergardiner.com
Website: www.undergardiner.com

This notice issued February 24, 2016.

TORONTO

WATERFRONTToronto

In Partnership with
Will and Judy Matthews

Appendix 5 – Guided Walking Tour Question & Comment Transcripts

UNDER GARDINER WALKSHOP

COMMUNITY CONSULTATION NOTES

APRIL 10, 2016

Park People (www.parkpeople.ca)
Jake Tobin Garrett- Walk Leader (jgarrett@parkpeople.ca)
Anna Hill – Note Taker (ahill@parkpeople.ca)

1. **Stop #1 - Fort York Visitor's Centre**
   - **Walkshops** This is the first of three Under Gardiner Walkshops with one over the Jane's Walk weekend.
   - **Comments** The project design team will receive your comments from the walk.
   - **Leads** Jake Tobin Garrett of Park People is our walk leader, Anna Hill of Park People is our note- taker, Lauren Abrahams is attending on behalf of Public Work and Christopher McKinnon is here on behalf of Waterfront Toronto.
   - **Further information** For updates and further information, please register at www.undergardiner.com and tweet opinions and feedback at @undergardiner.
   - **Project Funding** includes $25 million from the Matthews Foundation for project hard and soft costs.
   - **Fast Facts** The 1.75 km linear park will stretch from Strachan to Bathurst. Total acreage is 10 acres, just a bit smaller than Dufferin Grove Park. The Under Gardiner will connect 70,000 people living in the surrounding communities.
   - **Programming** will include performance, sports & recreation, and public art.
   - **Trail** A trail will extend the length of the Under Gardiner while "pulse points" will create activity hubs at designated locations.
   - **Pulse Points** will include 1) Strachan Creative Action Hub, 2) Fort York-Liquid Landscape, 3) Fort York Boulevard Crossing, 4) Bathurst Community Hub
   - **Feedback** A key goal of today's walk is to receive your feedback, particularly in regards to the design/programming of the four pulse points.
   - **Participant Questions (Q) and Comments (C)**
     - **Participant Demographics** Walkshop participants are from surrounding communities as well as North York, Bloor & Sherbourne, Annex, Riverdale and City Place.

- **Audience Reasons for Participation** include an interest in public art, cycling connectivity, project development, program development, construction progress, and safety.
- **Q-** Are Gardiner highway repairs currently in progress on site? **A-** Yes, Gardiner repairs are in progress.
- **Q-** What is "Metropolitan Rigging"? **A -** To maximize the flexibility of the space, we want to be able to suspend from above or support from below. "Metropolitan Rigging" is our name for a scaffolding system to allow us to suspend art or other installations from above. Flexibility is a core design objective as some installations may be seasonal.
- **Q-** What happened to the colored lights [public art project *Water Table* by Lisa Steele and Kim Tomczak] that used to shine on the Gardiner? **A-** Lights have been removed as part of construction process but they will return, bolder and better.
- **Q-**It seems that the City build projects, tears them down and then rebuilds them. Why? **A-** Construction of the Under Gardiner won't happen until the deck rehabilitation is complete. This rehabilitation is the first major renovation of the Gardiner in 50 years. The Metropolitan Rigging will offer support for future maintenance.

2. **Stop #2 - Strachan-Creative Action Hub**
   - **Location** The Creative Action Hub is for higher intensity programming because it is further away from residential units than other "Pulse Points".
   - **Performance** Creative Action Hub will host various types of performances
   - **Boardwalk / Seating** A boardwalk along Strachan will fold down into a stepped seating area that descends from Strachan Avenue down to the ground under the Gardiner.
   - **Gateway** This stair-stepped seating area will also double as an iconic gateway entrance into the Under Gardiner trail.
   - **Grand Trunk Railway** Notice how the Under Gardiner columns were placed alongside the Grand Trunk Railway, creating a triangular view cone into the performance space.
   - **Children & Youth Playgrounds** – The project is proposing to install a playground and skate park just west of Strachan Avenue, adjacent to the Gardiner.
   - **Participant Questions (Q) and Comments (C)**:
     - **Q**- **Fort York Partnership -**How will this installation infringe on land owned by Fort York? **A –** The Under Gardiner will require a strong partnership with Fort York. Fort York owns the parking lot next to the Armory. A portion of this parking will remain while a portion will be converted to public green space.
     - **Q**- **Impact on trees** Will the big trees remain? **A-** At present, all of the big trees will remain.

- **Q**- **Strachan Underpass** How will it be possible to pass from the playground, on one side of Strachan, to the performance space, on the other side of Strachan? **A-** The existing underpass beneath Strachan will remain.
- **Q**- **Sound Mitigation** The sound of the cars is very loud. What are strategies to mitigate noise, otherwise the concerts will need to be twice as loud to compete with the cars. **A –** There are various strategies to mitigate sound of auto traffic and trains, including sound barriers, sound muffling and landscaping solutions.
- **Q- Width of Sidewalk** – What is the anticipated width of the sidewalk or boardwalk on Strachan? Will the width accommodate large numbers of people descending into the performance space? **A-** Yes, the sidewalk will be widened and there will be protection from cars on Strachan.
- **Q**- **Accessibility** Will the performance space be accessible? **A-** Yes, there will be a barrier free ramp leading from Strachan into the performance space.
- **Q- Washrooms** Will new washrooms be created near the performance space and playgrounds? **A-** We are still trying to figure out where the washrooms should go. One idea is that people could use the washrooms in the Fort York Visitor Centre.
- **C- Mistake not to include washrooms** It could be a mistake not to include additional washrooms since the Fort York Visitor Centre may be closed during evening events. If the City is building the playgrounds, maybe they could install washrooms too.
- **Q- Bird excrement –** Do you have a plan to keep the park free of bird excrement? **A-** We have been considering pigeon hotels to attract the birds to isolated areas of the trail.
- **Q**- **Air Quality** If there is a playground in this area, will steps be taken to monitor air quality? **A-** Yes. There will be an EA report to assess air quality and on-going monitoring of air quality.
- **C- Trees to Improve Air Quality** Please consider planting more trees near the Creative Action Hub and playground to improve air quality.
- **C- Indigenous History** Please include indigenous history as part of the design of the Under Gardiner. Consider including indigenous programs or gardens with native herbs, medicines and foods.
- **C- Community Garden –** It is important to provide more community garden space with any new public space construction project in Toronto. Given the population density of this neighbourhood, a community garden would be well used by residents or in partnership with a local school.
- **C- Separate pedestrian and cyclist traffic** Please separate pedestrian and cycling traffic. This is especially important for seniors and young children.
- **C-Structural Integrity of Decking** It is going to be very important to continually monitor the structural integrity of the decking. One falling piece of concrete could seriously injure someone.

- **Connectivity to Waterfront** It is very important to have a plan in place to connect the Under Gardiner to the newly planned park at Strachan and Lakeshore.
- **C- Connectivity to Liberty Village Bike Path** It is very important to connect the Under Gardiner to the new bike path in Liberty Village.
- **C- Rain Curtain** Please consider some kind of rain curtain to prevent water from blowing into the performance space.
- **C- Low Residential Density Allows for Youth Focused Recreation** A skate park, basketball court or BMX Park would be an appropriate use for this area given the distance to residential units.
- **C- Water run-off** Please consider creative design solutions to handle water-run-off from the Gardiner.
- **C- Graffiti Strategy** Please develop a graffiti strategy which could include coated surfaces to deter graffiti and designated graffiti zones to encourage graffiti.
- **C- Homeless Strategy** Please develop a homeless strategy that includes or discourages homeless participation in the Under Gardiner.
- **C- Smoking** Please have signs in place to deter smoking at the children's playground, youth playground and throughout the trail.
- **C-Security** There needs to be a security plan in place to deter vandalism, particularly vandalism of the art installations. Recently, some of the Winter Stations were quite damaged by the end of the exhibition.
- **Outdoor Movie Night** – The performance space could be a great location for an outdoor movie night.

3. Stop #3- Fort York-Liquid Landscape

- **High Point of Gardiner** Please notice that this is the highest elevation of the Gardiner decking. According to urban planner, Ken Greenburg, it is possible to fit a 5-storey building under the decking at this point.
- **Softer Landscape** There is a proposal to provide softer landscaping and native plants at this point. Landscaping could reference Lake Ontario shoreline.
- **Acoustics Under Gardiner** are better here. Easier to hear.
- **Proximity of Residences** Notice that residential units are adjacent to the trail.
- **Participant Questions (Q) or Comments (C)**
  - **C-Waterfall** It would be cool to see a waterfall to call attention to the height of the roof above.
  - **C-Mud Management** There is a lot of mud here because of water run-off from above. Please develop a smart landscaping plan to mitigate mud and manage salt water run-off. Swales, native vegetation or vegetable gardens could help mitigate mud.
  - **C-Celebrating Height of Roof–** A climbing wall, zip-line, or Tree-Top Trekking are all examples of activities that could celebrate the

height of the roof and respond to people's yearning to climb. Drop-in programs are great for people who are not able to plan ahead. How about a trapeze, slacklines, or a high wire? For safety, maybe use a net to create a second level halfway up the columns.

- **C-Cirque du Soleil or Circus Camp –** About 8 years ago, Cirque du Soleil had a public performance in Quebec City beneath an underpass. It was hugely popular. What about inviting Cirque du Soleil or a Circus Camp to set up shop here in the summer months?
- **C- Colors of Columns –** The Yellow columns are fantastic. How about using color to further accentuate the columns and define "rooms."
- **C- Community Feedback –**Since there are adjacent residences, how about some uses that are per the request of people living in the apartments? Maybe a separate consultation?
- **C-Benches** Some seating in this area would be nice.
- **C-Farmers' Market / Food Festivals** This might be a nice location for a neighbourhood Farmers' Market or Foodie Festival, especially because the linear quality of the Under Gardiner is very similar to a street. Perhaps the market could continue in winter due to roof protection.
- **C-City Project Display** What about large displays that relate to the history of the city and transportation? How about an old street car, new Eglinton Crosstown street car or historic navy ship?
- **C- First Nations-** Fort York does a lot of programming that relates to First Nations History and this programming could be part of this Pulse Point.
- **C-Diversity**–In Chicago's Millennium Park, there is a wonderful fountain that includes diverse images of city residents. Art installations in this space should also reflect Toronto's diversity.
- **Ceiling Surface for Projection** – How about a ceiling surface for projection? What about a planetarium projection of stars or movies on the ceiling?

4. Stop #4-Fort York Boulevard Crossing

- **Location** An east/west Boulevard Crossing occurs at the halfway point of the length of the Under Gardiner.
- **3 Options** An Environmental Assessment is looking at three options for the trail to cross Fort York Boulevard; 1) At Grade Crossing, 2) Pedestrian Bridge, 3) Tunnel
- **Preferred Option** The preferred option is the pedestrian bridge to create an iconic moment, to allow a continuous flow of pedestrian and cycling traffic, and to allow existing car traffic and a possible future LRT line to continue unimpeded.
- **Design for Pedestrian Bridge on Website** The design includes seating and will be posted at www.undergardener.com later this week.

- **Pedestrian Bridge Location** The pedestrian bridge will be parallel with the roof of the Gardiner. The bridge will provide east-west connection, not north-south.
- **Proximity of Residences to Under Gardiner** – Notice that high-rise units are very close to the Gardiner at this point. There is new zoning in effect which now requires 25 meters of separation but these units were likely built before this regulation was in effect.
- **Participant Questions (Q) or Comments (C)**
    - **Q-Cost** What is the estimated cost of the pedestrian bridge? **A-** About $4-6 million or 20%-25% of the project budget.
    - **C- Benefits of At-Grade Crossing** Please consider the benefits of an at-grade crossing. For example, an at-grade crossing will slow down the cars on Lakeshore. Also, an at-grade crossing could allow north-south as well as east-west movement of pedestrians.
    - **C-Danger of Curving Road** One of the problems of the at-grade crossing is that the curve in the road makes it difficult to see pedestrians.
    - **C-Curve Means We Need a Stoplight** Yes, the curve in the road is why it is important to have a stoplight.
    - **C-Stoplight or Stop Sign Could Impede Future LRT** A stoplight could complicate a future LRT line.
    - **C-Iconic Bridge Could Slow Traffic** Maybe the bridge could be designed in such a way to slow traffic.
    - **C-Pedestrian Bridge Sightlines Into Residential Units** The pedestrian bridge will require design provisions to deter sightlines into residences.
    - **C-Pedestrian Bridge Framing of CN Tower** Perhaps the pedestrian bridge can frame views of the CN Tower.
    - **C- Grade level commercial zoning –** Perhaps the first floor residential units could be zoned commercial. It would be really helpful to have cafes and restaurants at this Pulse Point. If not, how about kiosks or carts to offer refreshments on the pedestrian bridge? This is especially important in very cold or very hot weather.
    - **C-What about a four-way pedestrian bridge?** You actually need north south connectivity in addition to east west connectivity. What about a 4-way pedestrian bridge?
    - **C-Length of pedestrian bridge** What about extending the pedestrian bridge further down the trail? Given the height of the Gardiner, maybe two levels are better than one.

5. **Stop #4 - Bathurst Community Hub**
    - **East of the Boulevard Crossing, Land Is Not In the Public Domain –** East of the boulevard crossing, we are on privately owned publicly accessible land.
    - **Proximity of Residences** – There are a number of residential units very close to the trail at this point.

- **Sound Quality More Representative** Listen closely as there is no rehabilitation work presently occurring on this portion of the Gardiner. Therefore, the traffic sounds are more representative of the future project sound quality.
- **Community Hub** How can we design this section of the Under Gardiner to act like a community space?
- **Participant Questions (Q) or Comments (C)**
    - **C-Fire pits** What about fire pits? Everyone likes to gather around a fire in winter.
    - **C-Shelter** This feels like the coldest part of the trail. Important to provide shelter at this point. Would it be possible to hollow out the rock sculpture as a form of shelter? A tent could provide shelter and avoid site lines into residential units. Also, maybe there could be a roller skating rink or arts and crafts in the tent…some kind of programming to draw people into it.
    - **C- Chess, Ping Pong or Community Garden** Chess tables, ping pong tables, or a community garden might make this more of a community hub.
    - **Q- Existing Improvements** How will the new trail respond to the existing paving and public art? **A-** The new design will not disrupt existing paving, public art or loading zones. Rather, the new trail will weave into the existing design.
    - **C-Concessions as revenue tool for maintenance** It's freezing and we all need something hot to drink. What about concession kiosks as a revenue tool to help with the long term sustainability of the project?
    - **C-Local vendors** - Let's not have franchise concessions but rather, local vendors
    - **C-Farmers' Market** Maybe this is the right location for a farmer's market, though there will soon be a new new Loblaws on Bathurst Street.
    - **C- Connectivity** Important to connect the trail to the path, community centre, off-leash dog area and school across Bathurst. There is a study under way to look at an at-grade crossing to connect to City Place.
    - **C-Security for Art Installations** This might be the best spot for art exhibitions due to "eyes on the street" that could help keep art installations more secure.
    - **C-Historic References** – This might be another appropriate location for historic references. What about a canon?
    - **Q- Management and Governance Models –**What kind of management and governance models are being considered for the Under Gardiner? **A-**Park People is currently working with HR&A to study various models of management and governance to develop appropriate models for the Under Gardiner.
    - **Q- Anticipated Timeline for Completion** What is the anticipated timeline for completion? **A –** The design will be completed by end of summer, 2016. The Gardiner Rehabilitation will be completed

by October 2016. The Under Gardiner will be completed by Summer 2017.

- **Q-Property Taxes –** Will the construction of the Under Gardiner raise my property taxes? **A-** Perhaps but as your property taxes increase, so too will the value of your home.
- **C-Upcoming Community Consultations and Walkshops** There will be another public consultation in May and there will be two more Walkshops with dates to be announced shortly. Please sign up to receive updates at www.undergardener.com.
- **C-Further Comments** Please contact hello@undergardiner.com if you have further comments about Project: Under Gardiner.

Park People (www.parkpeople.ca)
Jake Tobin Garrett- Walk Leader (jgarrett@parkpeople.ca)
Anna Hill – Note Taker (ahill@parkpeople.ca)

UNDER GARDINER WALKSHOP

COMMUNITY CONSULTATION NOTES

May 8, 2016

6. Stop #1 - Fort York Visitor's Centre

- **Walkshops** This is the second Under Gardiner Walkshops
- **Comments** The project design team will receive your comments from the walk.
- **Leads** Jake Tobin Garrett of Park People is our walk leader, Anna Hill of Park People is our note- taker, Lauren Abrahams is attending on behalf of Public Work and Christopher McKinnon is here on behalf of Waterfront Toronto.
- **Pulse Points** will include 1) Strachan Creative Action Hub, 2) Fort York-Liquid Landscape, 3) Fort York Boulevard Crossing, 4) Bathurst Community Hub
- **Feedback** A key goal of today's walk is to receive your feedback, particularly in regards to the design of the four pulse points.
- **Participant Demographics** Walkshop participants are from surrounding communities as well as East York, Leslieville, Scarborough, and Etobicoke.
- **Audience Reasons for Participation** include an interest in urban design, public space, neighbourhood integration, Toronto history, an east/west extension of the project, and how the Under Gardiner will fit into a larger, downtown multi-use trail system.

7. Stop #2 - Strachan-Creative Action Hub

- **Location** The Creative Action Hub is for higher intensity programming because it is further away from residential units than other "pulse points".
- **Performance** Creative Action Hub will host various types of performances
- **Boardwalk / Seating** A boardwalk along Strachan will fold down into a stepped seating area that descends from Strachan Avenue down to the ground under the Gardiner.
- **Gateway** This stair-stepped seating area will also double as an iconic gateway entrance into the Under Gardiner trail.
- **Grand Trunk Railway** Notice how the Under Gardiner columns were placed alongside the Grand Trunk Railway, creating a triangular view cone into the performance space.

- **"The Bentway" is one of four names under consideration as a new name for Project: Under Gardiner.** It is the front runner name as of noon today (you can vote until 11:59 PM today). "The Bentway" takes its name from the structural columns and beams supporting the Gardiner that are known as "bents."
- **Children & Youth Playgrounds** – The City is proposing to install a playground and skate park just west of Strachan Avenue, also under the Gardiner.
- **Participant Comments (C) or Questions (Q) and Answers (A)**:
    - **C- Water run-off** - Please consider creative design solutions to handle water-run-off from the Gardiner.
    - **C- Light installation -**Consider some kind of installation that references the traffic volume with light that pulses or responds in some other way to reflect the passing cars hitting the expansion joints. (Speaker commented that traffic will sound slightly different after construction is completed)
    - **C- Sound mitigation -** It is very noisy due to traffic on adjacent roads. Think about a sound mitigation strategy.
    - **C- Ropes course -**What about a ropes course, adult swings, or climbing wall in this space?
    - **C- Dance floor** What about a dance floor for tango night or other community dance nights?
    - **C- Hanging screens** How about hanging screens to allow for projections of movies or other visual installations.
    - **C- Drive-in headphones** Install drive-in head phones so that people can listen to the movie and hear the sound of the movie without competing with the sound of the traffic.
    - **C- Hanging gardens** How about hanging gardens?
    - **C- Hanging art** would also be great.
    - **C- Lighting** Important that this section is well-lit.
    - **C- Multi-use path connections** Please consider how the Under Gardiner connects to other, local multi-use paths.
    - **C- Homeless strategy** Please develop a homeless strategy as this will be a very attractive place for homeless people to sleep. What resources will be available for them?
    - **Q- What will happen to the parking lot where we are standing?**
    - **A- Greenspace & parking** This is currently a municipal parking lot. A portion of it will be developed as green space and the rest will be used as parking.
    - **Q- Existing infrastructure?** What is the state of the existing infrastructure (water, sewer, electrical) and how will it be improved?
    - **A –Currently, the site is under-served** in terms of water and sewer because not many people use the site. The water drains from the Gardiner through downspouts and flows directly into the mud below. This presents an important design opportunity to redirect and manage water in an environmentally friendly way. Swales, irrigated gardens and plantings are all under consideration as potential design solutions to highlight water

management. As well, we are aware of the need for washrooms and lighting.

8. **Stop #3- Fort York-Liquid Landscape**
    - **High Point of Gardiner** Please notice that this is the highest elevation of the Gardiner decking. According to urban planner, Ken Greenburg, it is possible to fit a 5-storey building under the decking at this point.
    - **Softer Landscape** There is a proposal to provide softer landscaping and native plants at this point. Landscaping could reference Lake Ontario shoreline.
    - **Acoustics Under Gardiner** are better here. Easier to hear.
    - **Proximity of Residences** Notice that residential units are adjacent to the trail.
    - **Intersection of Cultures Here** such as indigenous, military, natural history of the lake, Grand Trunk Railway, Gardiner.
    - **Participant Comments (C) or Questions (Q) and Answers (A)**
        - **C-Outdoor City Museum** – one idea from last walk is that you could have an outdoor city museum here that include installations like the historic and new street cars.
        - **C- Sanctioned Graffiti-**Consider murals on the columns or sanctioned areas for graffiti art. See graffiti park in Venice Beach by way of example.
        - **C- Food Trucks-**How about food trucks? There needs to be some commercial activity here. Food brings people together.
        - **C- Waterfall-** A waterfall could help accentuate the height of the space.
        - **C- Timeline -**How about creating a giant timeline on the bents to tie together the site's historical strands (indigenous, military, railway, Gardiner, natural history)
        - **C- Zipline-** The space is so tall! What about a zipline, bungie jump or a giant swing?
        - **C-Second level -**Consider a second level that makes it possible to walk from bent to bent in the air.
        - **C-Winter works -**We need to animate the space in colder months so it is not a winter dead zone. What about ice sculptures, an ice slide, cross country skiing, snow shoeing, some heating poles, warming huts or an outdoor fire place? Refer to winter festivals in Winnipeg. Refer to Toronto Winter Stations.
        - **C-Create a sky** on the canopy above by painting either clouds and blue sky or a starry night mural.
        - **C- Kids Railway** What about referencing the old Grand Trunk Railway with a kids' train that also helps people with mobility issues to see the length of the space?
        - **C- Sanctioned Buskers** Buskers and music will help enliven the space.
        - **C-Micro-retail** like a flower market, farmer's market, or food carts will also help enliven the space.

- **C-Balance between trail access and programming** Although all of these programming suggestions are great, please also make it possible for commuters to be able to access the trail as a safe route to downtown.
- **C- Bike Cooperative** – In terms of micro-retail, this would be a great location for a bike cooperative like the one at the Evergreen Brickworks. Kids could come here to get their bike tuned up. Consider installing a bike park near the skateboard park.
- **Q- It is hard to get to this site. What steps are being taken to make it easier to get to this location?**
- **A-New pedestrian bridge** is being constructed south of King to the Garrison Commons. This bridge will improve pedestrian and cycling access to the site.

9. Stop #4-Fort York Boulevard Crossing

- **Location** An east/west Boulevard Crossing occurs at the halfway point of the length of the Under Gardiner.
- **3 Options** An Environmental Assessment evaluated three options for the trail to cross Fort York Boulevard; 1) At Grade Crossing, 2) Pedestrian Bridge, 3) Tunnel
- **Preferred Option** The preferred option is the pedestrian bridge to create an iconic moment, to allow a continuous flow of pedestrian and cycling traffic, and to allow existing car traffic and a possible future LRT line to continue unimpeded.
- **Pedestrian Bridge Location** The pedestrian bridge will be parallel with the roof of the Gardiner. The bridge will provide east-west connection, not north-south.
- **Proximity of Residences to Under Gardiner** – Notice that high-rise units are very close to the Gardiner at this point.
- **Skating rink –** A skating rink will be installed at this location in winter.
- **Participant Comments (C) or Questions (Q) and Answers (A)**
  - **C-Hanging pedestrian bridge** – what about hanging the pedestrian bridge rather than supporting it from below?
  - **C- Extending the pedestrian bridge –** what about extending the bridge further to the west or east to allow for vertical "lookouts" under the bents?
  - **C-Ensuring people use the bridge** To ensure people use the bridge rather than dashing across the street, this bridge is going to need to have amenities that attract people to it. It should be an interesting design as well.
  - **C- Accessibility of bridge** – The bridge should not just be stairs. It needs to be accessible. (Walk leader confirmed that yes, the bridge will be accessible though there could be switch backs in the ramp.)
  - **Q- Can you reroute the traffic into tunnel so people can cross at grade?**
  - **A-No.** The structural integrity of the bents is paramount. It is too dangerous to dig around the foundations of the columns.

Therefore, we cannot create a tunnel for cars or for people. As well, there is archeological heritage here that should not be disturbed.

- **Q-Will there be a separation between bikes and pedestrians?** Look at the example of the cycling paths at Queen's Key.
- **A – Perhaps.** This is something the designers are looking at. The need for a separation between bikes and pedestrians was also raised at the last consultation.
- **C-Connect Above and Below** There needs to be some kind of art installation that alerts drivers to the fact that the Under Gardiner Park is occurring below. For example, tuned rumble strips on the Gardiner could signify the presence of the park below. Rumble strips can be tuned based on their distance apart from one another. As well, there could be a digital data stream that alerts drivers to the park below. The data stream could contain facts about Toronto. For example, how many births occurred in the city that day. There is something very similar in London, UK right now. Please reference the London installation. *(Anna gave Laura cards for the two women who made this suggestion).*
- **C-Suggestion for park opening** When the park opens, consider a symphony of car horns on the Gardiner to announce the opening of the park below. In St. John's Newfoundland, every year, the ships in the harbour perform a song with their ship horns. A local musician writes the music for the ships. Something similar with vehicles would be an amazing way to announce the opening of the park. *(Anna gave Laura cards for the two women who made this suggestion).*
- **C-Splash pad** The skating pad should also be a splash pad in summer.
- **C-Lost Rivers of Toronto** The architecture should refer to Garrison Creek which probably runs under this very site. Other "Lost Rivers" may also run under the site. What about day lighting Garrison Creek? Important to research and refer to these lost rivers as well as the original shoreline of Lake Ontario in the design.
- **C-Ravine Watersheds** You could also refer to the city's main six watersheds that define the north/south ravine system.
- **C-Age of the Sail** Historically, Toronto was built during the age of the sail. What about referring to the sail in the design of the pedestrian bridge? Or what about referencing sails in the design of a play structure?
- **C-Art installation that references water** – In your treatment of water from the highway, please highlight the purification process with some kind of design feature. There could be an educational piece around storm water management similar to the one at Sherbourne Common.
- **C-Water fountains** How about some water fountains.
- **C- Water for homeless** What about washrooms, or washing stations for the homeless?

- **C-Research project** It would be good to research and document how the Under Gardiner space is used right from the beginning. As well, this site could be a research site for urban life in general. Research topics could include effects of air pollution, noise pollution, survival of plants etc. Schools and universities could be involved in this research.
- **C-Benches** We need benches near the skating rink, both to put on skates and to appreciate the view of Fort York in summer.
- **C-Visual Connection to Fort York** – There is an opportunity to create a much stronger visual connection to Fort York at this pulse point. During special events, what about historic soldiers standing on the hill? What about aboriginal structures on the hill or other references?
- **Reference to aboriginal culture** – Please reference aboriginal culture in some way at this pulse point. Think about aboriginal meaning of the name "Toronto".
- **C-Column for each nation** We need to celebrate Toronto as a multi-cultural city in this park. What about dedicating a column or bent to each nation in Toronto? You could create murals on the columns that reflect the city's diversity of cultures and the pedestrian bridge could "bridge" these cultures.

10. Stop #4 - Bathurst Community Hub

- **East of the Boulevard Crossing, Land Is Not In the Public Domain –** East of the boulevard crossing, we are on privately owned publicly accessible land.
- **Proximity of Residences** – There are a number of residential units very close to the trail at this point.
- **Sound Quality More Representative** Listen closely as there is no rehabilitation work presently occurring on this portion of the Gardiner. Therefore, the traffic sounds are more representative of the future project sound quality.
- **Connections –** This section of the trail will cross Bathurst at grade and connect to the new community centre, school and off-leash dog park at City Place. The Bathurst crossing will be a new signalized crossing. A new Loblaw's is under construction just south on Bathurst.
- **Community Hub** How can we design this section of the Under Gardiner to act more like a community park?
- **Participant Comments (C) or Questions (Q) and Answers (A)**
  - **C-Micro enterprise in shipping containers** Maybe this is a good spot for a shipping container market similar to Market 707,
  - **C-Dog waste management strategy** is very important here.
  - **C-Lighting** could warm up this space as it feels rather dark and cold. But somehow the lighting should not project into residential windows. Perhaps lighting needs to be screened. Hanging lanterns with giant curtains could be cool.

- **C- Hearth / giant living room** Maybe this cold dark space needs to feel like an outdoor "living room" with a hearth, lanterns and curtains. There was some interesting seating at Winter Stations.
- **C-Lighting is key to success of this space** Think about colored lights.
- **C- Room with a view** Think about the view here and reference key landmarks like the CN Tower.
- **C-Gateway to City from Toronto Airport** This space is the closest public gateway to visitors arriving at Billy Bishop. This space should welcome visitors to Toronto.
- **C-Electronic Signage** As part of the "gateway welcome concept", there should be electronic signage here that references the rest of the city as part of an inspirational way-finding and welcome strategy.
- **C-Noise** It is still noisy here. Need noise attenuation.
- **C-Washrooms** Need a plan for public washrooms.
- **C-Include Homeless** Don't separate the homeless from everyone else. Refer to public wash stations in Paris.
- **C-Bike share station** We need a Bikeshare stand here for those who are cycling the rest of the path.
- **C- The best plans are plans that liberate other people's plans – Jane Jacobs.**
- **–END-**

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UNDER GARDINER WALKSHOP

COMMUNITY CONSULTATION NOTES

June 2, 2016

11. Stop #1 - Fort York Visitor's Centre

- **Walkshops** This is the third of four Under Gardiner Walkshops
- **Comments** The project design team will receive your comments from the walk.
- **Leads** Jake Tobin Garrett of Park People is our walk leader, Anna Hill of Park People is our note-taker, Lauren Abrahams is attending on behalf of Public Work and Christopher McKinnon is here on behalf of Waterfront Toronto.
- **Background –** Project: Under Gardiner was made possible with a donation of $25 million from Will and Judy Matthews. The City is providing additional funding for programs. 1.75 km linear corridor with 10 acres of new public space, serving 70,000 adjacent residents and a city-wide audience. Different zones of space called Pulse Points.
- **Pulse Points** will include 1) Strachan Creative Action Hub, 2) Fort York-Liquid Landscape, 3) Fort York Boulevard Crossing, 4) Bathurst Community Hub
- **Feedback** A key goal of today's walk is to receive your feedback, particularly in regards to the design of the four pulse points.
- **Route** We will adjust today's route slightly due to the lack of access to Fort York which is preparing for the Field Trip Music Festival.
- **Participant Comments (C) or Questions (Q) and Answers (A)**:
    - **Participant Demographics** Walkshop participants are from surrounding communities such as downtown, Etobicoke and Scarborough.
    - **Audience Reasons for Participation** include general curiosity about what is happening, an interest in art and music in public space, hoping to eradicate "the wall" feeling of the Gardiner Expressway, desire for more activity on the waterfront, hoping to see a network of public spaces along the waterfront as seen in other North American cities.
    - **Q-Timeline** What is the timeline? Is the current construction on schedule?
    - **A-**The first phase of the project will be finished in July 2017. The Gardiner repairs are currently on schedule.
    - **Q- Noise** The Gardiner is very noisy. Are there any plans to compensate for this noise?

- **A-"Strange Beauty"** The Under Gardiner landscape has a "strange beauty" with telescoping columns, the rhythm of concrete bents, and the play of light and shadow. Although we are conscious of noise challenges, we do not want to erase what is here, rather try to recognize inherent design opportunities. The thump thump noise you hear has to do with the current construction. Once the construction is finished, that thumping will be much quieter.
- **Q-Commercial** Are you envisioning seasonal commercial activity?
- **A-Pop-Ups** We are envisioning pop-ups, meaning nothing is permanent. Flexibility of use is an important goal for us. We envision kiosks, markets and other temporary program elements.
- **Q- Economic Development** Is there any discussion of economic development opportunities for immigrant youth or aboriginal youth? For example, Market 707 at Scadding Court provides shipping containers for micro-enterprise.
- **A-Flexibility** We are designing the space to accommodate flexible programs. Each pulse point has its own characteristics that will change with the seasons. There will be opportunities to engage many different user groups.
- **C- Farmer's Market** If there is a Farmer's Market, it needs to be economically viable, not just window dressing.
- **C-Food Trucks** Food trucks might be more appropriate because this is a place people will come in search of prepared food. Destination park users don't want to carry home bags full of market produce.

12. Stop #2 - Strachan-Creative Action Hub

- **Location** The Creative Action Hub is for higher intensity programming because it is further away from residential units than other "pulse points".
- **Performance** Creative Action Hub will host various types of performances
- **Boardwalk / Seating** A boardwalk along Strachan will fold down into a stepped seating area that descends from Strachan Avenue down to the space under the Gardiner.
- **Gateway** This stair-stepped seating area will also double as an iconic gateway entrance into the Under Gardiner trail.
- **Grand Trunk Railway** Notice how the Under Gardiner columns were placed alongside the Grand Trunk Railway, creating a triangular view cone into the performance space.
- **Children & Youth Playgrounds** – The City is proposing to install a playground and skate park just west of Strachan Avenue, also under the Gardiner.
- **Participant Comments (C) or Questions (Q) and Answers (A)**:
  - **Q- Washrooms** Are there going to be new washrooms at the Creative Action Hub?
  - **A- Temporary Solution** For Phase One, we will rely on the washrooms at Fort York and may need to bring in temporary Port-o-Potties at specific Pulse Points. As part of the next phase,

permanent washrooms will likely be installed at three of the four centres of activity.

- **Q-Strachan Bottleneck** What is the traffic management proposal? Will there be a bottleneck of pedestrians and vehicles at Strachan?
- **A – Multiple Entrances** In addition to the Strachan gate, it will be possible to enter the site on foot anywhere along the trail. As well, the sidewalk will be widened at Strachan with a belvedere. There will be a barrier between pedestrian and vehicular traffic.
- **Q- Baffles** Will there be baffles under the Gardiner at Strachan so that actors do not have to project over the traffic noise?
- **A- Noise Attenuation Strategy** – We are looking at various strategies for noise attenuation.
- **C**-**Noise Impact** Whenever there is a Fort York concert, the windows literally vibrate. Please think about how noise travels and be aware that a loud music performance at the Creative Action Hub could adversely impact residents further east.
- **C**-**Graffiti Strategy** It is a good idea to have designated areas for graffiti.
- **Q**-**Accessibility** What is the accessibility strategy at the Creative Action Hub?
- **A** –**Ramps & Berm –**This site will be AODA compliant. No slopes greater than 5%. There will be a ramp that provides access to the platforms and connects the Strachan gate to the path below. As well PFR has funds earmarked for a berm that will provide additional access to the site.
- **Q**- **Seating Capacity** What is the seating capacity of the Creative Action Hub?
- **A**- **150-200 seats.**
- **Q- Art on underside of Gardiner decking** Can we put any art on the underside of the Gardiner decking?
- **A- Yes. Suggestions for art beneath the decking** include a daytime sky with clouds, a projected night sky or films.
- **C-Headphones** If you show movies, consider some kind of headphones to make it easier to hear the sound.
- **Q-Programming** Who is planning the programming for the site?
- **A-Programming Study** A new entity will be created that is tasked with programming. A study is underway right now regarding programming and governance models. This study will be reviewed first by Executive Committee and then presented to City Council in July.
- **Q-Frequency of Construction Repairs** How often will comprehensive construction repairs need to occur on the Gardiner? How will this type of construction impact the project?
- **A – Every 50 Years** This type of comprehensive rehabilitation of the Gardiner will occur in another 50 years.
- **Q- Approach to sustainable design** What is the project approach to sustainable design? Are you implementing solar panels? Rain water diversion strategies? Permeable surfaces?

- **A – Yes to sustainable design** Although we do not have a plan for solar power at this point we are definitely looking into various environmental approaches to water management. Instead of the existing down spouts which dump the highway run-off into muddy puddles under the Gardiner, we want to look at bio swales with salt-tolerant plants. As well, we want to use environmentally friendly materials and permeable surfaces. We are very open to innovative technology that may be appropriate for the site.
- **C – Solar lighting** How about solar powered lighting?
- **C- Trees** How about lining Strachan Avenue with native trees to create a green screen between the fast moving traffic and the slow moving pedestrians?
- **Q- Width of park** Will the park extend beyond the width of the Gardiner?
- **A – Green Space** There will be additional green space that will extend south from the Creative Action Hub. The area where we are standing is currently a municipal parking lot. A portion of it will be developed as green space and the rest will be used as parking.
- **C-Karaoke** Could the stage have capacity for Karaoke? Please consider a Karaoke festival.

13. Stop #3- Fort York-Liquid Landscape

- **High Point of Gardiner** Please notice that this is the highest elevation of the Gardiner decking. According to urban planner, Ken Greenburg, it is possible to fit a 5-storey building under the decking at this point.
- **Softer Landscape** There is a proposal to provide softer landscaping and native plants at this point. Landscaping could reference the Lake Ontario shoreline. "Docks" will extend into this grassy area and provide focal points for activity.
- **Acoustics Under Gardiner** are better here. Easier to hear.
- **Proximity of Residences** Notice that residential units are adjacent to the trail.
- **Intersection of Cultures Here** such as indigenous, military, natural history of the lake, Grand Trunk Railway, Gardiner. There was a suggestion to create an outdoor Toronto Museum on this site. Right now, there is a historic schooner under a tarp, just sitting on this site. Perhaps it could be displayed. As well, there was a suggestion to paint the bents to recognize the many different cultures living together in Toronto.
- **Participant Comments (C) or Questions (Q) and Answers (A)**
  - **C-Second Level** How about a second level so you can walk among the bents, high in the air?
  - **C- Tree House** How about a tree house that you can climb up to and use as a viewing platform.
  - **C- Historical Relevance** Whatever you do at this pulse point, please keep it historically appropriate and relevant.
  - **C- Reflected Light** There are some really neat projects in cities like New York that involve reflected lighting. Consider reflecting

light into this space or including a light sculpture that creates the feeling of water with ripples of light on the bents.
    - **C- Elevator** –Please ensure that any installation is accessible.
    - **C- Bike and Car Parking** – Can bike and car parking be functional and artistic?
    - **C- Winter Attractions** It is important to design a site that is attractive in winter.
    - **C- Fire pits** Fire pits or heat lamps would make the site much more useable in winter.
    - **C- Warming Huts** What about warming huts along the trail?
    - **C- Versatile Huts** What about warming huts that can double as something else in summer?
    - **C-Greenhouses** How about a mini green house that has overwintering plants in winter and seedlings in spring?
    - **C-Ice Sculptures and Beaver Tails –** We need ice sculptures and Beaver Tails to make the park a success in winter.
    - **C-Historic Huts** The huts should be historical, demonstrating a pioneer cabin or the architecture of First Nations.
    - **C- Maple Syrup Festival –** How about a maple syrup festival with a hollowed out log and hot rocks in celebration of First Nations maple syrup production?
    - **C-Snowboard Park** Toronto needs a snowboard park and this is a great place for one. We need a half pipe here.
    - **C- Plantagon** Please check out Plantagon's Agritechture and Plantscrapers. Consider vertical gardens climbing up the columns. Vertical gardens could be a neat approach to providing more community garden space.

14. **Stop #4-Fort York Boulevard Crossing**
    - **Location -** An east/west Boulevard Crossing occurs at the halfway point of the length of the Under Gardiner.
    - **3 Options -** An Environmental Assessment evaluated three options for the trail to cross Fort York Boulevard; 1) At Grade Crossing, 2) Pedestrian Bridge, 3) Tunnel
    - **Preferred Option** The preferred option is the pedestrian bridge to create an iconic moment, to allow a continuous flow of pedestrian and cycling traffic, and to allow existing car traffic and a possible future LRT line to continue unimpeded.
    - **Pedestrian Bridge Location** The pedestrian bridge will be parallel with the roof of the Gardiner. The bridge will provide east-west connection, not north-south.
    - **Proximity of Residences to Under Gardiner** – Notice that high-rise units are very close to the Gardiner at this point.
    - **Suspended Bridge or Supported Bridge** – Let's discuss the pros and cons of a suspended bridge versus a supported bridge. A suspended bridge will hang from the Gardiner itself whereas a supported bridge will involve footings that come down to the ground.
    - **Skating rink –** A skating rink will be installed at this location in winter. It will be possible to skate from here to the Fort York visitor's centre along Toronto's longest linear skating trail. In future phases, the skating

trail might connect to the Mouth of the Fort park at the Fort York Library.

- **Water** As part of this discussion, let's also talk about innovative ways to celebrate water. The rink will be a splash pad in summer.
- **Participant Comments (C) or Questions (Q) and Answers (A)**
  - **Q- Bridge location-** Will the pedestrian bridge be located under the Gardiner, between the bents? How wide?
  - **A – Yes.** The approximate width will be 4 meters.
  - **C- Bridge Balconies** – There could be balconies on the bridge that stick out beyond the width of the Gardiner. These balconies could function as viewing platforms, allowing for views of Fort York or the CN Tower. The balconies could project out between the bents**.**
  - **C – Seating** How about some seating on the bridge or on the balconies
  - **C- Accessibility** Please ensure the bridge is fully accessible.
  - **C- Suspension Bridge Views** The cables of a suspension bridge might obstruct views…. or maybe the cables could frame views. A suspension bridge keeps the space below free and clear.
  - **C- Supported Bridge Views** A supported bridge keeps the space above free and clear. Views from the bridge would be unobstructed.
  - **C- VOTE –** 2/3 like Suspension Bridge. 1/3 likes Supported Bridge.
  - **Q- Lateral Stability** What will provide lateral stability for a suspension bridge?
  - **A – Collars and Tendrils** would support the suspension bridge. Collars would clamp around the columns and tendrils would anchor the hanging bridge to the columns, providing lateral stability.
  - **C-Northern Extension** The bridge could have a northern extension. Maybe a balcony or some other form of viewing platform. In this location, you want an elevated perch to get the best views of the fort, the skating rink, and the CN tower.
  - **Tree Platforms** There are interesting platforms that surround tall trees in the Black Forest in Germany. Perhaps similar platforms could encircle the bents at selected locations.
  - **Vines** What about vines that climb up the columns?
  - **Children's Play Space** There is a very strong need for children's play space in these high density communities Please incorporate play space into the design.
  - **Acrobats –** The site needs some acrobats or circus programming.
  - **Shipping container cafe** What about a shipping container café in winter, especially to provide hot drinks for the skaters?
  - **Q- It is hard to get to this site.** What steps are being taken to make it easier to get to this location, especially on TTC?
  - **A-Waterfront Transit Reset.** The City is in the midst of Waterfront Transit Reset public consultation. Please check the City's website for consultation dates. There is some talk of a waterfront bus. A waterfront bus could link waterfront park

destinations together. If there is a lot of activity at the site, we are hopeful that new TTC routes will be created. It is important that the pedestrian bridge not impeded TTC access to the site.

15. Stop #4 - Bathurst Community Hub

- **East of the Boulevard Crossing, Land Is Not in the Public Domain –** East of the boulevard crossing, we are on privately owned publicly accessible land.
- **Proximity of Residences** – There are a number of residential units very close to the trail at this point.
- **Pop up commercial activity –** This space could accommodate pop-up micro-enterprise. What kind of retail services do we want to see here?
- **Connections –** This section of the trail will cross Bathurst at grade and connect to the new community centre, school and off-leash dog park at City Place. The Bathurst crossing will be a new signalized crossing. A new Loblaw's is under construction just south on Bathurst.
- **Community Hub** How can we design this section of the Under Gardiner to act more like a community park?
- **Participant Comments (C) or Questions (Q) and Answers (A)**
  - **C-Farmer's Market –** How about a Farmer's Market here?
  - **C- No** Farmer's Market not a good idea because there is no area to load in or load out. This is a dark, windy space. The Farmers will freeze and people will not want to linger.
  - **C-Loading** Very important to consider loading zones along the entire length of the trail.
  - **C-Underpass Park** This space feels more like underpass park. It is hard and tough.
  - **C- A place to smoke cigarettes.**
  - **C-Wind art; art with light** What about inserting art installations that respond to wind? What about art installations that reflect light into the site or on the glass building walls? What about wind chimes or coloured glass? What about lights powered by wind power?
  - **C-No signalized crossing** The last thing we need is a light to slow down traffic. Let the cars get to the Gardiner as fast as possible.
  - **C-Councillor Cressy wants to slow traffic** Actually, the councillor has expressed a desire to slow traffic at this point, based on resident comments.
  - **C-Major investment ends at Fort York Boulevard** Because we are on private land here, the majority of funding will be invested in spaces west of Fort York Boulevard.
  - **C- 5 meters** The air space 5 meters above grade is privately owned.
  - **C-Transform the ceiling with a "soft above."** If there is air space under the decking that is public, think about how you could transform the allowable airspace. Colored light, giant lanterns, flowing curtains, mobiles or other art installations could be

suspended from the decking. Leave the ground plane as is but create a “soft above”.

- **–END-**

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UNDER GARDINER WALKSHOP

COMMUNITY CONSULTATION NOTES

June 22, 2016

C = Participant Comments
Q = Questions
A = Answers

- **Areas participants are from:**

King/Strachan, Beaches, Bathurst/Harbord, Midtown, Davisville, Yonge/Sheppard

- **Why participants are interested in project:**
  - Want more information, a different project
  - Want to know timelines and when it is expected space is available to use
  - To see the ideas that they've read about, to see the area
  - Involved with other organizations that focus on climate change and the environment, want to see how the project tackles sustainability
  - Want to know how project connects to neighbourhoods
  - Previously went to Gardiner consultations and want to see the differences between the public space idea vs. Gardiner East

- Project is 1.75km of linear public space
- There are areas of Pulse: activity areas
- Three sections: (1) Creative Action Hub – performance space, (2) Liquid Landscape – grassier area, (3) Community Link/Amenities – nearby residents
- Naming campaign in March that brainstormed new names for the project, over 900 submission, shortlist of 4 names that went through online voting. The result: "The Bentway" – refers to the bents of the Gardiner – the brand will be the focus of wayfinding and programming

- **Preliminary Questions (pre-walk)**

Q: When can we expect to use the space? **A:** Summer 2017. 1st phase is Strachan Ave.

Q: Who owns under the Gardiner? Will there be a change of 'right of way'? **A:** City. Part of National Historic Site. Will become hybrid public space, public plazas. Some areas also owned by developer.

Q: Is there a city division decided to operate this project? **A:** Report to City Council about maintenance and opportunity of space to form a new not-profit collaboration

to maintain/operate/fundraise. Expectations of a city park. Online report is available.

Q: How will the noise be addressed? **A:** Majority of noise heard today is due to the construction and extension joints. On previous walks it was not as loud – eventually will be softer. Potential noise mitigation. Locating different activities that will fit noise levels

Q: Was 'Under Gardiner' name considered? **A:** Yes but wanted it to be more community-involved, thus the naming campaign. There will be a branding exercise to promote "the Bentway"

Stop 1 – Strachan Gate

Creative Action Hub – propose for action/noise activities, furthers away from residential, one of the main gateways to project, accessibility is incorporated into design – ramp

Q: Is there bike access? **A:** Yes. Design is stairs with ramps.

Q: How many parts intersect with transit? **A:** Trail connects to Exhibition, Bathurst, Spadina, Streetcar on Queens Quay, new TTC bus route on Fort York, Fort York Pedestrian/Cycling bridge – also connects Garisson Common to Stanley Park (will be finished in 2018), Triangular view cone

Q: Are there restrictions on height? Such as restrictions on what can be attached on Bents?

Q: Should we consider activities in winter vs. summer? **A:** Yes, think about what can be done in winter – such as firepits, skating trails, etc.

Q: Would the trees along this side stay? **A:** Yes. The intent is to have the creative action hub on the west side of Strachan area

Q: The entrance will have a stairway? **A:** Yes. Widening sidewalk, building a wall. This will be an event space so people would move towards Strachan. There will be protective barriers.

Q: When would this area be cleared so the construction of stairs could begin? **A:** Area being referred to is actually not part of construction for project but the regeneration of the Gardiner

Stop 2 – Parking Lot west of Fort York Armoury

Q: What is the zoning of the parking lot? Would it change? It's usually used as Exhibition Place parking. **A:** Not sure what original zoning would be but some greenspaces would go towards the parking lot

Q: Is there a way to make the crossing area more porous? **A:** Gateway into project would not have fence currently here and there would be a larger walkway

C: They could use a 3D sound system to surround the performance space to project sound /none leaking out of space. Some cities have used this and makes the area more quiet too.

C: Strachan Ave is very busy and noisy, this creates a safety issue of pushing people off to the sidewalk. Would there be a safety barrier? **A:** Lauren from Public Works mentioned on past walks that there would be a guardrail to protect that area

C: Skateparks and similar should be used in the space as well. **A:** Flexibility is key for this project's design and usage of space.

Q: Skating rink or trail part of the design? Could it be stretched out in length – having a hard time imagining activity and management of flow of people. **A:** Yes. The organic form of space will be used to guide this design.

C: The skating trail could be water in the summer – storm water collection

C: Designing the space so pedestrians go onto sidewalk vs. a stop. Enable moving safely from event space to street. **A:** Should note that not all people would be exiting here.

C: Any washrooms located here? **A:** None planned in this area. There are washrooms at Fort York Visitors Centre and there will be temporary/portable available during events.

C: Opportunity for food vendors? Permanent? **A:** Pop-Ups and temporary are incorporated in the design

C: Thinking about how to light the spaces. Solar power? Other sustainable methods?

Stop 3 – Fort York Visitor Centre

Liquid Landscape – part of the Gardiner that is 5 storeys tall, highest portion, most light, softest landscape proposed. Fort York has ideas of programming for the space and there have been performances here before.

C: Bents are like portals – each could signify different periods – travel through time periods

C: Possibly adding art and banners to pillars

C: if it is part of the original shoreline it would be a good teaching moment that should be incorporated – educational platform of development. Can bring in native plants. Linking up with post-secondary institutions to do programming (i.e. Geology programs at universities). The Native Child and Family Education Centre's rooftop could be used as inspiration for the space.

C: Street furniture representing shoreline/etc – raw materials used in space that relates to the geology of the area (i.e. stones found on shoreline can be used)

Q: Is this the original area of Garisson Creek? **A:** Yes.

C: A way there could actually be water - used as a calming feature for noise, greening, etc.

C: How the space can be used when it is raining (i.e. storm water) – create a water feature that comes alive during the rain only? Also a good space to hide under when it rains

Q: Opportunity for people to climb up and look out? **A:** People want ability to go on platform, opportunity to see from bridge.

C: Incorporate height and the pillars – rock-climbing wall?

C: Have totems on pillars, other education features – Aboriginal history

Q: Was Fleet St. busy last year? **A:** Unsure.

Stop 4 – Fort York Boulevard

Middle point – first interruption – challenge is how to bridge these two sides? Environmental assessment of site, consultation, etc. re: deciding on the best pedestrian bridge option. What to consider – curve of street, concrete barriers, speed of cars. This bridge will allow people to see the project from above.

Q: It would go over Fort York and intersection. Width of bridge? **A:** 4 meters. Accommodating pedestrians and bike lanes. Included in phase 1.

C: Set of stairs? There would be stairs for direct access? **A:** Re: Ryerson SLC stairs where people use as a meeting place.

Q: Any seating on bridge? Incorporation of chairs like on the Highline (NY)? Moveable chairs?

Q: Suspension vs. Footing bridge = height is same? **A:** Yes, same. **C:** Gardiner is close, what happens to condos privacy? **A:** Potential for one side to be higher or chairs only on one side.

Q: Expense between bridges? **A:** same. Grounded has more potential to disturb ground, destabilize Gardiner footing. Suspension is harder for maintenance work but benefit is that most can be constructed off-site.

C: I like the suspension idea because there is too much stuff on the street already.

C: The bridge should be something beautiful, cultural is more valuable.

C: Suspension creates a link from Gardiner to park and makes people think "we can do things WITH the Gardiner" – putting more focus on incorporating Gardiner with design

C: Don't want to take away from aesthetic of "Bentway" therefore Suspension is good.

C: Lots happening on street – biking, driving – so Footing bridge will add more. Suspension would be better.

Q: Are there other access points on bridge? Can you exit quickly? **A:** No. **C:** There should be more points of access especially on the west side. Suspension, but *not* rope bridge, is best, though a rope bridge would be more fun.

C: Will this area be continuous? Fence will remain because of Fort York? If needs to remain, there should be a nicer fence.

Q: Towards the Bathurst bridge – is that a dead end? **A:** No, condos will go up and there should be linkages.

C: Zipline?

Stop 5 – Bathurst Street / Condo Courtyard

Most urban feeling part of the Gardiner. Space owned/maintained by Condo Board and the other side ir ownded by another developer and will be a loblaws. This portion will be future plans, except for the trail, which connects to CityPlace, a new school, dogpark, etc. The idea here is to think about the kinds of amenity space there could be for nearby residents.

C: Area is a wind tunnel, now its calm but can get very bad.

C: Could use wind for power/electricity and lighting

C: Well shaded – good area for farmers market (though windy)

C: There are two other farmers markets nearby – Spadina/Bremner, Spadina/Front

C: What if we had a pop up space similar to the one outside of Club Monaco in Yorkville? It would make it into a destination to go to in the area. Perhaps something smaller, trendy that attracts people

C: TO Flower Market in west end with live bands once a month – something similar would be nice

C: Structure that could expand, a flexible space for many things – such as Market 707 on Dundas/Bathurst. Shipping container markets for entrepreneurs and new comers. This would provide flexibility.

C: Bike Parking and Bike Share on different points of the project

C: Water sources? Water fountains to refill bottles? But distinctive fountains with an interesting design to attract people

Q: Are condos comfortable with wayfinding signs and signage because it is a private space? **A:** Waterfront TO has held stakeholder committee meetings, ongoing negotiations – so far all positive

C: Havent talked much about art installations – one space just for artists that is constantly changing? Rotating pubic art. If people knew it was the "art gallery" there could be more attraction to go there

C: What about harnessing the kinetic energy? Using cars driving by to have lighting art. Using vibrations to power something?

C: People will use this as throughway – how to make it safe at all times of the day? Floor lighting, specifically for trail portion?

C: Motion censored lighting – when cyclists pass by

C: There's a type of paint that can be used to remove C02 – method to improve air quality

C: Important to recognize area is diverse and spaces should be used creatively

Appendix 6 – Email Newsletters Distributed

An update from Project: Under Gardiner

View this email in your browser

Twitter Website

More Updates

Learn more about Project: Under Gardiner

Visit us online to explore the project's ideas and inspirations. Share your thoughts on Twitter or get in touch by email. We would love to hear

Notice of Study Commencement

We recently kicked off a Municipal Class Environmental Assessment to look at options for a new pedestrian crossing at Fort York Boulevard and the Gardiner Expressway. See

your feedback!
Explore the Project

the official notice for more details.
Download PDF

Our mailing address is:
Waterfront Toronto, on behalf of Project: Under Gardiner
20 Bay Street
Suite 1310
Toronto, Ontario M5J 2N8
Canada

PROJECT: UNDER GARDINER

DEAR TORONTO,

You are invited to attend the first public meeting for *Project: Under Gardiner* and the related Municipal Class Environmental Assessment. At this public meeting we'll tell you more about the project and our objectives. We'll be presenting a series of early designs for public comment and feedback.

The Project

Waterfront Toronto and the City of Toronto are developing 4 hectares (10 acres) of new public space on underused land under the Gardiner Expressway. The space will connect seven neighbourhoods with a new 1.75-kilometre multi-use trail and spaces for cultural programming between west of Strachan Avenue and Spadina Avenue.

The Environmental Assessment

Waterfront Toronto and the City of Toronto have initiated a Schedule 'C' Municipal Class Environmental Assessment (EA) to study the municipal infrastructure required for a new pedestrian crossing at Fort York Boulevard, a component of the larger project. The study will follow the requirements of Phase 1 through Phase 5 of the Municipal Class Environmental Assessment to examine the need for the infrastructure and evaluate alternative solutions and alternative design concepts.

How to Participate

You can attend the upcoming public meeting. The presentation and display boards from the meeting will also be made available online for viewing and public comment the week of April 11, 2016. We'll send another email update after the meeting to let you know when and where these materials

will be available. Know someone who wants to receive updates? Send them to: www.undergardiner.com/connect.html

Public Meeting Details

Date: Thursday April 7, 2016

Time: Open House at 6:30 p.m. and 8:00 p.m.; Presentation from 7:00 p.m. - 8:00 p.m.

Location: Harbourfront Community Centre Gymnasium, 627 Queens Quay West, Toronto, ON M5V 3G3 The nearest major intersection is Queens Quay West and Bathurst Street.

Map: Click here.

Transit: Take the 511 Bathurst streetcar south to Fleet Street. Walk south to Queens Quay and east to the main entrance of the community centre. OR: take the 509 Harbourfront streetcar from Union Station to Queens Quay West at Dan Leckie Way West Side. Cross to the south side of Queens Quay and then walk west to the main entrance of the community centre. Please use the TTC trip planner for additional options.

Accessibility: Barrier-free access to the community centre is through the main entrance at the northwest corner of the building.

For more information, please contact:

Christopher McKinnon, Public Consultation Lead
Email: hello@undergardiner.com
Website: www.undergardiner.com

Twitter Website

More Updates

Learn more about Project: Under Gardiner

Visit us online to explore the project's ideas and inspirations. Share your thoughts on Twitter or

Submissions Deadline: April 1st at 11:59pm

Have you had a chance to submit your name to the #ReclaimTheName campaign? Today's the

get in touch by email. We would love to hear your feedback!
Explore the Project

final day! Get creative and send us your best!
#ReclaimTheName

Our mailing address is:
Waterfront Toronto, on behalf of Project: Under Gardiner
20 Bay Street
Suite 1310
Toronto, Ontario M5J 2N8
Canada

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Twitter Website

More Updates

Learn more about Project: Under Gardiner

Visit us online to explore the project's ideas and inspirations. Share your thoughts on Twitter or

Reclaim the Name Campaign

With the naming submissions now closed, we received 884 outstanding suggestions! The

get in touch by email. We would love to hear your feedback!
Explore the Project

naming jury will now sift through the hundreds of names and develop a shortlist of three to five names that will then be voted on by the public in May.
#ReclaimTheName

Our mailing address is:
Waterfront Toronto, on behalf of Project: Under Gardiner
20 Bay Street
Suite 1310
Toronto, Ontario M5J 2N8
Canada

An update from Project: Under Gardiner

View this email in your browser

PROJECT: UNDER GARDINER

JOIN US. RALLY BEHIND THE NAME YOU LOVE MOST.

Find out more and vote for your favourite.

Hey Torontonians! Today's the day. Voting begins now to choose the forever name for *Project: Under Gardiner*. Go see the four finalists and cast your vote. You can vote once a day until the deadline of May 8, 2016.

Share this. Rally your friends and neighbours around the name you love. Form a voting block and vote together each day. Make a YouTube testimonial to advocate for your favourite. Start your own campaign and bring people together.

Speak up and speak out. We want your votes and we want to hear your voice. Join the conversation online with #ReclaimTheName.

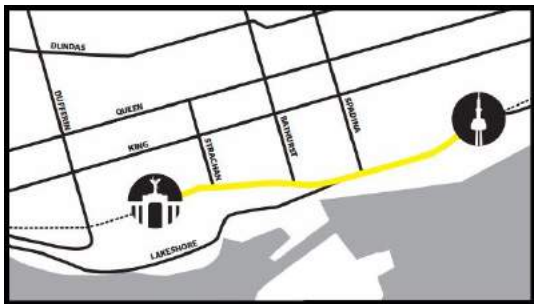
Learn more by visiting www.undergardiner.com.

VOTE NOW

Twitter Website

More Updates

Learn more about *Project: Under Gardiner*
Visit us online to explore the project's ideas and inspirations through videos and the materials from our first public meeting. Share your thoughts on Twitter or through online questionnaires. We would love to hear your feedback!
Explore the Project



Join us for a Walking Tour
Join Park People, Waterfront Toronto, and PUBLIC WORK for the second of four walking workshops of *Project: Under Gardiner*. This will be an opportunity to learn more about the project, but more importantly, provide your feedback and ideas to the project team.
Register on Eventbrite

You're invited to "Activate and Elevate"
Join Lord Cultural Resources for an insightful discussion with a group of international thought leaders, planners and designers. We're convening this *Project: Under Gardiner* "think tank" to discuss the programs, activities and events that will define, shape, transform and energize the nearly 2-kilometre stretch of this once forgotten urban space.
Register on Eventbrite

Our mailing address is:
Waterfront Toronto, on behalf of Project: Under Gardiner
20 Bay Street
Suite 1310
Toronto, Ontario M5J 2N8
Canada

This is an update from Project: Under Gardiner. View this email in your browser

Hey Torontonians! Today's the day. Your votes will decide the forever name for *Project: Under Gardiner*. Go see the four finalists and cast your vote now.

The deadline to cast your vote is 11:59pm tonight, May 8, 2016.

Share this. Rally your friends and neighbours around the name you love. Speak up and speak out. We want your votes and we want to hear your voice. Join the conversation online with #ReclaimTheName.

Watch the four videos below and visit www.undergardiner.com to cast your vote.

GATHERING PLACE

This name honours the Indigenous roots of this site and celebrates the

THE BENTWAY

This is a strong, modern, catchy and descriptive name that pays

history of these lands. This name has a strong affinity with the most common meaning of “Toronto,” which is derived from the Huron *toronton*, and references “place of meetings.” In the present day—a gathering place reflects a strong sense of community and suggests a place to be that brings people together.

tribute to the unique architectural feature under the Gardiner Expressway—the column-and-beam structures known as “bents.” The idea of a bent also reflects the bending nature of this 1.75km stretch of space, whereas the added word “way” is suggestive of a pedestrian corridor.

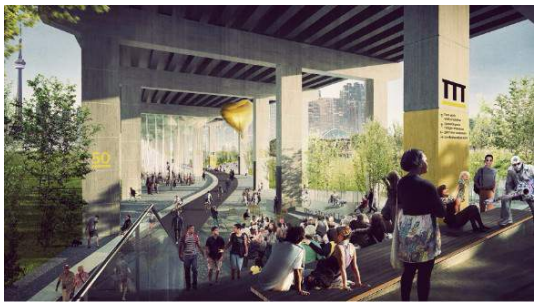
THE CANOPY

This name has a deeply positive resonance—dreamers often long for a full moon under a canopy of stars. Within nature, a canopy is a place of shelter that is home to a rich, green and diverse life. This name feels contemporary and warm while also adding an air of fun. It captures the spirit of a wondrous and bustling space that up until now has been hidden in plain sight.

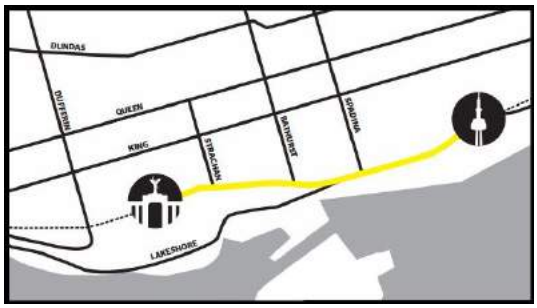
THE ARTERY

This name suggests the creative lifeblood of our city and the Gardiner Expressway is also the main artery into our downtown core. This name encapsulates the vibrancy of Toronto and recognizes the cultural pulse of an urban trail that flows through and connects seven diverse neighbourhoods. This sense of connectivity, life and art is what the transformation beneath the Gardiner is all about.

VOTE NOW



Learn more about *Project: Under Gardiner*



Join us for a Walking Tour TODAY at 2pm

Visit us online to explore the project's ideas and inspirations through videos and the materials from our first public meeting. Share your thoughts on Twitter or through online questionnaires. We would love to hear your feedback!

Explore the Project

Join Park People, Waterfront Toronto, and PUBLIC WORK for the second of four walking workshops of *Project: Under Gardiner*. This will be an opportunity to learn more about the project, but more importantly, provide your feedback and ideas to the project team.

Register on Eventbrite

TWO NAMES ARE LEFT STANDING.

We heard you when you made **The Artery** and **The Bentway** your top two names for our new public space.

Now we're bringing them back for a run-off vote. This is your very last chance to choose the name you love the most. Please vote one last time!

Join our final naming showdown. Vote now.

Voting ends at noon on Monday, May 30th.

PUBLIC MEETING #2

On Tuesday, May 31 at 6:30 p.m., you are invited to attend the second public meeting for *Project: Under Gardiner* and the related Municipal Class Environmental Assessment. This public meeting will provide updates on the design, public consultation to date, a proposed air quality assessment and the Environmental Assessment.

The Project
Waterfront Toronto and the City of Toronto are developing 4 hectares (10 acres) of new public space on underused land under the Gardiner Expressway. The space will connect seven neighbourhoods with a new 1.75-kilometre multi-use trail and spaces for cultural programming between west of Strachan Avenue and Spadina Avenue.

The Environmental Assessment
Waterfront Toronto and the City of Toronto have initiated a Schedule 'C' Municipal Class Environmental Assessment (EA) to study the municipal infrastructure required for a new pedestrian crossing at Fort York Boulevard, a component of the larger project. The study will follow the requirements of Phase 1 through Phase 5 of the Municipal Class Environmental Assessment to examine the need for the infrastructure and evaluate alternative solutions and alternative design concepts.

How to Participate
If you are unable to attend the public meeting, the presentation and display boards will also be made available online for viewing and public comment the week of June 6, 2016. Subscribe to the mailing list to receive updates on when and where these materials will be available:
www.undergardiner.com/connect.html

Public Meeting Details
Date: Tuesday May 31, 2016
Time: Presentation at 6:30 p.m., followed by an Open House at 8:00 p.m.
Location: Waterfront Neighbourhood Centre Gymnasium, 627 Queens Quay West, Toronto, ON M5V 3G3. The nearest major intersection is Queens Quay West and Bathurst Street.
Map: Click here.
Transit: Take the 511 Bathurst streetcar south to Fleet Street. Walk south to Queens Quay and east to the main entrance of the community centre. OR: take the 509 Harbourfront streetcar from Union Station to Queens Quay West at Dan Leckie Way West Side. Cross to the south side of Queens Quay and then walk west to the main entrance of the neighbourhood centre. Please use the TTC trip planner for additional options.
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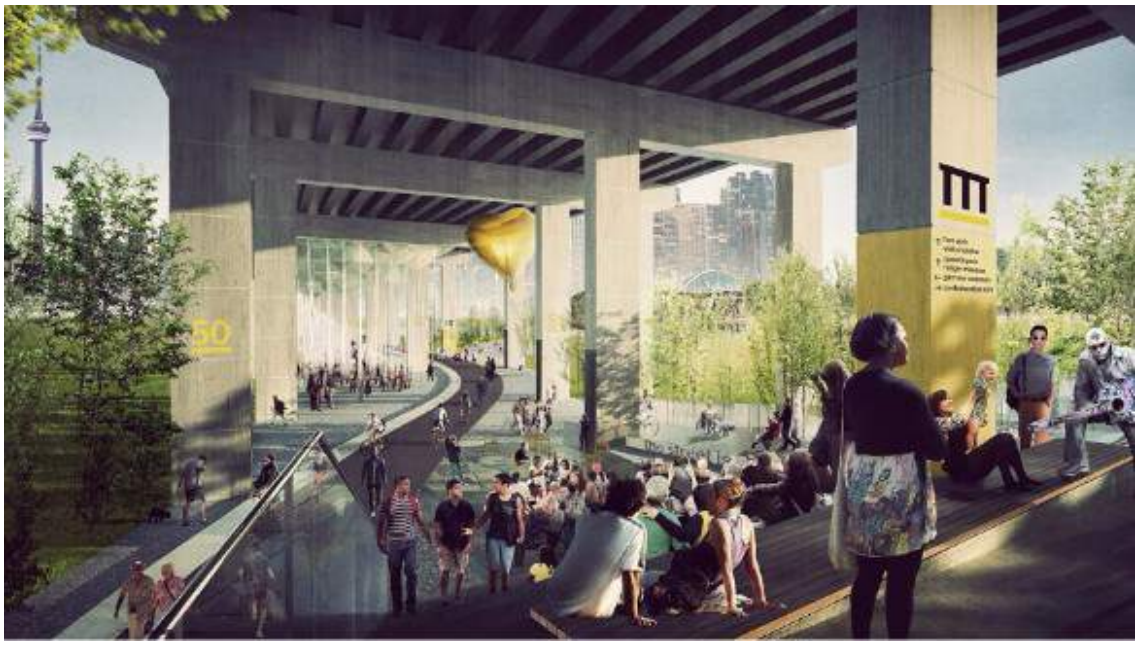
For more information, please contact:
Christopher McKinnon, Public Consultation Lead

Email: hello@undergardiner.com
Website: www.undergardiner.com

JOIN A WALKING TOUR



Thursday, June 2 from 6:00 p.m. to 8:00 p.m.

Join Park People, Waterfront Toronto, and PUBLIC WORK for the third of four walking workshops of Project: Under Gardiner. This will be an opportunity to learn more about the project, but more importantly, provide your feedback and ideas to the project team.

REGISTER ON EVENTBRITE

Twitter Website

Our mailing address is:
Waterfront Toronto, on behalf of Project: Under Gardiner
20 Bay Street
Suite 1310
Toronto, Ontario M5J 2N8
Canada

Appendix C
Project: Under Gardiner Cultural Heritage Resource Assessment: Built Heritage Resources and Cultural Heritage Landscapes

CULTURAL HERITAGE RESOURCE ASSESSMENT:
BUILT HERITAGE RESOURCES AND CULTURAL HERITAGE LANDSCAPES

EXISTING CONDITIONS - IMPACT ASSESSMENT

PROJECT: UNDER GARDINER
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

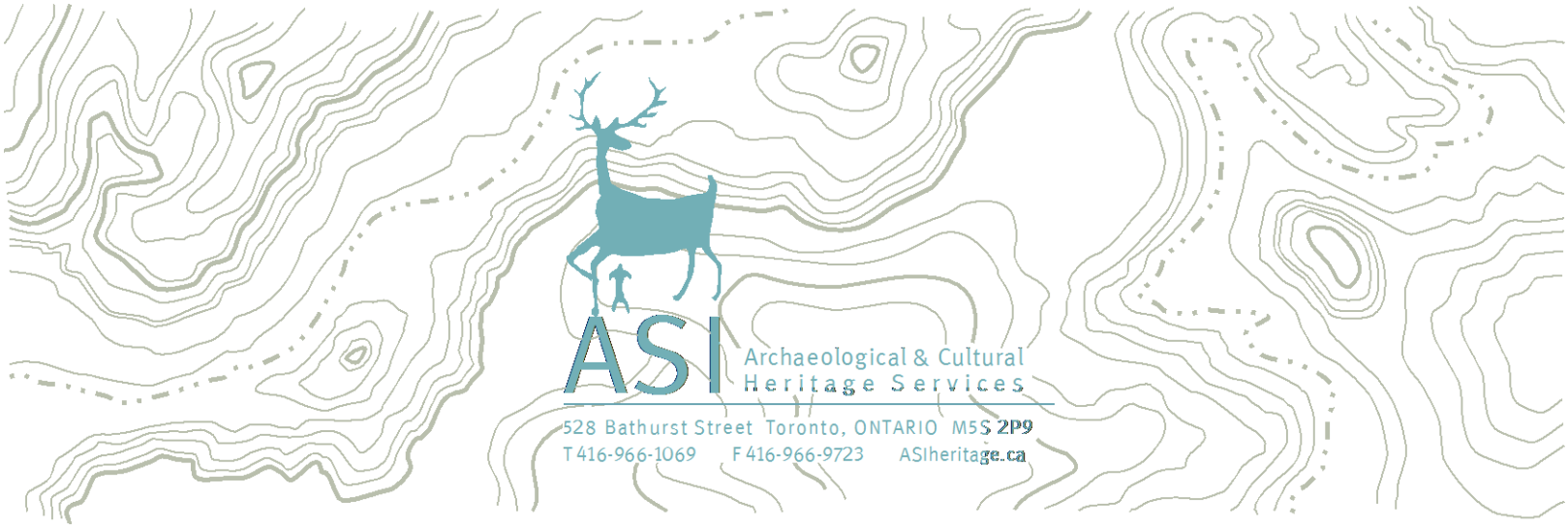
CITY OF TORONTO, ONTARIO

Prepared for:

Dillon Consulting Limited
235 Yorkland Blvd, Suite 800
Toronto, ON, M2J 4Y8
T 416-229-4647

ASI File: 15EA-251

April 2016 (Revised July, August and November 2016)



CULTURAL HERITAGE RESOURCE ASSESSMENT:
BUILT HERITAGE RESOURCES AND CULTURAL HERITAGE LANDSCAPES

EXISTING CONDITIONS - IMPACT ASSESSMENT

PROJECT: UNDER GARDINER
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT
CITY OF TORONTO, ONTARIO

EXECUTIVE SUMMARY

ASI was contracted by Dillon Consulting Limited to conduct a Cultural Heritage Resource Assessment as part of the Project: Under Gardiner Municipal Class Environmental Assessment study. Project: Under Gardiner will create a new pedestrian and cycling trail, connections and programmable cultural spaces in the 10 acres of unused space under the Gardiner Expressway between Strachan Ave and Spadina Ave. The site is comprised of unused public lands, public spaces adjacent to new developments, and an area within the Fort York National Historic Site and adjacent to the Fort York Visitor Centre.

The results of background historic research and a review of secondary source material, including historic mapping, revealed that the study area was originally located along the shoreline or within Lake Ontario prior to major lakefilling activities in the late-nineteenth and early-twentieth centuries to support railroad and shipping infrastructure. The area immediately to the north of the study area has a long history as a military fort, dating to the construction of Fort York in its current location beginning in 1813. The areas to the south, east, and west are located within an industrial and commercial landscape dating to the late-nineteenth century. The area has been subject to considerable high-rise residential condominium and road development.

The field review confirmed that this area retains one known cultural heritage resource and one potential cultural heritage resource. Fort York (CHL 1) is a designated heritage site under Part V of the *Ontario Heritage Act* and is a National Historic Site of Canada. The Gardiner Expressway (CHL 2) is not previously identified as a cultural heritage feature and was identified during field review. The Gardiner Expressway was identified as having potential to be a cultural heritage resource given the role the Gardiner Expressway has played in defining the study area. It is recommended that consultation with the City of Toronto be undertaken to determine if a Heritage Impact Assessment is required.

Based on the results of background data collection and field review, the following recommendations were developed for the Project: Under Gardiner Class Environmental Assessment:

1. The Fort York HCD and NHS will be altered through introduction of the new structure. However, given the location of the bridge on the fringe of Fort York, the bridge is not expected to alter any identified heritage attributes. The bridge design should be light and minimalistic, and bridge railings should be open-concept to allow for improved views from the bridge to Fort York. It is recommended that landscaping and bridge design be developed with input from the City of Toronto Heritage Preservation Services, and Fort York Management Board, to ensure compatibility with the heritage character of Fort York.

2. Should future work require an expansion of the Project: Under Gardiner Municipal Class EA 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.

3. This report should be submitted to the Ministry of Tourism, Culture, and Sport, the City of Toronto Heritage Preservation Services, and Fort York Management Board for review and comment.

ARCHAEOLOGICAL SERVICES INC.
CULTURAL HERITAGE DIVISION

PROJECT PERSONNEL

Senior Project Manager:	Lindsay Graves, MA *Cultural Heritage Specialist* *Assistant Manager, Cultural Heritage Division*
Project Coordinator:	Sarah Jagelewski, Hon. BA *Staff Archaeologist* *Assistant Manager, Environmental Assessment Division*
Project Administrator:	Carol Bella, Hon. BA *Research Archaeologist and Administrative Assistant*
Report Preparation:	Joel Konrad, PhD *Cultural Heritage Specialist* John Sleath, MA *Cultural Heritage Assistant*
Graphics Preparation:	Jonas Fernandes, MSc *Geomatics Specialist* John Sleath Blake Williams, MLitt *Geomatics Specialist*
Report Reviewer:	Lindsay Graves

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1.0 INTRODUCTION

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The purpose of this report is to present a built heritage and cultural landscape inventory of cultural heritage resources, identify existing conditions of the Project: Under Gardiner study area, identify impacts to cultural heritage resources, and propose appropriate mitigation measures. This research was conducted under the senior project management of Lindsay Graves, Cultural Heritage Specialist and Assistant Manager of the Cultural Heritage Division at ASI.

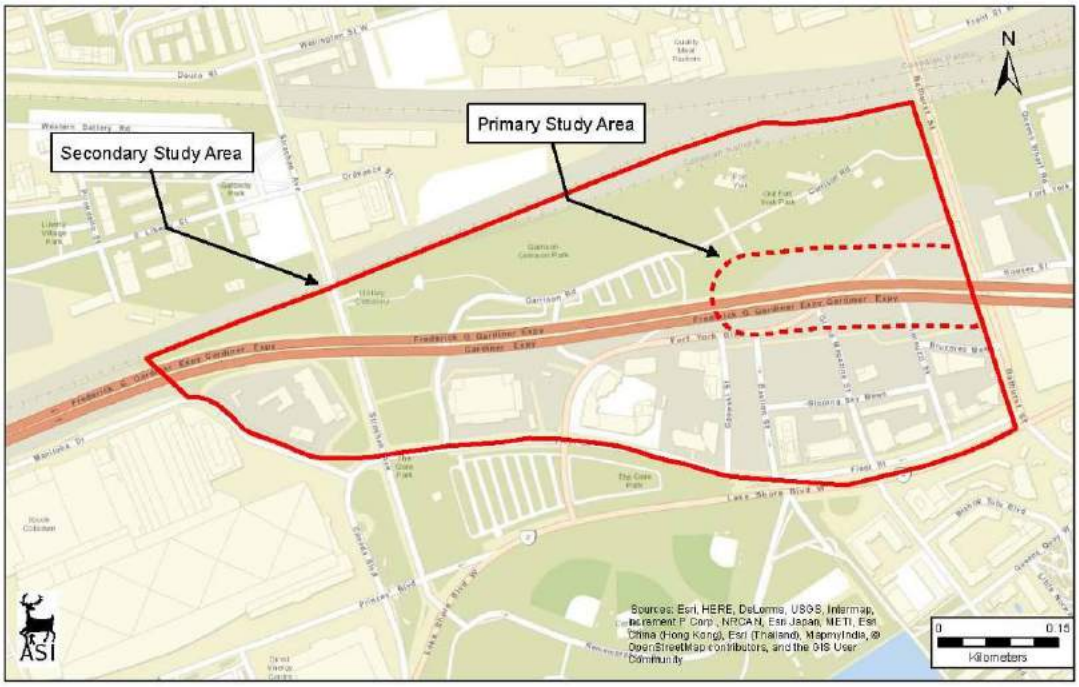

Figure 1: Location of the study area

Base Map:©OpenStreetMap and contributors,
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2.0 BUILT HERITAGE RESOURCE AND CULTURAL HERITAGE LANDSCAPE ASSESSMENT CONTEXT

2.1 Legislation and Policy Context

This cultural heritage assessment considers cultural heritage resources in the context of improvements to specified areas, pursuant to the *Environmental Assessment Act*. This assessment addresses above ground cultural heritage resources over 40 years old. Use of a 40 year old threshold is a guiding principle when conducting a preliminary identification of cultural heritage resources (Ministry of Transportation 2006; Ministry of Transportation 2007; Ontario Realty Corporation 2007). While identification of a resource that is 40 years old or older does not confer outright heritage significance, this threshold provides a means to collect information about resources that may retain heritage value. Similarly, if a resource is slightly younger than 40 years old, this does not preclude the resource from retaining heritage value.

For the purposes of this assessment, the term cultural heritage resource was used to describe both cultural heritage landscapes and built heritage resources. A cultural landscape is perceived as a collection of individual built heritage resources and other related features that together form farm complexes, roadscapes and nucleated settlements. Built heritage resources are typically individual buildings or structures that may be associated with a variety of human activities, such as historical settlement and patterns of architectural development.

The analysis throughout the study process addresses cultural heritage resources under various pieces of legislation and their supporting guidelines. Under the *Environmental Assessment Act* (1990) environment is defined in Subsection 1(c) to include:

- cultural conditions that influence the life of man or a community, and;
- any building, structure, machine, or other device or thing made by man.

The Ministry of Tourism, Culture and Sport is charged under Section 2 of the *Ontario Heritage Act* with the responsibility to determine policies, priorities and programs for the conservation, protection and preservation of the heritage of Ontario and has published two guidelines to assist in assessing cultural heritage resources as part of an environmental assessment: *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (1992), and *Guidelines on the Man-Made Heritage Component of Environmental Assessments* (1981). Accordingly, both guidelines have been utilized in this assessment process.

The *Guidelines on the Man-Made Heritage Component of Environmental Assessments* (Section 1.0) states the following:

> When speaking of man-made heritage we are concerned with the works of man and the effects of his activities in the environment rather than with movable human artifacts or those environments that are natural and completely undisturbed by man.

In addition, environment may be interpreted to include the combination and interrelationships of human artifacts with all other aspects of the physical environment, as well as with the social, economic and cultural conditions that influence the life of the people and communities in Ontario. The *Guidelines on the Man-Made Heritage Component of Environmental Assessments* distinguish between two basic ways of visually experiencing this heritage in the environment, namely as cultural heritage landscapes and as cultural features.

Within this document, cultural heritage landscapes are defined as the following (Section 1.0):

> The use and physical appearance of the land as we see it now is a result of man's activities over time in modifying pristine landscapes for his own purposes. A cultural landscape is perceived as a collection of individual man-made features into a whole. Urban cultural landscapes are sometimes given special names such as townscapes or streetscapes that describe various scales of perception from the general scene to the particular view. Cultural landscapes in the countryside are viewed in or adjacent to natural undisturbed landscapes, or waterscapes, and include such land uses as agriculture, mining, forestry, recreation, and transportation. Like urban cultural landscapes, they too may be perceived at various scales: as a large area of homogeneous character; or as an intermediate sized area of homogeneous character or a collection of settings such as a group of farms; or as a discrete example of specific landscape character such as a single farm, or an individual village or hamlet.

A cultural feature is defined as the following (Section 1.0):

> …an individual part of a cultural landscape that may be focused upon as part of a broader scene, or viewed independently. The term refers to any man-made or modified object in or on the land or underwater, such as buildings of various types, street furniture, engineering works, plantings and landscaping, archaeological sites, or a collection of such objects seen as a group because of close physical or social relationships.

The Minister of Tourism, Culture, and Sport has also published *Standards and Guidelines for Conservation of Provincial Heritage Properties* (April 2010; Standards and Guidelines hereafter). These Standards and Guidelines apply to properties the Government of Ontario owns or controls that have cultural heritage value or interest. They are mandatory for ministries and prescribed public bodies and have the authority of a Management Board or Cabinet directive. Prescribed public bodies include:

- Agricultural Research Institute of Ontario
- Hydro One Inc.
- Liquor Control Board of Ontario
- McMichael Canadian Art Collection
- Metrolinx
- The Niagara Parks Commission.
- Ontario Heritage Trust
- Ontario Infrastructure Projects Corporation
- Ontario Lottery and Gaming Corporation
- Ontario Power Generation Inc.
- Ontario Realty Corporation
- Royal Botanical Gardens
- Toronto Area Transit Operating Authority
- St. Lawrence Parks Commission

The Standards and Guidelines provide a series of definitions considered during the course of the assessment:

A provincial heritage property is defined as the following (14):

> Provincial heritage property means real property, including buildings and structures on the property, that has cultural heritage value or interest and that is owned by the Crown in right of Ontario or by a prescribed public body; or that is occupied by a ministry or a prescribed public body if the terms of the occupancy agreement are such that the ministry or public body is entitled to make the alterations to the property that may be required under these heritage standards and guidelines.

A provincial heritage property of provincial significance is defined as the following (14):

> Provincial heritage property that has been evaluated using the criteria found in Ontario Heritage Act O.Reg. 10/06 and has been found to have cultural heritage value or interest of provincial significance.

A built heritage resource is defined as the following (13):

> …one or more significant buildings (including fixtures or equipment located in or forming part of a building), structures, earthworks, monuments, installations, or remains associated with architectural, cultural, social, political, economic, or military history and identified as being important to a community. For the purposes of these Standards and Guidelines, "structures" does not include roadways in the provincial highway network and in-use electrical or telecommunications transmission towers.

A cultural heritage landscape is defined as the following (13):

> … a defined geographical area that human activity has modified and that has cultural heritage value. Such an area involves one or more groupings of individual heritage features, such as structures, spaces, archaeological sites, and natural elements, which together form a significant type of heritage form distinct from that of its constituent elements or parts. Heritage conservation districts designated under the Ontario Heritage Act, villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trails, and industrial complexes of cultural heritage value are some examples.

Additionally, the *Planning Act* (1990) and related *Provincial Policy Statement* (*PPS*), which was updated in 2014, make a number of provisions relating to heritage conservation. One of the general purposes of the *Planning Act* is to integrate matters of provincial interest in provincial and municipal planning decisions. In order to inform all those involved in planning activities of the scope of these matters of provincial interest, Section 2 of the *Planning Act* provides an extensive listing. These matters of provincial interest shall be regarded when certain authorities, including the council of a municipality, carry out their responsibilities under the *Act*. One of these provincial interests is directly concerned with:

> 2.(d) the conservation of features of significant architectural, cultural, historical, archaeological or scientific interest

Part 4.7 of the *PPS* states that:

> The official plan is the most important vehicle for implementation of this Provincial Policy Statement. Comprehensive, integrated and long-term planning is best achieved through official plans.

> Official plans shall identify provincial interests and set out appropriate land use designations and policies. To determine the significance of some natural heritage features and other resources, evaluation may be required.
>
> Official plans should also coordinate cross-boundary matters to complement the actions of other planning authorities and promote mutually beneficial solutions. Official plans shall provide clear, reasonable and attainable policies to protect provincial interests and direct development to suitable areas.
>
> In order to protect provincial interests, planning authorities shall keep their official plans up-to-date with this Provincial Policy Statement. The policies of this Provincial Policy Statement continue to apply after adoption and approval of an official plan.

Those policies of particular relevance for the conservation of heritage features are contained in Section 2- Wise Use and Management of Resources, wherein Subsection 2.6 - Cultural Heritage and Archaeological Resources, makes the following provisions:

> 2.6.1 Significant built heritage resources and significant cultural heritage landscapes shall be conserved.

A number of definitions that have specific meanings for use in a policy context accompany the policy statement. These definitions include built heritage resources and cultural heritage landscapes.

A *built heritage resource* is defined as: "a building, structure, monument, installation or any manufactured remnant that contributes to a property's cultural heritage value or interest as identified by a community, including an Aboriginal community" (PPS 2014).

A *cultural heritage landscape* is defined as "a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Aboriginal community. The area may involve features such as structures, spaces, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association" (PPS 2014). Examples may include, but are not limited to farmscapes, historic settlements, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trailways, and industrial complexes of cultural heritage value.

In addition, significance is also more generally defined. It is assigned a specific meaning according to the subject matter or policy context, such as wetlands or ecologically important areas. With regard to cultural heritage and archaeology resources, resources of significance are those that are valued for the important contribution they make to our understanding of the history of a place, an event, or a people (*PPS* 2014).

Criteria for determining significance for the resources are recommended by the Province, but municipal approaches that achieve or exceed the same objective may also be used. While some significant resources may already be identified and inventoried by official sources, the significance of others can only be determined after evaluation (*PPS* 2014).

Accordingly, the foregoing guidelines and relevant policy statement were used to guide the scope and methodology of the cultural heritage assessment.

2.2 Municipal Policies

The City of Toronto has developed an Official Plan (June 2015 Consolidation, Section 3.1.5, 'Heritage Conservation'), which sets out a number of policies with regard to cultural heritage resources. Policies that are relevant to this study are included below.

Policies

1. The Heritage Register will be maintained by the City Clerk, or his or her designate and will include all properties and Heritage Conservation Districts of cultural heritage value or interest that are designated under Parts IV and V of the Ontario Heritage Act, and will include all non-designated properties that have been identified through consultation with the City's heritage committee and approved by Council for their inclusion. The Heritage Register will be publicly accessible.
2. Properties and Heritage Conservation Districts of potential cultural heritage value or interest will be identified and evaluated to determine their cultural heritage value or interest consistent with provincial regulations, where applicable, and will include the consideration of cultural heritage values including design or physical value, historical or associative value and contextual value. The evaluation of cultural heritage value of a Heritage Conservation District may also consider social or community value and natural or scientific value. The contributions of Toronto's diverse cultures will be considered in determining the cultural heritage value of properties on the Heritage Register
3. Heritage properties of cultural heritage value or interest properties, including Heritage Conservation Districts and archaeological sites that are publicly known will be protected by being designated under the Ontario Heritage Act and/or included on the Heritage Register.
4. Properties on the Heritage Register will be conserved and maintained consistent with the Standards and Guidelines for the Conservation of Historic Places in Canada, as revised from time to time and as adopted by Council.
5. Proposed alterations, development, and/or public works on or adjacent to, a property on the Heritage Register will ensure that the integrity of the heritage property's cultural heritage value and attributes will be retained, prior to work commencing on the property and to the satisfaction of the City. Where a Heritage Impact Assessment is required in Schedule 3 of the Official Plan, it will describe and assess the potential impacts and mitigation strategies for the proposed alteration, development or public work.
6. The adaptive re-use of properties on the Heritage Register is encouraged for new uses permitted in the applicable Official Plan land use designation, consistent with the Standards and Guidelines for the Conservation of Historic Places in Canada.
7. Prior to undertaking an approved alteration to a property on the Heritage Register, the property will be recorded and documented by the owner, to the satisfaction of the City.
8. When a City-owned property on the Heritage Register is no longer required for its current use, the City will demonstrate excellence in the conservation, maintenance and compatible adaptive reuse of the property.
10. A heritage management plan will be adopted by Council. The heritage management plan will be a comprehensive and evolving strategy for the identification, conservation and management of all properties on the Heritage Register, unidentified and potential heritage properties.
12. Designated heritage properties will be protected against deterioration by neglect through the enforcement of heritage property standards by-laws.
13. In collaboration with First Nations, Métis and the Provincial Government, the City will develop a protocol for matters related to identifying, evaluating and protecting properties and cultural

heritage landscapes on the Heritage Register, archaeological sites and artifacts where they may be of interest to First Nations, or Métis

14. Potential and existing properties of cultural heritage value or interest, including cultural heritage landscapes and Heritage Conservation Districts, will be identified and included in area planning studies and plans with recommendations for further study, evaluation and conservation.
17. Commemoration of lost historical sites will be encouraged whenever a new private development or public work is undertaken in the vicinity of historic sites, such as those where major historical events occurred, important buildings or landscape features have disappeared or where important cultural activities have taken place. Interpretation of existing properties on the Heritage Register will also be encouraged.
18. Incentives for the conservation and maintenance of designated heritage properties will be created and made available to heritage property owners.

DEVELOPMENT ON PROPERTIES ON THE HERITAGE REGISTER

26. New construction on, or adjacent to, a property on the Heritage Register will be designed to conserve the cultural heritage values, attributes and character of that property and to mitigate visual and physical impact on it.
27. Where it is supported by the cultural heritage values and attributes of a property on the Heritage Register, the conservation of whole or substantial portions of buildings, structures and landscapes on those properties is desirable and encouraged. The retention of facades alone is discouraged
28. The owner of a designated heritage property will be encouraged to enter into a Heritage Easement Agreement where the City considers additional protection beyond designation desirable due to the location, proposed alteration, and/or the nature of that property.
29. Heritage buildings and/or structures located on properties on the Heritage Register should be conserved on their original location. However , where it is supported by the cultural heritage values and attributes of a property on the Heritage Register a heritage building may be relocated within its property or development site where:
    a) the heritage building or structure is not attached to or adjoining another building or structure;
    b) the location, orientation, situation or view of the heritage building is not identified in the Official Plan or as a cultural heritage value or attribute of the property, and/or the proposed relocation will not negatively affect the cultural heritage values or attributes of the property;
    c) the portion of the heritage building or structure that contains the identified cultural heritage values and attributes is being conserved in its entirety and will not be demolished, disassembled and/or reconstructed;
    d) the relocation on site does not conflict with any applicable Heritage Conservation District plans;
    e) a Heritage Property Conservation Plan is submitted that demonstrates that the removal and relocation of the building or structure within its existing property will not pose any physical risk to the heritage building and/or structure, its cultural heritage values and attributes, to the satisfaction of the City; and
    f) these and any other related conditions are secured in a Heritage Easement Agreement prior to removal and relocation on site.

2.3 Site-Specific Heritage Conservation Policy and Considerations

In addition to the general heritage policies listed in the *City of Toronto Official Plan*, additional site specific heritage conservation policies are in place due to the proximity of the Project: Under Gardiner study area to Fort York National Historic Site, and Garrison Commons Heritage Conservation District.

Fort York's status as a significant heritage resource was first recognized in the early 20th century. In 1923, the Historic Sites and Monuments Board of Canada designated the fort as a NHS, following several encroachments on the site by neighbouring developments. The national significance of the site was reaffirmed in 1958 in response to the threat of its destruction resulting from construction of the Gardiner Expressway. In 1985, Fort York and the Garrison Common were designated under Part V of the *Ontario Heritage Act*, as the City of Toronto's first heritage conservation district. The following section summarizes the formal protections that have been adopted at the provincial and federal levels to safeguard the heritage significance of Fort York. Following the above, relevant heritage conservation policies and fort-specific management guidelines and documents are discussed in order to identify the governing documents that define the heritage significance of the site and which are used to provide direction in cases where its heritage values may be under threat.

2.3.1 Designation of Fort York Heritage Conservation District and National Historic Site

The Fort York and Garrison Common HCD was designated in 1985 (City of Toronto By-Law 420-85), although the district, as defined at that time included only a small portion of the lands to the south of the fort under consideration herein. The study completed for the purposes of designation had been prepared the previous year by the Toronto Historical Board and the City of Toronto Planning and Development Department. While the study provided discussion of the fort's historical development, physical context and potential long term development, particular reference was made to the fort's relationship to the surrounding lands and changes in their use.

The HCD as approved in 1985 consisted of the walled portion of the fort, Garrison Common, the parking lot, the City tree nursery, the Strachan Avenue Burial Ground, and the parcel of land at 800 Fleet Street, west of the Fort York Armoury. Between 1996 and 2002, the City purchased six parcels of land in the vicinity of the fort, including the area under the Gardiner Expressway, which had been in the possession of the Canadian Pacific Railway. It was recognized that these new lands incorporated a variety of significant archaeological and heritage features. Beginning in 2001, Culture Division staff, as directed by Council, began the process of reassessing the boundaries of the HCD in light of these acquisitions and the opportunities they provided with respect to the long term management of the fort, and open space design within and adjacent to the HCD. This work included preparation of the *Fort York and Garrison Common Open Space Design and Implementation Plan* (2001), and the *Fort York Public Realm Plan* (2004).

Simultaneously, the City worked with Parks Canada and stakeholders such as the Friends of Fort York and the Fort York Management Board to prepare the *Fort York National Historic Site Commemorative Integrity Statement* (2004), which also involved consideration of the 1985 HCD boundaries and the merits of their extension. Another initiative during this general time was the preparation of the document entitled *Fort York: Setting it Right, Fort-Centered Planning and Design Principles* (2001), which was produced by the Friends of Fort York and the Fort York Management Board and which, in fact, served as a foundation for the Open Space and Public Realm Plans.

Ultimately, these initiatives led to a redefinition of the boundaries of the site, both as an HCD and a NHS. In July of 2003, the National Historic Sites and Monuments Board extended the NHS to include, among other new areas, the former Canadian Pacific Railway lands under the Gardiner Expressway (which had been rezoned as park space), while in May of 2004, the City redefined the boundaries of the HCD to match those of the NHS (City of Toronto By-Law 541-2004)[1].

2.4 Data Collection

In the course of the cultural heritage assessment, all potentially affected cultural heritage resources are subject to inventory. Short form names are usually applied to each resource type, (e.g. barn, residence). Generally, when conducting a preliminary identification of cultural heritage resources, three stages of research and data collection are undertaken to appropriately establish the potential for and existence of cultural heritage resources in a particular geographic area.

Background historical research, which includes consultation of primary and secondary source research and historic mapping, is undertaken to identify early settlement patterns and broad agents or themes of change in a study area. This stage in the data collection process enables the researcher to determine the presence of sensitive heritage areas that correspond to nineteenth and twentieth-century settlement and development patterns. To augment data collected during this stage of the research process, federal, provincial, and municipal databases and/or agencies are consulted to obtain information about specific properties that have been previously identified and/or designated as retaining cultural heritage value. Typically, resources identified during these stages of the research process are reflective of particular architectural styles, associated with an important person, place, or event, and contribute to the contextual facets of a particular place, neighbourhood, or intersection.

A field review is then undertaken to confirm the location and condition of previously identified cultural heritage resources. The field review is also utilised to identify cultural heritage resources that have not been previously identified on federal, provincial, or municipal databases.

Several investigative criteria are utilised during the field review to appropriately identify new cultural heritage resources. These investigative criteria are derived from provincial guidelines, definitions, and past experience. During the course of the environmental assessment, a built structure or landscape is identified as a cultural heritage resource if it is considered to be 40 years or older, and if the resource satisfies at least one of the following criteria:

Design/Physical Value:

- It is a rare, unique, representative or early example of a style, type, expression, material or construction method.
- It displays a high degree of craftsmanship or artistic merit.
- It demonstrates a high degree of technical or scientific achievement.
- The site and/or structure retains original stylistic features and has not been irreversibly altered so as to destroy its integrity.
- It demonstrates a high degree of excellence or creative, technical or scientific achievement at a provincial level in a given period.

[1] The only exception to the correspondence between the 2004 NHS and HCD boundary definitions is the exclusion of Victoria Park from the HCD, as the City until recently leased this site from the Federal government.

Historical/Associative Value:

- It has a direct association with a theme, event, belief, person, activity, organization, or institution that is significant to: the City of Toronto; the Province of Ontario; or Canada.
- It yields, or has the potential to yield, information that contributes to an understanding of the history of: the City of Toronto; the Province of Ontario; or Canada.
- It demonstrates or reflects the work or ideas of an architect, artist builder, designer, or theorist who is significant to: the City of Toronto; the Province of Ontario; or Canada.
- It represents or demonstrates a theme or pattern in Ontario's history.
- It demonstrates an uncommon, rare or unique aspect of Ontario's cultural heritage.
- It has a strong or special association with the entire province or with a community that is found in more than one part of the province. The association exists for historic, social, or cultural reasons or because of traditional use.
- It has a strong or special association with the life or work of a person, group or organization of importance to the province or with an event of importance to the province.

Contextual Value:

- It is important in defining, maintaining, or supporting the character of an area.
- It is physically, functionally, visually, or historically linked to its surroundings.
- It is a landmark.
- It illustrates a significant phase in the development of the community or a major change or turning point in the community's history.
- The landscape contains a structure other than a building (fencing, culvert, public art, statue, etc.) that is associated with the history or daily life of that area or region.
- There is evidence of previous historic and/or existing agricultural practices (e.g. terracing, deforestation, complex water canalization, apple orchards, vineyards, etc.)
- It is of aesthetic, visual or contextual important to the province.

If a resource meets one of these criteria it will be identified as a cultural heritage resource and is subject to further research where appropriate and when feasible. Typically, detailed archival research, permission to enter lands containing heritage resources, and consultation is required to determine the specific heritage significance of the identified cultural heritage resource.

When identifying cultural heritage landscapes, the following categories are typically utilized for the purposes of the classification during the field review:

Farm complexes:	comprise two or more buildings, one of which must be a farmhouse or barn, and may include a tree-lined drive, tree windbreaks, fences, domestic gardens and small orchards.
Roadscapes:	generally two-lanes in width with absence of shoulders or narrow shoulders only, ditches, tree lines, bridges, culverts and other associated features.
Waterscapes:	waterway features that contribute to the overall character of the cultural heritage landscape, usually in relation to their influence on historic development and settlement patterns.

Railscapes:	active or inactive railway lines or railway rights of way and associated features.
Historical settlements:	groupings of two or more structures with a commonly applied name.
Streetscapes:	generally consists of a paved road found in a more urban setting, and may include a series of houses that would have been built in the same time period.
Historical agricultural landscapes:	generally comprises a historically rooted settlement and farming pattern that reflects a recognizable arrangement of fields within a lot and may have associated agricultural outbuildings, structures, and vegetative elements such as tree rows.
Cemeteries:	land used for the burial of human remains.

Results of the desktop data collection and field review are contained in Sections 3.0, while Sections 4.0, 5.0 and 6.0 contain conclusions and recommendations with respect to potential impacts of the undertaking on identified cultural heritage resources.

3.0 BUILT HERITAGE RESOURCE AND CULTURAL HERITAGE LANDSCAPE ASSESSMENT

3.1 Introduction

This section provides a brief summary of historic research and a description of identified above ground cultural heritage resources that may be affected by the proposed undertaking. A review of available primary and secondary source material was undertaken to produce a contextual overview of the study area, including a general description of Euro-Canadian settlement and land use. Historically, the study area is located in the Town of York, York County.

3.2 Township Survey and Settlement

3.2.1 York Township

The history of York Township as a territorial division began in 1791 when Augustus Jones surveyed the township. The first land patents were granted in 1796 and by 1813 all of the township lands had been parcelled. By 1802, the township, bounded by the Humber River and Etobicoke Township to the west and sharing a border with Scarborough Township to the east, had a grist mill, two saw mills and two taverns. In 1801, the combined population of York, Etobicoke and Scarborough Townships and the Town of York numbered only 678 but by 1840 the population of York Township numbered more than 5,000 and an economic boom during the 1850s helped to triple the population. This required the growing urban area to stretch its northern limits from Queen Street to Bloor Street. Outside of the core of the city, especially north along Yonge Street, Yorkville (above Bloor) was a prosperous village and some Torontonians settled between Bloor and Eglinton as new street railway services improved suburban to urban access(Mika 1983).

In its first 30 years, York Township (as differentiated from the Town of York) was a rolling and well wooded countryside. The centre of the township was present day Yonge Street and Eglinton Avenue or Eglinton Village. Eglinton Avenue, which was surveyed as the township's baseline, was at that time known as Baseline Road, and the crossroads community had a number of services including four hotels and a Masonic Hall. Yonge Street was settled on both sides and one mile south of Eglinton Avenue, the Davis family ran a pottery business (in the community later known as Davisville). A large number of suburban residences were constructed along the Davenport Ridge, an early Aboriginal trail. Villages in the township and their years of incorporation included Yorkville (1884) and North Toronto (Eglinton and Davisville combined, 1889). The villages of Riverdale, Rosedale, the Annex, Seaton Village and Sunnyside were all annexed directly to Toronto during the 1880s. The annexation of East Toronto occurred in 1908.

The evolution of the city continued at an even greater pace through the late nineteenth and early twentieth centuries, with the consolidation of rail systems and the growth of numerous industrial and commercial operations within the city limits and along the rail corridors. Urban planning became more coordinated in the twentieth century, and a move toward more spatial control was made in 1904 with legislation that controlled non-residential land use in the city. This was soon applied to residential areas, as municipal officials attempted to alleviate certain kinds of congestion and undesirable overlap. The development of internal urban transport also promoted a wider spread community and the establishment of discrete business and residential districts.

Throughout the rest of the city, economic prosperity and urban opportunity drew people to various parts of the city to live and work. Industrial districts followed the railway lines, and new immigration and more land annexation, including North Toronto and Moore Park in 1912, resulted in strong population growth. The geographic area of the city doubled between 1891 and 1912, and the population grew from 181,000 to 378,000 during the same period. During the 1920s, a dramatic economic boom fueled the construction of new office towers – a total of 14 between 1922 and 1928. Increased automobile use necessitated improvements to local roads and crossings.

Few new buildings were constructed during the 1930s depression, and unemployment remained high until the war economy lifted companies up and out of their downturns. Before the war ended, a post-war reconstruction plan was put together for the city, and this represented the first overall approach to urban planning since Governor Simcoe envisioned plans for York in 1793. Residential lots were divided and subdivided as the city's density increased, new office buildings and manufacturing plants filled in open spaces, and public transportation networks were expanded.

3.2.2 Fort York and the Garrison Reserve

The Establishment of Fort York

At the time of its foundation, Fort York was located at the mouth of Toronto Harbour right at the water's edge. The fort was the central feature of the Garrison Reserve, established in 1793 when Lieutenant-Governor Simcoe founded both the Town of York and the military base of Fort York. The location of York from the outset was determined by its proposed function as the military and naval arsenal of the new province of Upper Canada. Governor Simcoe believed that a war with the United States was both inevitable and imminent (Firth 1962:xli), and, in addition to its position on the overland route to Lake Huron and the northwest fur trade, York's excellent harbour and its defensibility became important considerations. The town formed a compact plot within the area now bounded by Front, George, Duke

and Berkeley Streets (Careless 1984:21). The Garrison, on the other hand, maintained control of those lands east of Garrison Creek, between the lakeshore and the present Queen and Peter Streets. Within the Garrison Reserve, the location of the fort was selected so as to control what was then the only entrance into Toronto Harbour.

The Queen's Rangers arrived at the site in July of 1793 to begin the process of clearing the land and building a garrison (Firth 1962:xxxiii). The first log military barracks, or "Hutts," were built on the west side of Garrison Creek, although a sketch of the "proposed winter quarters" prepared by Governor Simcoe (Figure 2) shows two picketed buildings on the east side of the ravine. The initial work also involved widening the mouth of the creek to accommodate bateaux and a wharf. An early view of the Garrison (Figure 3), sketched by Elizabeth Simcoe in 1796, depicted the steeply sloping shore of the harbour entry (Careless 1984:20). The creek has since been filled in, and the Bathurst Street right-of-way immediately east of Fort York effectively extends where the creek once flowed (ASI 1992:8; 2006a; 2006b).

Simcoe's plans for the fortification of York were never fully approved by the Governor-in-Chief, Lord Dorchester, and little more could be accomplished by the time Simcoe returned to England in 1796. In that year, the Queen's Rangers were sent to other posts, and the new administrator, Peter Russell, found it difficult to continue the tasks of surveying, transporting provisions and building with a reduced garrison at York (Firth 1962:xlii). The Rangers returned in 1797, and it became necessary to construct additional barracks. Russell also ordered that a blockhouse, furnished with a beacon on its roof, be built on the east side of Garrison Creek (Benn 1993:39), which meant that the fortifications at York spanned both sides of the creek.

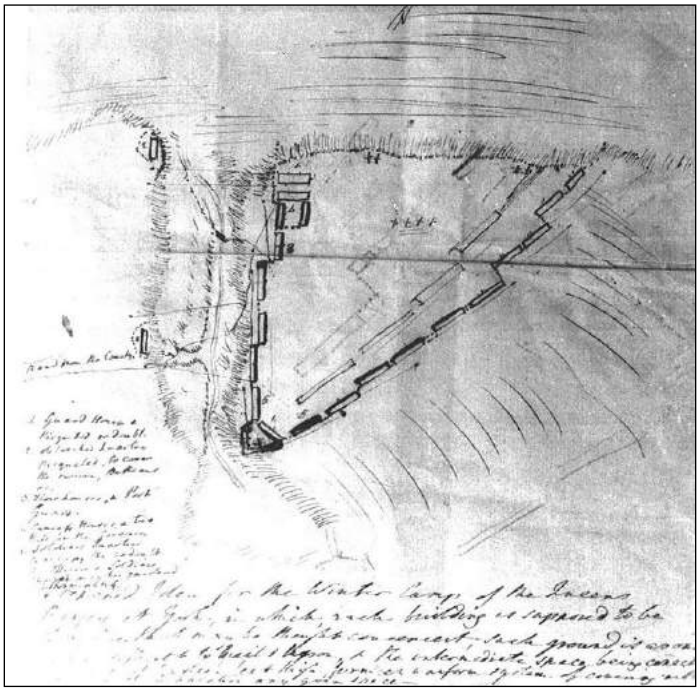

Figure 2: Simcoe's 1793 sketch of the Queen's Rangers garrison on the west side of the creek. North is to the bottom of the map. The geography of the site is distorted.

The log buildings constructed in 1793 were not intended as permanent structures, and, in 1802, a report on the state of public works in Upper Canada noted that "the Old Hutts on the West Side of the Creek

[were] condemned, and ordered to be pulled down" (Firth 1962:72). The report also noted that seven officers' buildings, two hospital buildings, one bakehouse, one canteen, eight barracks, one guardhouse, one magazine, one carriage and engine shed, one provision storehouse and the Indian and Commissary's store had been erected on the site of the 1797 block house on the east side of the creek (Firth 1962:71-72; Benn 1993:39). A stockade protected the landward sides of this new garrison. Most of the buildings on the west side of the creek were demolished, to be replaced by the official residence of the Lieutenant-Governor of Upper Canada, known as Government House (Benn 1993:39).

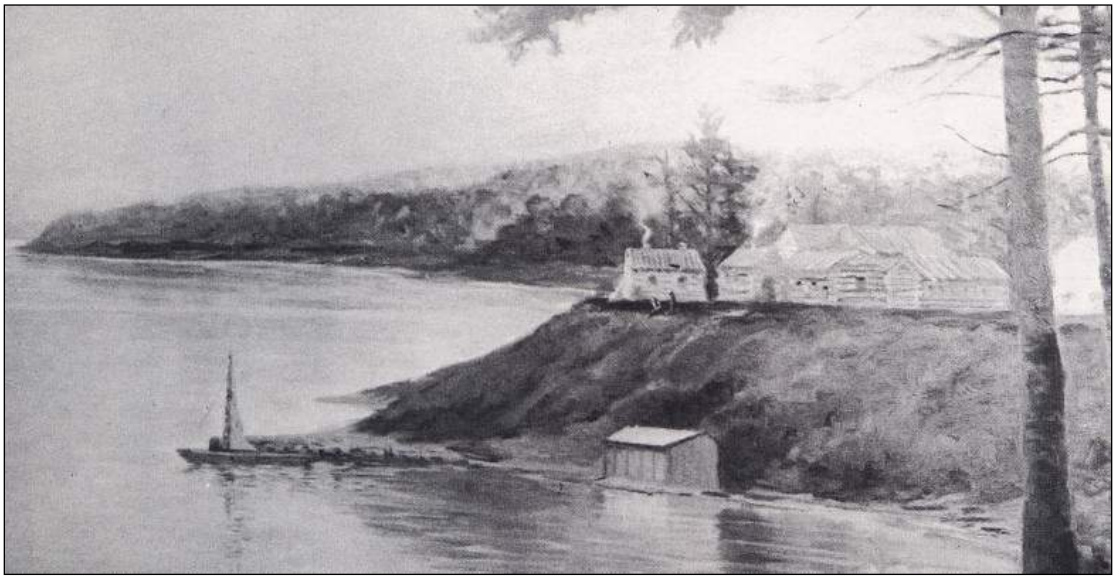

Figure 3: Elizabeth Simcoe's 1796 sketch of the Garrison. The mouth of Garrison Creek lies in the lower right foreground.

Reproduced from Careless (1984:20).

Detailed mapping is not available for the early nineteenth century facilities on the east side of the creek. Indications of the east garrison's layout, however, can be found in sketches of the period. Little else in the way of fortifications was constructed at York until 1812, when Simcoe's plan to turn York into a naval establishment was revived by Sir Isaac Brock (Firth 1962:xliv). Three new batteries were installed at the Fort: one on the site of the main garrison, one near Government House, and the third in the Garrison Creek ravine (Benn 1993:44). The emplacement at Government House later formed part of the fabric of the west wall, moat and circular battery that remain at Old Fort York today.

The Battle of York

On April 27, 1813, an area extending east from approximately the location of the Boulevard Club to Fort York witnessed a battle between American and British/Canadian troops. Both sides together suffered a total of 477 casualties. The published accounts of the Battle of York describe three points of engagement where fatalities were suffered by both the British and their allies, and the invading American forces (Benn 1984, 1993, 2007; Firth 1962; Malcomson 2008).

The first point of engagement was the landing place of the Americans, whose squadron had arrived in Toronto Harbour on the morning of the 27th. The Americans first put ashore at present day Dowling

Avenue and were met by an advance party of 40 to 50 Ojibwa and Mississauga warriors (Benn 1993:53). The warriors were overwhelmed, however, and suffered eight casualties (presumed killed) before they retreated into the woods. While a company of grenadiers arrived shortly thereafter, the British forces were still outnumbered three to one and so they subsequently withdrew eastward to the area of ruined Fort Rouillé. The Americans also suffered casualties in this initial engagement. The battle then moved eastward towards the Western Battery in the vicinity of the Princes' Gates and on to Fort York.

Meanwhile, the American squadron offshore began to move eastward to take up a position opposite the fort. The British commander, Sir Roger Sheaffe, retreated with his men to the Western Battery, west of Fort York, in the vicinity of the Princess Gates. A portable gunpowder magazine was accidentally ignited at this location, however, and approximately 30 men were killed or wounded (Benn 1993:54). Sheaffe was said to have quickly evacuated the wounded as well as the remaining soldiers in the battery back to the fort.

The fort came under tremendous fire from the American squadron and Sheaffe decided to retreat further still, right into the Town of York. Upon retreating, the grand powder magazine, located near Government House was ignited so that its stores would not fall into enemy hands. The resulting explosion killed or wounded 250 Americans troops, including their field commander, Brigadier-General Zebulon Pike (Benn 1984:56). The debris field of the magazine explosion is estimated to have been in the order of 450 metres in radius (Malcomson 2008:216-217). Archaeological excavations within the fort have resulted in the recovery of numerous distorted metal objects, such as powder barrel hoops scattered by the explosion (David Spittal, personal communication, 2005)

Total casualties in the six-hour battle were 157 British and 320 Americans. The Mississaugas and Ojibwa withdrew into the forest, Sheaffe's professional troops retreated to Kingston, and the local militia surrendered the town. The Americans occupied York for six days. They looted homes, took or destroyed supplies, and burned various public facilities, including Government House, and many of the buildings in the Fort, as well as the Parliament buildings and its neighbouring blockhouse in the Town. On May 1st, the Americans reboarded their ships. They then rode at anchor in the harbour to wait out a storm, sailing from York on May 8th (Benn 1993:50-62).

An account of the aftermath of the battle recorded by militiaman Ely Playter would seem to indicate that the Americans collected the dead during their occupation of York and buried them, as Playter wrote that "the Yankees had buried all of the Dead" (Benn 1984:51). It is not clear from this whether the dead from all points of engagement, including the landing zone were collected, or whether both British and American remains were buried during this work.

When the Americans left York, the townspeople inspected the burial job and pronounced it to be unsatisfactory. As reported by Mrs. Powell in a letter to her husband, William D. Powell, the Reverend John Strachan and others buried the remains of the British soldiers (the "brave defenders") and "assisted to secure their graves from further disturbance" (Firth 1962:311). It cannot be ascertained from her comments, however, whether the British graves were indeed distinguishable from the American graves, and if so, whether the American graves were left where they had originally been dug.

While the location of these graves was not made explicit in Mrs. Powell's letter, Strachan was also known to have interred British fatalities from the War of 1812 in the military cemetery at Victoria Square. This was because York served as the hospital centre for the Niagara Peninsula after the Battle of Stoney Creek in June of 1813 (Benn 1993:75). During periods of heavy fighting, Strachan routinely buried six to eight soldiers a day in this cemetery, located south of Wellington and east of Bathurst, close to Fort York. This

cemetery remained in use from 1793 to 1860, although it is clear that not even all of the British fatalities of the battle were ultimately interred there. Over the last 150 years, the remains of battle casualties have been found during construction work within the Canadian National Exhibition grounds and at the east end of Fort York. In 1860, the bodies of 15 soldiers were excavated "opposite Dillon's Tavern" when a new Bathurst Street bridge was being constructed. This location could have been either on the Front Street side of the ravine or near the East Gate of the fort. Redevelopment of the eastern portion of the fort by the Park-Blackwell Company in the early 1900s resulted in the discovery of the remains of two soldiers in the eastern rampart, and it remains possible that other remains are extant in this area.

It is not at all clear whether any casualties were "buried where they fell" in the skirmishing around the American landing point and/or during their advance to the Fort, but the possibility cannot be ruled out, particularly in areas where the casualties were heaviest, such as near the ruins of Fort Rouillé and in the vicinity of the Fort York magazine (Malcomson 2008:333-334).

Rebuilding Fort York

After the destruction of most of the fort during the Battle of York, it was rebuilt between the summer of 1813 and 1815 on the west side of the creek (Benn 1993:69-70). The fortifications built on the west side of the creek more or less took the form commemorated today at Old Fort York. The main garrison consisted of seven soldiers' barracks, three officers' quarters, two blockhouses, two magazines, one guardhouse, a cookhouse an engineers' office, and store surrounded by palisades and earthen ramparts. A hospital, blacksmith's shop, storehouses and other buildings were located to the north of the fort in the creek valley. Although there was a general shift of attention to the west of the creek, the battery in the ravine was refurbished and several ancillary features remained on the east side of the creek, including a bakehouse and two "hutts for Artillerymen and Artificers".

As many as three small wharves were set on the shore below the fort. These are depicted as short, T-shaped structures on a variety of early nineteenth century maps. Given their diminutive size, they would have been capable of servicing only small, shallow draught, vessels. Three small structures were located in the general vicinity of the wharves, but post-date them. They may have been storage sheds, latrines or privies.

Shortly after the war and immediate post-war rebuilding of the Fort, plans were laid for improved defences including a new fort further west along the shore to complement the existing complex. The New Fort (Stanley Barracks) was opened in 1842 on the shore of the lake in what are now the Canadian National Exhibition grounds. A road connected the old and new forts.

The Dissolution of the Military Reserve

The Battle of York also demonstrated that the Military Reserve did not contribute in any great manner to defense against a land attack from the west. A substantial portion of the old Military Reserve, parts of which had been held by private individuals on licenses of occupation, was surveyed and offered for sale by the Commissioner of Crown Lands at a public sale in November 1833. The money raised from the sale of lands within the Military Reserve, expected to be as much as £43,000, was to be used for the construction of the new fortifications and a chapel for the use of both the garrison and the neighbourhood (Firth 1966:33-35).

In the immediate vicinity of the fort, development that followed the military's relinquish of control was dominated by railway and industrial concerns. The lands directly north, south and east of Fort York were acquired by the railways in the 1850s, but quickly proved to be insufficient for their needs, initiating a series of lakefilling projects. The end result of this work was to render the fort landlocked.

3.2.3 The Great Western Railway

The Great Western Railway entered the city from the west along the lakeshore in 1855. The company erected a locomotive terminal and freight shed on the north side of Fort York before relocating its central facilities to east of Yonge Street in the mid-1860s (HRL 1989:8). Between 1856 and 1857, the Grand Trunk Railway constructed a cruciform-shaped engine house with turntable, a freight house, smithy, temporary shed, pumping house, carriage house and shed, wharf and a temporary passenger station to the south of Fort York (Figure 4). This work involved a major campaign of lakefilling, which involved the construction of a shorewall of 62 timber cribs (Stephen Otto, personal communication, 2008) and deposition of a substantial volume of fill, some of which was likely derived from Grand Trunk cutting operations within the Garrison common. When the Grand Trunk was taken over by the Canadian Pacific, it continued to use the Fort York railway yards, rebuilding or modifying the engine house and erecting a variety of other small buildings, which tended to be short-lived. The railway corridor south of the fort continued in use until the construction of the Gardiner Expressway. The Ontario, Simcoe and Huron Railway (renamed the Northern Railway in 1858) developed a freight handling complex, located approximately 150 metres to the east of the Queen's Wharf east of Fort York. These facilities were constructed on harbour lakefill undertaken after 1853.

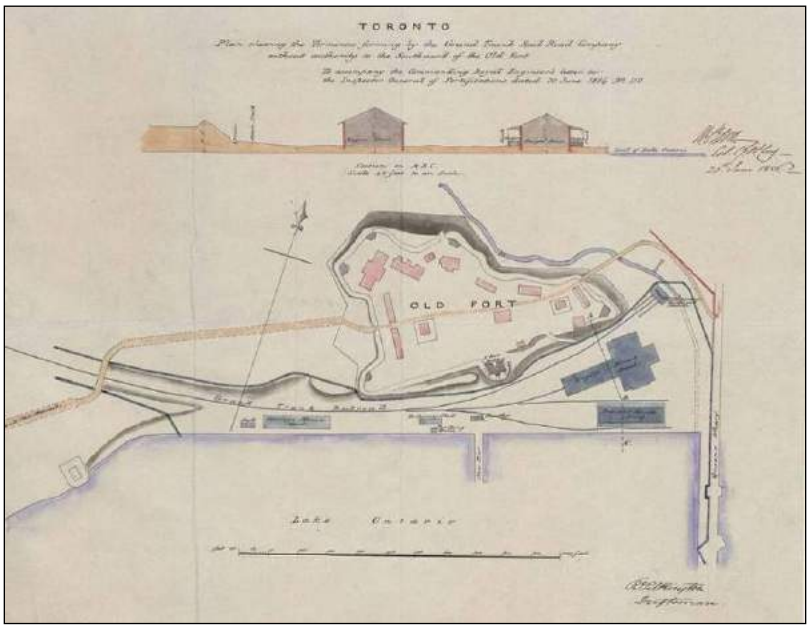

Figure 4: Railway developments south of Fort York as depicted on the 1856 *Plan of the Terminus forming the Grand Trunk Railway Company* map (Pilkington, 1856)

Garrison Common

Garrison Common to the west of the fort encompasses a variety of features associated with various periods of the military's use of the site. Perhaps the earliest of these are the half-moon earthworks, which guarded the western approach to the fort. This defensive work was not manned, however, during the American attack on the fort in 1813. A second set of earthworks appears closer to the fort on several maps dating to after the War of 1812. It is unclear if this feature was ever constructed.

A Commissariat fuel yard, surrounded by a fence, was located in the area between the existing Armouries and the intersection of Fleet Street and Strachan Avenue between circa 1850-1871. Within the compound were an office building and a coal oil store, and perhaps other small structures. Much of the interior space of the compound was likely taken up by piles of coal. A small wharf was located to the southwest of the compound and likely serviced the fuel yard. Between the Commissariat fuel yard and the fort stood a series of buildings that made up an ordnance and supply yard during the later nineteenth and early twentieth centuries. These facilities included a military store, an office, a gun carriage shed and a small unidentified structure. The supply yard was surrounded by a fence, which also contained a variety of other features, such as a wood shed, privy, pump and pump tank.

Located to the north of the Commissariat Fuel Yard, the Old Military Burying Ground at Fort York was Toronto's third military cemetery, occupying an area of approximately 0.7 hectare. No register of burials is known to survive, although at least 97 soldiers, veterans, and their family members, who died between 1862 and 1911, are interred there. The actual number of graves is likely to be higher, possibly up to 200. The precise location of the graves within the cemetery, which was divided into Protestant and Roman Catholic sections, is unknown. Most of the burials took place before 1870, prior to the British military relinquishing control of Fort York to the Canadian government. The cemetery became largely neglected and overgrown shortly after 1870. By 1921, it had reached such a state of decline, that the City authorized a restoration project that included leveling the mounded, uneven surface of the grounds; collection of the

broken tablets; repair of fences; construction of a cinder path across the site; and the erection of a flagpole and installation of a commemorative plaque. The broken tablets were mounted into a brick wall near the flagpole in 1961. This attempt at conservation has resulted in further deterioration of the markers due to incompatibilities between the stones and the cement used to fix them in the wall (Otto 2005). A Stage 2 assessment carried out along the extreme west side of the cemetery area, adjacent to Strachan Avenue did not result in the discovery of any burials (ASI 2006a).

The remaining military feature within the common area is a circa 1871 magazine that was located near the cemetery. It is depicted on maps as late as 1959, but was demolished around that time, when the Garrison Road bridge was rebuilt in its current form. The final feature of note within this general area was the waterworks engine house that supplied the Provincial Lunatic Asylum, located to the northwest of the fort, between circa 1849 and 1871.

3.3 Physiographic Setting

The study area is located in an area in which massive landscape changes have occurred due to waterfront development and industrialization. The majority of the study area is comprised of the tablelands that rise above the Lake Ontario shore. The extreme southeast portion of the study area, however, consists of made lands that were formed through lakefilling operations carried out in the mid- to late nineteenth century.

In general terms, the study area falls within the Iroquois Plain region of southern Ontario. The Iroquois Plain is the former lake bottom of glacial Lake Iroquois and, as such, the terrain generally consists of sand and clay plains dissected by a series of glacial ravines carrying creeks that drain into contemporary Lake Ontario (Chapman and Putnam 1984).

By circa 3,000 B.P., the shoreline in the vicinity was established more or less in the location at which it stood in the early nineteenth century. East of Bathurst Street, the line of the shore varied from approximately 50 to 150 metres to the south of the present alignment of Front Street. West of Bathurst, the shore swung to the southwest. Running roughly parallel to the southern limits of the Fort York Boulevard right-of-way, it formed a slight embayment to the southwest of Fort York. The original location of the shoreline below the fort was confirmed in one locale to the immediate northeast of the armouries during a recent archaeological assessment (ASI 2002). Proceeding further west, the shore then curved back to the northwest, creating Humber Bay.

A distinctive feature of the nineteenth century shore was its narrow limestone shingle beach, just wide enough for the passage of vehicles, lying below a steep embankment (HRL 1989:50). Garrison Creek was located east of the study area and emptied into Lake Ontario on the east side of modern Bathurst Street, its course forming a low sandy peninsula further to the west, on which Fort York was built. The outlet of the creek likely provided an environment in which a variety of food resources were available to any Aboriginal or early Euro-Canadian occupants of the region. Salmon, for instance, were reported in some abundance prior to alterations of the watercourses due to the clearance of the local forest cover (Scadding 1873:36). Phillpott's map of 1818 and Bonnycastle's map of 1833 appear to depict a series of minor swales on the grounds to the west of the fort. These likely represent seasonal creeks that drained directly into Lake Ontario.

Based upon species mentioned in association by early nineteenth-century land surveyors, and the drainage preferences for those species, the general area would have been covered by maple, oak, basswood, pine, hemlock and beech at the time of European contact (Konrad 1973:126).

3.4 Review of Historic Mapping

The 1842 *Topographical map of the city and liberties of Toronto* (Cane 1842) was reviewed to determine the potential for the presence of cultural heritage resources within the study area from the nineteenth century (Figure 5). It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases, given that they were financed by subscription, and subscribers were given preference with regard to the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlases.

Only one nineteenth century map was consulted, as the majority of the study area was still part of Lake Ontario prior to early-twentieth century landfilling activities. The 1842 Cane map demonstrates the drastic changes between the nineteenth century Lake Ontario shoreline and the modern day shoreline, with the shoreline present a short distance south of outer defences of Fort York (labelled as 'The Old Garrison'). Fort York is depicted in its current location, with numerous structures present throughout. Bathurst Street is present in its current alignment to the north of the study area, but is depicted as terminating north of Garrison Creek, to the northeast of Fort York. Modern day Front Street, Fleet Street, and Strachan Avenue, as well as the numerous mid-nineteenth century rail lines are all absent from this mapping.

In addition to nineteenth-century mapping, historical mapping and aerial photographs for the twentieth century were examined. This report presents maps from 1909, 1947, 1957-60, 1962, and 1992. These do not represent the full range of maps consulted for the purpose of this study but were judged to cover the full range of land filling activities and land uses that occurred in the area during this period.

The 1909 Topographic map depicts the study area as an industrial area, with railway lines and rail buildings located to the south, north, and east of Fort York (Figure 6). Bathurst Street is depicted as an unmetalled road along its present alignment to the northeast of the study area, with a bridge carrying its path over the extant rail lines north of Fort York, into the Fort York proper (labelled as 'Old Fort'). This is prior to the installation of the extant Bathurst Street Bridge, which was moved from the Humber River to its current location in 1916 (City of Toronto, 2013). Garrison Common is depicted in its present location to the west of Fort York, although it is not labelled and the Military Burial Grounds are not noted in any way. Strachan Avenue is depicted as an unmetalled with a bridge carrying the roadway over the extant rail lines in its present location into the Stanley Barracks. From this mapping it is evident that the current extent of lakefilling activity had not yet occurred, as the shoreline of Lake Ontario is considerably further north than at present, and the land where the Fort York Armouries currently resides was not yet created.

The 1947 Aerial Photograph continues to depict the study area as primarily situated within an area of heavy industry and rail infrastructure, with Fort York and Garrison Common to the north (Figure 7). The Fort York Armouries are also depicted in their current location to the south of Garrison Common. Bathurst Street is depicted along its present alignments, and is carried over the rail tracks by the extant Bathurst Street Bridge. Bathurst Street continues south to Fleet Street/ Lakeshore Boulevard, depicted for the first time in the historical mapping and air photos within this report, demonstrating the accelerated lakefiling activities that occurred in the first half of the twentieth century. Strachan Avenue is also depicted in its present alignment, with the extant bridge carrying it over the rail tracks in the western portion of the study area. The Canadian National Exhibition Grounds buildings are depicted in their extant locations southwest of the study area.

The 1957-1960 Toronto Planning map depicts the surveyed buildings present at the time of its creation, as well as the planned developments in the area (Figure 8). This mapping is instructive, as it demonstrates the existing conditions as well as the early stages of the planning of the Gardiner Expressway. Fort York, Garrison Commons (including the Military Burial Grounds), and the Fort York Armouries are all depicted in their extant locations, as are Bathurst Street, Strachan Avenue, and Fleet Street. The study area continues to be depicted as primarily composed of railways and associated rail infrastructure for the vast majority of the study area and the area to the south of it. The proposed route of the Gardiner Expressway is depicted in its present location, with proposed impacts to several buildings directly west of Bathurst Street and to several buildings west of Strachan Avenue.

The 1962 Aerial Photograph depicts the portion of the Gardiner Expressway within the study area as under construction, with the steel sub-structure of the bridge visible in several locations where the road surface had not yet been constructed (Figure 9). Fort York and Garrison Commons are depicted in their extant locations, as are Bathurst Street, Strachan Avenue, and Fleet Street. The study area continues to be depicted as primarily composed of railways and associated rail infrastructure, as in the 1947 aerial photograph. The area northwest of the intersection of Bathurst and Fleet Streets depicts a number of structures south of the rail yards.

The 1992 Aerial Photograph depicts few changes from the 1962 mapping, and demonstrates that the study area was located with an urban, industrial area into the late twentieth century (Figure 10). The only notable changes are in south of the eastern portion of the study area, where the rail yards and infrastructure described earlier is replaced by large parking and what appears to be storage areas. Fort York Boulvard is still not depicted, nor are any of the many high-rise condominium buildings extant in the study area at the time of the field inspection.

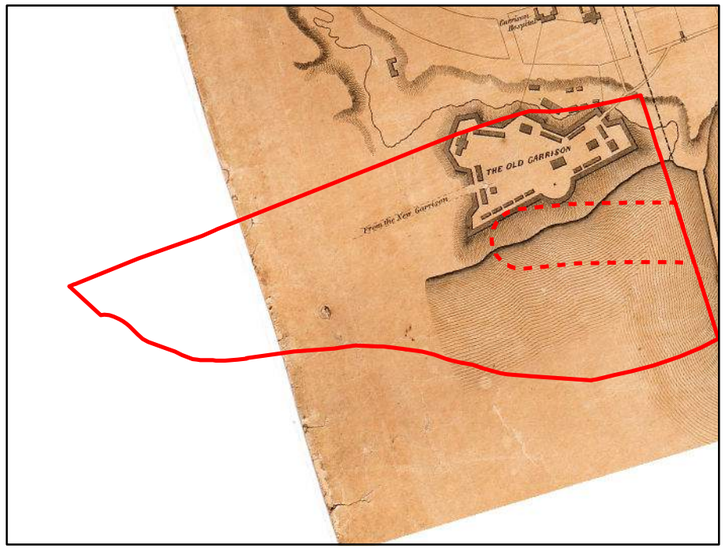

Figure 5: 1842 Cane Map

Figure 6: 1909 Topographical Map

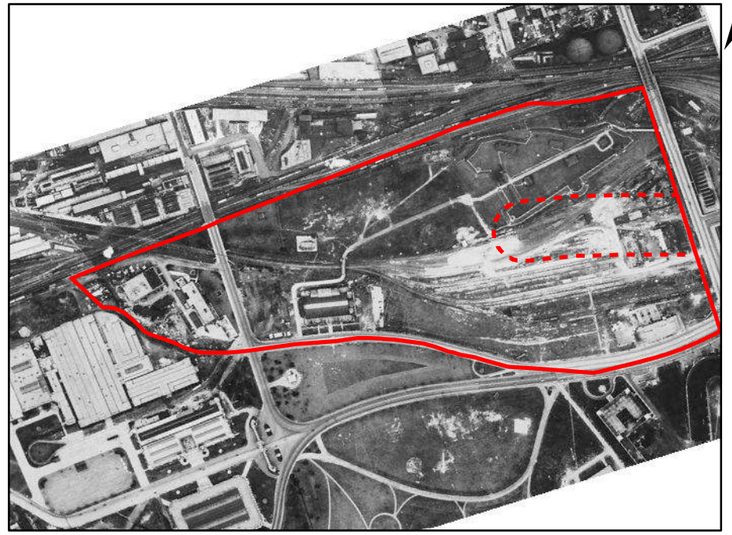

Figure 7: 1947 Aerial Photograph

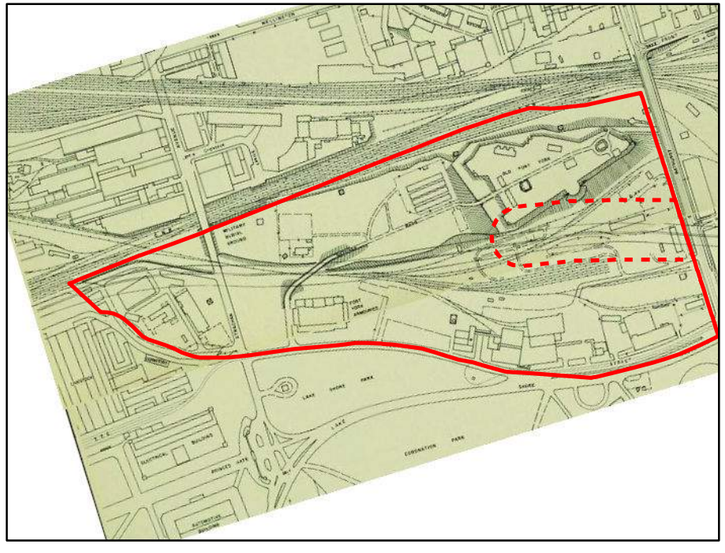

Figure 8: 1957-1960 Planning Map

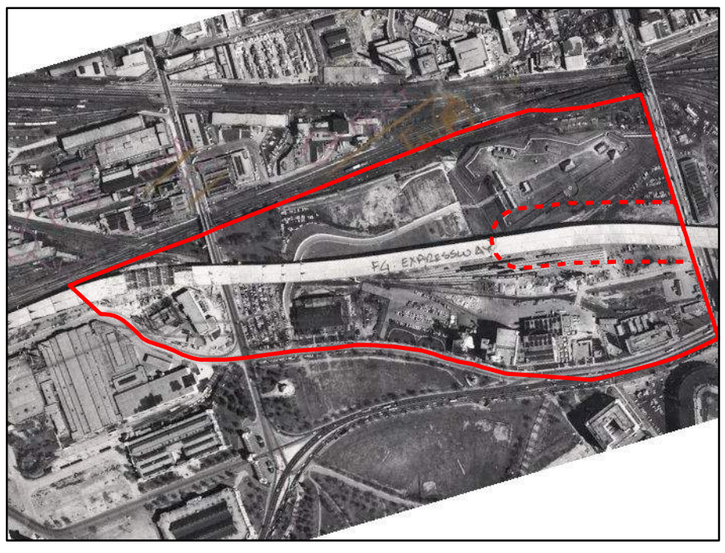

Figure 9: 1962 Aerial Photograph

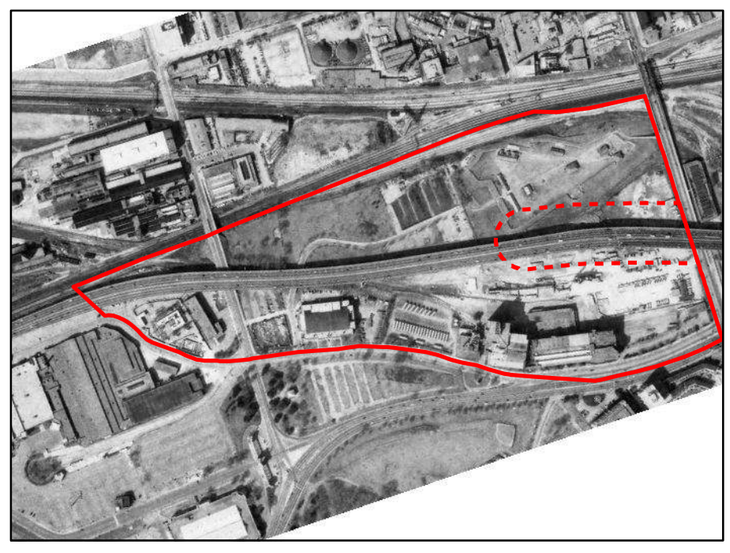

Figure 10: 1992 Aerial Photograph

Archaeological & Cultural Heritage Services
528 Bathurst Street Toronto, ONTARIO M5S 2P9
416-966-1069 | F416-966-9723 | asiheritage.ca

Primary Study Area

Secondary Study Area

0 500

Metres

ASI PROJECT NO.: 15EA-251
DATE: 18 Jul 2016

DRAWN BY: BW
FILE: 15EA251_Fig5-10

Path: X:\2015 Projects\EA\15EA-250_251 Under the Gardiner\View\15EA251_HistMaps.mxd

3.5 Existing Conditions

In order to make a preliminary identification of existing cultural heritage resources within the study area, the following resources were consulted:

- The City of Toronto's *Inventory of Heritage Properties* and list of Heritage Conservation Districts (2013);
- Parks Canada's *Canada's Historic Places* website: available online, the searchable register provides information on historic places recognized for their heritage value at the local, provincial, territorial, and national levels[2];
- Park's Canada's *Directory of Federal Heritage Designations*, a searchable on-line database that identifies National Historic Sites, National Historic Events, National Historic People, Heritage Railway Stations, Federal Heritage Buildings, and Heritage Lighthouses;
- The inventory of Ontario Heritage Trust easements;
- The Ontario Heritage Trust's *Ontario Heritage Plaque Guide*, an online, searchable database of Ontario Heritage Plaques[3];
- *Ontario's Historical Plaques* website[4];

Based on the review of available data, there are two previously identified resources within and/or adjacent to the study area.

A field review was undertaken by John Sleath of ASI on 29 March, 2016, to document the existing conditions of the study area. The field review was preceded by a review of available, current and historic, aerial photographs and maps (including online sources such as Bing and Google maps). These large-scale maps were reviewed for any potential cultural heritage resources which may be extant in the study area. The existing conditions of the study area are described below. Identified cultural heritage resources are discussed in Section 3.5.1 and Section 8.0, and are mapped along with plate locations in Section 9.0 (Figure 11) of this report.

3.5.1 Project: Under Gardiner Study Area– Existing Conditions

The study area is composed of an area underneath the Gardiner Expressway between the west side of Bathurst Street in the east to approximately 325 metres west of Strachan Avenue in the west. The Gardiner Expressway consists of an elevated roadway in the downtown core of the City of Toronto that is oriented generally east-west within the study area (Plate 1). The study area is adjacent to Fort York National Historic Site (NHS) and Heritage Conservation District (HCD) for the entire northern portion of the study area, and a segment of the southwest limit of the study area that is bordered by Strachan Avenue on the west, Fleet Street on the south, and Fort York Boulevard on the east. The area to the south of the study area is generally composed of recently built condominiums, or condominiums currently under construction. The majority of the study area is also currently in use as a construction staging and storage area for the ongoing repairs to the Gardiner Expressway (Plate 2) The area west of Strachan Avenue is the Canadian National Exhibition grounds. The study area crosses over Iannuzzi Street, Fort York Boulevard, Grand Magazine Street, Garrison Road, and Strachan Avenue.

[2] Reviewed 3 March, 2016 (http://www.historicplaces.ca/en/pages/about-apropos.aspx)
[3] Reviewed 3 March, 2016 (http://www.heritagetrust.on.ca/Resources-and-Learning/Online-Plaque-Guide.aspx)
[4] Reviewed 3 March, 2016 (www.ontarioplaques.com)

The eastern portion of the study area commences at the western limit of the Bathurst Street right-of-way (ROW), and is adjacent to modern high-rise condominium developments to both the north and south (Plate 3). Approximately 185 metres west of Bathurst Street, the study area intersects with Fort York Boulevard, west of which the study area passes through Fort York NHS and HCD (Plates 4-5). Fort York NHS was established in 1923 to commemorate the pivotal role that the Fort played in the foundation of Canada, while the HCD was founded in 1985 in recognition of the importance of the Fort in the foundation of the City of Toronto. Since 2004, the boundaries of the NHS and the HCD have been the same. The area south of the Gardiner in the central portion of the study area consists of a grass area adjacent to Fort York Boulevard. The area north of this central portion of the study area includes earthen ramparts and defensive works that make up the Fort's perimeter, with Garrison Common further to the west (Plate 6). The area directly within the study area in this section is comprised of a public use area featuring art installations and bicycle parking between Bathurst Street and Iannuzzi Street (Plate 7) while the remainder is currently a construction area to facilitate repairs to the Expressway above (Plate 8).

The study area is oriented parallel to Fort York Boulevard for approximately 250 metres, at which point the roadway turns sharply to the south, while the study area maintains its east-west orientation (Plate 9). This portion south of the study area, bordered by Fort York Boulevard in the east, Strachan Avenue in the west, and Fleet Street in the south forms the southwestern limit of the Fort York NHS and HCD. In this area the study area continues to be adjacent to Garrison Common (which contains the Military Burial Grounds) in the north, and is adjacent to the Fort York Armoury in the south (Plate 10). Built in 1933, the Armoury is designated a Federal Heritage Building, is actively used by the Department of National Defence, and is home of the Queen's York Rangers Museum (Plate 11). The area underneath the Gardiner Expressway was entirely a construction zone at the time of field inspection.

The western portion of the study area extends over Strachan Avenue by a bridge, and ends approximately 325 metres west of Strachan Avenue. This western portion is bordered by a vacant grass and treed area contained within Fort York NHS/HCD to the north (Plate 12), and the Canadian National Exhibition Grounds to the south. A TTC streetcar rail line is also to the north, and the Exhibition Loop loading platform is to the south, with the rail line passing under the Gardiner within, and to the west of the study area limits.

Plate 1: The east portion of the study area with the Gardiner Expressway at left, and Fort York at right, facing west.

Plate 2: The study area under the Gardiner Expressway showing construction activities, facing east

Plate 3: The central portion of the study area with modern condominiums at left, looking west

Plate 4: View of Fort York and the eastern portion of the study area, facing southwest from Bathurst Street.

Plate 5: The Gardiner Expressway from within Fort York, looking south.

Plate 6: Garrison Common, looking east.

Plate 7: The central portion of the study area under the Gardiner, facing north towards Fort York.

Plate 8: The study area west of Bathurst Street, looking east from Iannuzzi Street

Plate 9: The central portion of the study area, looking northeast

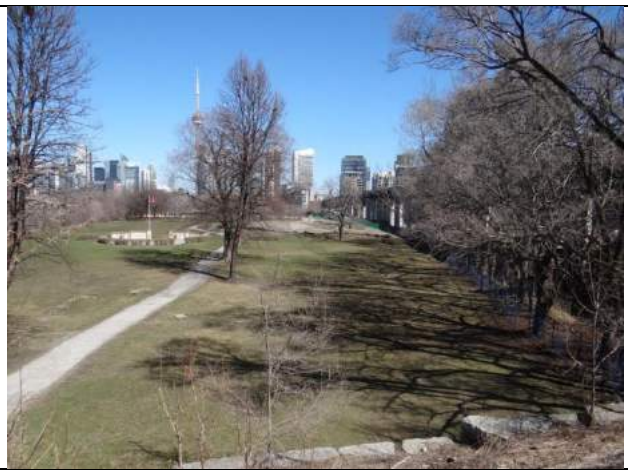

Plate 10: Garrison Common with the Gardiner at right, looking east towards Fort York.

Plate 11: Fort York Armoury, looking northeast from the corner of Fleet Street and Strachan Avenue

Plate 12: The western portion of the study area, looking west from Strachan Avenue

3.5.2 Project: Under Gardiner– Identified Cultural Heritage Resources

Based on the results of the background research and field review, two cultural heritage resources were identified within and/or adjacent to the Project: Under Gardiner Municipal Class EA study area, including two cultural heritage landscapes (CHL) (Table 1). A detailed inventory of these cultural heritage resources is presented in Section 8.0 and mapping of these features is provided in Section 9.0 of this report.

Table 1: Summary of built heritage resources (BHR) and cultural heritage landscapes (CHL) in the primary study area

Feature	Location	Recognition	Description/Comments
CHL 1	Fort York	Designated, Part V; National Historic Site.	Historic Fort built between 1813 and 1815. **See Appendix A for a complete description of preliminary heritage values and attributes.** Designated under Part V of the *Ontario Heritage Act* (By-Law 420-85) and as a National Historic Site of Canada (Recognition date: 1923/05/25).
CHL 2	Gardiner Expressway	Identified during review	Built between 1955 and 1966, the Gardiner Expressway was constructed by the Toronto Metro Council and is named after Frederick G. Gardiner, who spearheaded the project. A portion of the Gardiner Expressway east of the study area is designated as part of the Union Station Heritage Conservation District (By-Law 634-2006)

4.0 SCREENING FOR POTENTIAL IMPACTS

To assess the potential impacts of the undertaking, identified cultural heritage resources are considered against a range of possible impacts as outlined in the document entitled *Screening for Impacts to Built Heritage and Cultural Heritage Landscapes* (MTC November 2010) which include:

- Destruction, removal or relocation of any, or part of any, significant heritage attribute or feature (III.1).
- Alteration which means a change in any manner and includes restoration, renovation, repair or disturbance (III.2).
- Shadows created that alter the appearance of a heritage attribute or change the exposure or visibility of a natural feature or plantings, such as a garden (III.3).
- Isolation of a heritage attribute from its surrounding environment, context, or a significant relationship (III.4).
- Direct or indirect obstruction of significant views or vistas from, within, or to a built or natural heritage feature (III.5).
- A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces (III.6).
- Soil disturbance such as a change in grade, or an alteration of the drainage pattern, or excavation, etc (III.7)

A number of additional factors are also considered when evaluating potential impacts on identified cultural heritage resources. These are outlined in a document set out by the Ministry of Culture and Communications (now Ministry of Tourism, Culture and Sport) and the Ministry of the Environment entitled *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (October 1992) and include:

- Magnitude: the amount of physical alteration or destruction which can be expected;
- Severity: the irreversibility or reversibility of an impact;
- Duration: the length of time an adverse impact persists;
- Frequency: the number of times an impact can be expected;
- Range: the spatial distribution, widespread or site specific, of an adverse impact; and
- Diversity: the number of different kinds of activities to affect a heritage resource.

For the purposes of evaluating potential impacts of development and site alteration, MTC (2010) defines "adjacent" as: "contiguous properties as well as properties that are separated from a heritage property by narrow strip of land used as a public or private road, highway, street, lane, trail, right-of-way, walkway, green space, park, and/or easement or as otherwise defined in the municipal official plan."

4.1 Potential Impacts to Cultural Heritage Resources of the Preliminary Design Options

The Project: Under Gardiner study area was reviewed to determine possible impacts to identified heritage resources. The following table (Table 2) considers the impacts of seven design options on identified cultural heritage resources, based on the Ministry of Tourism and Culture document entitled *Screening for Impacts to Built Heritage and Cultural Heritage Landscapes* (November 2010).

Table 2: Potential Impacts to Identified Cultural Heritage Resources resulting from the Preliminary Design Options

Resource	Options	Impacts Identified
CHL 1	Option 1: Do Nothing	No negative impacts to the Fort York National Historic Site (NHS) and Heritage Conservation District (HCD) are identified.
	Option 2a: New Crosswalk	No negative impacts to the Fort York NHS and HCD are identified.
	Option 2b: New Crosswalk	No negative impacts to the Fort York NHS and HCD are identified.
	Option 2C: New Crosswalk	No negative impacts to the Fort York NHS and HCD are identified.
	Option 3: Proposed Bridge	This option will result in potential negative impacts to Fort York NHS and HCD through: alteration to former shoreline of Lake Ontario through introduction of grade change associated with the ramp; alteration to the site through introduction of a new structure; alteration to identified views from the Fort south to Lake Ontario Potential positive impacts identified include: increased views from the perimeter of the site into the Fort
	Option 4a: New Tunnel	This option will result in potential negative impacts to Fort York NHS and HCD through: soil disturbance and change in grade within the HCD and directly adjacent to the southern earthworks of Fort York.
	Option 4b: New Tunnel	This option will result in potential negative impacts to Fort

Table 2: Potential Impacts to Identified Cultural Heritage Resources resulting from the Preliminary Design Options

Resource	Options	Impacts Identified
	(Switchback)	York NHS and HCD through: soil disturbance and change in grade within the Fort York HCD, but would result in minimal encroachment as it is along the perimeter and furthest away from the fort.
CHL 2	Option 1: Do Nothing	No negative impacts to the Gardiner Expressway are identified.
	Option 2a: New Crosswalk	No negative impacts to the Gardiner Expressway are identified.
	Option 2b: New Crosswalk	No negative impacts to the Gardiner Expressway are identified.
	Option 2C: New Crosswalk	No negative impacts to the Gardiner Expressway are identified.
	Option 3: Proposed Bridge	This option will result in potential direct impacts to the Gardiner Expressway, a potential cultural heritage resource.
	Option 4a: New Tunnel	No negative impacts to the Gardiner Expressway are identified.
	Option 4b: New Tunnel (Switchback)	No negative impacts to the Gardiner Expressway are identified.

4.2 Potential Impacts to Cultural Heritage Resources of the Preferred Alternative Design

The preferred alternative design for the crossing at Fort York Blvd is a suspended bridge (See Appendix C). This design option will feature a bridge suspended from the underside of the Gardiner Expressway by attaching steel hangers to the expressway.

In early November 2016, ASI was notified by Dillon Consulting Limited that Project: Under Gardiner will employ an innovative technology, the friction clamp (see Section 4.4 of the Environmental Study Report) to suspend the bridge from the Gardiner Expressway. The friction clamp was designed as a failsafe system that uses the weight of the bridge to develop the compression against the column and the resultant friction. This technology requires no mechanical connections, puncturing of the bridge or the Gardiner Expressway.

The following table (Table 3) considers the impacts of the preferred alternative design on identified cultural heritage resources, based on the Ministry of Tourism and Culture document entitled *Screening for Impacts to Built Heritage and Cultural Heritage Landscapes* (November 2010). Table 3 also recommends mitigation strategies.

Table 3: Impacts to Identified Cultural Heritage Resources and Recommended Mitigation Strategies resulting from the Preferred Alternative Design

Resource	Impacts Identified in Table 2	Potential Impacts resulting from Suspended Bridge Design and Mitigation Strategies
CHL 1	Option 3 (Proposed Bridge) will result in negative impacts to Fort York NHS and HCD through: potential alteration to former shoreline of Lake Ontario through introduction of grade change associated	1. The suspended bridge design is not expected to impact the former shoreline of Lake Ontario given that impacts of the east ramp through introduction of grade changes is no longer a concern in this design.

Table 3: Impacts to Identified Cultural Heritage Resources and Recommended Mitigation Strategies resulting from the Preferred Alternative Design

Resource	Impacts Identified in Table 2	Potential Impacts resulting from Suspended Bridge Design and Mitigation Strategies
	with the ramp; potential alteration to the site through introduction of a new structure; potential alteration to identified views from the Fort south to Lake Ontario Positive impacts identified include: increased views from the perimeter of the site into the Fort	2. The site will be altered through introduction of a new structure. However, given the location of the bridge on the fringe of Fort York, the bridge is not expected to alter any identified heritage attributes. The bridge design should be light and minimalistic, and bridge railings should be open-concept to allow for improved views from the bridge to Fort York. It is recommended that landscaping and bridge design be developed with input from the City of Toronto Heritage Preservation Services, and Fort York Management Board, to ensure compatibility with the heritage character of Fort York. 3. Potential alterations to identified views from Fort York south to Lake Ontario. • Views south to Lake Ontario from the Fort at this location are obstructed by tall buildings. The significant view noted south from the Fort, between Bastion St. and Gzowski Blvd., will not be impacted.
CHL 2	Option 3 (Proposed Bridge) will result in potential direct impacts to the Gardiner Expressway, a potential cultural heritage resource.	1. The suspended bridge design will not result in direct impacts or alterations to the Gardiner Expressway. This potential impact has been mitigated through employment of the friction clamp, which was designed as a failsafe system that uses the weight of the bridge to develop the compression against the column and the resultant friction. This technology requires no mechanical connections, puncturing of the bridge or the Gardiner Expressway.

5.0 CONCLUSIONS

The results of background historic research and a review of secondary source material, including historic mapping, revealed that the study area was originally located along the shoreline or within Lake Ontario prior to major lakefilling activities in the late-nineteenth and early-twentieth centuries to support railroad and shipping infrastructure. The area immediately to the north of the study area has a long history as a military fort, dating to the construction of Fort York in its current location beginning in 1813, while the areas to the south, east, and west are located within an industrial and commercial landscape dating to the late-nineteenth century. The area has been subject to considerable high-rise residential condominium and road development in the early twenty-first century. The field review confirmed that this area retains two cultural heritage resources. The following provides a summary of the assessment results:

Key Findings

- A total of two cultural heritage resources were identified within and/or adjacent to the Project: Under Gardiner study area, including two cultural heritage landscapes (CHL 1 and CHL 2);
- Of these, one is Designated under Part V of the *Ontario Heritage Act* and is a National Historic Site (CHL 1)
- Of the two cultural heritage resources, one is an early-nineteenth century military fort (CHL 1) and one is a mid-twentieth century roadscape (CHL 2)
- Identified cultural heritage resources are historically, architecturally, and contextually associated with early nineteenth to mid twentieth-century land use patterns in the City of Toronto.

6.0 RECOMMENDATIONS

The background research, data collection, and field review conducted for the study area determined that two cultural heritage landscapes are located within or adjacent to the Project: Under Gardiner study area (CHL 1 and CHL 2). Based on the results of the assessment, the following recommendations have been developed:

1. The Fort York HCD and NHS will be altered through introduction of the new structure. However, given the location of the bridge on the fringe of Fort York, the bridge is not expected to alter any identified heritage attributes. The bridge design should be light and minimalistic, and bridge railings should be open-concept to allow for improved views from the bridge to Fort York. It is recommended that landscaping and bridge design be developed with input from the City of Toronto Heritage Preservation Services, and Fort York Management Board, to ensure compatibility with the heritage character of Fort York.

2. Should future work require an expansion of the Project: Under Gardiner Municipal Class EA 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.

3. This report should be submitted to the Ministry of Tourism, Culture, and Sport, the City of Toronto Heritage Preservation Services, and Fort York Management Board for review and comment.

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8.0 CULTURAL HERITAGE RESOURCE INVENTORY

Table 4: Inventory of Cultural heritage resources (CHR) in the study area

Resource	Type	Address/Location	Recognition	Description	Photos
CHL 1	Fort	250 Fort York Boulevard	National Historic Site, Designated, Part V of the *OHA* (By-law 420-85)	Historical: -Constructed between 1813 and 1815 on the west side of Garrison Creek following the destruction of the original fort in the Battle of York on April 27, 1813 -Originally composed of soldiers barracks, officers quarters, blockhouses, magazines, cookhouses, defensive earthworks, and bastions. -Critical defensive position during the Old Northwest Frontier Crisis, the Mississauga Crisis, and the War of 1812 -Designated a National Historic Site by the Historic Sites and Monuments Board in 1923 -Designated under Part V of the Ontario Heritage Act in 1985 (See Appendix A for a more in-depth description of historical, design, and contextual significance of Fort York) Design: -Seven buildings that date from 1813-1815 within the outer walls -Large tracks of greenspace in Garrison Commons to the west of the Fort. -Military Burial Ground located in Garrison Common, east of Strachan Avenue. Context: -Originally located on the former shoreline of Lake Ontario, serving as a crucial harbour defence during the War of 1812 and beyond. -Currently located north of the Gardiner Expressway (CHL 2) with late-nineteenth and early-twentieth century landfilling activities removing the shoreline context. -Fort York NHS and HCD is bounded by Bathurst Street to the east, Fort York Boulvevard and Fleet Street to the south, Strachan Avenue and the Gardiner Expressway to the west, and rail tracks to the north.	 Fort York, looking southwest  Cannon on the south bastion, facing southwest
CHL 2	Roadscape	The Gardiner Expressway	Identified during field review	Historical: -Constructed between 1955 and 1964, with the portion within the study area constructed circa 1962 -Named in honour of Councillor Fredrick G. Gardiner, who was pivotal in its construction. Design: -Composed of both at-grade sections and elevated portions, the section within the study area is elevated high above grade level, and consists of steel spans supported by concrete piers. -Central transportation route that links the Don Valley Parkway, Queen Elizabeth Way, and Highway 427 Context: -Located in the heart of downtown Toronto, the Gardiner Expressway passes through industrial area as well as recently developed high-rise residential condominiums. -Identified as a contributing element in the Union Station HCD located to the east of the study area (City of Toronto 2006).	 The Gardiner Expressway passing over Fort York Boulevard, facing west

9.0 CULTURAL HERITAGE RESOURCE LOCATION MAPPING

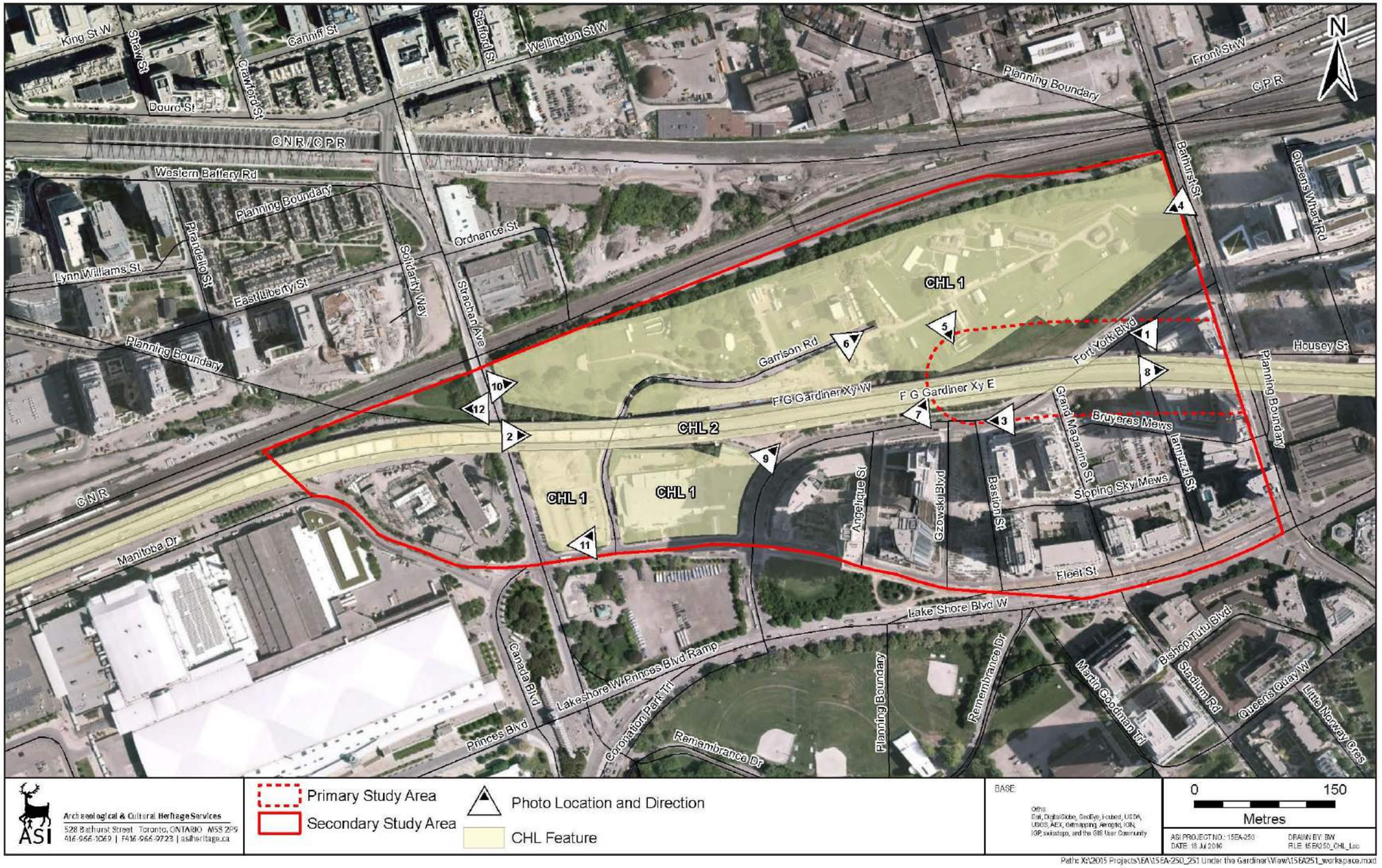


Figure 11: Location of Cultural Heritage Resources in the Project: Under Gardiner Study Area

Appendix A: Preliminary Heritage Values and Attributes

The Fort York Heritage Conservation District and National Historic Site is valued for its military, natural, and industrial associations. Both the NHS-CIS and HDCP documents emphasize that the site's founding as a military outpost and use as a critical defensive position during the Old Northwest Frontier Crisis, the Mississauga Crisis, and the War of 1812 are of *primary* heritage significance and are of national importance. As such, any aboveground resources, surviving fabric, artifacts, or archaeological deposits which testify to the site's military history are considered 'Level 1' heritage attributes within Park's Canada CIS document. Park's Canada's Cultural Resource Management Policy notes that categorizing a resource as 'Level 1' is an indication of its high national historic significance (Parks Canada 2008). The Fort York HDCP document also notes that features associated with the site's primary significance should be conserved:

> …buildings, landforms, artifacts, features, views, intangible values or archaeological remains which are of national importance. Some are located outside the boundaries of the Heritage Conservation District. The attributes described herein relate primarily to early 19th century military history, specifically the war of 1812 and the founding landscape of Fort York (Nasmith 2010: 63).

The CIS document provides a full itemization of Level 1 resources while the Heritage Value Statement, contained within the HCDP, itemizes the heritage attributes that reflect the site's primary heritage values (Table 5).

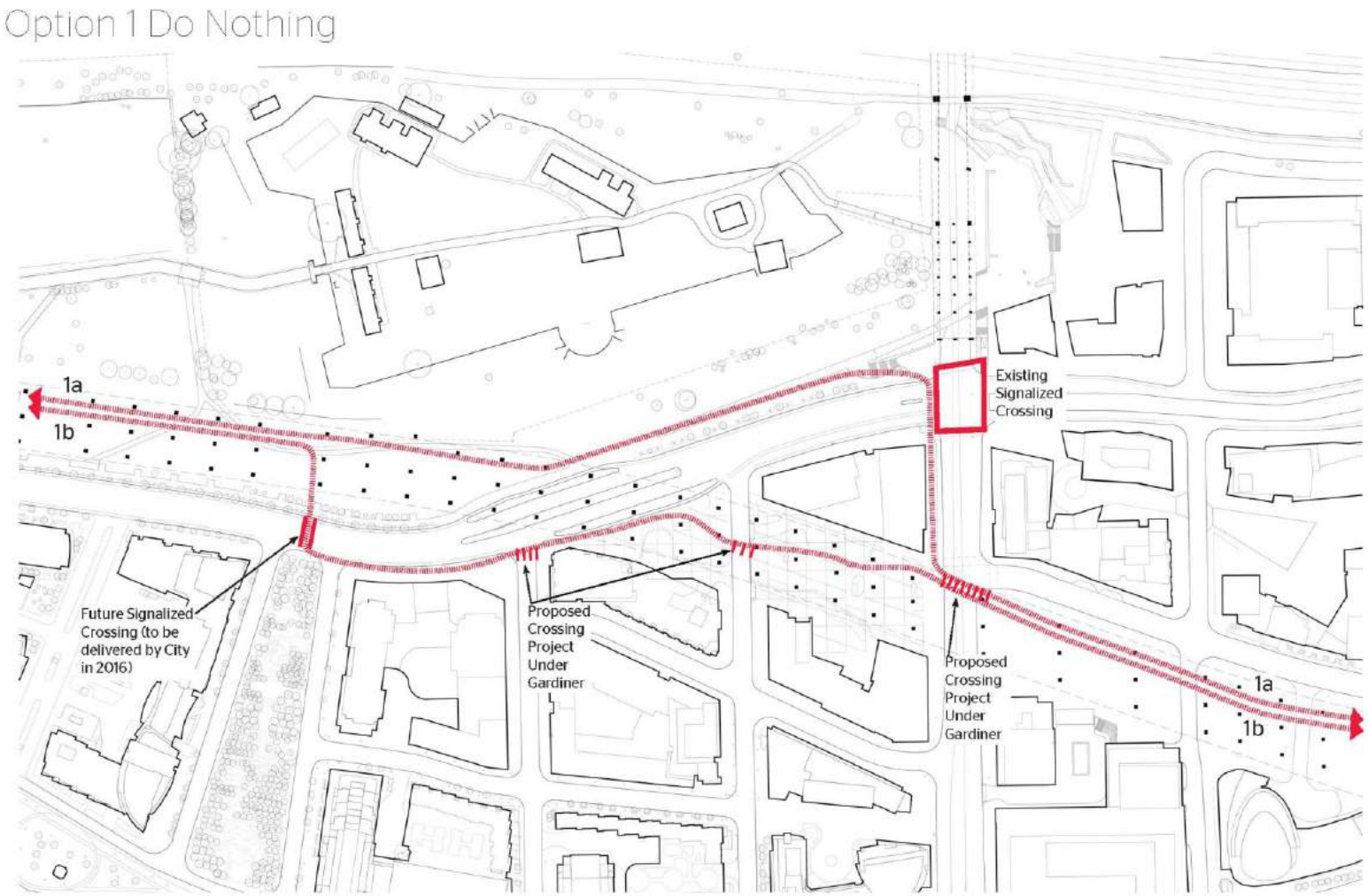
Table 5: Level 1 Resources Identified in Site-Specific Heritage Management Guidelines and Documents

Fort York HCDP Document	Fort York NHS –CIS Document
• Block House No.1; Block House No. 2, the East Magazine, the Stone Powder Magazine, Brick Officer Quarters and Mess Establishment, North Soldiers' Barracks, and the South Soldier's Barracks	• 7 buildings that date from 1813-1815
• The open space and landscape elements inside and outside the walls of the Fort, including earthwork defences	• Open character of the Garrison Common
• Strachan Avenue Military Cemetery	• Military Cemetery at Strachan Avenue

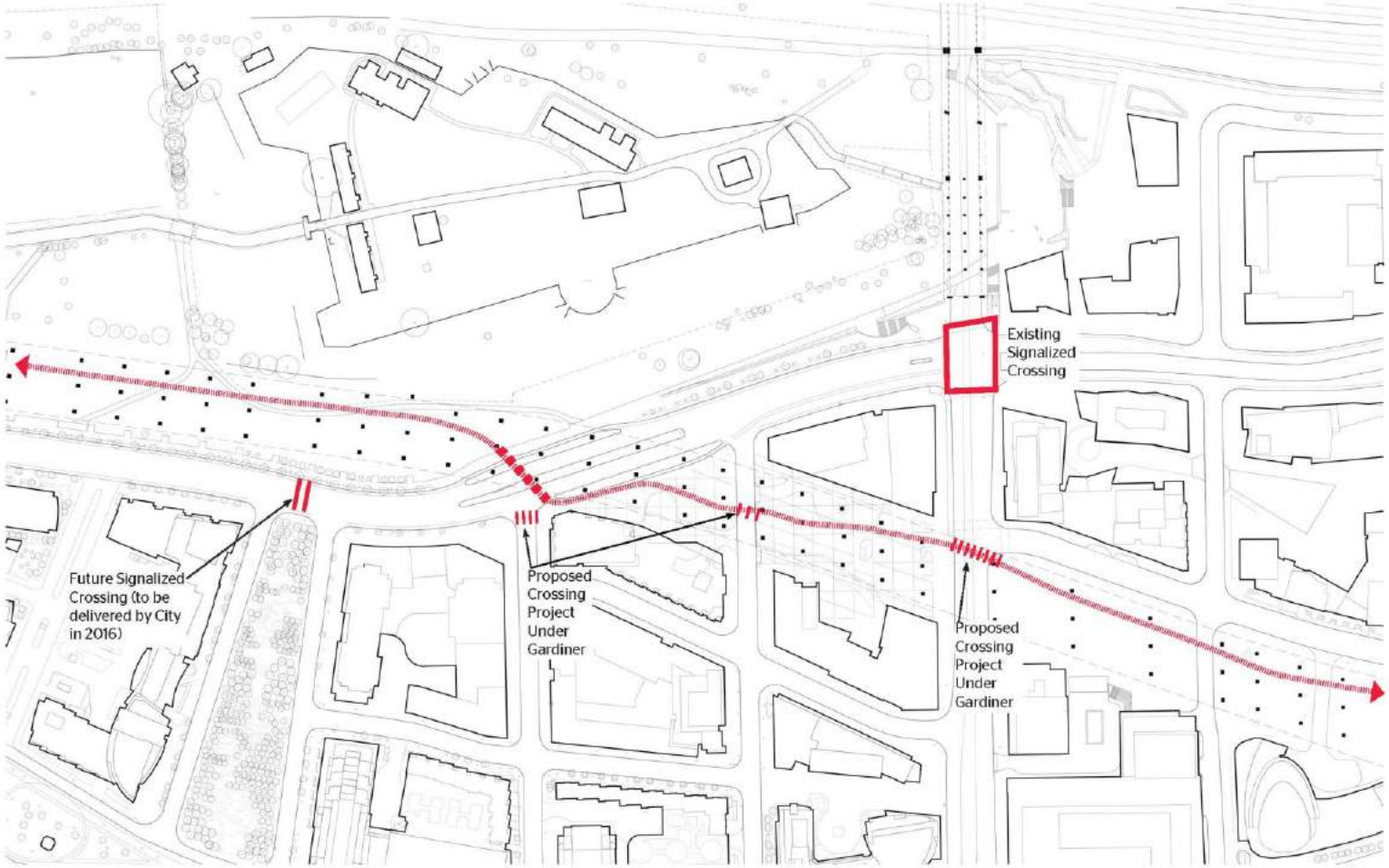
Table 5: Level 1 Resources Identified in Site-Specific Heritage Management Guidelines and Documents	
Fort York HCDP Document	**Fort York NHS –CIS Document**
• Associated archaeological resources inside and outside the fort walls and archaeological deposits in the former Military Reserve, including: log cookhouse, splinterproof barracks Nos. 1 and 2, splinterproof barracks No. 3, 4, and 5; engineer quarters, commandant's house, guard house, cookhouse, rebellion barracks, artillery barracks, ordnance store, east gate, magazine crater, russel fort, ravine battery and traverse, mouth of Garrison Creek, south ramparts, east embankment, palisades and fraises, wells, earthwork near Strachan Avenue and Fleet Street, Fort Rouille, Garrison Creek, Lake Ontario shoreline, portions of the Fort York site on the east side of Garrison Creek, Commissariat fuel yard, western battery, St. John the Evangelical Church, military facility along Front Street, Bathurst Street barracks and observatory, Gibraltar Point Blockhouse and Battery on the Toronto Islands, HMS Sir Isaac Brock	• Archaeological resources: the subsurface remains of pre-War of 1812 buildings such as the first military post built in 1793 and the Lt. Governor's House; ten buildings from the 1813-1815 period and buildings from the 1837 rebellion period and later; remains of two batteries believed to be located underneath Bathurst Street; the crater created by the explosion of the powder magazine and the glacis buried underneath fill outside the south rampart; original earthworks and the footprint of those removed during the 1930s restoration
• Well	• Surviving natural landscape features which speak to the prominent location of the fort at the edge of a ravine and the lake
• Strachan Avenue Military Cemetery • Victoria Memorial Square	• Tangible remains of the defensible position and associated landscape as it existed in at the time for fort was constructed
• Garrison Common • Its setting adjacent to Garrison Creek and the former shoreline of Lake Ontario • The topography, including remnants of the Garrison Creek Ravine system	• Spatial arrangement of the buildings
• The Garrison Road	• Unmodified portions of the ravine bank on the north and east sides
• Continued contextual relationship with the City's changing urban landscape	• Western earth work, moat, and those portions of other earthworks which align with the original trace

Table 5: Level 1 Resources Identified in Site-Specific Heritage Management Guidelines and Documents	
Fort York HCDP Document	**Fort York NHS –CIS Document**
• First Fort York site on the former east bank of Garrison Creek	• Historic access route to the western entrance to the Fort
• Views from within the Fort to the West preserving the open, cleared Garrison Common and the field of fire • Views from within the Fort to the Garrison Creek Ravines • Views from within the Fort east to downtown Toronto • Views from within the Fort south to Lake Ontario • Views from outside the Fort from the original Lake Ontario Shoreline • Views within the Fort ramparts; • Views out from inside the Fort; • Views near the West Gate; • Views near the edge of the District; • Views from adjacent areas	• Remaining headstones placed around the base of the monument in the middle of Victoria Memorial Square
• Natural setting characterized by lake, stream, ravine and forest, defined by the use of natural light and sounds and lack of nighttime lighting.	• Views towards the fort from along Garrison Road, from the east and north, from the foot of the south ramparts which conveys the military character of the site
	• Views towards the north and east from inside the fort which convey a sense of the original elevation of the fort in relation to its surroundings

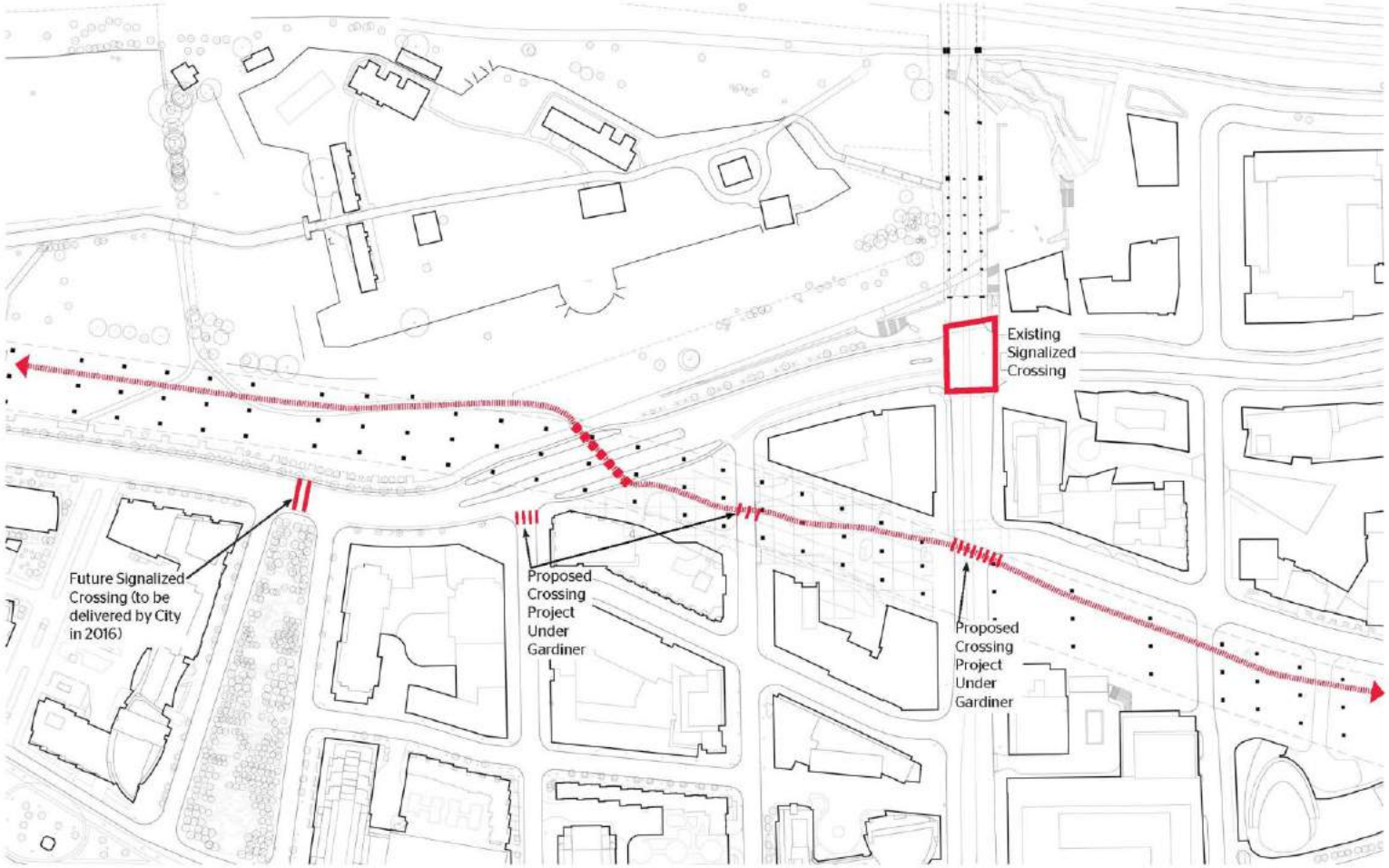
Appendix B: Project: Under Gardiner - Design Options



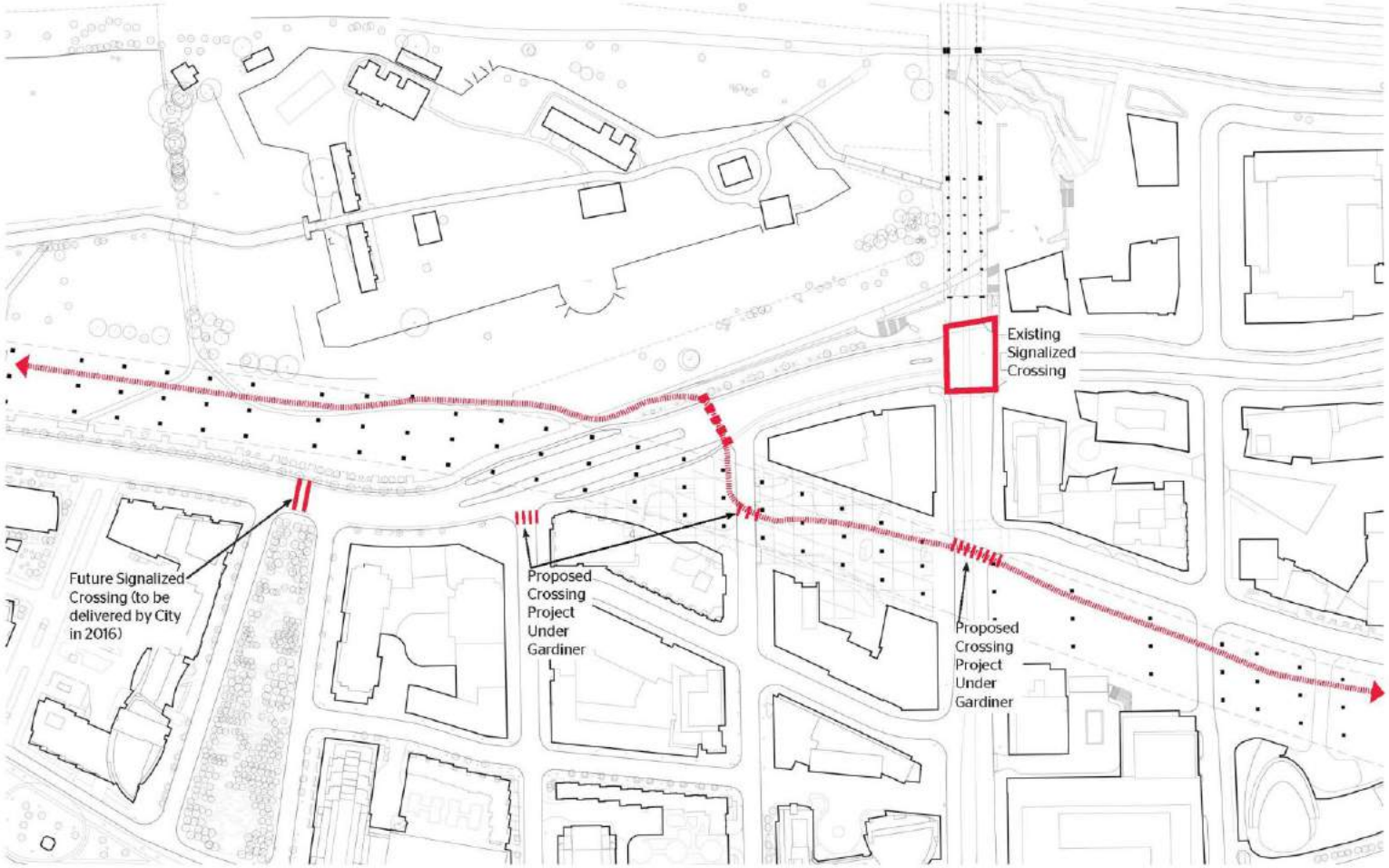
Option 2a New Crosswalk



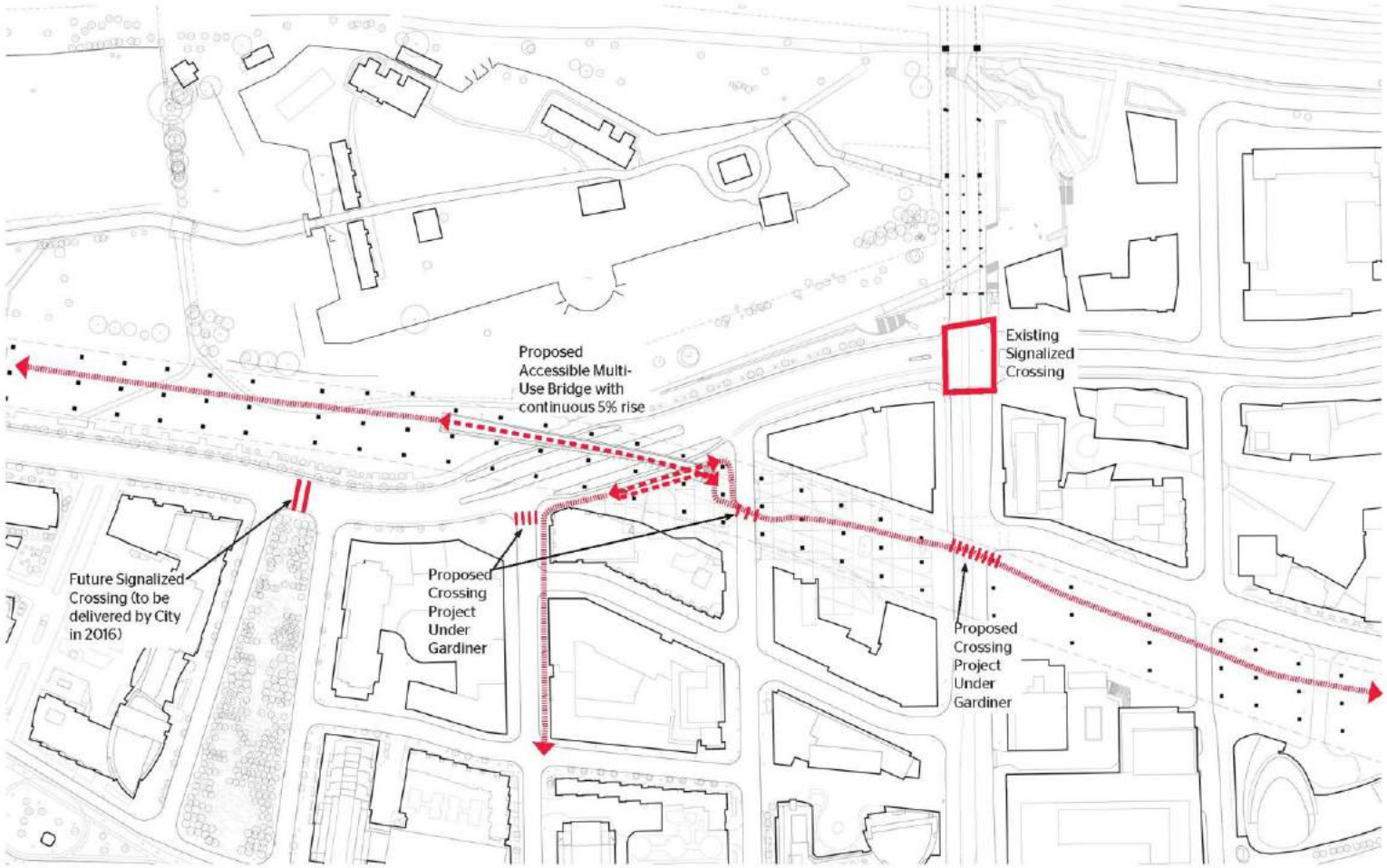
Option 2b New Crosswalk



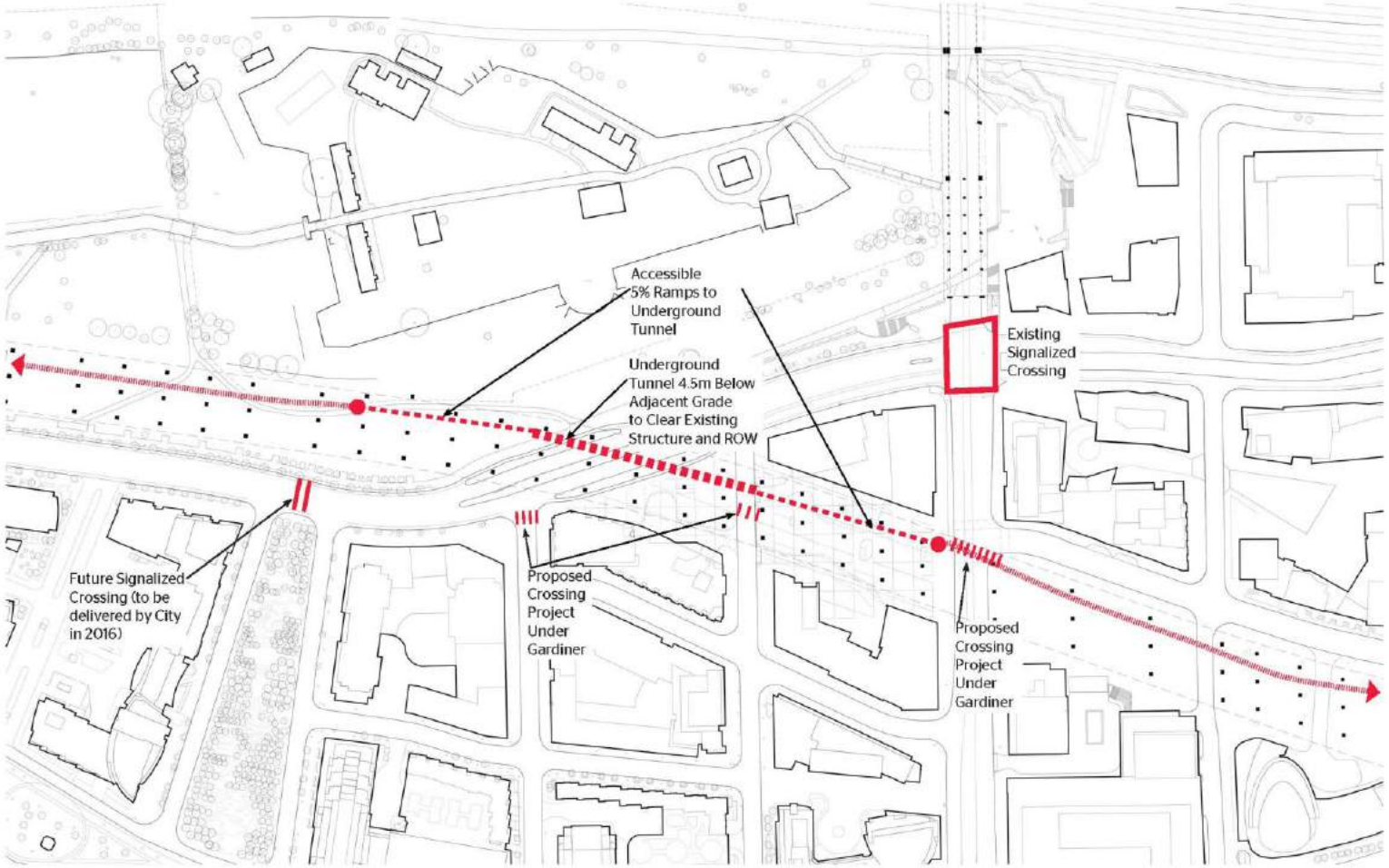
Option 2c New Crosswalk



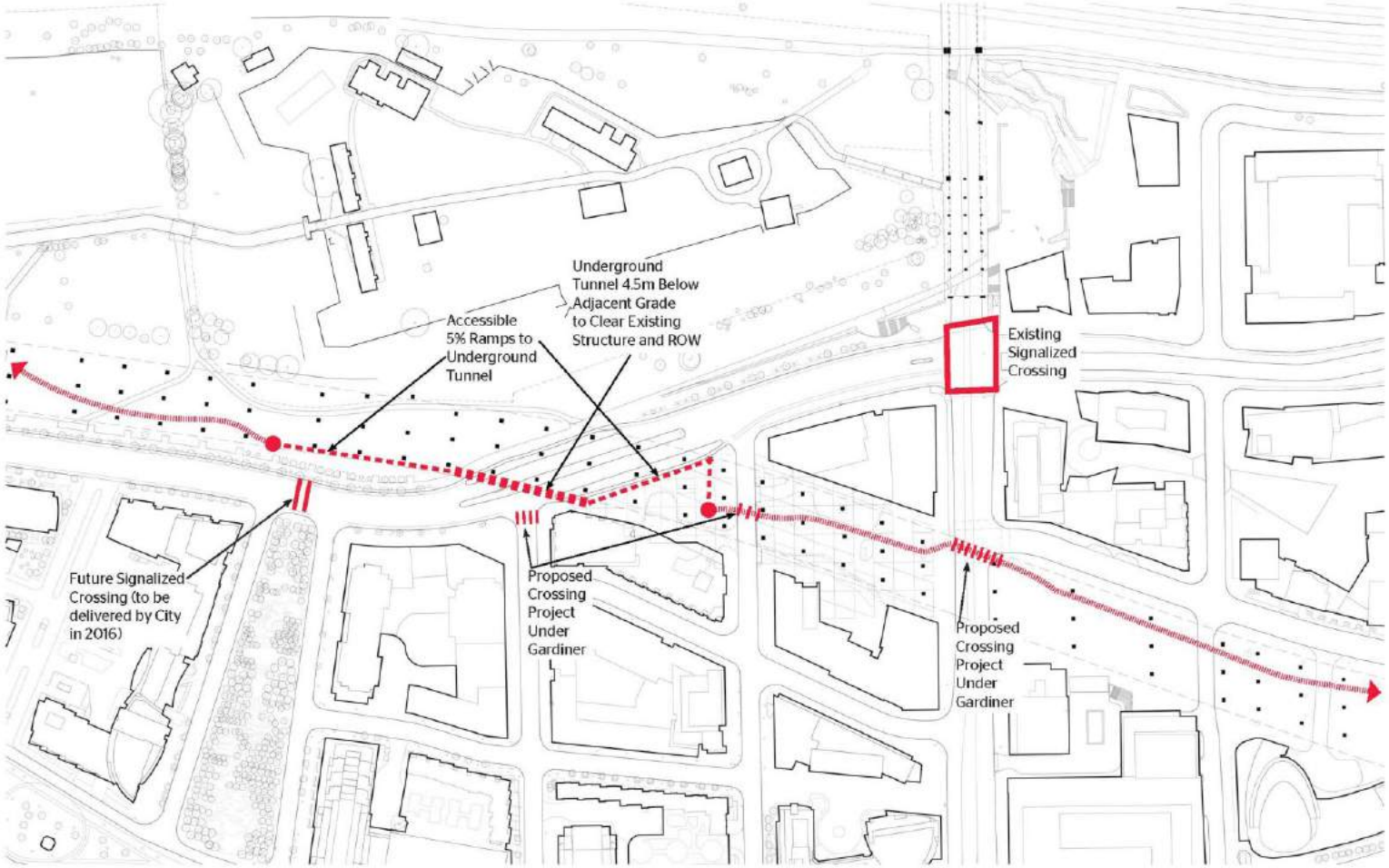
Option 3 Proposed Bridge



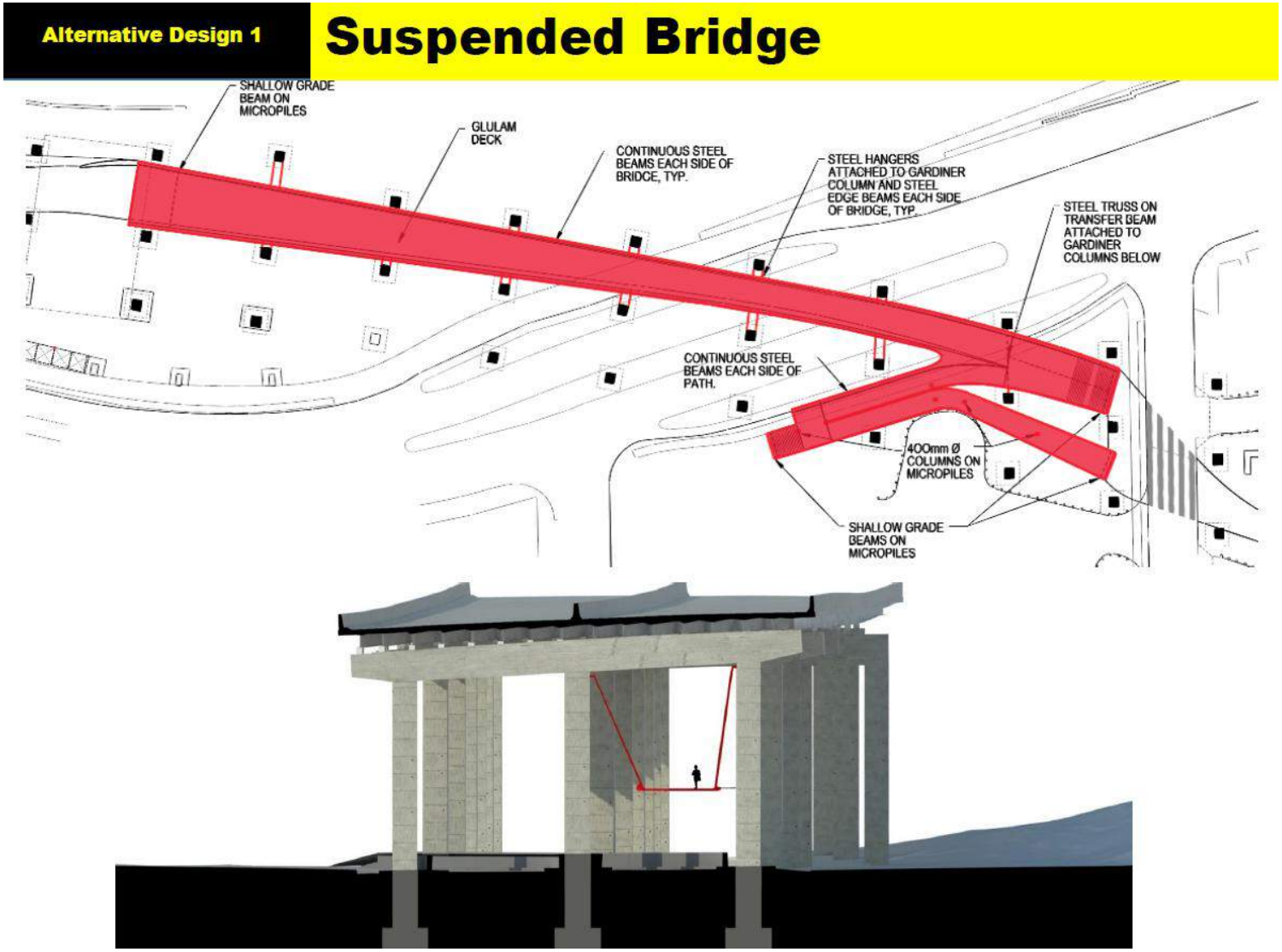
Option 4a New Tunnel



Option 4b New Tunnel (w/ switchback)



Appendix C: Project: Under Gardiner - Preferred Alternative Design



Alternative Design 1

Suspended Bridge