METROLINX

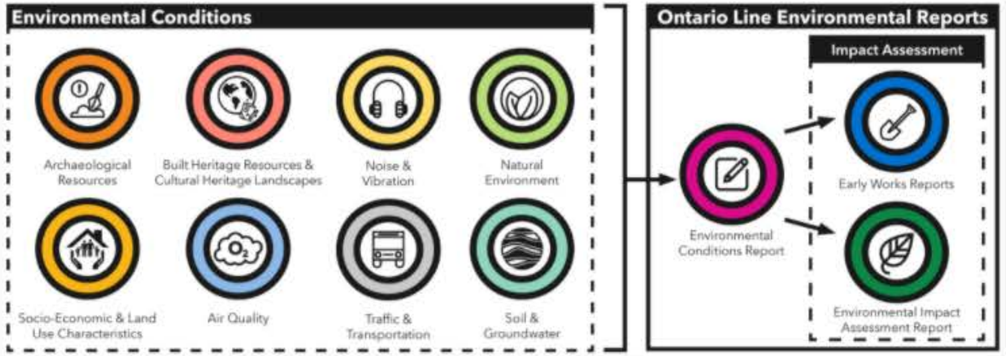
Appendix B2

Project Webpage:
Exhibition Station
Early Works Updates

Environment

The Ontario Line - Environment

By its nature, providing reliable, safe and accessible public transportation brings environmental and social benefits. Metrolinx is committed to the preservation and protection of the environment, while working to provide an integrated and sustainable transportation system. To maintain strong environmental oversight, Metrolinx is conducting a thorough environmental assessment – including studying existing environmental conditions and completing an environmental impact assessment. The below graphic shows the different environmental conditions that have been studied throughout the Ontario Line study area and the different reports that we will use to share those findings.



Environmental Assessment Process

Metrolinx is completing an environmental assessment (EA) in accordance with **Ontario Regulation 341/20: Ontario Line Project (O. Reg. 341/20) made under the Environmental Assessment Act**. This regulation was available for public review from February 18, 2020 to March 19, 2020 on the **Environmental Registry of Ontario** and came into force on June 30, 2020.

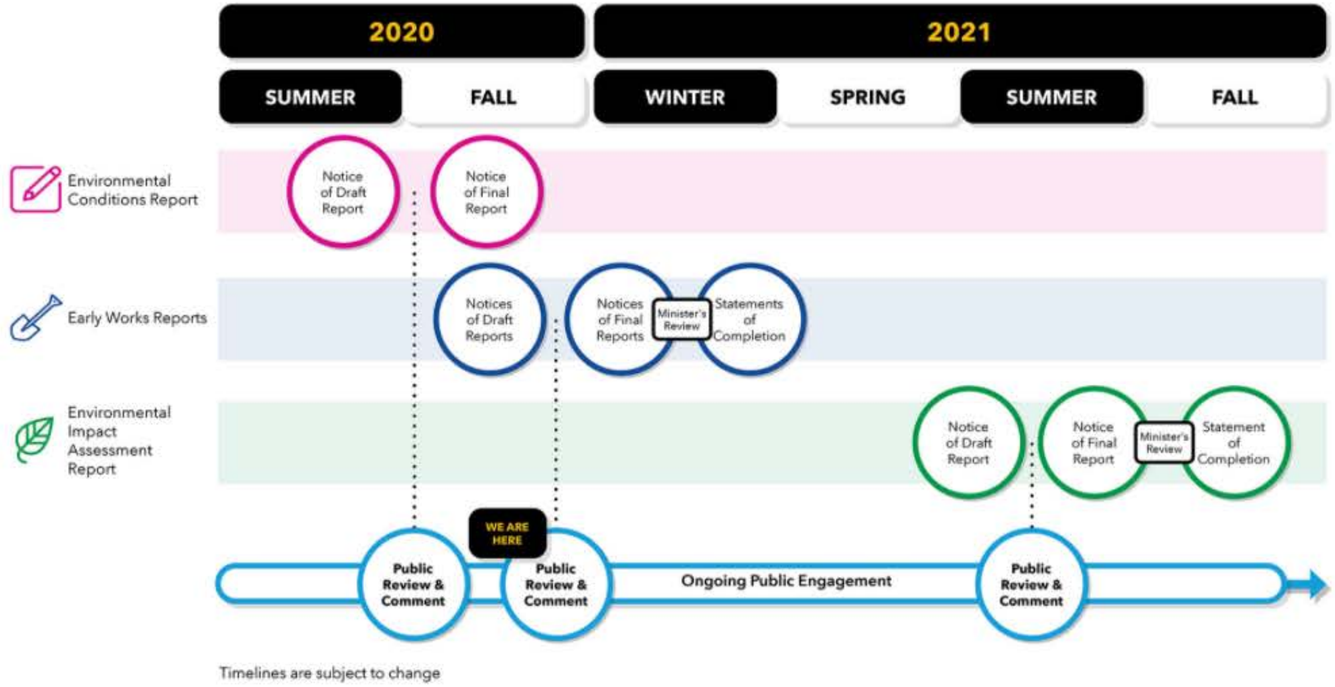
The regulation outlines a Project-specific EA process that includes:

- Public, regulatory agency and Indigenous community notification and consultation
- An Environmental Conditions Report and an Environmental Impact Assessment Report
- An opportunity for Early Works Reports for assessment of works that are ready to proceed in advance of Environmental Impact Assessment
- Report completion
- Metrolinx addressing concerns through an issues resolution process

Environmental Assessment Process

Ontario Line Environmental Reporting Timeline

In keeping with the process outlined in O. Reg. 341/20, Metrolinx is advancing Environmental Conditions, Early Works and Environmental Impact Assessment Reports.



Environmental Conditions Report

Early Works

Early Works

Early works are components of the Ontario Line Project that are anticipated to be ready to proceed before completion of the Environmental Impact Assessment Report, such as station construction, rail corridor expansion, utility relocation or bridge replacement or expansion, as defined in O. Reg. 341/20.

Early Works Reports will provide a description of the early works and alternatives considered, document local environmental conditions, and outline early works-specific environmental impacts, mitigation measures, monitoring activities, potentially required permits and approvals and other components.

Ontario Line early works are being advanced where the Project interfaces with other concurrently planned transit projects (i.e., GO Expansion) and where portions of the alignment run in parallel to the existing Lakeshore East and Lakeshore West GO rail corridors.

Advancing work in these areas provides planning, design and implementation efficiencies for the interfacing projects, and will facilitate timely implementation of the Ontario Line Project.

At this time, the following Ontario Line early works are being planned:

- Exhibition Station
- Lower Don Bridges
- Lakeshore East Joint Corridor

Enabling early works proposed to begin in 2021 include:

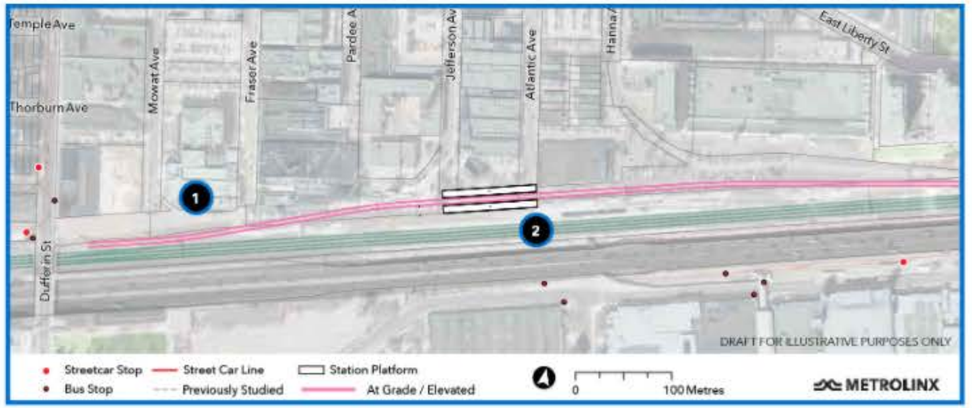
- **Exhibition Station** – an extension to the existing passenger tunnel; a temporary pedestrian bridge; a new north platform and accompanying shift of the northern two GO tracks; and, utility relocation and protection. Learn more.
- **Lower Don Bridges** – two bridges added to either side of the existing rail bridge, with space for tracks going in both directions.
- **Lakeshore East Joint Corridor** – rail corridor expansion between Eastern Avenue and Logan Avenue to accommodate four GO rail tracks and two Ontario Line tracks, including: grading; installation or upgrading of vegetated slopes or retaining walls and noise barriers next to the corridor, where appropriate; relocation or protection of utilities; and, construction of new Ontario Line bridges on each side of the existing Queen, Dundas and Logan bridges.

The Ontario Line - Neighbourhood Updates - West

The following maps show refinements to the alignment, or route of the line, and the proposed location of station platforms. Station entrance buildings and initial designs will be shared as new information is available. Teams have been studying how to speed up delivery, reduce building costs, minimize community impacts and improve connections for customers.

Exhibition to Queen/Spadina

Exhibition



1. Tail tracks, west of Exhibition, will provide space for the storage of Ontario Line vehicles and protect for a future extension of the line.

2. The Ontario Line Exhibition Station will create a connection to the GO network and will bring customers to a popular destination for sports, concerts, the CNE, trade shows and other attractions. It will also bring the subway system closer to many homes and businesses in the growing and increasingly vibrant Liberty Village community. Since the Ontario Line will be above ground through this segment, commuters on the Lakeshore West Line will be able to quickly and seamlessly transfer from one train to the other.

Enabling early works, including new passenger tunnels, an extension to the existing passenger tunnel, a temporary pedestrian bridge, a new north platform, and utility relocation and protection, are anticipated to begin in 2021.

Learn more about Procurement.

The Ontario Line - Early Works: Exhibition Station

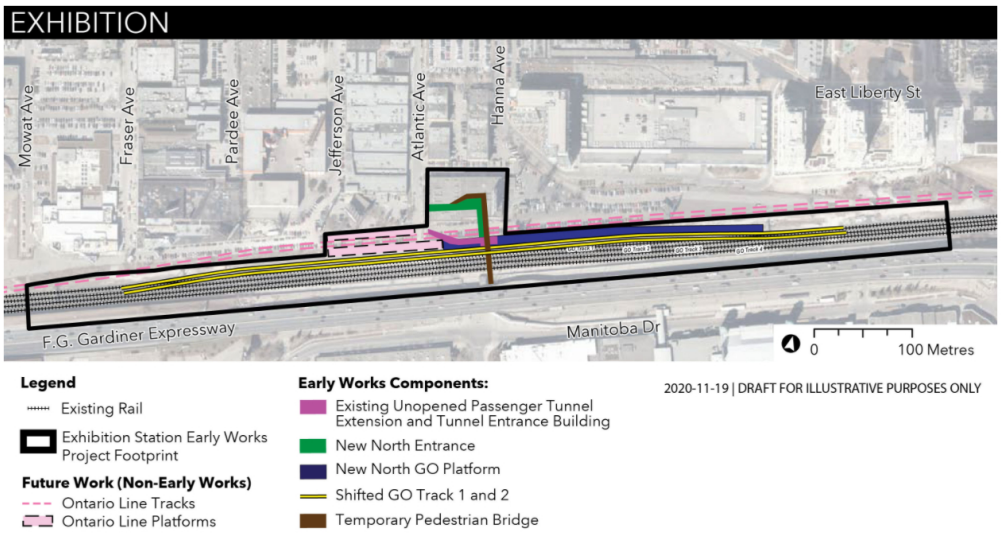
Ontario Line trains will be above ground at Exhibition Station, which currently accommodates GO Train and VIA rail services as well as freight rail operations. Since GO Expansion Plans call for more GO train services at Exhibition Station, Metrolinx is carrying out early works for the Ontario Line in this area to ensure both of these important transit expansion projects are properly coordinated and completed in a timely manner.

These early works will set the groundwork for other major construction on the Ontario Line project, reducing risk of construction delays to the main P3 contracts by completing the joint corridor work in advance of the main contracts.

The Draft Exhibition Station Early Works Report outlines the purpose of early works, a description of local environmental conditions, potential impacts and proposed mitigation measures.

View the Full Early Works Report

Early Works Components



Existing Unopened Passenger Tunnel Extension and Tunnel Entrance Building

An existing out of service passenger tunnel extension and station entrance will be opened. This newly opened tunnel and entrance with a walkway to Atlantic Avenue will be in service until the new north entrance is completed. The existing platform access at the bottom of Atlantic Avenue will be removed to accommodate construction of the new north GO platform and the GO Track 1 shift. Once the new north entrance is open, the Atlantic Avenue walkway will close and the tunnel extension and vertical access will continue to provide passenger access.

Existing unopened tunnel entrance building - view of the covered walkway to Atlantic Avenue from the west

Existing unopened tunnel entrance building - view from the east

New North Entrance

The existing passenger tunnel will be extended north and the new north entrance will be constructed to provide continuous access to the station throughout construction, including future Ontario Line work.

Platforms and GO Tracks

The new north platform will service GO trains temporarily. GO trains will run on the shifted GO Track 1. Once the Ontario Line station is constructed, the western portion of the new north platform will form part of the joint GO-Ontario Line platform, and the eastern portion will be removed. GO trains will continue to run on Track 1, and stop at the new joint GO-Ontario Line platform. The joint platform will allow people transferring from the Ontario Line to the GO Train to walk straight from one to the other without having to go up or down a level.

Pedestrian Bridge

Installation of a temporary pedestrian bridge spanning the rail corridor will provide additional access capacity to reach station platforms and enhance cross-corridor access for trips to and from Liberty Village. The bridge will also reduce potential congestion in the existing tunnel during special events at Exhibition Place and/or Ontario Place. The bridge will stay in place until the Ontario Line is in operation.

Example pedestrian bridge design rendering - Dowling Avenue

Example pedestrian bridge design rendering - Dowling Avenue

Assessment Process

The early works assessment process included the following:

- Reviewing and examining early works components and construction activities
- Understanding local environmental conditions through desktop reviews and field studies
- Assessing and evaluating potential impacts that early works components and construction activities may have on the environment
- Proposing mitigation measures to avoid or reduce impacts and monitoring activities to verify effectiveness of mitigation measures
- Determining any municipal, provincial, federal or other permits and approvals that may be required prior to construction

The Draft Exhibition Station Early Works Report provides the following:

- A description of the early works
- A map showing the site of the early works
- A description of the local environmental conditions at the site of the early works
- A description of all studies undertaken
- Metrolinx's assessment and evaluation of the impacts that the preferred method of carrying out the early works and other methods might have on the environment, and Metrolinx's criteria for assessment and evaluation of those impacts
- A description of any measures proposed by Metrolinx for mitigating any negative impacts that the preferred method of carrying out the early works might have on the environment
- A description of the means Metrolinx proposes to use to monitor or verify the effectiveness of mitigation measures proposed
- A description of any municipal, provincial, federal or other approvals or permits that may be required for the early works
- A consultation record

Environmental impacts of the Exhibition Station early works are being assessed in accordance with O. Reg. 341/20.

During the review period, Metrolinx will establish an issues resolution process to attempt to resolve any concerns raised by the public or Indigenous communities during the review period. At the end of the review period, Metrolinx will update the Draft Early Works Report by adding a description of issues identified, what Metrolinx did to address concerns, and any implications to the early works timeline. Metrolinx will then publish the Final Early Works Report on the Project webpage: www.metrolinx.com/ontarioline and issue a Notice of Final Early Works Report.

Click on the icons below to learn more.

Air Quality - Exhibition Station

Archeological Resources - Exhibition Station

Built Heritage Resources & Cultural Heritage Landscapes - Exhibition Station

Hydrology & Surface Water - Exhibition Station

Natural Environment - Exhibition Station

Noise and Vibration - Exhibition Station

Socio-Economic & Land Use Characteristics - Exhibition Station

Soil & Groundwater - Exhibition Station

Traffic & Transportation - Exhibition Station

Air Quality - Exhibition Station

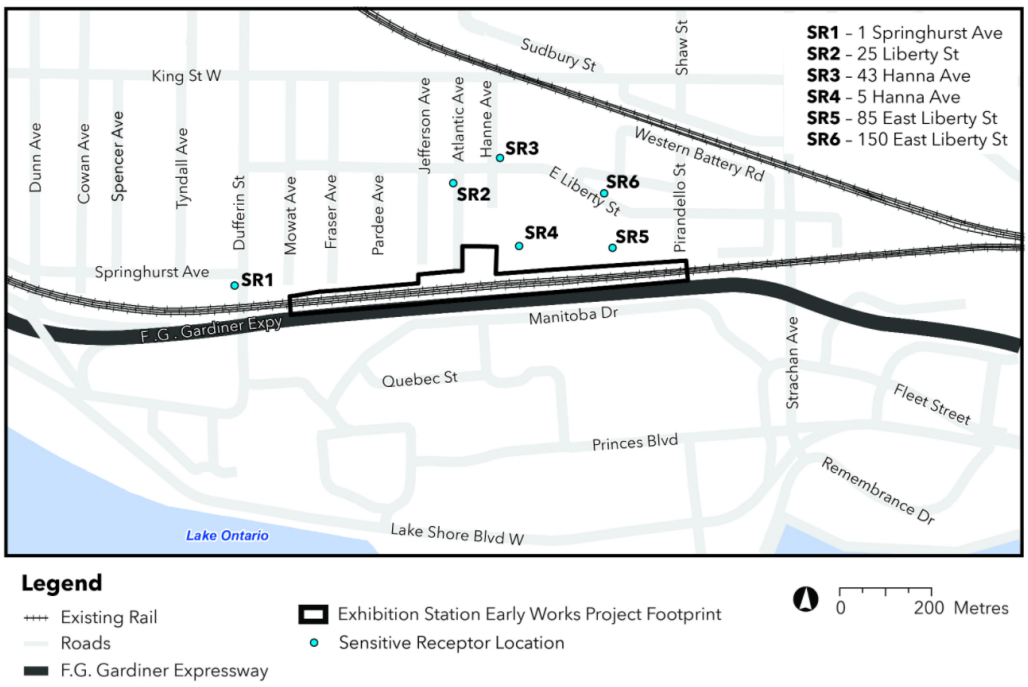
← Return to Early Works: Exhibition Station

Key Findings

- There are existing exceedances of a number of contaminants, including nitrogen dioxide (NO2), a main combustion product from vehicular exhaust; benzene and benzo(a)pyrene, produced by both industry and vehicular exhaust; and fine particulate matter (PM2.5) (dust), produced by industry and vehicular exhausts within the city. High levels of vehicular exhaust contaminants, such as nitrogen dioxide, benzene, and benzo(a)pyrene, are typical of a highly urbanized environment like the City of Toronto.
- Six sensitive receptors* have been identified within the study area (i.e., apartments/condominiums): 1 Springhurst Avenue, 25 Liberty Street, 43 Hanna Avenue, 5 Hanna Avenue, 85 King Street West, and 150 East Liberty Street – without mitigation, these locations have the potential to be affected based on proximity to the project footprint and predominant wind direction.
- There is potential for temporary increases in contaminants associated with construction vehicle emissions. These increases will be minimized via implementing appropriate mitigation measures (see Potential Effects & Mitigation Measures for more details).

*A sensitive receptor is a building in which a person resides on a permanent or semi-permanent basis, such as a house or an apartment.

Exhibition Station Sensitive Receptors



Potential Effects and Mitigation Measures

Potential Effects:

- Temporary increase in air pollution and odour (e.g., diesel combustion products such as NO2) as a result of construction vehicle emissions and increased traffic due to congestion associated with construction activities.
- Temporary increase in dust, silica and airborne particulate matter resulting from earthworks, excavation, material handling and transfer, demolition and construction activities.

Mitigation Measures:

- Construction equipment will comply with all applicable regulatory emission standards.
- Contain (e.g., tarp) sources of dust such as soil stockpiles, as required.
- Full or partial enclosure of demolition and other activities, where possible and necessary

- Full or partial enclosure of demolition and other activities, where possible and necessary.
- Reduction of activities during high wind conditions.
- Use dust suppressants such as water, as required.
- Implement on-site air quality monitoring and apply threshold "Action Level" triggers for implementation of specific and increasing intensity mitigation activities linked to specific construction activities.

← Return to Early Works: Exhibition Station

What are your thoughts on the Air Quality study key findings and identified potential impacts and mitigation measures? *

Submit

Archeological Resources - Exhibition Station

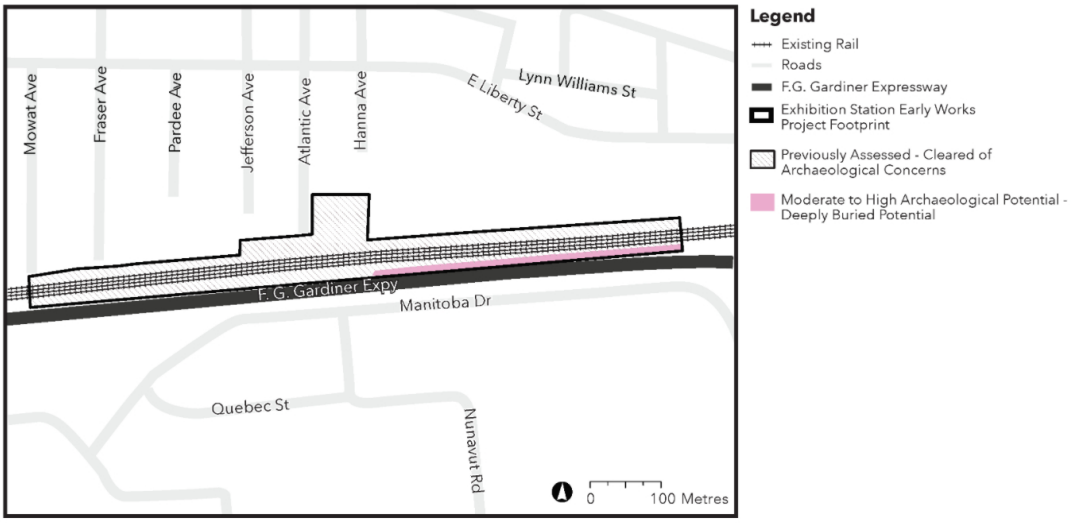
← Return to Early Works: Exhibition Station

Key Findings

- Most of the study area has been cleared of archaeological concerns.
- A small section between the Gardiner Expressway and the Lakeshore West rail corridor still retains moderate to high archaeological potential associated with past historical activities and landmarks.
- Where there is archaeological potential and disturbance is anticipated, further archaeological assessment(s) will be completed. The assessment may include deeply buried investigative techniques, such as mechanical topsoil removal, and mechanical trenching.

Archaeological Potential within Exhibition Station:

Early Works Archaeology Study Area



Potential Effects and Mitigation Measures

Potential Effects:

- Potential for disturbance of deeply buried archaeological resources (e.g., historical structure remnants) due to construction activities at Exhibition Station.

Mitigation Measures:

- Complete additional archaeological assessments, where required, as early as possible and in advance of any ground disturbance.
- If archaeological materials are encountered (or suspected) during construction, all work will stop. The site will be protected from impact and additional assessment will be undertaken.

← Return to Early Works: Exhibition Station

What are your thoughts on the Archaeological Resources study key findings and identified potential impacts and mitigation measures? *

Submit

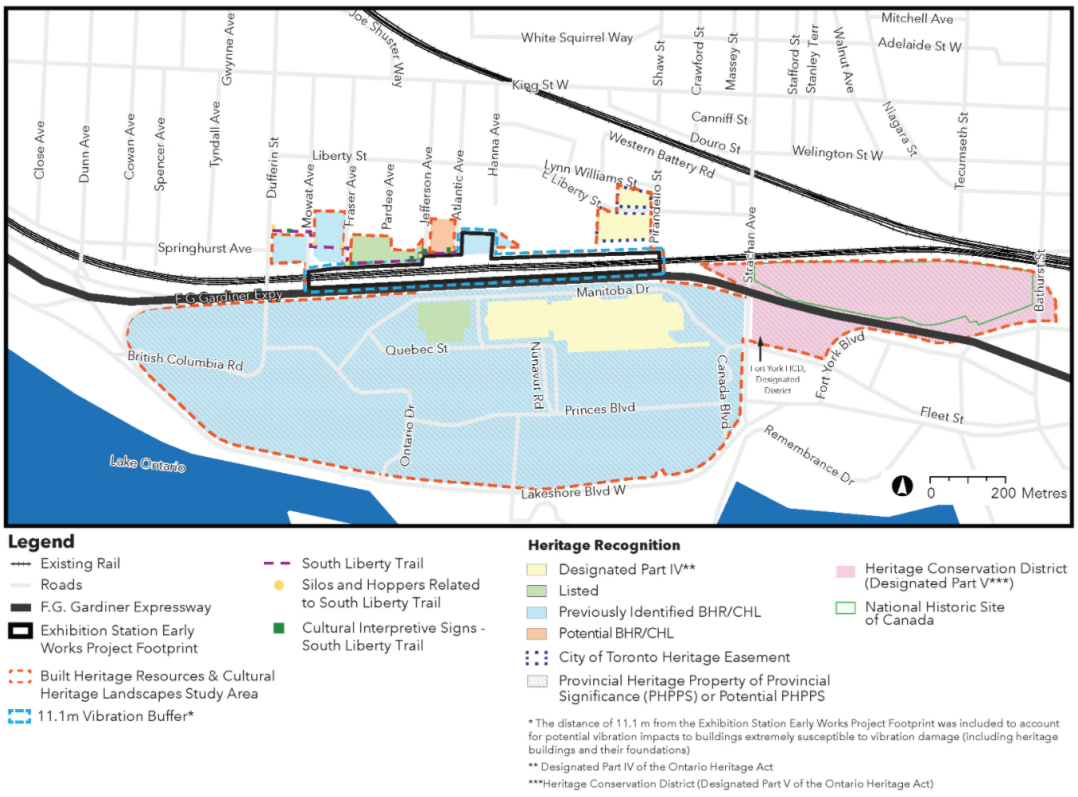
Built Heritage Resources & Cultural Heritage Landscapes - Exhibition Station

← Return to Early Works: Exhibition Station

Key Findings

- The following built heritage resources/cultural heritage landscapes (BHRs/CHLs) have been identified within the study area:
  - 1 Atlantic Avenue;
  - 2-20 Atlantic Avenue;
  - 7-19 Fraser Avenue;
  - Exhibition Place (known Provincial Heritage Property of Provincial Significance), including 2 Strachan Avenue, 45 Manitoba Drive and 10 Nova Scotia Avenue;
  - 153 Dufferin Street;
  - 3 Mowat Avenue;
  - Cultural interpretive signs and silos/hoppers along the South Liberty Trail;
  - 75 East Liberty Street; and
  - 250 Fort York Boulevard – Fort York National Historic Site.
- Of the BHRs/CHLs that have been identified, one (1 Atlantic Avenue) anticipated to be directly impacted.
- No impacts, direct or indirect, are anticipated to other BHRs/CHLs.

Exhibition Station Early Works Cultural Heritage Study Area



Legend

- Existing Rail
- Roads
- F.G. Gardiner Expressway
- Exhibition Station Early Works Project Footprint
- Built Heritage Resources & Cultural Heritage Landscapes Study Area
- 11.1m Vibration Buffer*
- South Liberty Trail
- Silos and Hoppers Related to South Liberty Trail
- Cultural Interpretive Signs - South Liberty Trail

Heritage Recognition

- Designated Part IV**
- Listed
- Previously Identified BHR/CHL
- Potential BHR/CHL
- City of Toronto Heritage Easement
- Provincial Heritage Property of Provincial Significance (PHPPS) or Potential PHPPS
- Heritage Conservation District (Designated Part V***)
- National Historic Site of Canada

* The distance of 11.1 m from the Exhibition Station Early Works Project Footprint was included to account for potential vibration impacts to buildings extremely susceptible to vibration damage (including heritage buildings and their foundations)

** Designated Part IV of the Ontario Heritage Act

***Heritage Conservation District (Designated Part V of the Ontario Heritage Act)

Potential Effects and Mitigation Measures

Effects:

- Demolition of the main building at 1 Atlantic Avenue, a potential built heritage resource/cultural heritage landscape (BHR/CHL).
- Potential vibration impacts to the chimney and accessory building at 1 Atlantic Avenue.

Mitigation Measures:

- For 1 Atlantic Avenue, implement the following:
  - Consult with City of Toronto's Heritage Preservation Services as part of the detailed design phase and prior to the Environmental Impact Assessment Report, regarding any required physical impact to the property in order to determine and obtain any approval or permits.
  - Complete detailed documentation of the property that includes the identification of salvageable materials and/or heritage attributes, prior to demolition. Documentation should include a photographic record, drawings and floor plans, where appropriate. Heritage attributes of the property that are within the boundaries of the study area should be retained/conserved where possible.
  - The final development plan for the site should incorporate commemorative signage, in consultation with City of Toronto Heritage Preservation Services, to communicate the cultural heritage value or interest of the demolished structure.
  - Documentation of the structural condition of the chimney and accessory building. Establish vibration limits including the type of construction.

The main building at 1 Atlantic Avenue is within the Exhibition Station Early Works Project Footprint. The building was constructed between 1950 and 1953 and originally served as Westeel Company Ltd. metal fabricators, a mid-20th century example of a manufacturing plant. Potential heritage attributes of the property include the low horizontal massing of the two-storey red brick commercial building, which includes horizontal bands of windows and a flat roof. The property also includes a tall brick chimney and brick accessory building at the rear of the property. The front of the property includes urban landscaping with trees. Source: Google "Streetview", 2019. http://maps.google.com

← Return to Early Works: Exhibition Station

What are your thoughts on the Cultural Heritage Report key findings and identified potential impacts and mitigation measures? *

Submit

Hydrology & Surface Water - Exhibition Station

← Return to Early Works: Exhibition Station

Key Findings

- The study area is outside of the Toronto and Region Conservation Authority's regulated area as well as any floodplain.
- Changes to stormwater quality and quantity may occur and are anticipated to be minimized via implementation of appropriate mitigation measures such as minimizing the amount of exposed soil, protecting storm drain inlets, and stabilizing all exposed soil areas as soon as land alterations are completed.
- Prior to construction, a Stormwater Management Plan outlining stormwater discharge management, and an Erosion and Sediment Control Plan will be developed.
- The overall stormwater quality and quantity control strategy will be developed in accordance with all relevant municipal, provincial, and federal requirements, and outlined in the Stormwater Management Report.

Potential Effects and Mitigation Measures

Potential Effects:

- No potential effects to hydrology and surface water are anticipated.
- Change in stormwater quantity and quality, including erosion of exposed soil and increased sediment loading which may impact receiving waterbodies and/or municipal stormwater drainage system.

Mitigation Measures:

- The overall stormwater quality and quantity control strategy will be developed in accordance with all relevant municipal, provincial, and federal requirements.
- Prior to construction, a Stormwater Management Plan and an Erosion and Sediment Control Plan will be developed.
- The following stormwater management best practices will be considered and implemented, as required:
  - Minimize clearing and amount of exposed soil;
  - Install sediment controls before grading/land alterations begin;
  - Sequence construction activities so that soil is not exposed for long periods of time;
  - Protect storm drain inlets to filter out debris; and
  - Stabilize all exposed soil areas as soon as land alterations have been completed.

Example of silt fencing used for erosion and sediment control

← Return to Early Works: Exhibition Station

What are your thoughts on the Surface Water and Hydrology study key findings and identified potential impacts and mitigation measures? *

Submit

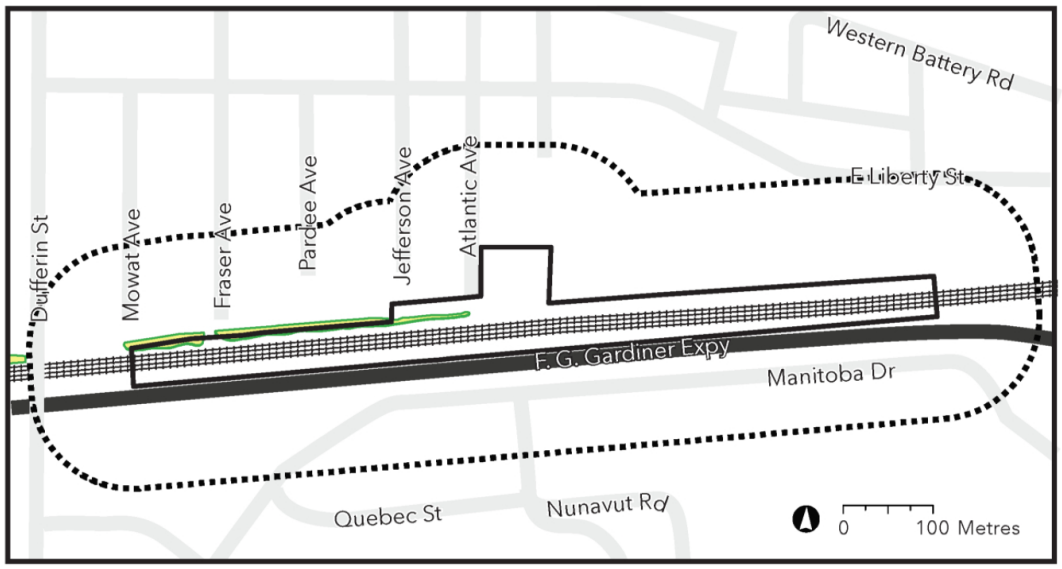
Natural Environment - Exhibition Station

← Return to Early Works: Exhibition Station

Key Findings

- Vegetation is limited to streetscapes (street trees, treed fence line or manicured lawns) and treed hedges (hedgerows).
- The study area provides limited wildlife habitat given its urbanized nature.
- The study area does not feature any provincially or locally significant wetlands, watercourses, areas of natural and scientific interest, woodlands, valleylands, environmentally significant areas or municipal or conservation authority policy areas.
- Species at risk are not anticipated to be affected by construction activities.

Ecological Land Classification* within the Exhibition Station Early Works Natural Environment Study Area



Potential Effects and Mitigation Measures

Potential Effects

- Disturbance or displacement of wildlife.
- Removal of/damage to trees, terrestrial vegetation and wildlife habitat, including migratory breeding bird habitat.

Mitigation Measures

- Sensitive wildlife timing restrictions for construction activities (e.g., removal of vegetation outside of the breeding bird season).
- Prior to construction, a Common Nighthawk (Species of Conservation Concern) candidate nesting habitat survey will be completed to confirm nesting habitat presence/absence at 1 Atlantic Avenue and, if habitat is found to be present, appropriate mitigation measures will be implemented (e.g., conducting building demolition outside of breeding bird window).
- Tree/vegetation removals will be kept to a minimum and limited to within the construction footprint.
- Tree removal compensation will be provided in accordance with the Metrolinx Vegetation Guideline (2020).

← Return to Early Works: Exhibition Station

What are your thoughts on the Natural Environment Study key findings and identified potential impacts and mitigation measures? *

Submit

Noise and Vibration - Exhibition Station

← Return to Early Works: Exhibition Station

Key Findings

Construction Noise

- The impact assessment conservatively assumed that all construction equipment would operate in a small work area closest to each sensitive receiver* instead of being spread throughout the project footprint.
- Without mitigation, there is potential for noise criteria exceedances at 5 Hanna Avenue and the complex located at 6 Pirandello Street and 65-85 East Liberty Street.
- Potential for exceedances will be minimized by implementing appropriate mitigation measures (see Potential Effects & Mitigation Measures).
- The impact assessment will be updated before work begins, using the most up-to-date information on construction methods and techniques, equipment, and refined construction areas – so that appropriate mitigation measures will be in place to avoid noise criteria exceedances.

*A sensitive receiver is a location that is sensitive to noise, where noise is assessed. These locations include living and sleeping quarters of dwellings and sleeping quarters of noise sensitive institutional/commercial land uses.

Construction Vibration

- The impact assessment employed a conservative approach, where construction equipment was assumed to operate at the edge of the project footprint, closest to sensitive receivers.
- Without mitigation, there is potential for the City of Toronto Prohibited Limit exceedance at 15 Atlantic Ave.
- Vibration may also be perceptible at 2-20 Atlantic Avenue/28 Atlantic Avenue, 1 Fraser Avenue, and 3 Mowat Avenue/2 Fraser Avenue.
- Potential for exceedances will be minimized by implementing appropriate mitigation measures (see Potential Effects & Mitigation Measures).
- Prior to the commencement of construction, the impact assessment will be updated based upon refined construction methodology, site staging, construction areas, and building locations - such that appropriate mitigation measures will be implemented to avoid vibration criteria exceedances.

Potential Effects and Mitigation Measures

Construction Noise

Potential Effects:

- Without mitigation, potential for noise level criteria exceedances at 5 Hanna Avenue and the complex located at 6 Pirandello Street and 65 to 85 East Liberty Street.

Mitigation Measures:

- Use construction equipment compliant with noise level specifications in the Ministry of the Environment, Conservation and Parks' NPC-115 and NPC-118 guidelines.
- Keep equipment in good working order and operate with effective muffling devices.
- Acoustic equipment enclosures for equipment such as compressors and generators.
- Evaluate acoustic enclosures for power generators.
- Additional equipment silencers/mufflers.
- Use of upgraded construction hoarding (considering requirements from CSA Z107.9 for noise barriers) between construction equipment and noise sensitive receivers.
- Use of localized noise barriers for specific equipment and operations, including rail corridor construction works.
- Minimize simultaneous operation of equipment where possible.
- Implement a no idling policy on site (unless necessary for equipment operation).
- Restrict construction hours where possible:
    - Perform construction during daytime hours where possible. If night time construction is necessary, activities with the highest noise levels should be conducted during day time periods.
    - If construction will occur outside of normal daytime hours, inform local residents of type of construction and expected duration outside of daytime hours prior to commencing work.
    - Consider operational duration limits for construction on the portion of the Exhibition Station Early Works Project Footprint near 5 Hanna Avenue and the complex located at 6 Pirandello Street and 65 to 85 East Liberty Street.
- Undertake noise monitoring and regular reporting throughout the construction phase. Where noise criteria are exceeded, additional noise mitigation measures shall be implemented.

- Develop a communications protocol for providing advance construction noise and vibration impact notices and addressing public complaints in a timely manner.

Example of a construction noise logger

Construction Vibration

Potential Effects:

- Without mitigation, potential for perceptible vibration levels at the commercial buildings located at 15, 2/28 Atlantic Avenue, 1 Fraser Avenue, and 3 Mowat Avenue/2-20 Fraser Avenue.
- Without mitigation, potential for City Bylaw vibration level exceedance at the footings of the Gardiner Expressway and 15 Atlantic Avenue.

Mitigation Measures:

- Use equipment with low vibration emissions where possible.
- Restrict construction hours where possible:
  - Perform construction during daytime hours where possible. If night time construction is necessary, the activities with the highest vibration levels should be conducted during day time periods.
  - If construction will occur outside of normal daytime hours, inform local residents before construction of type of construction and expected duration outside of daytime hours.
  - Consider operational duration limits for construction near the commercial buildings located at 15, 2/28 Atlantic Avenue, 1 Fraser Avenue, and 3 Mowat Avenue/2-20 Fraser Avenue.
- Update impact assessment based upon refined site staging, construction areas, and building locations prior to the commencement of construction.
- Use alternative means of construction within 11.1 metres of structures extremely susceptible to vibration damage.
- Review and refine construction activities in proximity to the Gardiner Expressway and, if required, conduct a more detailed analysis with respect to
- the Gardiner Expressway footings and review other applicable vibration limits such as the City of Toronto Specification GN117SS.
- Conduct monitoring and pre-construction inspections in accordance with City of Toronto Bylaw 514, as required.
- Provide smooth surfaces for trucks to travel.
- Operate construction equipment on lower vibration settings where available.
- Maximize distance between equipment and sensitive receivers.
- Develop a communications protocol for providing advance construction noise and vibration impact notices and addressing public complaints in a timely manner.

Example construction vibration monitor

← Return to Early Works: Exhibition Station

What are your thoughts on the Noise & Vibration study key findings and identified potential impacts and mitigation measures? *

Submit

Socio-Economic & Land Use Characteristics - Exhibition Station

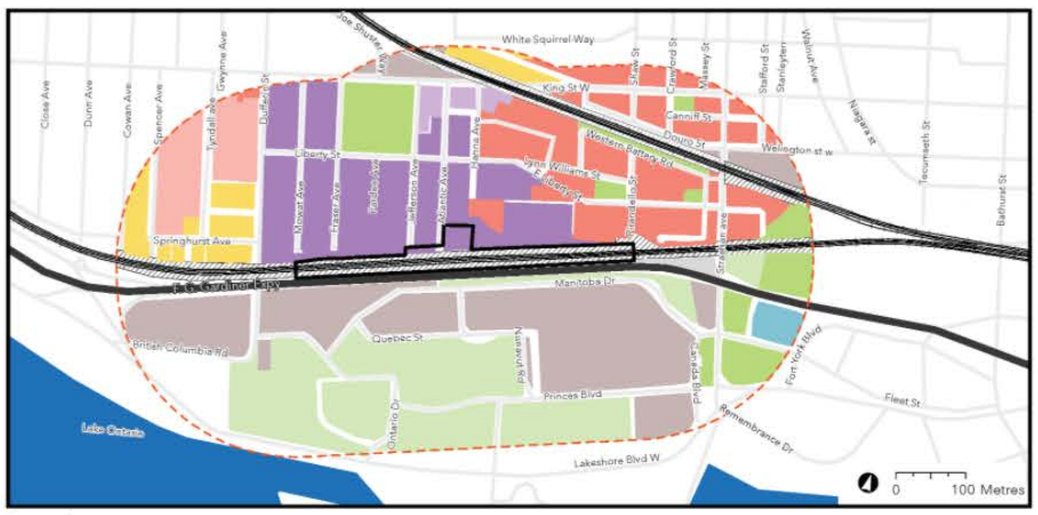
← Return to Early Works: Exhibition Station

Key Findings

- Construction activities will occur primarily within the existing Lakeshore West rail corridor lands.
- Adjacent land uses include core employment* and mixed use.
- During construction, access disruptions, visual effects and nuisance effects such as dust and construction noise will be temporary and will be minimized via appropriate mitigation measures (see Potential Effects & Mitigation Measures).

*Core employment areas contain businesses and economic activities such as manufacturing, processing, warehousing, offices, etc.

Land Uses within the Exhibition Station Socio-Economic and Land Use Characteristics Study Area



Potential Effects and Mitigation Measures

Potential Effects:

- Access disruption to adjacent lands to accommodate construction activities.
- Nuisance effects (i.e., dust, noise, and vibration) from construction areas/activities.
- Visual effects from permanent public-facing structures and construction areas/activities.
- Permanent and temporary property acquisition (property requirements will be confirmed during detailed design).
- Temporary relocation or removal of streetscaping materials, furniture and landscaping in the public realm.

Mitigation Measures:

- Maintained access to businesses during working hours.
- See air quality and noise and vibration for mitigation measures related to these potential nuisance effects.
- Minimize the visual effects of structures by selecting appropriate building materials and architectural design.
- Screened enclosures and temporary landscaping along construction site boundaries, where necessary.
- Temporary lighting and wayfinding signage around construction sites.
- Clearly marked pedestrian and cyclist detours, where required.
- Following completion of construction, restore impacted lands to existing conditions, to the greatest extent possible.
- Ongoing consultation with affected property owners and provision of fair market value compensation in accordance with applicable laws.

View of Exhibition Place and Ontario Place within Toronto's downtown

← Return to Early Works: Exhibition Station

What are your thoughts on the Socio-Economic Environment study key findings and identified potential impacts and mitigation measures? *

Submit

Soil & Groundwater - Exhibition Station

← Return to Early Works: Exhibition Station

Key Findings

- Glacial till is the main near surface soil type and is mostly made up of sand and silt.
- The area is serviced by municipal water supply from Lake Ontario.
- Construction activities are not anticipated to have significant dewatering requirements.
- Without mitigation, there is potential for impacts to groundwater (e.g., temporary drawdown of the water table) and soil (e.g., ground movement and settlement as a result of excavation). The completion of hydrogeological and geotechnical investigations and a construction dewatering assessment during detailed design, completion of Groundwater and Soil Management Plans prior to construction, and the implementation of appropriate mitigation measures during construction, are anticipated to minimize potential impacts (see Potential Effects & Mitigation Measures).

Potential Effects and Mitigation Measures

Groundwater

Potential Effects:

- Subsidence/settlement of structures within the Zone of Influence (ZOI*) due to construction dewatering.
- Encounter previously contaminated groundwater during construction excavation and/or dewatering activities.

*The Zone of Influence refers to the area where groundwater levels will be lowered due to dewatering.

Mitigation Measures:

- As part of detailed design, determine water taking quantities, quality, and resultant dewatering ZOI through a site-specific Hydrogeological Investigation, Construction Dewatering Assessment and Groundwater Management Plan.
- Subsidence/settlement impacts to existing structures can be mitigated with measures such as completion of pre-construction inspections of structures within the dewatering ZOI and implementation of a detailed settlement monitoring program complete with settlement triggers that result in changes to the dewatering program if surpassed.
- Remedial action plans, risk assessment, and risk mitigation plans for encountering contaminated groundwater.

Soil

Potential Effects:

- Displacement of soils as a result of construction may result in ground movement and settlement.

Mitigation Measures:

- Complete a detailed settlement analysis during the detailed design phase.
- During construction, employ excavation support systems, as required, and/or implement appropriate ground treatment.
- Develop a Soil and Excavated Materials Management Plan for the handling, management and disposal of excavated material.

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What are your thoughts on Soil & Groundwater study key findings and identified potential impacts and mitigation measures? *

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Traffic & Transportation - Exhibition Station

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Key Findings

- The study area road network includes three north-south roads (Atlantic Avenue, Jefferson Avenue and Nova Scotia Avenue), and an east-west road (Manitoba Drive).
- The active transportation network includes sidewalks along all streets and the South Liberty Trail. There are no dedicated cycling routes (e.g., bike lanes, cycle tracks, and multi-use paths); however, bicycle parking racks and Bike Share Toronto stations are provided on Atlantic Avenue and at the southern entrance to Exhibition Station.
- The rail network includes four Metrolinx-owned tracks that service GO Transit and VIA Rail commuter lines as well as freight trains operated by Canadian National Railway and Canadian Pacific Railway.
- TTC operates six surface transit routes: four bus routes (#29C – Wilson Station-Exhibition/Princes' Gate, #307 – Bathurst Blue Night, #329 – Dufferin Blue Night, and #363 – Ossington Blue Night) and two streetcar routes (#509 – Harbourfront and #511 – Bathurst).
- No GO service disruptions are anticipated.
- As the detailed construction staging schemes that describe the potential modifications to the existing transportation network become available, a comprehensive quantitative impact assessment will be completed, as required.

Existing Pedestrian Network within the Exhibition Station Early Works Traffic and Transportation Study Area

Potential Effects and Mitigation Measures

Potential Effects:

- Temporary lane restrictions/closures and construction vehicle traffic causing impacts to traffic flow of nearby roads such as Manitoba Drive, Atlantic Avenue, and Jefferson Avenue.
- Detour routes lead to increased walking distances.
- Relocation/removal of existing bicycle amenities (e.g., bicycle parking racks).
- Disruption to existing rail operations if short-term track closures are implemented.

Mitigation Measures:

- Develop a Construction Traffic Management Plan prior to construction.
- Issue notifications and advisory signage to alert traffic and transit users of any upcoming road closures and disruptions, as required.
- Consult and coordinate with the City of Toronto during construction planning, including consideration of route detours.
- Consult with rail companies (i.e., Canadian National Railway, Canadian Pacific Railway, and VIA Rail) that operate along the rail corridor to assess how track closures would impact their service and coordinate temporary schedules to accommodate all rail services on the open tracks.

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What are your thoughts on the Traffic & Transportation study key findings and identified potential impacts and mitigation measures? *

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The Ontario Line - Contact Us

We appreciate the time you have taken to learn more about the Ontario Line project and we value your feedback.

When public gatherings are safer, we look forward to meeting you in-person, including at our future community offices in Riverside and Thorncliffe Park. Until then, there are a few other ways you can stay in touch:

Environmental assessment feedback

The environmental assessment process for the Ontario Line involves an Environmental Conditions Report (completed in fall 2020), a series of Early Works Reports (in process), and an Environmental Impact Assessment Report (expected in mid-2021).

E-newsletter

Get project updates and learn about future virtual open houses by signing up for our e-newsletter.

"Ask-a-Question" public forum

Submit your question anonymously in our public forum.

Email or phone

Email us using the form below or call us at 416-202-5100.

Your name *

Your e-mail address *

Nearest Ontario Line Station (Optional)

- None -

Subject *

Message *

Send message

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Ontario Line - Ask a Question #3

Submit your question below. We'll post an answer to your question within three to five business days. Be sure to vote for your favourite questions.

NOTE: Conduct inconsistent with our policies will result in the removal of your submission.

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