

QUEEN STREET MAJOR STORM TRUNK SEWER PROJECT

Project Update

September 2021



Presentation Overview

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2. Project Information
 - Construction work areas
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Project Overview

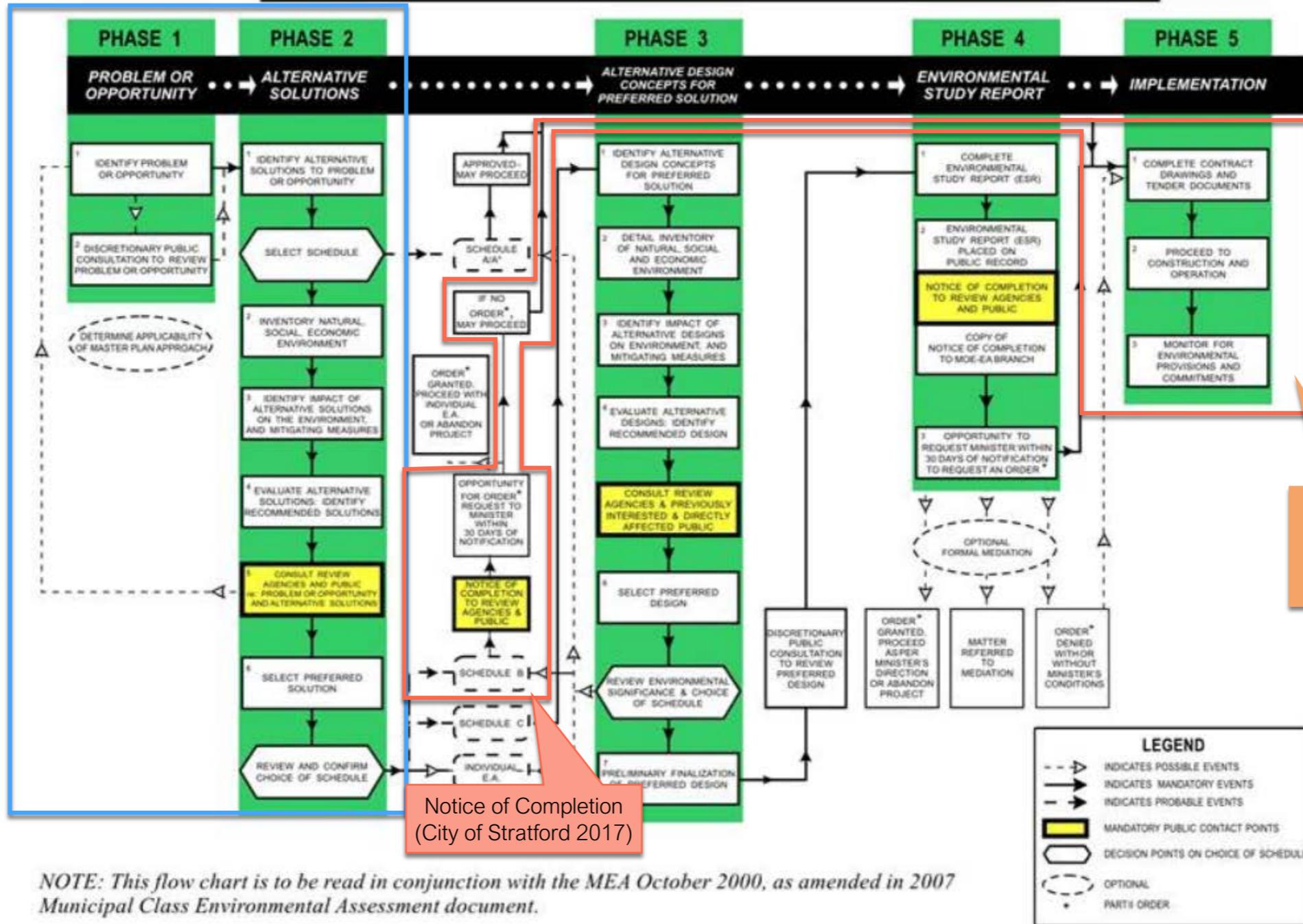
Why is the Queen Street Major Storm Trunk Sewer Project taking place?

- The Queen Street major storm diversion trunk sewer will collect drainage from south Stratford and direct it North towards Lake Victoria.
- The project is a Schedule B undertaking (as per the Municipal Class Environmental Assessment, Appendix 1 Project Schedules, Municipal Water and Wastewater Projects) to implement a diversion sewer along Queen Street.
- This diversion sewer was recommended in the South Side Storm System Class Environmental Assessment (EA) Study completed in 2004 and amended in 2017. The addendum presented the Alternative I design and method of construction to the public and stakeholders.
- The Project File and Issue of Notice of Completion can be made available upon request.



Project Overview

MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS



South Side Storm System Class EA (City of Stratford, 2004)

Notice of Completion (City of Stratford 2017)

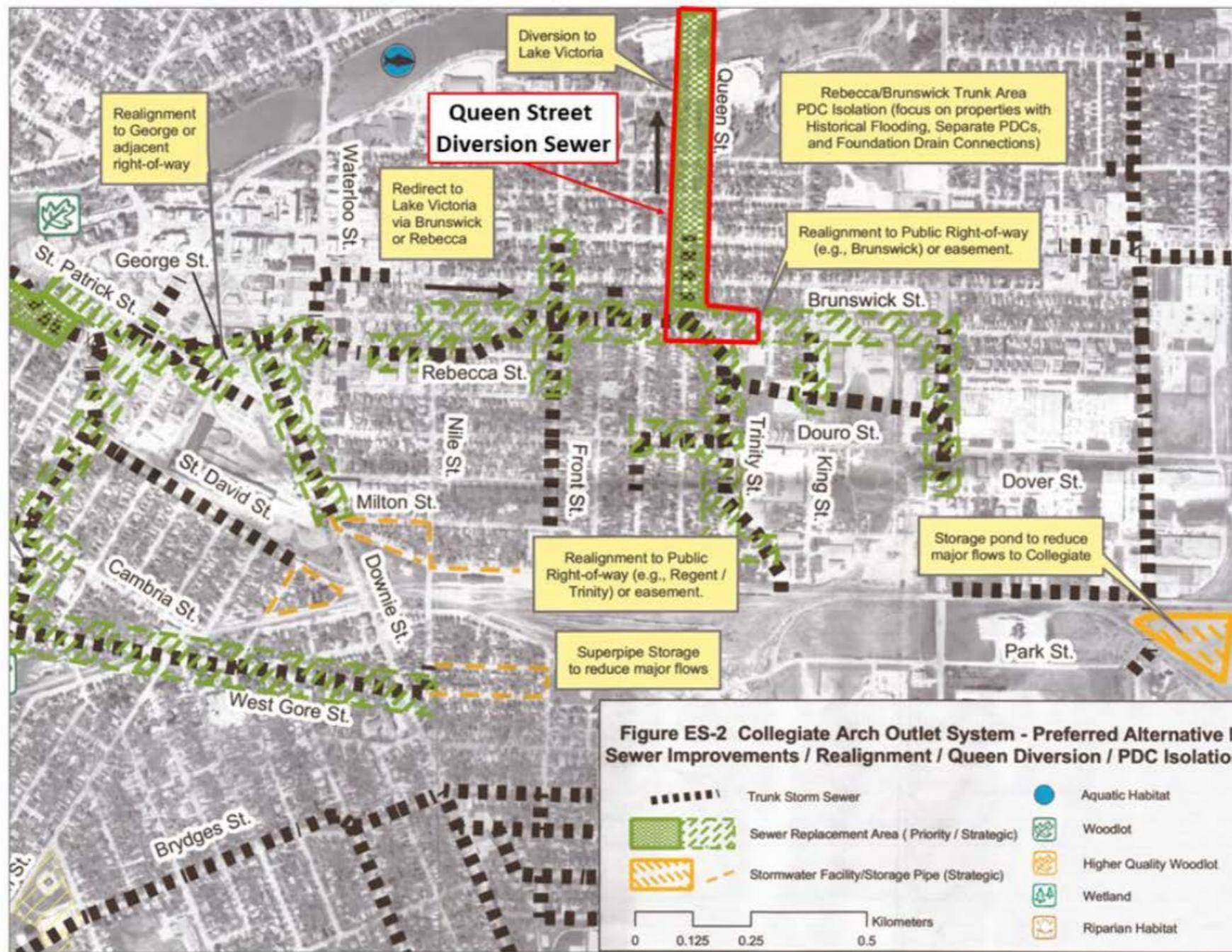
WE ARE HERE
Construction in 2021/2022

NOTE: This flow chart is to be read in conjunction with the MEA October 2000, as amended in 2007 Municipal Class Environmental Assessment document.



Project Overview

- Preferred Solution from South Side Storm Sewer System Class EA (2004)



Project Overview

Project Details:

- The Queen Street Storm Sewer Diversion Project consists of the following:
 - New 2250mm diameter storm sewer by microtunneling on Queen Street from 45m south of Lakeside Drive to Brunswick Street.
 - New 2000mm diameter storm sewer by microtunneling on Brunswick Street from Trinity Ave to Queen Street.
 - New 4000x1500mm box culvert by open cut from Lake Victoria to 45m south of Lakeside Drive.
 - Storm sewer outlet structure on the Lake Victoria shoreline.
 - Temporary microtunnel launching or receiving shafts at
 - Queen ST (45m from Lakeside Dr)
 - Queen St / Brunswick St intersection
 - Brunswick ST / Trinity ST intersection
 - ~~Queen St / Water St intersection~~ (Update: This shaft will not be constructed)



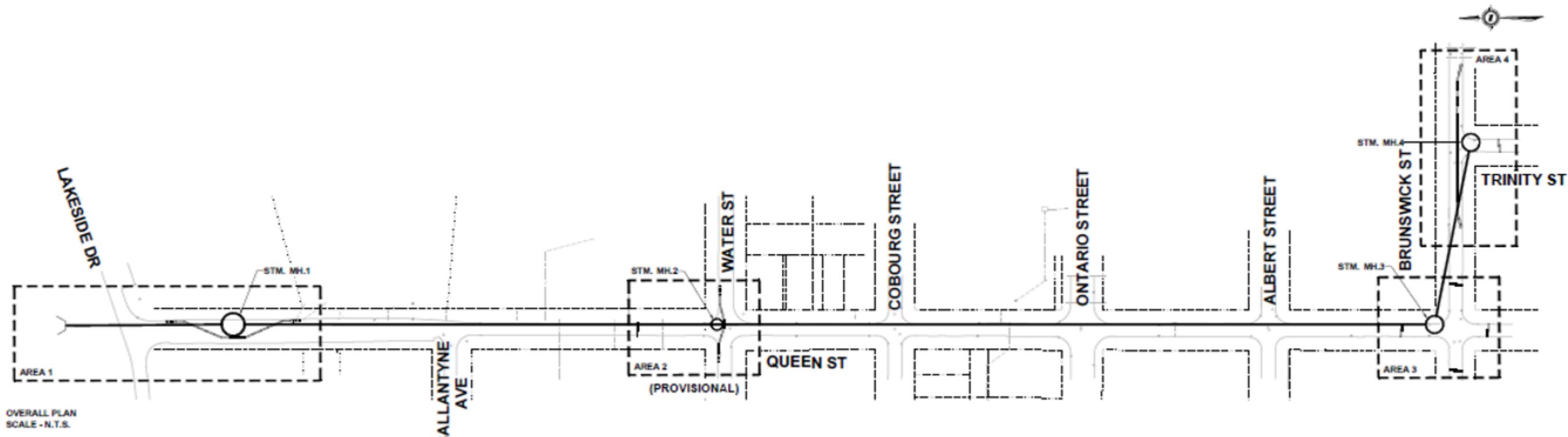
Project Overview

- The proposed deep storm sewer on Queen Street and Brunswick Street will be constructed primarily by microtunneling to minimize impacts to the surrounding area, however temporary compounds or working areas will be required where the microtunneling machines are launched and received and where connections to existing sewers are made.
- Infrastructure improvements will only be made at the four construction compound areas where the roadway, curbs or sidewalks are to be removed to facilitate the shaft construction. Improvements will not be made to the roadway or subsurface infrastructure along the tunnel alignment where there are no surface impacts.
- Construction is anticipated beginning in September 2021 and ending in April 2022.



Construction Work Areas

- There are 4 proposed temporary compounds or working areas required to facilitate the construction of the diversion tunnel. These are located at:
 - Queen Street / Lakeside Drive Intersection (area 1)
 - ~~Queen Street / Water Street Intersection (area 2 – will not be constructed)~~



Construction Work Areas

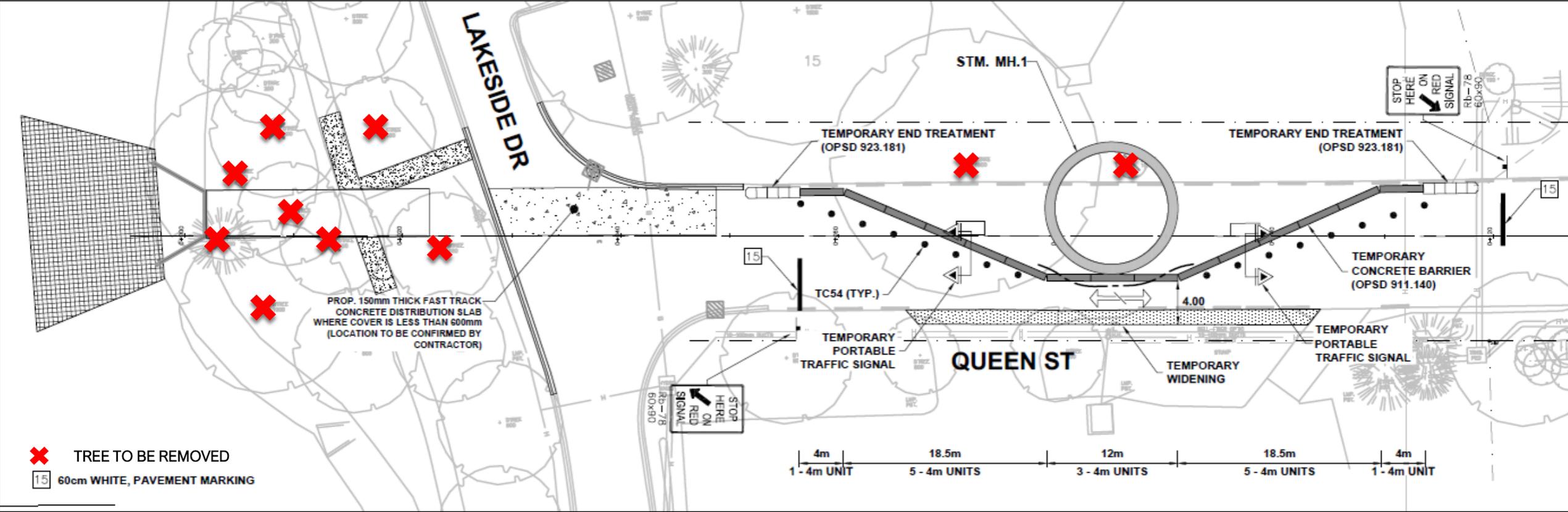
Queen Street / Lakeside Drive

- The Queen Street / Lakeside Drive will be the primary working site.
- A temporary compound will be fully enclosed on the Festival Theatre parking lot.
- At this location, Queen Street will be reduced to one lane of traffic and controlled by a portable traffic signal.
- Lakeside Drive will remain open in two directions for most of the project. A temporary road closure will be required to construct the open cut box culvert sections and outfall structure.
- Trees will be removed to facilitate the construction. Tree impacts and restoration will be addressed later in this presentation.



Construction Work Areas

Queen Street / Lakeside Drive



Construction Work Areas

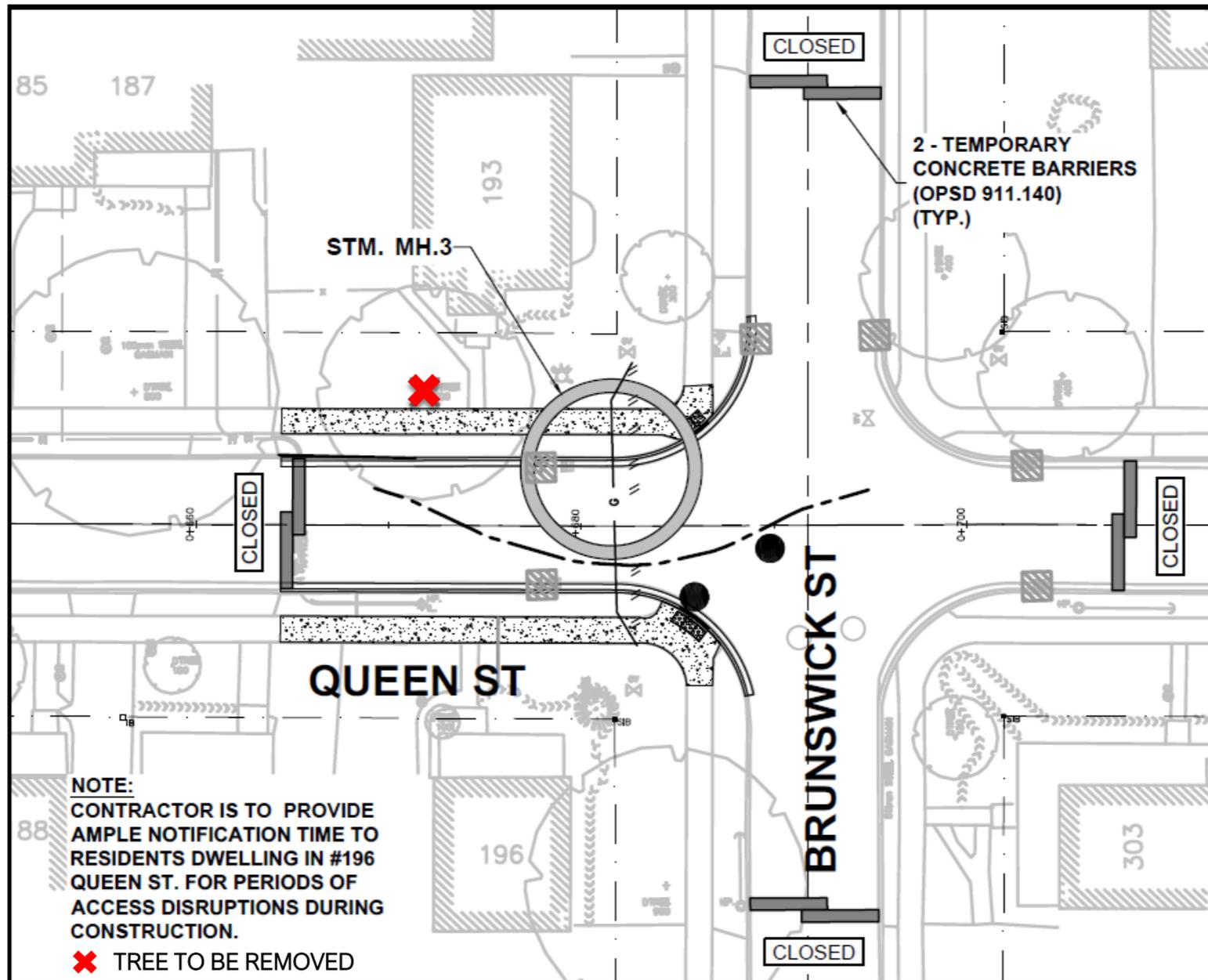
Queen Street / Brunswick Street

- This intersection will serve as a receiving and launch shaft, It will be fully enclosed and allow for a construction working area of approximately 1000m².
- The intersection will be closed for the duration of the project to vehicular and pedestrian traffic.
- A boulevard tree will be removed to facilitate the construction. Tree impacts and restoration will be addressed later in this presentation.



Construction Work Areas

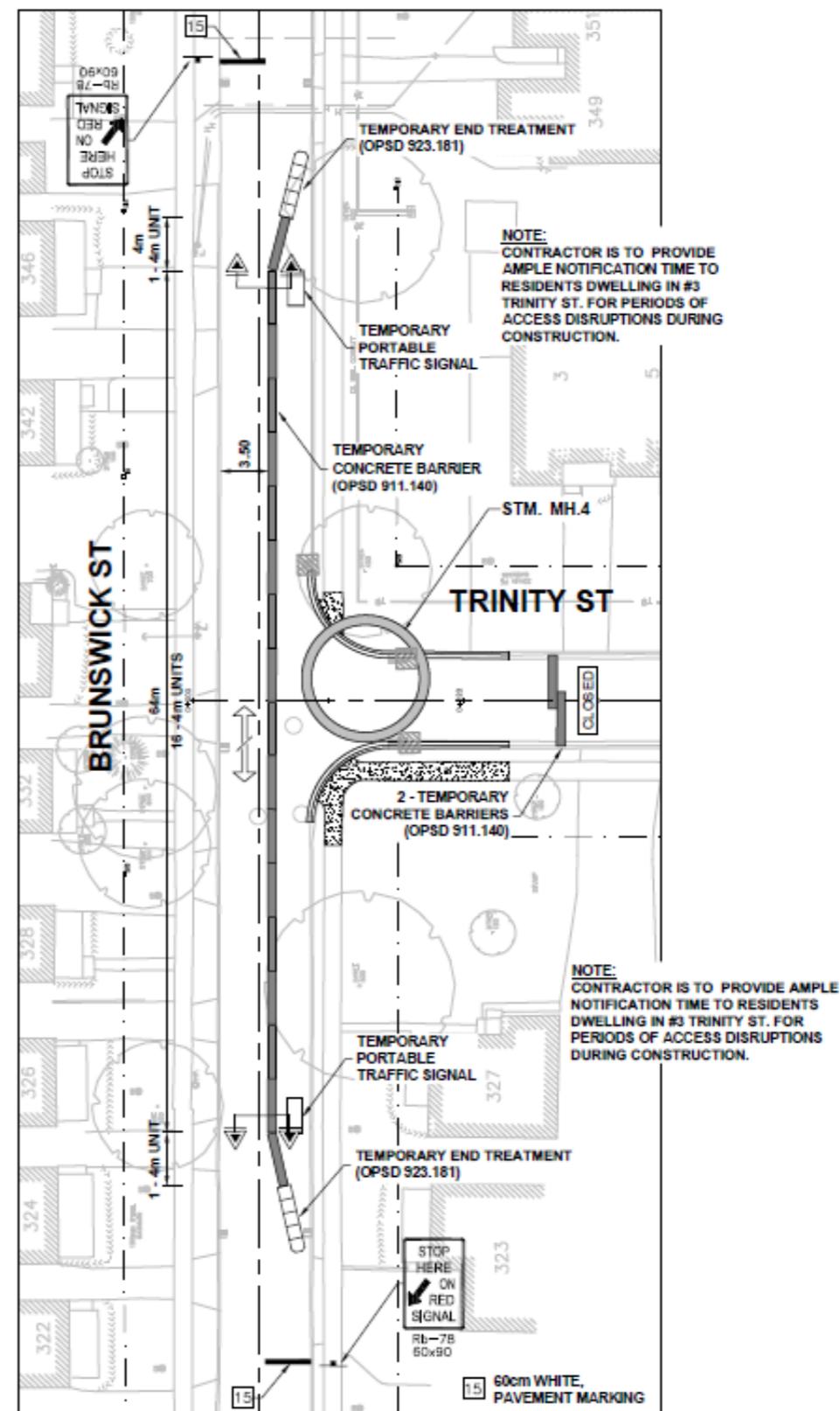
Queen Street / Brunswick Street



Construction Work Areas

Brunswick Street & Trinity Street

- This intersection will serve as the receiving shaft and will be fully enclosed to allow for a construction working area of approximately 700m².
- A temporary road closure on Trinity Street will be required to allow for the construction of the shaft and site compound.
- Brunswick Street will be converted to a two-way street from King Street to Queen Street for the duration of the project.
- No boulevard trees are anticipated to be impacted.



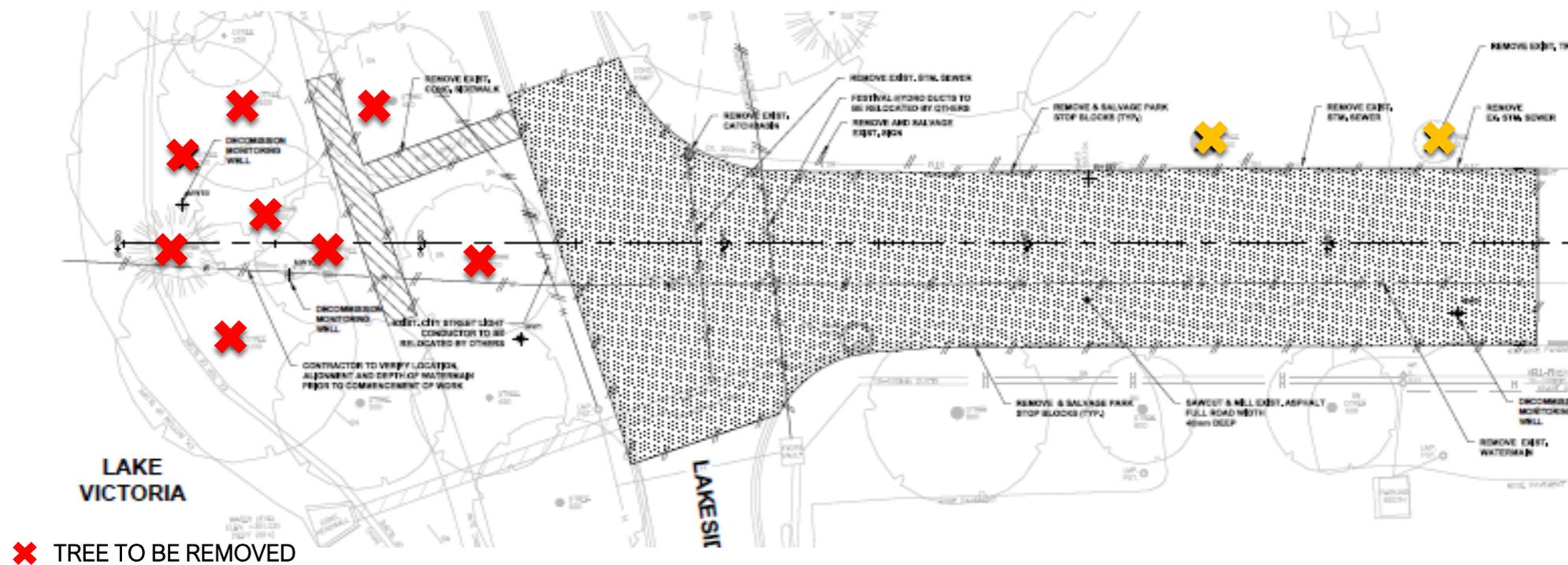
Anticipated Construction Schedule

- The construction contract for this project was awarded to Birnam Excavating Ltd on August 9th.
- Construction on Queen Street at Lakeside Drive will begin in late September.
- Construction of the Brunswick Street shafts at Queen and Trinity is anticipated to begin in late October.
- Microtunneling along Queen Street from Lakeside Drive to Brunswick Street is expected to run from late October to January.
- Microtunneling along Brunswick Street from Trinity Street to Queen Street is expected to run from mid January to March.
- Restoration will take place in Spring 2022.



Tree Impacts, Removals, Pruning

- Trees have been identified for removal where conflicts with the installation of new infrastructure is unavoidable. These trees have been identified with an 'X' on the drawings. A total of 11 trees have been identified for removal.
- 8 trees have been identified for removal along the Lake Victoria shoreline and 2 near the Queen Street Construction work site. These trees are in direct conflict outfall structure, box culvert section or launch shaft. The tree highlighted in orange will be removed in September 2021.



Tree Impacts, Removals, Pruning

- A tree assessment was completed during the design phase to assess the health, size, and species of each tree. The health of the trees will be closely monitored and reassessed during construction by the City's arborist.
- Tree protection fencing will be erected to protect trees within the working areas.
- If tree branches within the right-of-way interfere with construction, the trees will be pruned before construction equipment enters the drip line of the tree.
- Following construction, trees will be planted in compensation for trees that were removed.



Impacts During Construction

Pre-Construction Inspection

- The Contractor will survey all abutting properties on both sides of the street affected by tunnelling works before construction starts to establish a baseline condition. The inspection will look at the interior and exterior of all properties. Inspection of the interior will only be done if permitted by the homeowner.

Noise and Vibration Monitoring

- The Contractor will hire a noise and vibration consultant to provide monitoring services during construction. This will involve setting up temporary monitoring equipment to record the noise and vibration. Results will be reviewed to confirm the levels are within the acceptable range.

Geotechnical Instrumentation & Monitoring Program

- The Contractor will be required to implement a program to monitor the ground movements and ensure that movements do not exceed applicable limits.



Impacts During Construction

- Queen Street and Brunswick Street will be open to traffic in areas that are not impacted by the construction working areas (tunnel access shafts).
- Normal working hours are 7:00 a.m. to 7:00 p.m., Monday to Friday, except statutory holidays in accordance with the City Noise By-Law. Work beyond normal working hours must be applied for by the Contractor. It is typically preferable for microtunneling work to proceed on a continuous basis (24 hours a day) to prevent the machine from getting stuck. The need for 24-hour microtunneling may be considered at the time of construction and would require that the Contractor apply for a Noise By-law exemption. At this time, the Contractor does not anticipate working a 24-hour schedule.



Questions?

If you have any specific questions about your property, the project, or how to navigate the information available on the City website, contact the City's Project Manager.

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