

Virtual Open House: Environmental Project Report Addendum



March 10, 2022



Open House Series

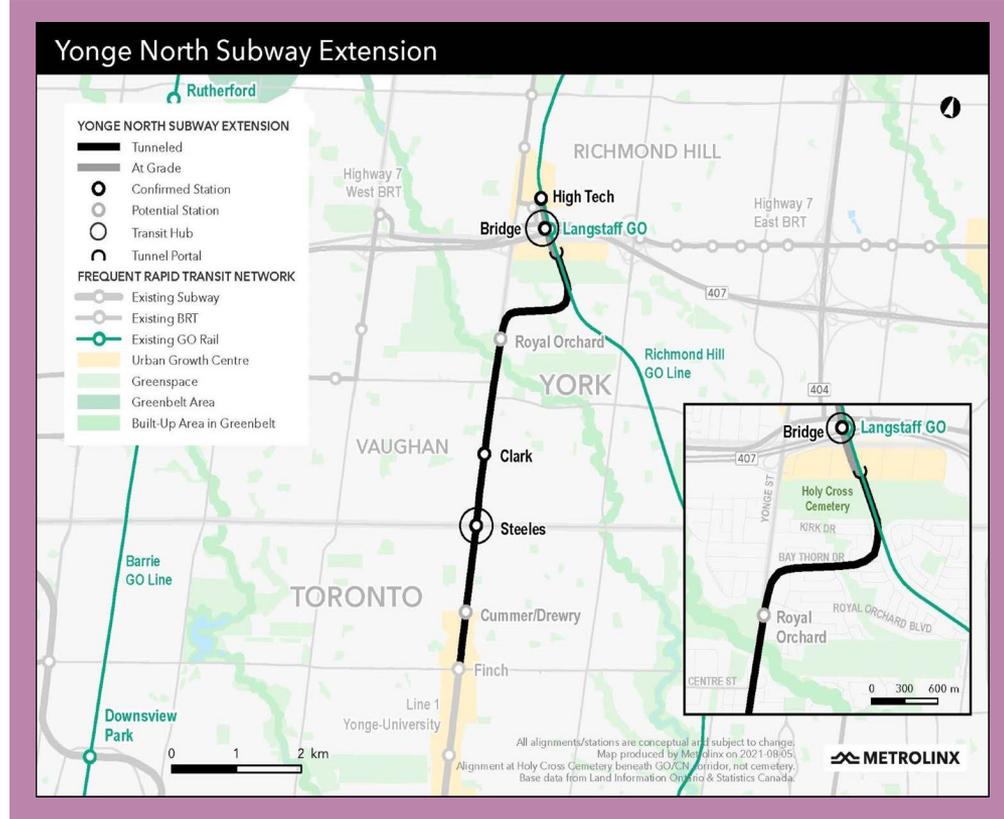
MEETING	TOPICS	DATE
EPR Virtual Open House #1	Overview of the Environmental Project Report Addendum, summary of findings	February 17
EPR Virtual Open House #2	Tunnelled segment Focus topics include: Noise and vibration, natural environment, cultural heritage, and soil and groundwater	February 23
EPR Virtual Open House #3	Surface segment Focus topics include: Noise and vibration, natural environment, and air quality	March 2
 EPR Virtual Open House #4	Engagement overview Focus areas include EPR Addendum feedback on noise and vibration and natural environment, and project feedback on tunnelling, emergency exit buildings and property requirements	March 10

Yonge North Subway Extension

By the Numbers

-  ~8 km route
-  4* new stations
-  94,100 daily riders
-  Up to 22 minutes saved on a trip from York Region to downtown Toronto
-  4,800 tonnes in yearly greenhouse gas emission reductions
-  26,000 more people with in 10-minute walk to transit
-  7,700 fewer km traveled by cars during morning rush hour

* We're exploring opportunities with our project partners that could support additional stations as the analysis is refined.



EPR Addendum Approach and Study Area

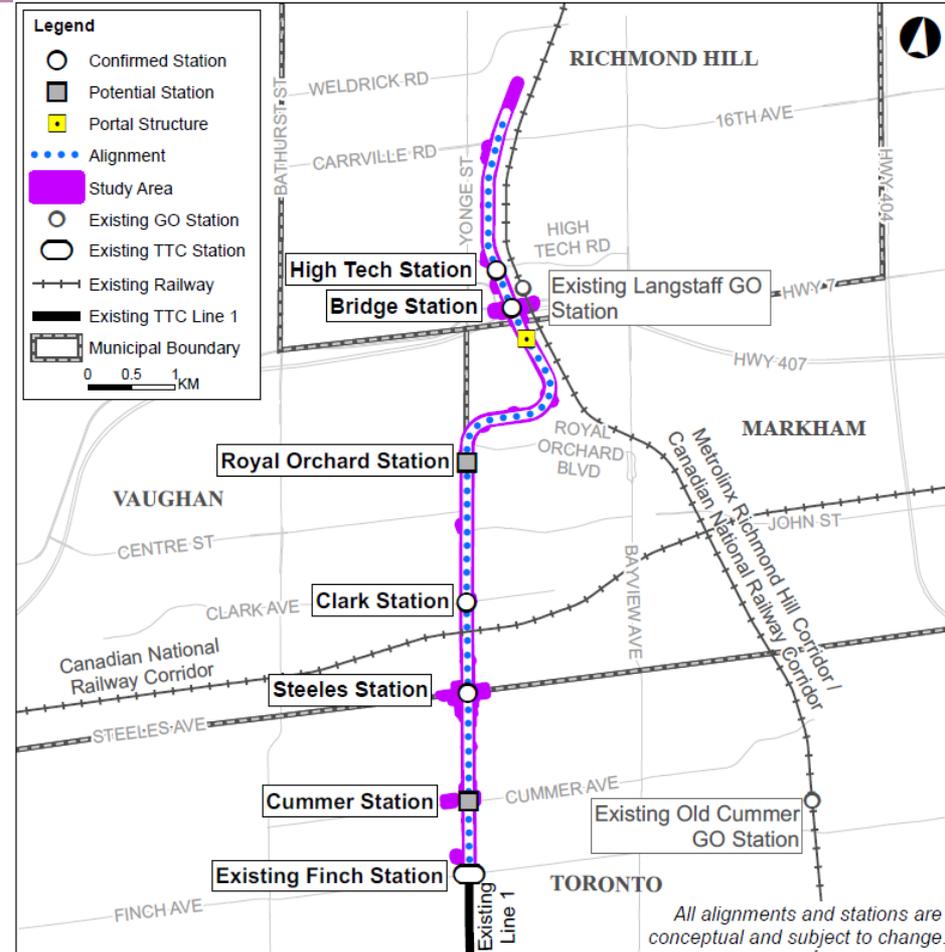
1. Characterize existing conditions:

- Review available information
- Complete field studies

2. Identify potential environmental impacts, mitigation measures and monitoring activities based on:

- Existing conditions
- Project components
- Construction activities
- Current regulatory requirements and industry best practices

3. Update EPR Addendum based on the feedback received during the public review period



EPR Addendum Review

February 10
Notice of EPR
Addendum

March 14
Public Review Closes

April 16 or earlier
Notice of Updated
EPR Addendum

Up to 35 days
MECP Minister's
Review Ends



- Effective February 10, 2022 an Addendum to the 2009 EPR is available for review on the Project webpage (www.metrolinxengage.com/en/yonge-north-subway-extension).
- Opportunity to comment on the EPR Addendum until March 14, 2022 via email YongeSubwayExt@metrolinx.com or the online feedback forms available at: www.metrolinxengage.com/en/yonge-north-subway-extension.

What we've heard about the EPR Addendum

Noise and Vibration questions on:

- Presentation of operational noise and vibration assessment results in the report
- Vibration levels during tunnelling
- Noise mitigation for the above ground section of the extension

Natural Environment questions on:

- Vegetation removal
- Species at risk





Noise and Vibration - Assessment Results Presentation

Table B 4-4 Segment 2 - Predicted Vibration Levels

Receptor	Speed (km/h)	Ground-borne Vibration (mm/s RMS)			Ground-borne Noise (dBA)		
		Predicted	MOEE Limit/Guideline	Impact	Predicted	FTA Limit/Guideline	Impact
R40	80	0.22	0.10	0.12	55	35	20

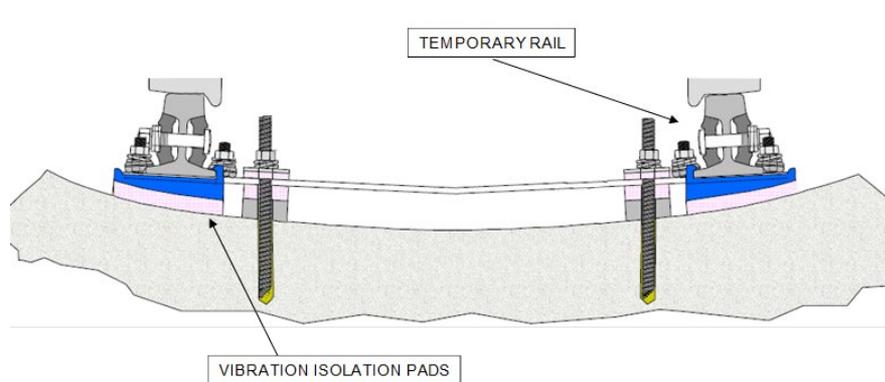
Table B 4-5 Segment 2 - Vibration Mitigation Recommendations

Receptor	Reduction Needed to control Ground-borne Vibration (dB)	Reduction Needed to control Ground-borne Noise (dB)	Indicative Mitigation Measures
R40	7	20	Floating slab track



Noise and Vibration - Vibration from Tunnelling

- Tunnels will be dug using two Tunnel Boring Machines (TBMs)
 - TBM passage transient, travelling approximately 10-15 meters per day
 - TBM vibration levels below limits for building damage, including heritage structures
- Excavated materials may be transported using temporary services trains or rubber-tired vehicles
 - Vibration levels will be reduced using solutions such as resilient fasteners and rubber tires
- On-going communication with local communities throughout construction



Resilient fastener diagram
Source: Crossrail



Noise and Vibration - Surface Segment

Trains

- Between the portal and Bantry Avenue, insignificant (1-2 dBA) sound level increases predicted for the surface segment
- With mitigation measures such as ballast mats, the vibration levels are predicted to meet or be lower than the applicable criteria.

Stationary Facilities (e.g., portal ventilation fan(s))

- With mitigation measures such as silencers on ventilation fans, no predicted sound and vibration level increases expected from stationary facilities.

Train Storage Facility (TSF)

- With mitigation measures such as noise barriers and moveable point frogs, the noise and vibration levels associated with the TSF are predicted to meet or be lower than the applicable criteria.
- A 5.5 m noise barrier will provide sound attenuation, security and visual screening to neighbouring properties



Example of ballast mat installation

Natural Environment - Vegetation Removal

- Vegetation removal will be reduced to the greatest extent possible and limited to the construction footprint.
- Tree and vegetation removal compensation will be provided in accordance with the Metrolinx Vegetation Guideline (2020).
- The Guideline includes compensation provisions with a landscape science-based approach that exceeds the requirements of applicable bylaws and regulations.
- Temporarily disturbed vegetated areas will be restored/re-vegetated.



Tree protection fence example.



Natural Environment - Species at Risk

- Along the tunnelled and surface segment, potential Barn Swallow and bat SAR habitat identified that may be impacted as a result of surface construction.
- Habitat presence will be confirmed via species-specific surveys prior to construction.
- No impacts anticipated to Redside dace, fish Species at Risk.
- All requirements of the *Endangered Species Act* will be met.



East Don River at Yonge Street Looking Downstream

What we've heard about the project

Tunnelling questions on:

- Dimensions of the tunnels
- The depth of the tunnels below Pomona Creek

Infrastructure questions on:

- Emergency exit buildings

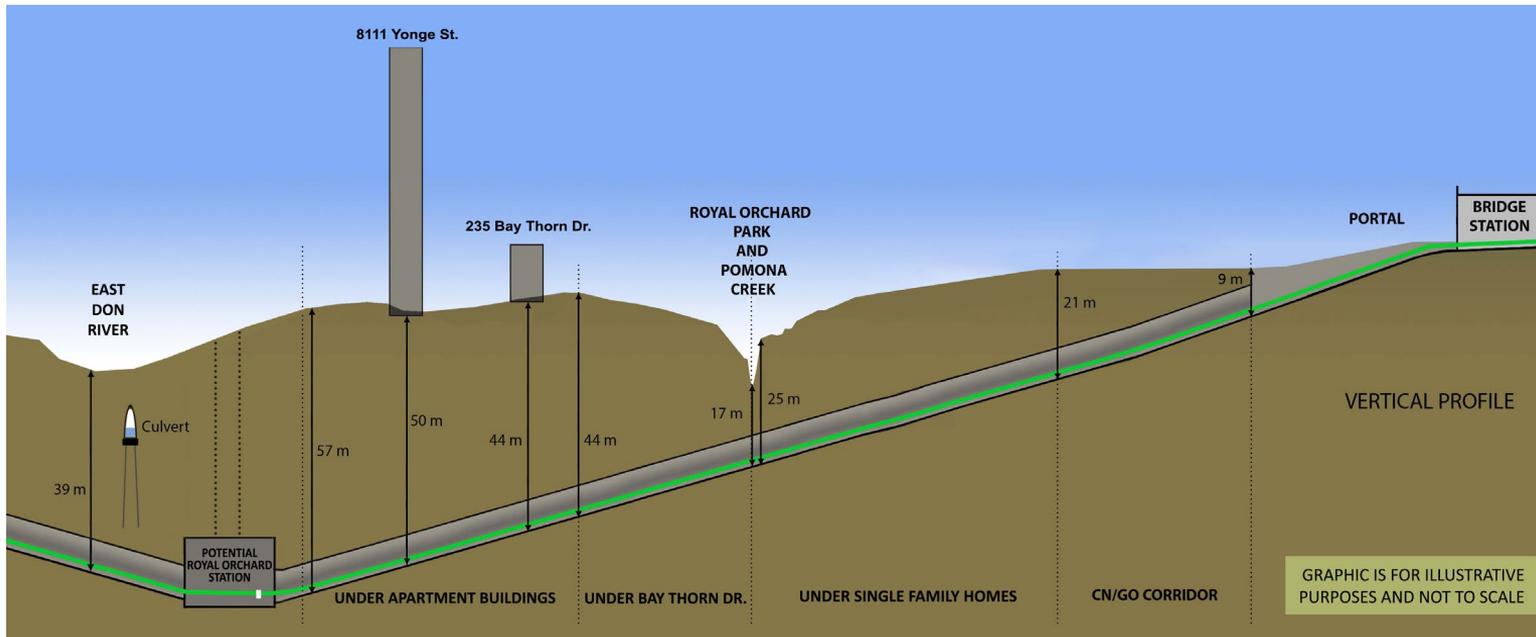
Property questions on:

- Timelines and property notifications



Tunnel Dimensions and Depths in Royal Orchard

- Approximately 6 km of twin tunnels will extend from the existing Finch Station to the tunnel portal just south of Langstaff Road East.
- Tunnels will be 5.6 meters in diameter and 5.6 meters apart. The tunnel will be 17 meters deep below Pomona Creek and 21-26 meters deep below Royal Orchard Park.



Emergency Exit Buildings

- Emergency exit buildings are single storey structures that are smaller than a house and can be designed in a variety of ways to fit the area around them. We will consult with the community on the look and feel of these buildings.
- Emergency exit buildings will be needed at various points along the tunnelled section of the route and are only used in the unlikely event of an emergency in the tunnel that would require people to safely get to the surface.
- We are working to determine the exact location of the emergency exit buildings needed along the entire route of the subway extension, with a specific focus to reduce the number needed in residential areas.



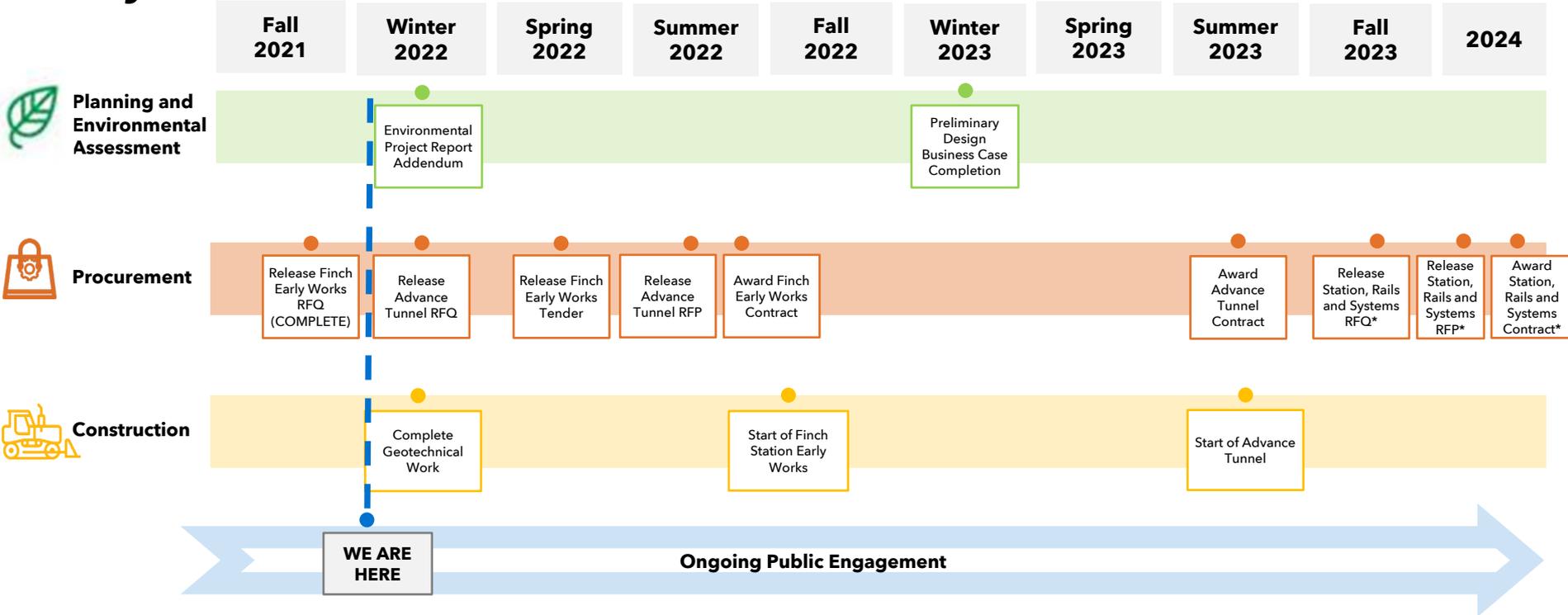
TTC Spadina Station Norman B. Gash House, designed to fit the surrounding neighbourhood

Property Requirement Notifications

- Property identified in the EPR Addendum study area received notifications. As designs are refined, some businesses and properties will be impacted to support the construction and delivery of the subway extension.
- Further assessments are being completed and final property requirements will be identified as project details are confirmed. Once completed, individual property owners will be contacted directly by a Metrolinx representative to discuss next steps.
- We are committed to providing clear, accurate information throughout this process, as early as possible.
- We will work closely with property owners to reach mutually beneficial agreements for any properties that are required to deliver this project.



Project Timeline



Upcoming Engagement Opportunities

- Public review period for the EPR Addendum closes March 14
- Stay tuned for a virtual open house on Finch Early Works
- Pop-ups at community centers, libraries and transit hubs, canvassing businesses and community walks in neighbourhoods along the route are underway and continuing through the coming months.
- Upcoming community office near the northern end of the extension, staffed by the Community Engagement team
- Upcoming noise and vibration mitigation experiential program at the community office



Share your feedback!

Thank you for taking the time to learn more about the project.

There are multiple opportunities to make your voice heard on the EPR Addendum. Please visit **Metrolinx Engage** to submit your comment or question on our *Ask A Question* forum.

You can reach us anytime:

- YongeSubwayExt@metrolinx.com
- 416-202-7000
- Visit our website:
[Metrolinx.com/YongeSubwayExt](https://www.metrolinx.com/YongeSubwayExt)
- Participate online:
[MetrolinxEngage.com/YongeSubwayExt](https://www.metrolinx.com/Engage/YongeSubwayExt)

**We Want
To Hear
From You**

