## Yonge North Subway Extension LIVE - February 17, 2022



Why are perceived noise levels 10-15x higher than prev promised

Feb 13, 2022 - 14:46

In Metrolinx' previous town halls, Mr. Collins was quoted as saying the expected noise levels would equate to "whispers" or "background noise in a tv studio". On page 105 of the noise & vibration addendum, Metrolinx' own table suggests this these examples exhibit noise levels of \*20-25\* decibels. However, this same table notes that Metrolinx has now defined the new limit as \*35\* decibels. As a 10-15 db increase in sound represents a 10-15x increase in the intensity of sound, the new noise levels is massively increased and grossly inconsistent with previous commitments. Why are noise levels now 10-15x higher than what was committed to by Metrolinx only 1 month ago?

Noise and Vibration Property Impacts







Answer

Mar 9, 2022 - 15:16

Thanks for your question, and apologies for the delay in responding.

The report has been written for many audiences, and currently presents predicted future ground-borne noise and vibration levels \*without mitigation\* and the reductions that need to be provided by the mitigation measures to achieve the applicable limits first. Mitigation measures – solutions such as floating slab track – that will be effective in achieving the required reductions are presented in a separate table. For the Updated EPR Addendum, we will be looking at ways to present the assessment process and results in a way that makes it easier to read and understand

The limit for ground-borne noise of 35 dBA is based on the Federal Transit Administration criteria and is used around the world for transit projects. Our predictions regarding the ground-borne noise and vibration levels through Royal Orchard communicated in the past open houses still stand. Metrolinx is continually committed to minimizing noise and vibration levels along the project and the use of solutions such as floating slab track would reduce the ground-borne noise levels to less than 30 dBA at the closest residences.







🔼 Proposed noise and vibration levels are not uniformly presented

Feb 12, 2022 - 17:23

The addendum shows proposed ground-borne noise levels \*at the closest occupied floor\* (i.e. basements for single family homes) but shows proposed vibration levels \*outdoors at the ground level\*. As 1/3 of people's homes exist below grade, do you intend to release information of the proposed vibration levels at the closest occupied floor (i.e. basement level)? If not, why not as this is critical information which significantly impacts the use of any basement? As basements would be substantially closer to the trains, it stands to reason that the proposed vibration levels in a basement would far exceed the 0.1 RMS limit indicated in the report and far exceed previous claims of "imperceptible" vibration.

Environmental Reports Noise and Vibration









Mar 9, 2022 - 15:14

Thanks for your question!

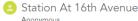
The report has been written for many audiences, and for the Updated EPR Addendum, we will be looking at ways to present the assessment process and results in a way that makes it easier to read and understand.

The differences in points of assessment are due to how criteria for ground-borne vibration and ground-borne noise are set up. Ground-borne vibration assessed against the MECP criteria requires assessment at an outdoor point at ground level. Ground-borne noise was assessed as per the FTA (Federal Transit Administration) criteria. FTA criteria apply to rooms, and the closest room to the underground alignment is assumed to be in the basement. We assessed both ground-borne noise and vibration along the alignment.

The difference between levels of outdoor vibration and indoor vibration on the basement floors or walls is very minor. Notably, in order to achieve ground-borne noise levels of 35 dBA or lower within an occupied space in a basement, the ground-borne vibration levels as measured on the basement floor or walls would need to be well below 0.10 mm/s and so would be imperceptible. In other words, meeting the 35 dBA ground-borne noise limit ensures ground-borne vibration levels are below the 0.10 mm/s limit.







Feb 10, 2022 - 18:14

In the Environmental Project Report Addendum the concept design shows tracks being built all the way to 16th avenue for a train storage facility. If the tracks are being extended all the way why not add a station at 16th avenue as part of the project? The cost of the station (which would be at grade) would be very low compared to other stations in the project and the cost of the project in general.







Great question!

Extending Line 1 subway service to 16th Avenue would mean the tracks would have to travel north of that area so that subway trains have room to cross between the northbound and southbound tracks after they reach the end of the line

One of the benefits of the latest plans for the Yonge North Subway Extension is that they protect for further extension of the line in the future by positioning the northern end of the project along the existing railway corridor.

Through our analysis we determined that the \$5.6 billion funding envelope announced for the project can accommodate up to four stations, if the extension follows the recommended route

There are four confirmed stations at Steeles, Clark, Bridge and High Tech. Steeles, Bridge and High Tech were determined essential for maximizing the benefits of the project. These stations will significantly improve access to frequent rapid transit and support the growth of the neighbourhoods they serve. Clark Station will offer riders seamless connections to the planned extension of the Viva Orange bus rapid transit line, which serves communities along Highway





Feb 13, 2022 - 22:49

Can you please explain an Emergency Exit Building. Size, appearance and impact on the community. Specifically the EEB planned on the residential area of Bay Thorn Drive.





Feb 16, 2022 - 14:56

Our design team is 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. 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 look and feel of the area around them.

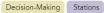
Emergency exit buildings will be needed at various points along the tunnelled section of the route and are only used in the unlikely event of an emergency in the tunnel that would require people to safely get to the surface.



What are the naming conventions behind "Bridge Station?"

Anonymous Feb 11, 2022 - 16:11

This may sound trivial to the larger grand scheme of things, but what is the reason for "Bridge" as a name? It seems quite out of place, in relation to the TTC's existing naming conventions using local street names, neighborhoods or clearly defined landmarks. If this was Castle Frank stn next to the Bloor Viaduct okay Bridge makes sense. Unless the plan here is to make some new lavish and flashy new Hwy bridges as part of the project so they stand out as landmarks its confusing and counter intuitive to the TTC's simplicity of naming. Especially when adjacent to a GO station why aren't these names being considered: Langstaff, Langstaff Gateway/Terminal, Richmond Hill Centre/Terminal? The name of this station should align to existing TTC names like: Kipling, Kennedy, Downsview Park and the new Mt.Dennis station.







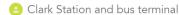


Feb 16, 2022 - 14:51

Thanks for your question, and it's not trivial at all! Bridge Station has not been confirmed as the official name of the station.

We'll be having discussions in the future about the names of the stations along the extension and looking for opportunities later in the planning and design process to get public feedback on station design elements.





Feb 15, 2022 - 20:00

Please provide details of the Clark Station & bus terminal: which corners of the intersection will the 2 subway entrances and bus terminal be located; at-grade or below grade; will existing structures be impacted (demolished/altered); anticipated timeline for construction (earliest start date and number of years to complete once construction commenced); impact of construction on disruption of traffic flow; environmental impact of construction (noise/vibrations/air quality) on residential properties (i.e., existing condominiums on northwest and southwest corners); postconstruction environmental impact on those residential condominium properties; impact of construction and post-construction on property values of those residential condominium properties. Thank-you.





Mar 9, 2022 - 15:36

Thanks for those questions.

The footprint of Clark Station in the EPR Addendum represents the area we're considering for the station box location - it is larger than the area we will ultimately need. The final location of Clark Station will be confirmed as we refine our plans through further analysis. We take the time to do detailed studies on what's needed so we can limit our construction footprint and be certain that we're only acquiring properties

When it comes to managing traffic during construction, we'll be working closely with municipalities, local transit agencies and future construction partners to introduce coordinated plans and solutions that will minimize disruptions and keep people moving

We'll make sure communities get plenty of notice ahead of time using all available communications channels, and we'll use clear and highly visible signage to make driving, cycling or walking around construction areas as easy as possible. These plans will be brought forward to future community liaison committees for discussion

The next stage in planning for the Yonge North Subway Extension includes the release of the Preliminary Design Business Case (PDBC), which will further refine the project's design, route, and benefits. The design for Clark Station will be evaluated in more depth through the PDBC and we'll have more information to share once it's finalized.





Anonymous Feb 17, 2022 - 14:36

I thought that the Provincial Government funded and confirmed the plans for the Royal Orchard station? My interpretation of this press release was that RO station was a for sure,,, yet on your addendum, it still says RO station (potential)!!

Is the Royal Orchard station confirmed, or still to be determined? if so, why the conflicting messages?



Where the Bus Terminal at Clark would be located in Thornhill?

Feb 17, 2022 - 13:47

I know it has been announced that the bus terminal would be an addition to part of transit connections at Clark and I am concerned with respect to safety of children who go to Thornhill Secondary School during peak hours of traffics, especially, those who need to cross the busiest intersection of Yonge & Clark. Plus, I will definitely make some issues in terms of traffic congestions near Yonge Street, safety of citizens and noisy in the community if it is located near Yonge & Clark (ex. Finch Station). What are impacts on transportation and safety measures of students for this area after completion of the bus terminal?





### Answer

Metrolinx

Mar 10, 2022 - 18:29

The footprint of Clark Station in the EPR Addendum represents the area we're considering for the station box location - it is larger than the area we will ultimately need. The final location of Clark Station will be confirmed as we refine our plans through further analysis. We take the time to do detailed studies on what's needed so we can limit our construction footprint and be certain that we're only acquiring properties that are absolutely necessary to get transit built.

When it comes to managing traffic during construction, we'll be working closely with municipalities, local transit agencies and future construction partners to introduce coordinated plans and solutions that will minimize disruptions and keep people moving.

We'll make sure communities get plenty of notice ahead of time using all available communications channels, and we'll use clear and highly visible signage to make driving, cycling or walking around construction areas as easy as possible. These plans will be brought forward to future community liaison committees for discussion.

The next stage in planning for the Yonge North Subway Extension includes the release of the Preliminary Design Business Case (PDBC), which will further refine the project's design, route, and benefits. The design for Clark Station will be evaluated in more depth through the PDBC and we'll have more information to share once it's finalized.





#### 16th street TSF land use

Feb 10, 2022 - 19:48

Are all the current properties south of the 16th street bridge being taken over by this project? Does that include the currently planned city park on

This area is residential and growing with the plan for many more condos in this immediate area which will continue to modernize this corner of RH. And it seems now it will be turned into an industrial train yard. There is already a lack of public parking and greenspace in this area due to the condo building. Please address the plans for land use in this area and vision for the build.

Construction Impacts Environmental Reports Property Impacts Public Consultation





Mar 9, 2022 - 15:58

Thanks, all great guestions!

Metrolinx and the City of Richmond Hill have discussed potential impacts related to the proposed train storage facility (TSF) and the City's planned Great Lands Interim Local Park, which is to be located immediately east of Northern Heights Drive. These lands do not overlap with the TSF and a multi-use trail will separate the two

The facility needed for the Yonge North Subway Extension will be used to store, inspect and clean subway trains while they are not in service. Placing a train storage facility at surface level is a standard practice, and it's critical to keep it above ground to stay within the \$5.6 billion funding envelope for the project. Cities like Vancouver, Chicago, and New York all have ground level train storage facilities that successfully integrate into residential areas while meeting the needs of their transit networks. This change brings the proposal in line with the TTC's five subway train storage facilities, which are all above ground.

We will continue to work closely with municipal and regional partners to make sure we get the most benefits out of the design while minimizing local impacts.

The next stage in planning for the Yonge North Subway Extension includes the release of the Preliminary Design Business Case (PDBC), which will further refine the project's design, route, and benefits. We expect to release the PDBC in early 2023.





# Evaluation of the Environment Report Addendum

Feb 14, 2022 - 19:29

Has your Environmental Report Addendum been independently evaluated by a third party who is competent?

Environmental Reports





Answer

Feb 16, 2022 - 15:03

Thanks for your question. The EPR addendum that was published on February 10th has been reviewed by a wide range of government agencies, including the Ministry of the Environment, Conservation and Parks, the Toronto and Region Conservation Authority, Ministry of Heritage, Sport, Tourism and Cultural Industries, Indigenous Nations, and all municipalities along the route of the extension

Now it's time for the public to review the material and provide comments and questions by March 14, 2022. Your input is critical to this process, so thanks for taking the time to reach out.





### Psychological safety

Feb 17, 2022 - 17:50

Why is there no study on the psychological impact of this development on existing residents as part of the overall Environmental study? Psychological safety of impacted people needs to be included in your study which is totally absent right now.

Environmental Reports







#### Answer

Metrolinx

Mar 15, 2022 - 11:54

Thanks for this question.

The applicable environmental assessment (EA) framework for the YNSE is Ontario Regulation 231/08: Transit Projects and Metrolinx Undertakings, developed under the Ontario EA Act. A health impact assessment is not a requirement under this regulation, and potential impacts related to human health are effectively mitigated through robust and comprehensive air and noise and vibration studies undertaken under the Ontario EA Act.

Metrolinx's assessment and management process for noise and vibration for the YNSE follows Ministry of the Environment, Conservation and Parks protocols for transit projects. This process entails:

- · predictive modelling of future project noise and vibration levels, and commitments to mitigation to avoid any significant impacts, as part
- specifying contractual construction and operations noise and vibration limits to limit both short-term and longer-term exposure while allowing for efficient project delivery;
- · completion of site-specific construction noise and vibration management plans once the contractor has selected means and methods;
- · installation of construction noise and vibration mitigation (e.g., temporary noise barriers) as required to work within specified limits;
- real-time monitoring of construction noise and vibration levels to allow for adaptive management as required; and
- · installation of operational noise and vibration mitigation to meet EA commitments (e.g., resilient fasteners, floating slab track, noise

A similar approach is employed to manage construction air quality impacts.

Metrolinx is committed to comprehensive mitigation for air, noise and vibration, as required, to avoid any significant impacts to local residents





#### Appendix A

Feb 14, 2022 - 19:32

Appendix A shows the track route and study area. Can you please state the TOTAL distance of 2 tracks plus the gap between the 2 tracks what will

Environmental Reports





## Answer

Mar 9, 2022 - 16:03

Thanks for the question, we're happy to clarify: the Yonge North Subway Extension is approximately 8 kilometers long and the two tunnels will

What will be done to manage noise along the above ground section.

Feb 17, 2022 - 18:35

The subway travels from Richmond Hill station to the maintenance facility at around 16th Ave. There are numerous residential buildings in the area that would experience an increase in noise from subway end of line activity.

**1** 2 **9** 0



### Answer

Metrolinx

Mar 9, 2022 - 15:18

Great question, thanks.

To keep noise levels in the area around the train storage facility near today's levels, we're looking at solutions that could include installing a noise barrier along the western edge of the facility and using moveable tracks that reduce the gap between rails that cross one another, reducing noises and vibration from subway trains that pass over them. Our goal is to make sure there are no significant differences between what's experienced in the community today and what will be experienced when the extension is up and running.





#### TSP Lands Plan

Feb 17, 2022 - 18:38

The City of RIchmond hill recently sent out a notice there is a proposal for a new group of condos on the exact land indicated to be used for the TSF (on the current Honda dealership lands). How does this impact your plans for that land?









Metrolinx Mar 18, 2022 - 09:01

Thanks for your question. We're still confirming property requirements as we consult on and refine our designs. We'll be working with the Town of Richmond Hill and the property owner to coordinate plans as we move forward with design work.





Why did Metrolinx request socioeconomic permit under ESA?

Anonymous Feb 17, 2022 - 20:05

Can you explain Metrolinx request for a socieconomic benefits permit to bypass protections under the Endangered Species Act with the policy principles and integrity of the Environmental Assessment.





#### Answer

Metrolinx

Mar 24, 2022 - 15:15

If we expect that construction or operation of the subway extension will disturb the habitat of any species at risk, the first step is to identify whether they are along the route or close to where construction will take place. If we discover the presence of a species at risk, the next step is for Metrolinx to figure out how to make sure we protect them. That could mean creating buffer zones around nesting species or even changing construction schedules to keep areas clear at critical times. We will meet all applicable requirements of the Ontario Endangered Species Act to make sure our work doesn't disrupt important wildlife habitats.



Who is going to lead this project, Municipality of York or COT?

Feb 16, 2022 - 03:06 COT means City Of Toronto





## Answer

Metrolinx Feb 16, 2022 - 15:05

Metrolinx and Infrastructure Ontario are moving the project forward under the Subway Program, which includes three other rapid transit expansions that will get the region moving: the Ontario Line, the Eglinton Crosstown West Extension, and the Scarborough Subway Extension.







Construction worker parking overwhelming residential streets.

Feb 17, 2022 - 14:50

Residents want assurance that construction worker parking will not be allowed along Morgan Ave during the construction work on the Clark subway station.





Metrolina Mar 18, 2022 - 09:07

Thanks for your comment. Once a contractor is brought on board, we'll be back in front of the community to get your input on construction





### Which bus routes will go into which stations?

Feb 17 2022 - 16:37

Which local bus routes will go into which stations? Which stations will have inside terminus bays & which load on street?

Where will express VIVA routes terminate? Will Orange, Purple or Pink go beyond Yonge?

Where will Markham Express bus routes terminate? Will YRT 23 run express from Promenade to Clark?

Will any TTC routes terminate on the street? Which quadrant will have Steeles subway station?

How will the Vaughan high rises be connected to Steeles station? How many people & cars will there be in each of the 4 quadrants?





#### Answer

Metrolinx

Mar 18 2022 - 09:05

Thanks, great questions.

As planning and design work on the project continues, we will work with our municipal partners to ensure subway stations are safe, convenient and accessible. At Steeles Station, this includes new traffic signals at Steeles and Yonge to provide better pedestrian crossings opportunities, underground connections to the station with future developments, and integrating with future bus transit facilities.

The design concept and requirements for transit connections are being refined based on the needs identified by the TTC, York Region Transit, and other local stakeholders. We are seeking input from the TTC and City of Toronto and will share more details about the Steeles Station transit hub when the Preliminary Design Business Case is finalized.

As planning and design work on the project continues, we are working with our municipal partners to incorporate urban design elements that accommodate multi-use pedestrian paths that will provide a pleasant walking experience

The next stage in planning for the Yonge North Subway Extension includes the release of the Preliminary Design Business Case (PDBC), which will further refine the project's design, route, and benefits. The design for Clark Station will be evaluated in more depth through the PDBC and we'll have more information to share once it's finalized.







## 🦲 noise and vibration during underground construction period

tunnling machine, heavy materials transportation, etc. can cause large noise and vibration during underground construction period. How to reduce the impact to the residents, especially who live in the houses just up the tunnel.

### Noise and Vibration





#### Answer

Metrolinx Mar 9, 2022 - 15:20

Thanks for the question, happy to answer.

Metrolinx is committed to addressing any noise and vibration due to construction and operation of the extension.

We'll work with communities to ensure a comprehensive array of measures are in place to address noise or vibration impacts and to ensure designs are sensitive and respectful of communities.

Metrolinx will help residents and businesses through construction by offering noise and traffic mitigation and local business supports like promotional signage, wayfinding, and construction hoarding.





## vibration limit of perceptibility

Feb 17, 2022 - 19:25

Your study shows that the limit of perception for vibration is 0.05 mm/s RMS yet you've set the limit for vibration in the residential homes at 0.1 mm/s RMS. Since the limit is double the level of perception, how can you claim that the vibrations would be "imperceptible"?







Metrolinx Mar 9, 2022 - 15:23

Great question, thanks for that!

The report has been written for many audiences and for the Updated EPR Addendum, we will be looking at ways to present the assessment process and results in a way that makes it easier to read and understand.

The differences in points of assessment are due to how criteria for ground-borne vibration and ground-borne noise are set up. Ground-borne vibration assessed against the MECP criteria requires assessment at an outdoor point at ground level. Ground-borne noise was assessed as per the FTA (Federal Transit Administration) criteria. FTA criteria apply to rooms, and the closest room to the underground alignment is assumed to be in the basement. We assessed both ground-borne noise and vibration along the alignment.

The difference between levels of outdoor vibration and indoor vibration on the basement floors or walls is very minor. Notably, in order to achieve ground-borne noise levels of 35 dBA or lower within an occupied space in a basement, the ground-borne vibration levels as measured on the basement floor or walls would need to be well below 0.10 mm/s and so would be imperceptible. In other words, meeting the 35 dBA ground-borne noise limit ensures ground-borne vibration levels are below the 0.10 mm/s limit.





Feb 17, 2022 - 20:10

The RO station in the EA is south of RO down a hill.. how will this be accessible?





Mar 9, 2022 - 15:49

Nice, great question!

The Yonge North Subway Extension will meet or exceed all necessary accessibility standards. The next stage in planning for the Yonge North Subway Extension includes the release of the Preliminary Design Business Case (PDBC), which will further refine the project's design, route, and benefits. We will have more details to share about the design of the station when the PDBC is finalized.







Feb 17, 2022 - 20:13

Will there be trees removed along the tunnel route in the RO neighbourhood. Is it necessary to remove any old large trees that are over the





# Answer

Metrolinx Mar 9, 2022 - 16:16

Thanks, great question. Please know that we are committed to protecting as many trees as possible while building the Yonge North Subway Extension. Vegetation removal will be reduced to the greatest extent possible and limited to the construction footprint. Tree protection zone fencing will protect/prevent tree injuries, while construction is happening and any vegetated areas that are temporarily disturbed will also be restored/re-vegetated.

If any trees need to be removed, we will work with the municipalities to provide compensation in accordance with Metrolinx's Vegetation Guideline, which provides a landscape science-based approach that exceeds the requirements of applicable bylaws and regulations.





when will the PQ for tunnelling works be released? Thank you

Anonymous Feb 17, 2022 - 18:45





Thanks for this great question. We anticipate release of the RFQ for the tunnelling works contract to be in approximately Spring 2022.



What time of day will trains go to overnight storage.

Anonymous Feb 17, 2022 - 19:29

Early in the morning and late at night, how many and how noisy will the trains be.







The design concept and requirements for transit connections are being refined based on the needs identified by Richmond Hill, York Region Transit, and other local stakeholders. We will share more details about the design and transit connections when the Preliminary Design





What is the concept for the Intermodal Langstaff Gateway?

Feb 10, 2022 - 18:12

Can you show us how all (six?) modes will be interconnected? What will it look like?

Transit Oriented Communities





Feb 16, 2022 - 14:49

Great question! And you're right: located between Highway 7 and Highway 407, Bridge Station will bring together as many as six existing and future regional transit services. The Bridge Station transit hub will offer fast and simple connections to Viva bus rapid transit and regional GO buses that travel on those major roadways, as buses won't have to divert far off their routes in order to connect to the subway. The station will also provide an easy transfer to the Richmond Hill GO train because it will be connected to the existing Langstaff GO station. Transferring between buses or trains will be simple and quick for riders because the station is planned to be built at-grade along the existing railway corridor, meaning there will be no need for lengthy descents to underground platforms. This will make it easier for people to transfer to other modes of transportation to get where they need to go. We are exploring how we can strengthen the connections between transit lines to give riders more travel options and improve the customer experience. We will have more details to share about the design of the station when the Preliminary Design Business Case is finalized.





Feb 16, 2022 - 19:16

Why is my home not considered a "heritage" building - it is as old as St. Anthony's school which is opposite my home. My home belongs to the same era and should be accorded the same preservation standards.

Heritage Considerations





Mar 10, 2022 - 10:28

Thanks for that question! Municipal, provincial or federal governments designate a site as heritage for their importance to Canadian history.



