Yonge North Subway Extension (YNSE)
Royal Orchard Community Liaison Committee
May 21, 2024

ATTENDEES

City of Markham

- Mayor Frank Scarpitti, Mayor of Marham
- Councillor Keith Irish, Markham, Ward 1
- Kant Chawla, Project Manager - Yonge North Subway Extension

Community Representatives

- Cory Ching, Local Resident & Member of the School Council for Baythorn P.S.
- Chris Collucci, President & CEO, Markham Board of Trade
- Alice Young, Director, Royal Orchard Ratepayers Association
- Dwight Richardson, Director, Royal Orchard Ratepayers Association
- Dale Murray, Local Resident
- Eugene Sirianni, Local Resident & Parent from St Anthony's Catholic Elementary School

Metrolinx

- Rajesh Khetarpal, Vice President, Community Engagement
- Peter Paz, Director, Community Engagement, 905 East
- Alyx Hopton, Senior Manager, Community Engagement, York/Simcoe
- Alim Lila, Manager, Community Engagement, Yonge North Subway Extension
- David Panici, Program Sponsor, Yonge North Subway Extension
- Stephen Collins, Executive Vice President, Subway Extensions Project Delivery
- Sanjay Verma, Director Construction - Yonge North Subway Extension

Overview

The third Royal Orchard Community Liaison Committee meeting took place on Tuesday, May 21, 2024, from 6:00 to 7:30 PM in a hybrid model with attendees joining at the YNSE Community Office or on Microsoft Teams. This Committee serves as a forum to regularly share information and solicit feedback and input on the Yonge North Subway Extension through effective dialogue between Metrolinx and stakeholders (including elected officials, area residents and businesses). The Yonge North Subway Extension will bring five stations of roughly eight kilometres of new subway service on TTC's Line 1, extending north from Finch Station to Richmond Hill.

The meeting included a presentation that shared tunnel depth profiles in the Royal Orchard community, the phasing of milestones associated with the Advanced Tunnel contract, and a discussion on additional geotechnical investigations required in the Royal Orchard community, including mitigations and work hour options.

Questions

1. **What is the general soil profile of the ground underneath Royal Orchard?**

   The soil profile near the tunnels under the Royal Orchard station includes a mix of sandy silt and competent bedrock. As the tunnels proceed north from Royal Orchard Station towards the community, the profile moves through competent rock, weathered rock, silty sand and sandy silt.

2. **Is there information available about the soil profile for the Toronto-York Spadina Subway Extension (TYSSE) built in Vaughan?**

   Yes, the geotechnical report can be found online: https://vivanext.com/PDFs/EA/SpadinaSubway/2005_AppD_GeotechnicalInvestigationReport_TYSSE.pdf

3. **What methodology was used to create the immersive sound experience for Royal Orchard? How was data from Eglinton used in the process with respect to the inputs?**

   Step 1: Arup sound engineers recorded sounds of existing homes in the Royal Orchard community using a calibrated sound level meter and an ambisonic (360°) microphone.

   Step 2: They then did the same thing for homes above a train tunnel near Eglinton where floating slab technology is in use. This tunnel was as similar as possible to the conditions of the future YNSE project.

   Step 3: In the listening room, sound engineers played back the 360° audio recordings taken in step 1 and adjusted them so that their measured sound levels in the listening room matched what was measured on-site. This means taking the same sound level meter that was used in Royal Orchard homes, putting it where people sit in the listening room, and ensuring it produces the same numbers that were measured in Royal Orchard. The end result is a literal duplicate of the soundscape from a Royal Orchard home in the listening room.

   Step 4: The sound engineer repeated step 3 using the audio and data from Step 2, except this time, they adjusted the audio to match the sound level that the YNSE project has committed to, no louder than 29 dBLAS, max over the course of a train pass by.

Step 5: Sound engineers played back the calibrated audio from steps 3 and 4 simultaneously. This produced the final demonstration of the future Yonge North Subway Extension in a Royal Orchard home.

All three scenarios in the demonstration use the committed volume of 29dBa. For many, the actual volume experienced will be lower than 29dBa based on the distance from the tunnels and the depth of the tunnels near the home.

4. **How loud are the conveyors that will take the muck from the tunnel boring machine out to the launch shaft?**

   The project company selected to build the tunnels must agree to keep noise and vibration from tunnelling – including the removal of excavated soils and rock – below a certain level.

   For the Yonge North Subway Station, that level will be 38 dBa.

5. **Will the two tunnel boring machines start at the same time?**

   The tunnel boring machines (TBMs) will have a staggered launch, with approximately 2-4 week in duration between them. The first TBM will launch and go through a learning curve period and adjustments will be made before the second TBM is launched. This gap will also ensure the TBMs maintain a distance between them as they make their way south toward the exit shaft.

6. **How long will tunnelling take?**

   The tunnel boring machines move approximately 10 metres a day. Tunnelling of the below-ground portion of the YNSE alignment is expected to take 2-3 years.

7. **What is the slope of the tunnel as it leaves Royal Orchard station heading towards the CN corridor?**

   The slope of the tunnel as it leaves Royal Orchard Station is 0.3%. The slope then climbs to 2.90% under the Royal Orchard community until it reaches Holy Cross Cemetery. The slope increases to 3.5% as it approaches ground level and then starts flattening as the alignment continues north.

8. **What lessons learned are Metrolinx applying to this round of geotechnical work?**

In addition to safety measures taken during previous geotechnical work, Metrolinx will mobilize environmental experts to assist with the installation of environmental mitigations to contain groundwater flow if it occurs prior to drill rig mobilization.

The natural science team will visit the site weekly or more frequently, if necessary, to inspect the work and suggest any necessary additional environmental protection.

Environmental barriers such as hay bales and silt fencing will be installed. They are expected to contain any overland flow.

The natural science team will provide any recommendations necessary to enhance groundwater containment, prevent any overflow and clean up.

Next Steps

- The topic of the next CLC meeting will focus on locations of emergency exit buildings in the Royal Orchard Community. This is likely to occur later this summer.

Action Items

- Metrolinx will bring station details and designs for Royal Orchard and Bridge Stations to a CLC meeting in the future.
- Metrolinx will share the approximate duration ranges for each stage/milestone of the tunnelling contract once a tunnelling partner is on board.