Construction of Fairbank-Silverthorn Storm Tunnel and Collection System



Virtual Public Information Event Basement Flooding Protection Program July 29, 2021 This meeting is being recorded for purposes of creating a meeting summary that will be shared with all meeting participants and interested parties.





Code of Conduct

- Be patient: Virtual meetings don't always run as smoothly as planned.
- **Be brief**: Limit yourself to one question or comment when called on to speak.
- **Be respectful**: The City of Toronto is an inclusive public organization. Discriminatory, prejudicial or hateful comments and questions will not be tolerated and you will be removed from the meeting.



We want to hear from you – all questions are good questions!



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Participating by Computer

Raise your hand or type your question



Via the internet browser Click the "..." button at the bottom of the video window and select "Raise Hand" or "Q&A".





Via the Webex App

 Click the Participants button at the bottom of the video (the Participants panel will open to the right). Then click the "Raise Hand" or "Q&A" button at the bottom right.





Participating by SmartPhone or Tablet





Land Acknowledgement

We acknowledge the land we are meeting on is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Huron-Wendat peoples and is now home to many diverse First Nations, Inuit and Métis peoples.

We also acknowledge that Toronto is covered by Treaty 13 with the Mississaugas of the Credit.



Purpose of this Meeting

- Provide information about the upcoming construction of the Fairbank Silverthorn Storm Tunnel and about 17 km of new Storm Sewers
- Review timeline, impacts and mitigation measures
- Provide opportunity for the public to ask questions about the planned work



Project Benefits

- Construction of a new Storm Tunnel and Local Storm Sewers will help reduce surface and basement flooding in the Fairbank-Silverthorn area
- The area has a history of severe flooding due to lack of infrastructure to manage stormwater
- The new storm tunnel and local storm sewers will collect, store and convey stormwater from the area to Black Creek
- Once complete, the new sewer system will reduce the impacts of heavy rainfall and sewer backups for more than 4,600 homes and provide flood protection to a 140-hectare area
- Additional improvements will include:
 - Upgrading other sewers and watermains
 - Replacing substandard water services
 - Resurfacing roads and replacement of sidewalks
 - Planting new trees in park locations



Project Area

- The storm sewer system improvements will take place in the area between Black Creek Drive (west), Vaughan Road/ Robina Avenue (east), Castlefield Avenue (north) and Rogers Road (south)
- •All areas affected by construction will be restored



Project History

2009-2010

Basement Flooding Environmental Assessment Study Recommended:

- 3 km long and 3 m wide storm trunk sewer
- 10 km of new local storm sewers due to combined sewer separation •
- 500+ flow control devices on catch basins connected to combined sewers

2012-2017 **Preliminary Design and Peer Review**

- Finalized tunnel design and new sewer dimensions and route •
- Reduced impacts on properties

2018-2021 **Detailed Design and Construction Tender**

- Identified additional storm sewers beyond original study •
- Tunnel diameter increased to 4.5 m for 2.2 km length and 1.8 m for 0.8 km. 25% spare tunnel storage capacity included for climate change/future flexibility

2019



Federal Government Funding

Federal government contributing \$73.2 million through the Disaster Mitigation and Adaptation Fund (DMAF)

Construction Scope and Timeline

- Work will be delivered by different contractors due to size and construction techniques (tunneling, open-cut)
- Construction will occur in 2 phases and include:

Phase 1: September 2021 to 2025

- Construction of a new 3 km-long storm trunk sewer
- Construction of 1.4 km new local storm sewers on various streets
- New outfall and erosion control near Keelesdale Park

Phase 2: Q4 - 2022 to 2025

- Construction of 15.6 km new local storm sewers on various streets
- Installation of about 275 Inlet Control Devices (ICD) to control the flow of storm water into the combined sewer system
- Water main on 2 streets, water service upgrades, Road and other restoration work



Construction Map



Construction of Storm Tunnel

- The construction of the new Storm Tunnel will involve tunneling underground using a Tunnel Boring Machine (TBM)
- The tunnel construction will be via a 12 metre diameter, 42 metre deep shaft located in Fairbank Memorial Park
- The TBM will be lowered through this shaft to begin work
- Local sewers will be constructed using Micro-Tunnel Boring Machine



Construction of Storm Tunnel

- Seven shafts will be built, along the tunnel for tunneling and to connect the new local storm sewers to the storm tunnel
- To construct 1.4 km of local storm sewers by micro tunneling there will be 16 smaller shafts
- Erosion protection work will occur near the outfall at Black Creek
 TARANTA



Construction at Fairbank Memorial Park

- Construction will not impact south portion of park
- Baseball diamond will be maintained
- Community Center and the Parking Lot will be unaffected
- Playground will be maintained with the current pathways from Gibson Street and Keywest Avenue
- A temporary construction access to the Park will be created from Dufferin Street and Rowan Avenue Junction
- Park will be restored after work is completed





Construction at Bert Robinson Park

- No impact from construction to the east side of the park (playpark)
- Access to the park facilities will be maintained
- Access to the railway underpass will be maintained
- A shaft will be constructed in the park to connect the new local storm sewer on Gilbert Avenue to the storm tunnel
- Park will be restored after work is complete





Traffic Management



Traffic Management - Continued

- Residents can expect traffic impacts.
- Emergency access requirements will be maintained at all times.
- Detours signage will be provided for major roadways.
- Road closures will be required at some shaft locations.
- Traffic management updates will be provided in Construction Update Notices when timing is confirmed.



Example – Why Road Closures

Most shafts will be built on the roadway, will require partial or full road closure







Reducing Noise & Vibration Impacts

- Continuous underground tunneling through Fairbank Park is required. Noise and work limitations will be set on any night time work.
- All shaft locations will have 2.8 metre high hoarding to reduce noise.
- Acoustic enclosures will surround all generators to reduce noise.
- Vehicles will have broadband backup alarms (not beeping)
- Vibration and noise will all be monitored along the tunnel length at key locations.





Tree Protection & Removal

- Tree removals will be required at Keelesdale, Fairbank and Bert Robinson Parks, and at shaft locations to allow for construction of the new storm trunk sewer.
- All efforts have been made to minimize tree removal and injury through tree protection.
- 79 Street/Park & 165 Ravine trees will require removal to accommodate construction.
- Three (3) new trees will be planted for every one (1) removed during the restoration phase.



Project Updates & Notification

- Newsletters, Construction Notices and Construction Updates will be issued by mail throughout the project.
- Updates will be posted on the project web page: <u>toronto.ca/fairbank</u>
- Affected properties will receive a special notice if there will be driveway access restriction or impacts to front yards within City property.
- Dedicated Field Ambassador will be the primary contact for the public, should issues arise during construction





For more information, contact:

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