Yonge subway extension: concept plan and profile

- Garden Avenue
- Red Maple Road
- Finch Station
- Existing
- Cummer/Drewry Station
- Steeles Station
- Clark Station
- Royal Orchard Station
- Richmond Hill Station

Service road
Right-of-way

- Thornhill Heritage District
- Holy Cross Cemetery
- Langstaff GO station
- Viva RHC bus terminal
- Pedestrian bridge

Utility corridor
- C.N.R. Bala Subdivision (Richmond Hill Line)

Legend
- Hydro corridor
- Community connector
- Existing GO parking
- Proposed Park & Ride

407 Transitway preliminary routes under study
The Yonge subway extension is part of a GTA-wide transit system.
Top 15 Priorities

Within the first 15 years of the Regional Transportation Plan’s implementation, the top 15 priorities for early implementation are:

- Yonge subway extension to Richmond Hill Centre
- Eglinton rapid transit from Pearson Airport to Scarborough Centre
- Upgrade/extension of Scarborough rapid transit line
- Finch/Sheppard rapid transit from Pearson Airport to Scarborough Centre and Meadowvale
- Express Rail on Lakeshore line from Hamilton to Oshawa
- Rapid transit in Hamilton from McMaster University to Centennial Parkway
- Hurontario rapid transit from Port Credit to Brampton
- 403 Transitway from Mississauga City Centre to Renforth Gateway
- Rail link between Union Station and Pearson Airport
- Rapid transit service along Hwy 2 in Durham
- Improvements/extension of GO Rail service to Bowmanville
- Early phases of bus rapid transit service on Dundas St in Halton and Peel
- Viva rapid transit on Hwy 7 and Yonge St through York Region
- Brampton’s Queen St Acceleride
- Spadina subway extension to Vaughan Corporate Centre
What we studied

To develop recommendations for the Yonge subway extension project, we assessed options and obtained public input for:

• Alignment
• Numbers and locations of stations
• How the subway will cross the East Don River
• The location of the terminus of the subway at Highway 7, its features and how it works
Where are we today?

Notice of study commencement

2008

October

November

December

PCC

PCC

PCC

Project approval: In time for consideration with provincial budget

2009

January

February

March

April

Design and Construction

Prepare project report

MOE review

Submit project report

Visit vivayork.com for updates

be involved

Toronto report to Commission/Council
What are the major phases of planning and building a subway?

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<td>Subway System Commissioning [1 year duration]</td>
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Key targets

- Project begins: 2009
- Design/Engineering: 2009
- Construction: 2011
- Open: 2016/2017
What comes with a subway?

- Passenger pick up and drop off
- Pedestrian entrance
- Bus terminal
- Parking facility
- Substation
- Emergency exit building
Yonge subway capacity improvements

- New subway cars have increased capacity
- Closer spacing between trains
- 7th car added to train
- Transfer to Spadina Subway
- New parking spaces on Spadina Subway extension

* Every other train makes a short turn at Steeles station in morning peak period.
How is a subway built?

- Utility location and piling
- Installation of decking
- Excavation and soil removal
- Construction of subway structure
- Removal of decking/street restoration
Construction principles

Our goal is to minimize disruption and inconvenience to the community during subway construction. Every effort will be made to:

- Use tunnelling, wherever possible
- Ensure the design of subway related structures is sensitive to existing neighbourhoods
- Maintain property access at all times
- Ensure appropriate number of lanes of traffic are always available in the peak direction
- Minimize the size of construction work areas
- Contain work areas to maintain community and pedestrian safety
- Provide timely construction updates to the community
- Complete construction as quickly as possible
### Yonge subway extension: station planning

#### Stations

<table>
<thead>
<tr>
<th>Station</th>
<th>Cummer/ Drewry</th>
<th>Steele</th>
<th>Clark</th>
<th>Royal Orchard</th>
<th>Langbridge/Lugosiatt</th>
<th>Richmond Hill Centre</th>
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#### Construction method

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<th>Cut &amp; Cover</th>
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<th>Cut &amp; Cover</th>
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#### Screening criteria

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* Some reconstruction of existing rail tracks will be required
** 4-bay after Finch LRT is completed
† Persons and jobs per hectare

Not to scale
Preliminary construction methodology

While significant lengths of the subway extension will be tunnelled, the construction of subway stations and special track work structure is done using the cut and cover method.
Steeles station | level by level

1 station overview all levels

2 street level

3 bus platform 1 level below street

4 subway level 2 levels below street

Legend
- Street Level
- Entrance
- Bus Platform Level
- Concourse Level
- Future Connections
- Subway Platform Level
- Vertical Movement
- Fare Paid Zone
Clark station

Legend
- Subway station
- Subway line
- Electrical substation
- Entrance
- Limit of surface elements
- Underground walkway
- Full property acquisition
- Partial property acquisition for surface elements only
- Vent structure
East Don River crossing

- Heritage features will be designed into the bridge in consultation with the community.
East Don River proposed traffic staging

• Careful removal of existing culvert and embankments will minimize local disruption.

1 stage 1 temporary lanes to the west

2 stage 2 temporary northbound lanes on partially constructed bridge

3 stage 3 final bridge in service

Legend
- Southbound traffic
- Northbound traffic
- Partially constructed bridge
- Bridge in service
Crossing the East Don River

1. Restore the valley to its natural state
2. Level Yonge Street to provide continued access to adjacent sites
3. Ensure the bridge design includes heritage features in context with the community
4. Ensure lighting is designed to be sensitive to adjacent uses in the community
5. Provide a safe pedestrian environment to cross between the heritage community north and south of the bridge
6. Meet Ministry of Environment guidelines for attenuating traffic and subway noise
Royal Orchard station

Legend
- Subway station
- Subway line
- Electrical substation
- Entrance
- Limit of surface elements
- Underground walkway
- Full property acquisition
- Partial property acquisition for surface elements only
- Vent structure
Langstaff/Longbridge parking

Design features that address community concerns:

• Noise buffers
• Maintaining a green corridor connection
• Bio swales
• Sustainable treatments for the parking area

Conceptual design, to be further developed in consultation with the community.
Langstaff / Longbridge station

Legend
- Subway station
- Subway line
- Electrical substation
- Entrance
- Limit of surface elements
- Underground walkway
- Full property acquisition
- Partial property acquisition for surface elements only
- Vent structure
- Limit of PPUDO, Park 'n' Ride, and associated roads.
Richmond Hill Centre alignment

Bus terminal

Legend

- 407 Transitway preliminary routes under study
- Community connector
- Hydro corridor
- Existing GO parking
- Bus terminal
- 407 Transitway station
- Limits of PPUDO, PNR, and associated roads

Richmond Hill Centre Terminal works in conjunction with Langstaff/Longbridge station

407 Transitway preliminary routes under study

Richmond Hill Centre alignment

Bus terminal

C.N.R. Bala Subdivision (Richmond Hill Line)

Pedestrian bridge

Holy Cross Cemetery

Langstaff GO station

Langstaff/Longbridge Station

YONGE STREET

HIGHWAY 407

HIGH TECH

RED MAPLE ROAD

GARDEN AVENUE

scale: 1:2000
## Major project costs

<table>
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<th>major project elements</th>
<th>cost M$</th>
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<td>stations and area facilities</td>
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<td>Finch improvements</td>
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<td>engineering and other costs</td>
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### project cost estimate, 2008 dollars

$2.4 billion
Next steps

December 2008
- Continue to post draft technical reports on vivayork.com for review and comments
- Draft Environmental Project Report

January 2009
- Issue Notice of Completion
- Submit Environmental Project Report to Ministry of the Environment for 30-day public review

February 2009
- Ministry of the Environment review period [up to 35 days]

March 2009
- Issue Statement of Completion

Spring 2009
- Project ready to proceed