



TORONTO-YORK SPADINA SUBWAY EXTENSION

Keeping you informed
SPRING 2009

Newsletter



Computer rendering of new Toronto Rocket vehicle

Activity on Spadina

The Toronto-York Spadina Subway Extension (TY SSE) is well on its way to becoming a vital link for commuters, residents and visitors. The \$2.6 billion project jointly funded by the Government of Canada, the Province of Ontario, the City of Toronto and The Regional Municipality of York will provide a high quality rapid transit service connected to the fastest growing region in the GTA.

This extension will provide a crucial expansion to the existing Toronto Transit Commission's (TTC's) Yonge-University-Spadina subway and for the first time, cross the City of Toronto boundary into the City of Vaughan. The 8.6 km subway extension will have six stations along the route with accompanying commuter parking facilities and bus terminals.

Currently, the project is in the design phase. Station design contracts and the tunnelling design contract were awarded last year. Station design is currently underway by three lead design consultants – Arup Canada Inc., AECOM and The Spadina Group Associates. Public open houses will begin this year to unveil the preliminary design concepts of the six stations.

Over the next year, drill rigs will be used to gather soil samples at the future stations and tunnel locations along the project route. This drilling will gather soil samples to confirm ground conditions that will help engineers and designers determine design criteria, as well as soil and groundwater management measures that will be required along the alignment.

As this extension ties into the existing Yonge-University-Spadina subway, another track will be required for operations at TTC's Wilson Yard, south of Downsview Station. Starting later this fall, this work will require temporarily detouring a small of part of Allen Road.

To meet the planned subway extension opening in 2015, four earth pressure balance tunnel boring machines will be used to dig the tunnels. Construction on the tunnels is expected to begin in 2010. Tunnel boring machines will launch and bore the twin tunnels for almost two years while construction of the stations and installation of the track and signals will continue through to 2015. During the last year of the project, project engineers and TTC operations staff will test, commission and safety certify the system before it is opened to the public.

Meet Andy Bertolo, P.Eng
CHIEF PROJECT MANAGER



Love to play with train sets? For Andy Bertolo, he is building the ultimate train set.

Working with a project office staff of 84, growing to 120 in 2010, the Timmins, Ontario native is in charge of building the Toronto-York Spadina Subway Extension.

Bertolo is a Professional Engineer who has worked for the TTC since 1997, following a 26-year career with Canadian National Railways.

Building subways is nothing new to Bertolo who was the Chief Project Manager for the Sheppard Subway line. "Pretty well all issues that the project encounters ultimately relate to the goal of delivering the project as a quality product in a timely, safe and cost-effective manner."

Bertolo added that residents living near the start of the Spadina subway line, between Wilson and Downsview Station, will soon see visible signs of progress. The first major construction contract for the extension is to build a structure connecting the TTC's Wilson yard and the main line south of Downsview Station.

 **Toronto-York Spadina
Subway Extension**



Head of tunnel boring machine; Sheppard subway construction

Building a Subway

The two main techniques that will be used to build the extension to the existing Yonge-University-Spadina subway north of Downsview Station are tunnel boring and "cut and cover" construction.

Much of the Toronto-York Spadina Subway Extension will use tunnel boring technology, in which a powerful circular cutting machine drills a tunnel deep in soil with minimal disruption to the street or ground above. The excavated material is taken up to street level and removed by truck. Tunnelling will be done wherever possible - it is quicker and more cost effective than cut-and-cover construction.

Where the work is more complex, such as at the stations which have platform and concourse levels, the more traditional cut-and-cover construction method will be used.

Cut-and-cover construction involves excavating a trench from the surface, building a concrete structure in it and then backfilling and restoring the ground and roadway. Since the stations are more complex than the tunnels,

extensive excavation and construction is used to create the platforms, concourses and unique elements of the stations.

Minimizing disruption during construction to both area businesses and the general public is a major focus for the project. Traffic management plans recognize the importance of maintaining mobility for pedestrians, transit vehicles and private vehicles in the area to the maximum extent feasible.



TBM in extraction shaft from Sheppard Subway



Cut-and-cover construction method

You Asked

When will the subway go to York University?

Service on the new extension is planned to start late 2015 so you can expect to catch a train to York University's Keele campus at that time.

Will the new subway trains be on the extension?

New TTC subway trains are coming to the Toronto-York Spadina Subway Extension. The new Toronto Rocket trains will run on the Yonge-University-Spadina subway and start to replace some of TTC's existing fleet of cars with new modern, comfortable trains.

Will all the stations have commuter parking lots?

To encourage commuters to use the subway system, 2,900 parking spaces will be available. Current plans call for commuter parking lots at the Finch West station with 400 spaces, Steeles West station with 1,900 spaces, and Highway 407 station with 600 spaces. Please refer to the subway route map on the back page to see the locations of the stations.

How often will the trains run on the extension?

On opening day, trains will run every four to five minutes. As more people use the subway, trains will be added and become more frequent.

How fast are the tunnels bored?

An earth pressure balance tunnel boring machine can progress approximately 15 metres per day depending on soil conditions. It would therefore take about 8 days to tunnel the length of a football field.

The Subway's Natural Environment



This project includes 8.6 kilometres of twin subway tunnel and six stations through the City of Toronto and into the City of Vaughan. Not only does the extension serve commercial, industrial and residential areas, it winds through York University's Keele campus and the north part of Black Creek.

Meet Your Neighbours... Black Creek Pioneer Village at Steeles West Station



The subway extension will bring the benefits of rapid transit to many residents and organizations

in the north-west part of Toronto and south-west York Region. In this first issue of the Toronto-York Spadina Subway Extension Newsletter, we'd like you to meet one of your neighbours - Black Creek Pioneer Village.

Opened in 1960 by the Metropolitan Toronto and Region Conservation Authority as a living tribute to the Toronto area's pioneering roots, Black Creek Pioneer Village boasts a telling history of its own. Its beautiful, green 30 acres is a place to experience the lifestyles, customs and surroundings of early residents who built the foundations for modern Toronto and Ontario.

Erin Fernandes, project manager at Toronto and Region Conservation Authority, is responsible for marketing

The project team is committed to a Provincial Environmental Compliance Plan and Canadian Environmental Assessment Act (CEAA) Compliance Plan to complete various aquatic and terrestrial studies at various areas along the alignment.

Starting this spring, aquatic and terrestrial specialists will begin field surveys on fish, fish habitats, the vegetation communities and any incidental wildlife observations in those natural environments. Breeding bird surveys will begin late May and early July.

This allows for a "snap shot" of the existing conditions of those natural environments. This information will be used to develop any necessary

mitigation strategies during construction. The same surveys will be repeated after construction to confirm that no adverse impact has been made on the health of those natural environments and ecosystems.

The project team will work closely with the Toronto and Region Conservation Authority (TRCA) and the Ministry of Natural Resources along with some help from the Canadian Wildlife Services.

The subway extension will ultimately help reduce greenhouse gas emissions and pollutants by encouraging people to rely less on cars. While building the subway, every effort will be made to protect and/or restore those natural environments along the alignment.



for Black Creek Pioneer Village (the Village).

"The Village has about 140,000 visitors annually. We are very excited about the new subway station planned for York University. Visitors will find it much easier to get here and now they'll have direct access to the Village by public transit," said Fernandes.

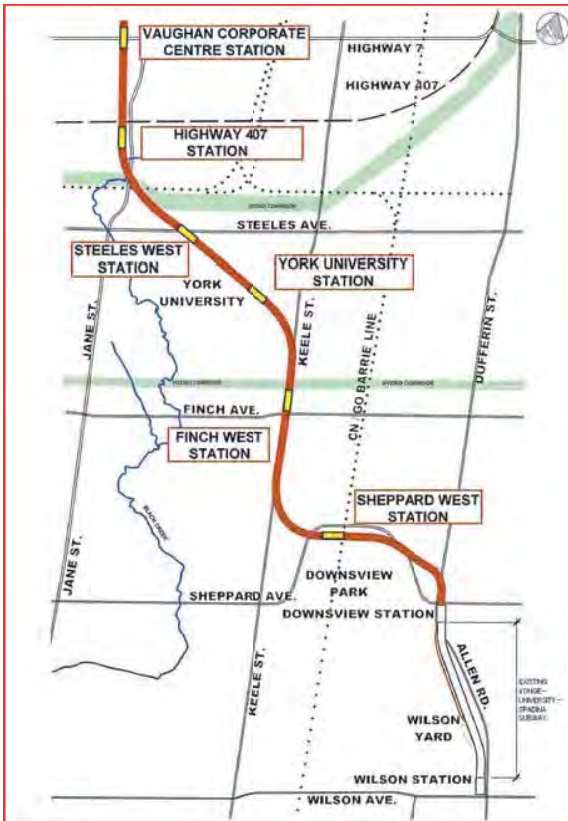
Black Creek Pioneer Village is a working village, typical of those established between 1790-1860. Historical interpreters and trades people in authentic period dress are on-site to explain how people lived, worked

and played in mid-19th century rural Ontario. An exciting new addition to the Village will be the Black Creek Historic Brewery, which will be open for tasting and tours in summer 2009.



For more information, visit www.blackcreek.ca.

Route Map



For more information:

- Visit www.ttc.ca
- Call 416-393-4001 (24 hour comment line)
- Email: TYSSSE@ttc.ca

The Toronto-York Spadina Subway Extension project is jointly funded by the Government of Canada, the Province of Ontario, the City of Toronto and The Regional Municipality of York.





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