



Yonge Express Subway (YES): Core Takeaway

Presented by Underground Consulting Incorporated (UCI)

YES is a **buildable, cost-efficient, technically feasible express subway** running 25.5 km in length on Yonge Street from downtown Toronto to Richmond Hill. It twins Line 1 with a deep express line, cutting expected travel time from **90 minutes to 25 minutes** - 3 stops from Steeles Ave. to downtown instead of 17 on Line 1. **YES** is the only project that meaningfully solves Line 1's long-term capacity crisis.

Why **YES** Is Needed

Line 1 is at - and soon beyond capacity

- The Yonge Relief Network Study 2015 concluded:

"However, as growth continues past 2031, a new transit project that can relieve demand on Line 1 will be required in order to create a resilient and effective transit network that can continue to support GTHA growth and Development."

"The YRNS reviewed short, medium and long term options, which were developed from a long list of 150 potential project concepts, to determine the potential to relieve crowding while augmenting regional travel opportunities."

"It was determined a new subway option, which may be tunnelled or use surface running alignments/legacy infrastructure, would be the most effective solution for long term Line 1 crowding."

YES was not contemplated in 2015, but it certainly achieves the desired result

The current situation

- The North Yonge Subway Extension will add **94,000 daily boardings per Metrolinx projections** - most expected to be heading downtown
- Intensification along the Yonge corridor continues without added capacity
- Existing relief measures (ATC, GO expansion, Ontario Line) are insufficient
- Ontario Line will provide approximately **2% relief**, and only south of Eglinton
- GO Train initiatives address Regional transit issues, not the Yonge corridor

No relief project exists in current plans

- The 2051 Regional Transportation Plan includes **no project** addressing Yonge corridor overcrowding

YES Concept - Express + Local Model

YES mirrors New York's express/local subway pattern:

- **Express stations only at major nodes: Downtown (Lakeshore), Davisville, York Mills, Steeles** at 5.5 km spacing
- **Transfers to Line 1** at Davisville, York Mills, Steeles
- **Union Station access** via a 300 m underground moving walkway

Integration with North Yonge Extension

- Proposal: Build the North Yonge Extension **as part of YES**, not Line 1
- Line 1 would extend only to Steeles for a simple transfer
- This avoids pushing Line 1 past its functional limit

Modern technology for YES

- Fully automatic operation
- No legacy constraints from Line 1
- North American standard rail gauge

- **YES** will provide **Capacity, Speed, Reliability and Redundancy** that Line 1 can never do!

Engineering & Constructability

Geology

- **Ideal shale bedrock** from waterfront to St. Clair
- **Known glacial soils** north of St. Clair - same conditions successfully mined on Eglinton Crosstown

Construction Method

- **Four working shafts:** Lakeshore, Davisville, York Mills, Steeles
- **Three tunnel drives** of approximately 5.5 km.
- Earth pressure balance Tunnel Boring Machines, precast concrete segments - proven methods

Protecting Line 1

Tunnelling under live rail infrastructure has been completed successfully on many projects

- **10 - 35 metre vertical separation**
- Pressurized face mining prevents ground loss
- Continuous monitoring of existing tunnel above

Minimal surface disruption

- No property acquisition for tunnelling
- No east-west station connection work
- Spoil removal concentrated at Lakeshore & York Mills - minimal haulage through the City

Most citizens outside of the shaft areas would be totally unaware that the new transit line was being built far underground

Cost & Schedule

Cost Advantage

Comparables

Project	Estimated Cost	Length	Cost per km
Yonge Express Subway (YES)	\$10 Billion	17.5 km	\$570 Million
Yonge North Subway Extension	\$5.6 Billion	8 km	\$700 Million
Scarborough Subway Extension	\$6 Billion	7.8 km	\$769 Million
Ontario Line	\$27 Billion	15.6 km	\$1.73 Billion

Comparator figures are publicly reported estimates; cost per kilometre rounded.

The unit cost advantage is structural, not optimistic

\$10B for 17.5 km equals \$570M/km - lowest of any major GTA subway project
One third the per kilometre cost of the Ontario Line!

Why costs are lower

- Almost entirely bored tunnel
- Only **four stations**
- **No connections with east-west subways**
- No portals, bridges, or property acquisition

Schedule

Approximately 4 years from start of construction depending on the number of tunnel boring machines committed to the project and staging utilized to maintain traffic flow on Yonge Street

Network Extensions

YES enables two major future expansions:

1. Toronto Islands (2.5 km, approximately \$2B)

- Tunnel under Toronto Harbour from the Lakeshore tunnel shaft to Centre Island
- Construction is feasible. Community planning is the main challenge

2. Western Extension (8.1 km, approximately \$4B)

Also tunnelled from Lakeshore tunnel shaft

- → Billy Bishop Airport → CNE → Ontario Place → Ontario Science Centre → BMO Field → New Convention Centre? → Humber Bay Shores (Etobicoke)
- Connects major waterfront destinations and dense new communities



Six Years of Engagement (interrupted by Covid)

UCI has:

- Briefed Toronto City Councillors and Mayor Chow, Vaughan, Markham and Richmond Hill Councillors and Mayors, the TTC, Metrolinx, Premier Ford's Office, the MTO, and the waterfront federal representative
- Showcased at the Tunnelling Association of Canada (2023)
- Provided preliminary design, geology, and cost basis for internal review

Across all these briefings, no technical basis for infeasibility has been provided to UCI

Public support continues to grow through outreach and media coverage



Urgency

Metrolinx is advancing design of the North Yonge Extension **as a Line 1 extension**
Every month of design work makes YES integration harder and more expensive

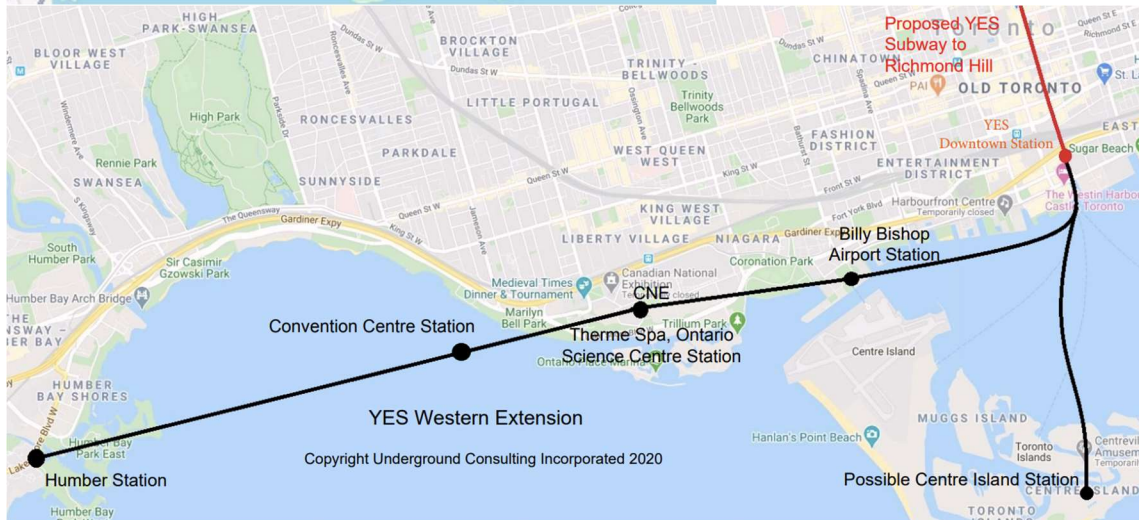
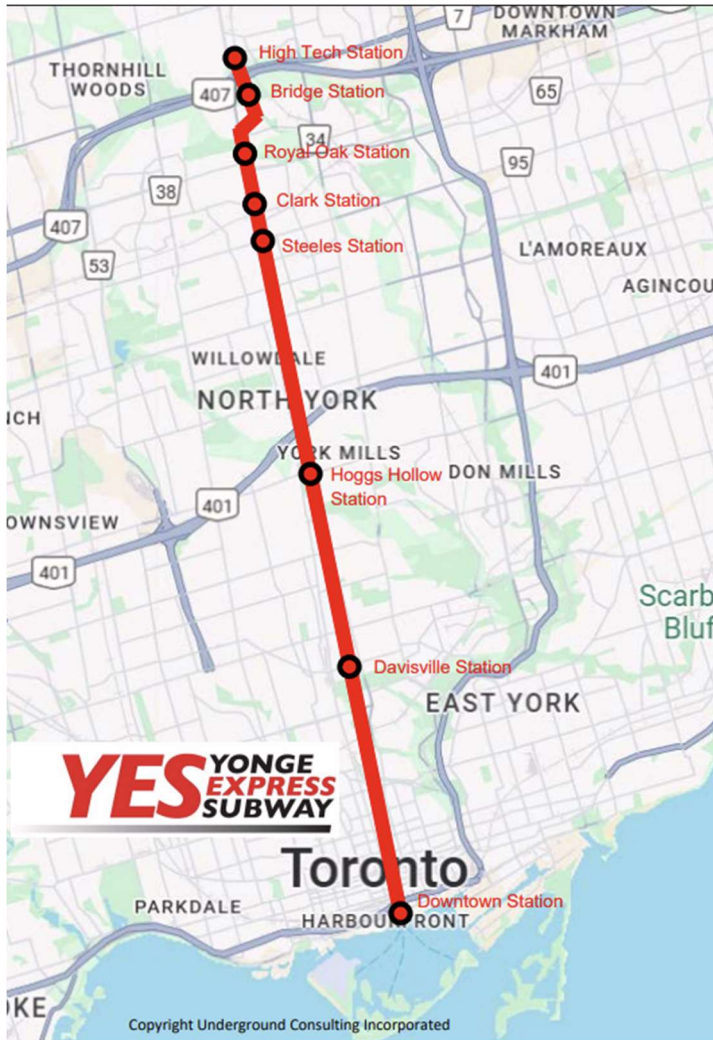
A feasibility study now... costs little and protects a ten-billion-dollar decision



What Must Happen Now

A **formal feasibility study** commissioned by the Province - the same process used for the Highway 401 tunnel concept

YES, it's buildable Let's do it!



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YES YONGE EXPRESS SUBWAY