

Relief Line Update

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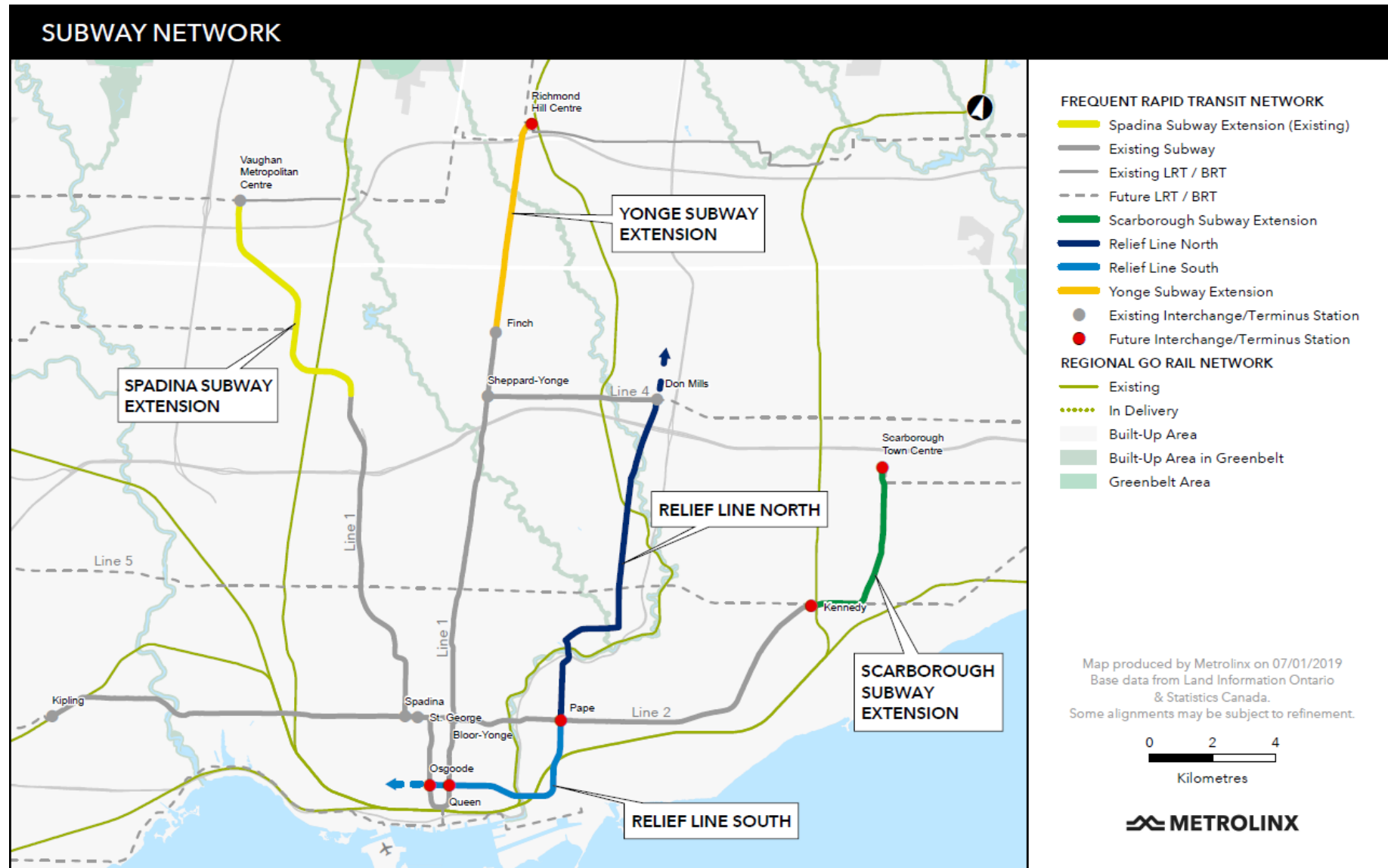
David Phalp, Manager, Rapid Transit Planning

EXECUTIVE SUMMARY

- The Relief Line South alignment identified by the City of Toronto as preferred, has a Benefit Cost Ratio (BCR) above 1.0, demonstrating the project's value; however, since it is close to 1.0, it is highly sensitive to costs, so more detailed design work and procurement method choice will be of importance to maintain or improve this initial BCR.
- Forecasts suggest that Relief Line South will attract ridership to unequivocally justify subway-level service; transit-oriented development opportunities can further boost ridership.
- Transit network forecasts show that Relief Line South needs to be in operation before the Yonge North Subway Extension. Relief Line North provides further crowding relief for Line 1.

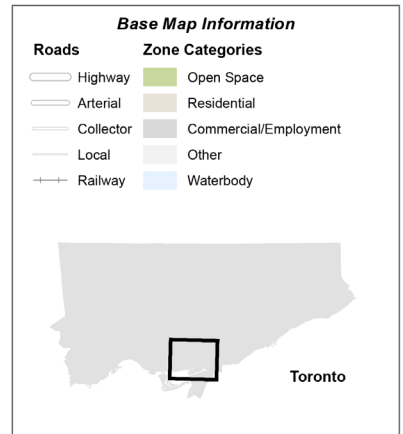
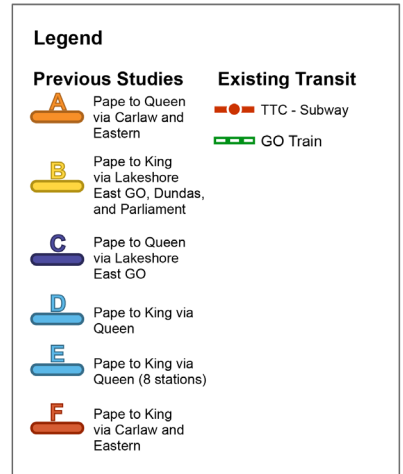
SUBWAY EXPANSION - PROJECT STATUS

Both Relief Line North and South and the Yonge North Subway Extension are priority projects included in the 2041 Regional Transportation Plan.



RELIEF LINE SOUTH: Initial Business Case Alignments Evaluated

- Metrolinx is developing an Initial Business Case on Relief Line South, evaluating six alignments according to the Metrolinx Business Case Guidance and the Auditor General's 2018 recommendations
- Toronto City Council approved the advancement of alignment "A" (Pape-Queen via Carlaw & Eastern)
- Statement of Completion of the Transit Project Assessment Process (TPAP) received October 24, 2018.



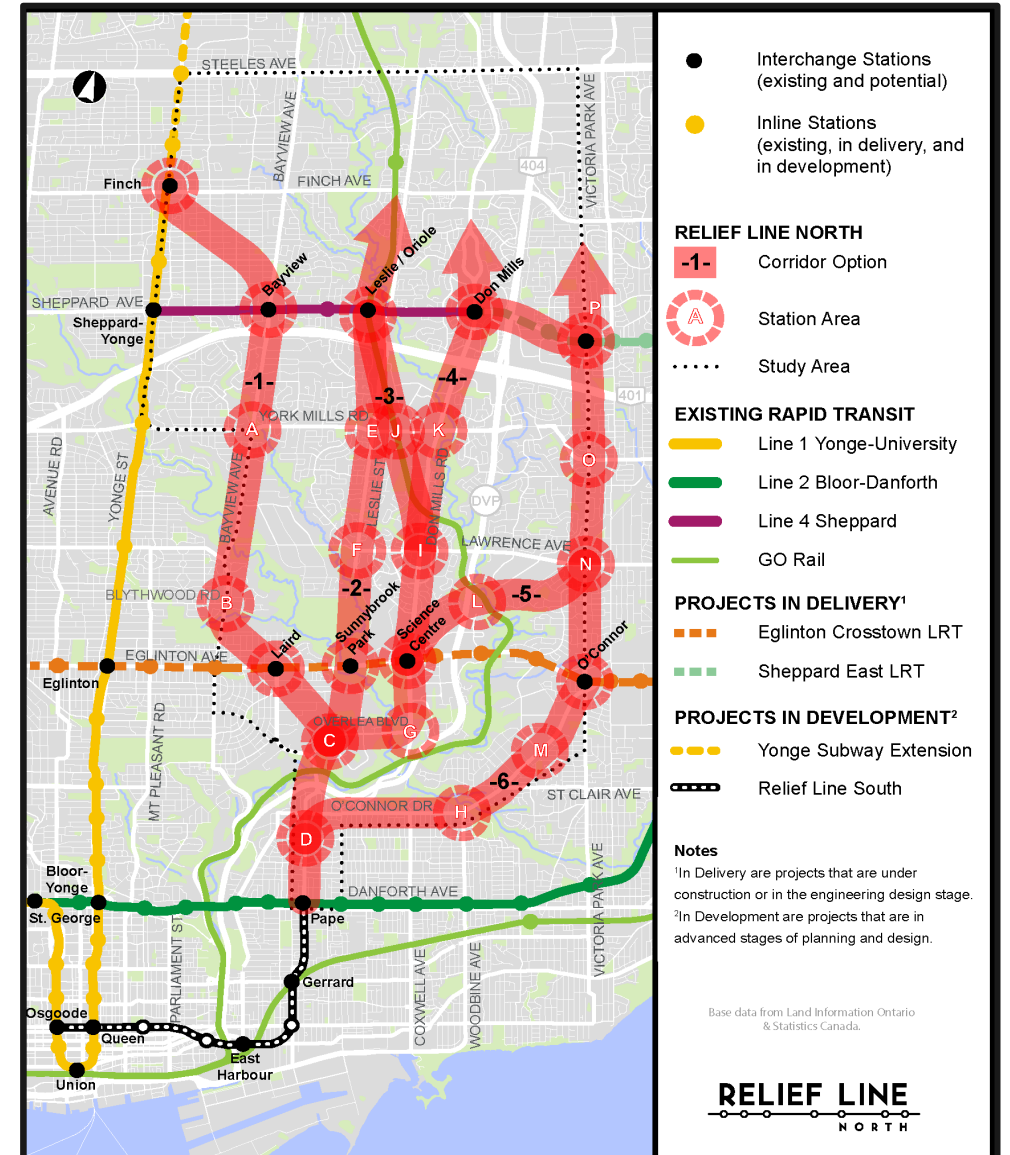
RELIEF LINE SOUTH: Initial Business Case Preliminary Economic Results

ALIGNMENTS:	A. PAPE-QUEEN VIA CARLAW & EASTERN (Toronto Council-approved)	B. PAPE-KING VIA LSE	C. PAPE-QUEEN VIA LSE	D. KING VIA QUEEN	E. PAPE-KING VIA QUEEN, 8 STATIONS	F. PAPE-KING VIA CARLAW & EASTERN
Relief Line Operating Length	6.3 km	5.8 km	5.8 km	6.1 km	6.1 km	6.3 km
Number of Stations on Relief Line	8	7	7	7	8	8
Relief Line serves Unilever Site	Yes	No	No	No	No	Yes
Capital Cost Estimate (2018\$)	±\$5.2 – 5.5 Billion					
Benefit-Cost Ratio Across Development Scenarios	> 1	< 1	< 1	< 1	< 1	> 1

These values are based on measured operating lengths for each alignment between Pape station and Osgoode/St Andrew station, as well as TTC capital and operating costs provided in Relief Line Project Assessment reports.

RELIEF LINE NORTH: Initial Business Case Defining Alternatives

- Metrolinx is leading the work on the Relief Line North Initial Business Case (IBC). A long list of alternatives was presented in Spring 2018; each of them is being evaluated to determine feasibility.
- Metrolinx and City of Toronto are refining these six alternative routes and working towards developing a short list of alternatives.



LINE 1: Ridership Demand and Network Effects

Metrolinx is examining the overall network effects of the combined projects of Relief Line South and North and Yonge North Subway Extension, to evaluate how they perform together



NEXT STEPS

Spring
2019

- Relief Line South: Finalize the Metrolinx Initial Business Case
- Relief Line North: Stakeholder consultation

Winter
2019/
20

- Relief Line South: Preliminary Design Business Case complete with report to Toronto City Council and Metrolinx Board

Winter
2019/
20

- Yonge North Subway Extension: Preliminary Design Business Case complete with report to Toronto City Council, York Regional Council and Metrolinx Board

Winter
2019/
20

- Line 1 demand and projects sequencing analysis complete



Appendix

TORONTO SUBWAYS BY THE NUMBERS

- 28K people ride Line 1 in the peak hour.
- 77% of trips to Downtown Toronto are by transit, primarily on Line 1
- On Toronto's four subway lines a train runs every 2 – 6 mins throughout the day
- Crowding on Line 1 is impeding reliability and safety, with specific challenges at the Bloor-Yonge interchange
- TTC is advancing work on Automatic Train Control / Automatic Train Operation (ATC/ATO) on Line 1, which will have a significant impact on capacity

INTERNATIONAL EXAMPLES OF SUBWAY-LEVEL SERVICE

Barcelona metro



Toronto subway



Vancouver SkyTrain



Paris metro



London DLR



New York subway

