

Advancing Planning and Design for the Relief Line and Yonge Subway Extension

**Presentation to TTC Board
May 18, 2017**

Report Outline

Relief Line South

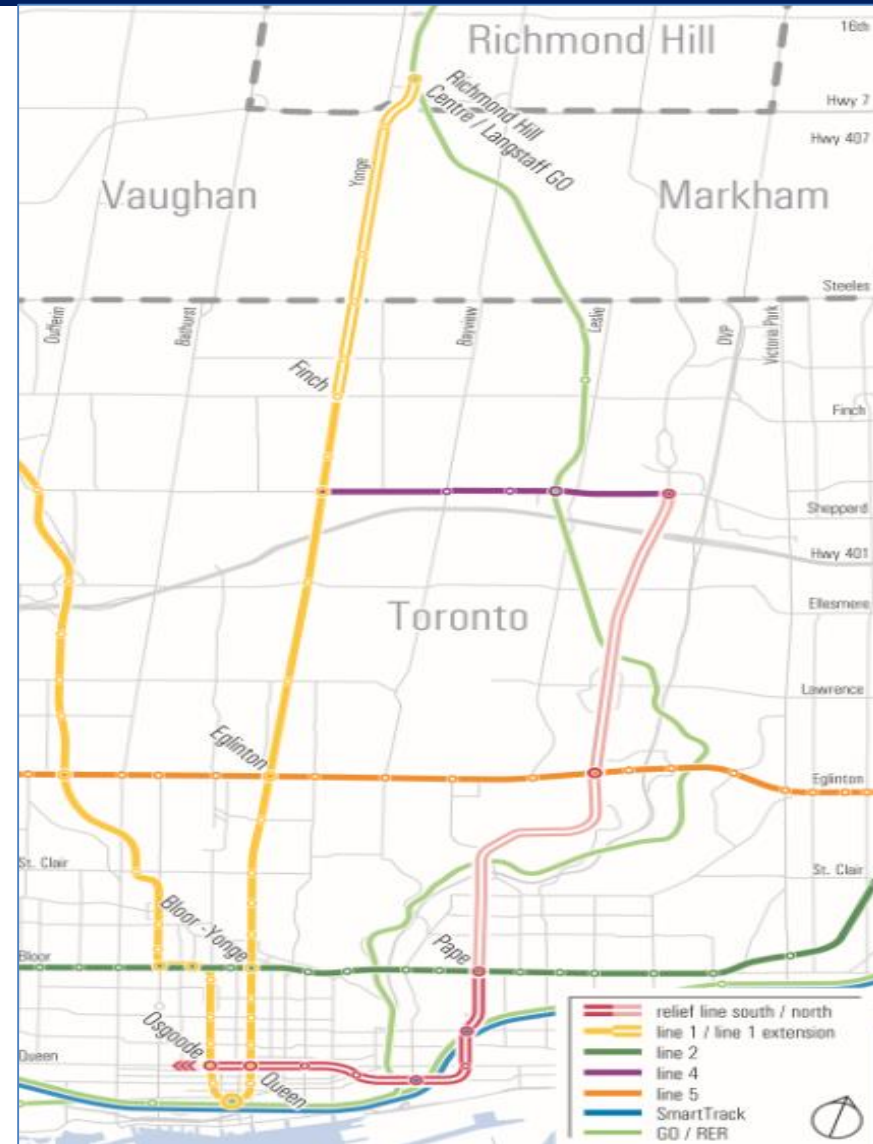
8 station rapid transit connection from Pape-Danforth to downtown.

Relief Line North

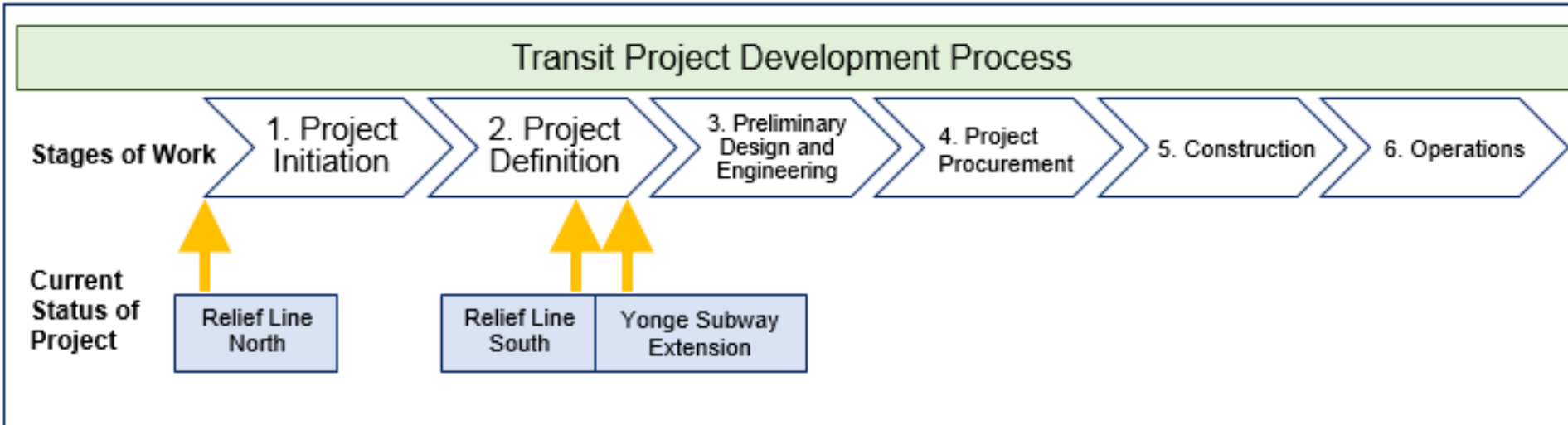
Rapid transit connection of Relief Line north from Pape-Danforth to as far as Sheppard Avenue East.

Yonge Subway Extension

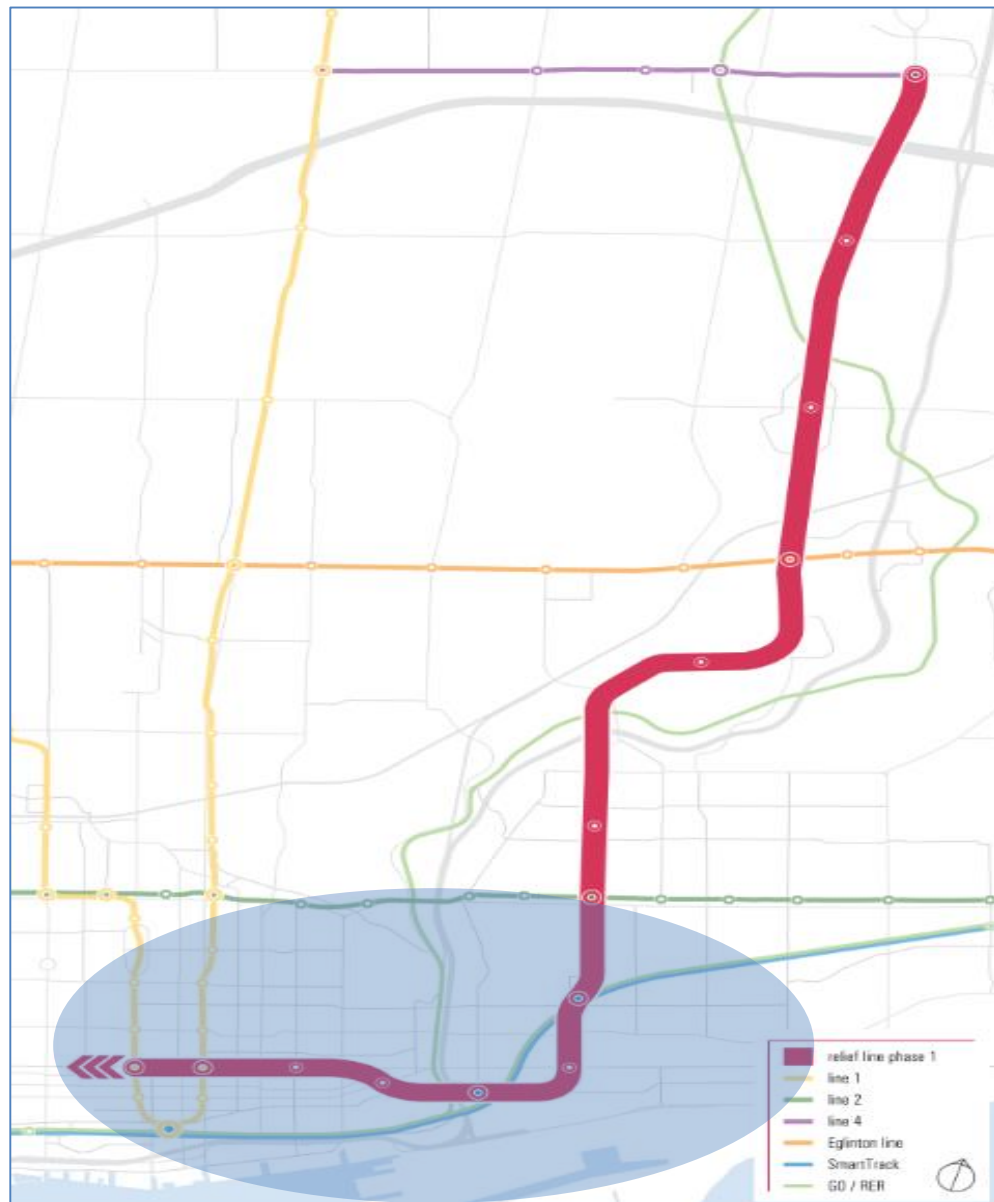
5 station extension of Line 1 north from Finch Station to York Region with two stations in Toronto and 3 in York Region.



Current Status of Projects



Relief Line South



Relief Line South Project Assessment

- Relief Line Project Assessment underway since 2014.
- In July 2016, City Council approved Pape-Eastern-Queen alignment for Relief Line South except for a local segment between Queen and Gerrard.
- Since July, City and TTC have completed evaluation of two options for the local segment - Pape and Carlaw, including technical analysis and extensive community and stakeholder consultation.
- Subject to City Council approval of the Carlaw alignment for the local segment, the TPAP will be initiated in Q3 2017.



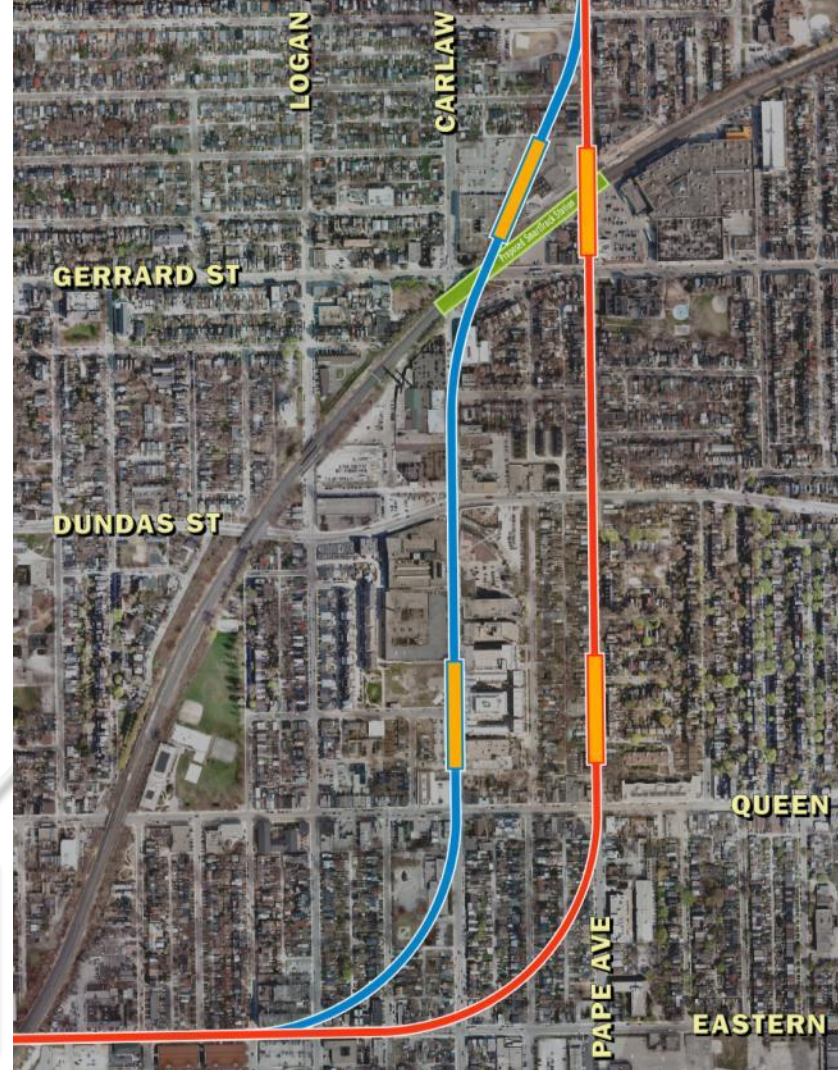
City Council approved a general alignment from downtown to Danforth and directed City and TTC staff to assess an additional alignment in this **LOCAL SEGMENT.**

Local Segment

Options Evaluated

1. Subway running under **Pape** from Queen to Danforth, with stations near Queen and Gerrard
2. Subway running under **Carlaw** from Queen to the GO Rail Corridor, then running diagonally under commercial and residential properties to connect to Pape near Riverdale Avenue, with stations near Queen and Gerrard

Planning and design for the Relief Line and SmartTrack is being coordinated to provide for a good interchange connection. Discussions with Metrolinx are underway.



Pape Avenue Characteristics (between Gerrard and Queen)

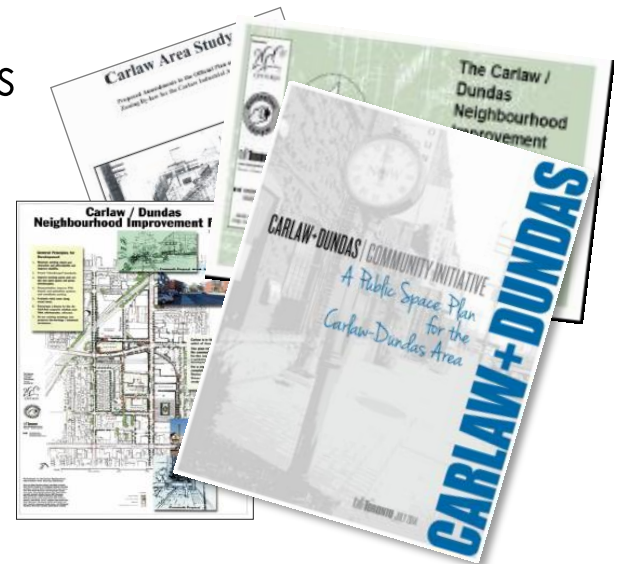
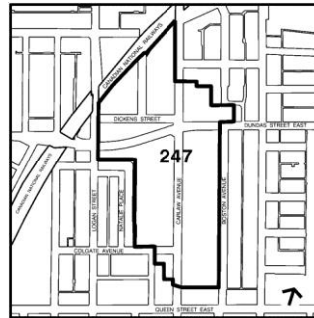
- Low-density residential street
- Classified as a local road
- Roadway width: 7.4 metres
- Right-of-way width: 18.3 metres
- Official Plan land use designation is Residential
- Estimated existing population along Pape: 1,100 *



* Estimated using 2016 Census data

Carlaw Avenue Characteristics (between Gerrard and Queen)

- Mixed-use street with mid-rise buildings, including residential, retail, and offices.
- Classified as a minor arterial
- Roadway width: 12.2 metres
- Right-of-way width: 20.1 metres
- Official Plan designation is Employment; Site and Area Specific Policy 247 also permits residential and live/work uses and retail
- Carlaw+Dundas Community Initiative was a response to the redevelopment taking place and recommends public realm improvements
- Surface transit route along Carlaw: 72 Pape bus
- Existing population along Carlaw: 2,500 *

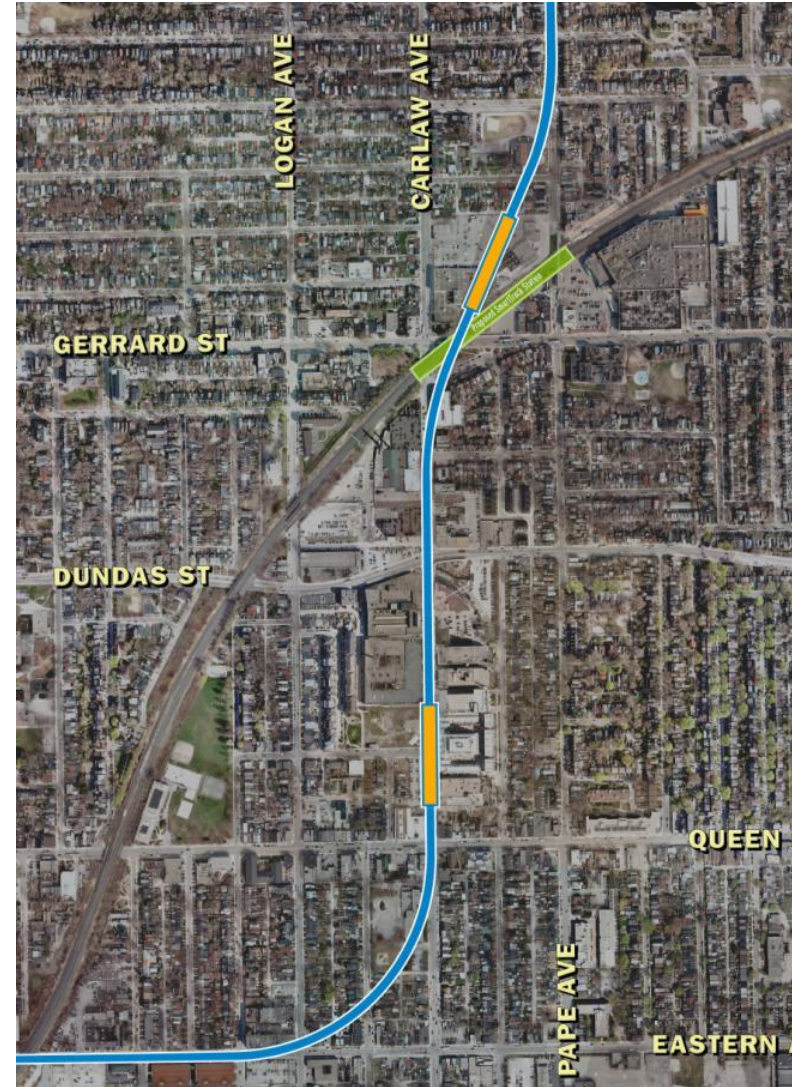


* Estimated using 2016 Census data

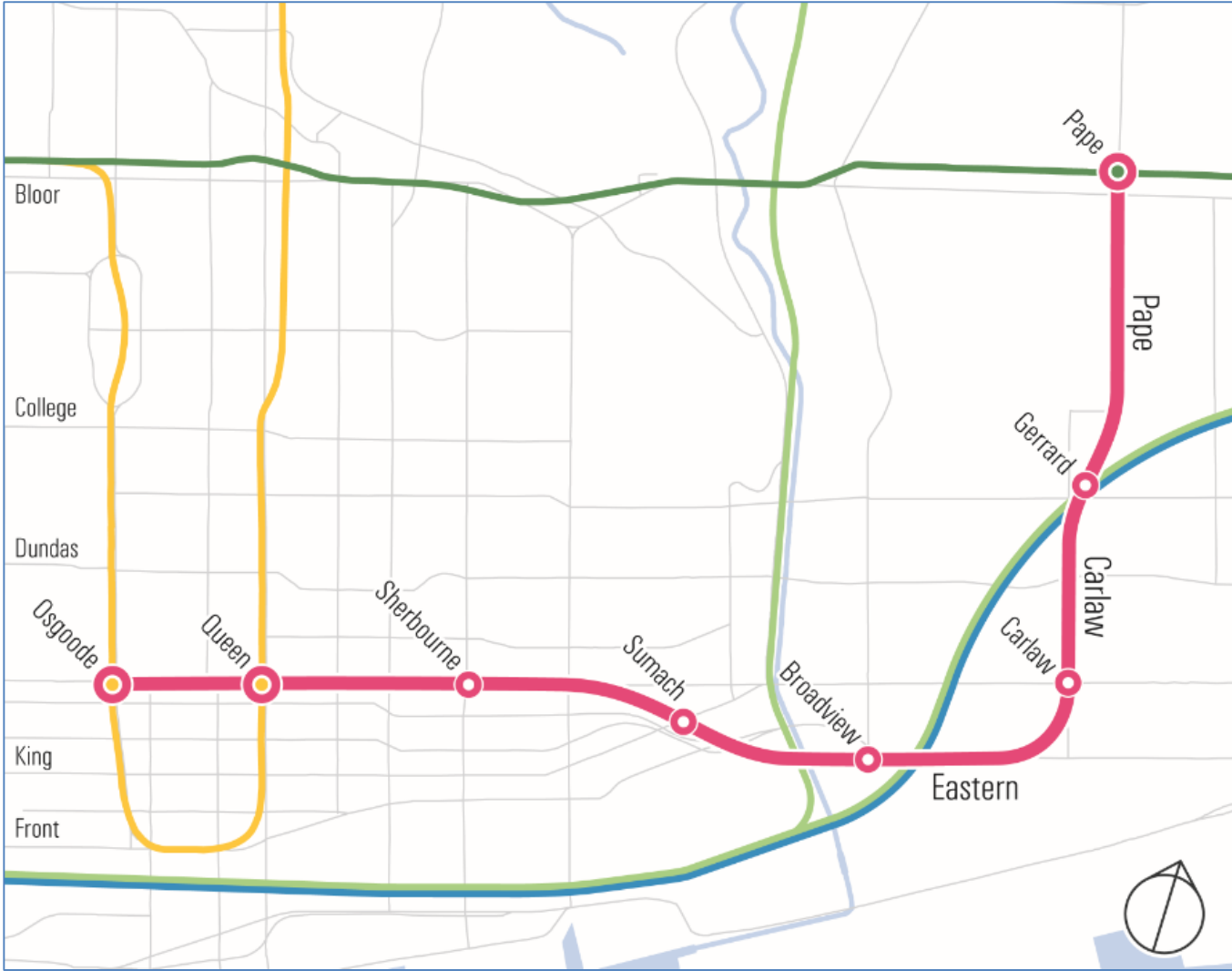
Local Segment - Preferred Alignment

Carlaw option is recommended:

- Best achieves city-building objectives
 - Helps strengthen the area as a hub for business and transitioning residential uses as envisioned by Special Policy Area 247
 - Station at Queen-Carlaw would invite a high level of activity that would support the emerging higher density, mixed-use Carlaw+Dundas area
 - Station at Queen serves a higher concentration of projected future employment and supports existing businesses
 - Both stations can be well-integrated into the existing urban fabric
- Best opportunities for transit network connectivity with SmartTrack and surface transit
- Most compatible with preserving integrity of existing neighbourhood



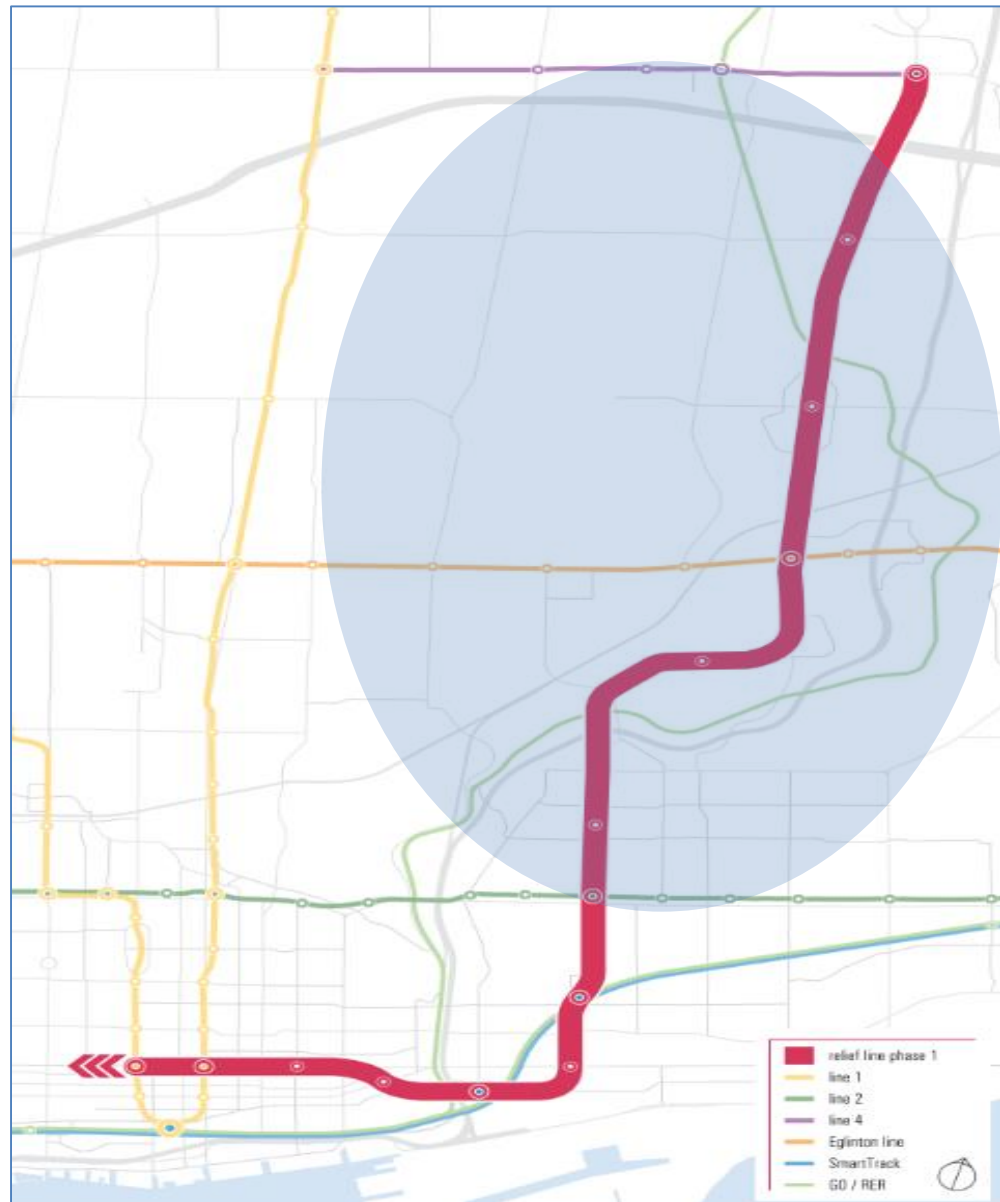
Relief Line South – Recommended Alignment for TPAP



Relief Line South – Next Phase of Work

- Next phase of work is to develop a Class 3 cost estimate, anticipated to take approximately 24 months.
- Budget required is approximately \$100M. City/TTC have allocated \$55M. Metrolinx will provide remaining \$45M from Provincial funding announced in June 2016.
- Scope of work includes:
 - Geotechnical and hydrological investigations
 - Infrastructure design (alignment, track, tunnel, station design, etc)
 - Utility design and relocations
 - System design
 - Operational work plans
 - Construction work plans
 - Stakeholder and public consultation as required.

Relief Line North



Relief Line North

- In 2012, Downtown Rapid Transit Expansion Study (DRTES) recommended future extension of Relief Line north from Danforth to as far north as Eglinton.
- In 2015, Metrolinx's Yonge Relief Network Study confirmed that an extension of the Relief Line North to Sheppard would provide benefits over the longer term.
- Advancing planning and design for the Relief Line North is important given future projected demand; further analysis to determine timing for the project.
- Work to be undertaken in partnership with TTC and Metrolinx to develop business case for the Relief Line North.

Relief Line - Recommendations

- Approve Carlaw alignment for Relief Line South local segment to be advanced to TPAP in Q3 2017.
- Advance planning and design of Relief Line South in partnership with TTC and Metrolinx and report to City Council when Class 3 cost estimate has been developed (anticipated for Q4 2019).
- Develop an initial business case for Relief Line North in partnership with TTC and Metrolinx and report to City Council in Q1 2018.
- Authorize City Manager to negotiate and enter into a Memorandum of Understanding with Metrolinx and TTC to define roles and responsibilities for the Relief Line and be reimbursed for funds required for Relief Line South.
- Authorize the Mayor and City Manager to negotiate funding agreements with the Province of Ontario and Government of Canada for the Relief Line South and report back to City Council.

Yonge Subway Extension



Yonge Subway Extension

- In 2009, City Council approved an Environmental Assessment for a 7.42 kilometre extension of the Yonge Subway line into Richmond Hill, including several principles regarding governance and project delivery.
- The Province of Ontario announced \$55M for planning and design of this project in June 2016 at the same time it announced \$150M for the Relief Line.
- City and TTC staff require authorization to undertake further work on YSE.
- Current forecasts indicate Line 1 demand may exceed capacity with YSE.

Yonge Subway Extension - Next Phase of Work

- Next phase of work is to develop a Class 3 cost estimate, anticipated to take approximately 24 months.
- Budget required is approximately \$90M. TTC will recover full costs of this work from Metrolinx and York Region.
- City/TTC recommend undertaking next phase subject to the key principles (Recommendation 6) for next phase of work.
- Scope of work includes:
 - Geotechnical and hydrological investigations
 - Infrastructure design (alignment, track, tunnel, station design, etc)
 - Utility design and relocations
 - System design
 - Operational work plans
 - Construction work plans
 - Stakeholder and public consultation as required.

Yonge Subway Extension- Recommendations

- City Council authorize City and TTC staff to work with York Region and Metrolinx on YSE planning and design and report back with a Class 3 cost estimate, anticipated for Q4 2019, subject to the following:
 - City/TTC will own, operate and maintain the subway infrastructure, recognizing the project is an extension of Line 1 service;
 - TTC will be responsible for project management of project planning and design;
 - York Region and/or Metrolinx will be responsible for the costs associated with this phase of work;
 - All parties will agree to a procurement options analysis to assess the best project delivery model; and
 - TTC will be responsible for the future delivery of YSE.
- Authorize City Manager to enter into a Memorandum of Understanding with TTC, Metrolinx and York Region, that defines roles and responsibilities, and to ensure TTC recovers full costs to complete work required to develop Class 3 cost estimate.

Further Analysis - Report Recommendation

City Council direct City and TTC to undertake further analysis on forecasted Line 1 demand, including:

- Working in consultation with Metrolinx to assess potential impacts of fare structure scenarios included (but not limited to) Metrolinx's proposed GTHA Fare Integration Study on Line 1 demand;
- In partnership with Metrolinx and York Region, identify and evaluate other possible measures to address Line 1 demand,
- Include results of this analysis in report back to City Council at next decision gate for Yonge Subway Extension anticipated for Q4 2019.

Summary

- Major milestone achieved for Relief Line South to identify an alignment for TPAP, which will be initiated in fall 2017. Staff will report back in Q4 2019 with a Class 3 cost estimate for this project.
- Relief Line North planning will be advanced, including development of an Initial Business case for Q1 2018.
- Given long lead time required to develop complex infrastructure projects, planning for YSE is also being advanced to develop a Class 3 cost estimate. Staff will report back prior to undertaking further work on this project in Q4 2019 .
- Impacts of these projects on Line 1 capacity requires a transit network planning approach. Report back on YSE will include an update on assessment of measures to address Line 1 capacity.

Questions ?