

# ATTACHMENT #1

## EGLINTON EAST LIGHT RAIL TRANSIT (EELRT) ALIGNMENT AND STOP ASSESSMENT

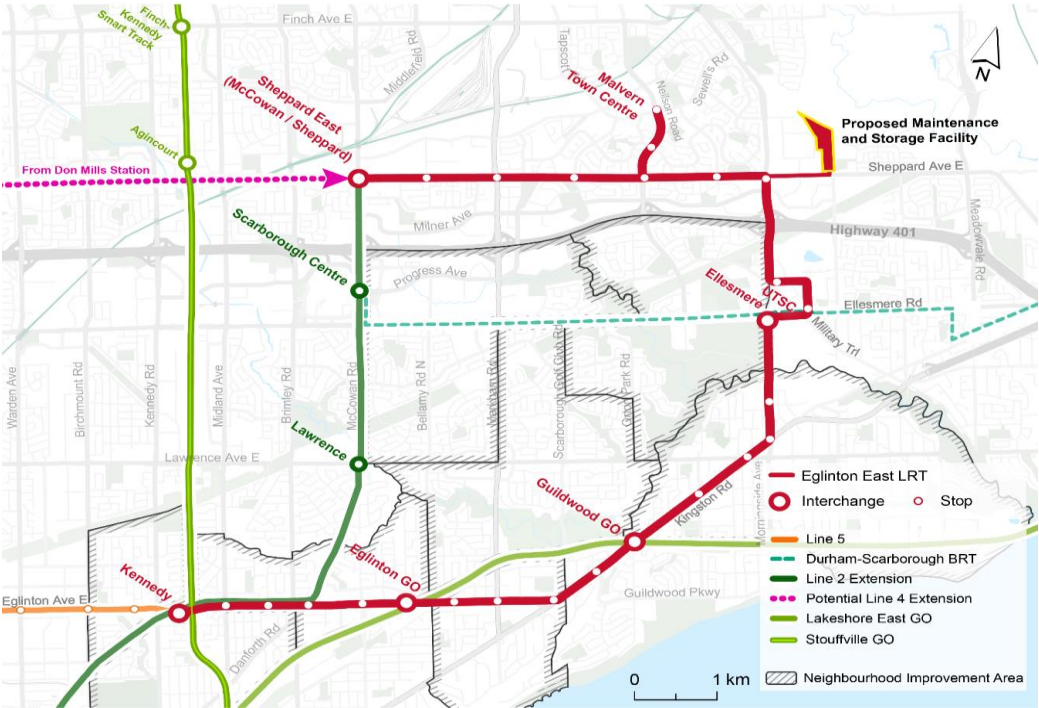
### 1. Design

#### 1.1 Alignment Overview

The EELRT is envisioned as a distinct service and is not proposed to be an extension of the Eglinton Crosstown (Line 5). The LRT will travel at-grade on a semi-exclusive LRT guideway, following existing streets. The LRT alignment begins at Kennedy Station and follows Eglinton Avenue, Kingston Road, Morningside Avenue, Ellesmere Road, New Military Trail and Sheppard Avenue East, terminating at the under-construction Line 2 station at McCowan Road. The alignment also has a branch that diverges north of Sheppard Avenue along Neilson Road, terminating at Malvern Town Centre.

The EELRT has a total length of 18.6 kilometres from the end of the new tracks at Kennedy Station to the end of the tail tracks at McCowan Station (including the Neilson Road branch).

Figure 1: EELRT Project Alignment Map



The EELRT will connect to Line 2 and 5 at Kennedy Station; and Line 2 and the potential future Line 4 at Sheppard-McCowan Station. GO Transit connections will be

provided at Kennedy GO, Eglinton GO, and Guildwood GO. Additionally, the LRT plans to intersect with the Durham-Scarborough Bus Rapid Transit (DSBRT) at Ellesmere Road between Morningside Avenue and future New Military Trail. Passenger transfers with local bus services will be provided where appropriate to complement the LRT service and support Scarborough transit users.

## **1.2 Design Development**

### **1.2.1 Stops Assessment**

The 10% design for the EELRT has carried forward the Council-approved alignment from 2022 with some changes to the total number of stops. The original proposal for the 10% design consisted of 31 stops (inclusive of terminal stations), with an average stop spacing of 560 metres. In particular, the stop spacing along the Sheppard Avenue portion was less than 400 metres, matching the local bus stop spacing. Based on a study completed by TTC to estimate rapid transit operating speed at the planning and conceptual design phases, stop spacing was found to be the strongest predictor of average speed regardless of type of rapid transit (exclusive or semi-exclusive). As such, other stop configuration alternatives were explored with the goal of increasing the average speed of the LRT and improving its performance, and ultimately, its business case. The options considered were as follows:

**Option 1:** Base Case – Council approved stop configuration with 31 stops.

**Option 2:** Removal of 9 stops out of 31 along the corridor.

- 5 stops removed on Sheppard Avenue
- 1 stop removed along Neilson Road
- 1 stop removed along Kingston Road
- 2 stops removed along Eglinton Avenue

**Option 3:** Removal of 5 stops along Sheppard Avenue.

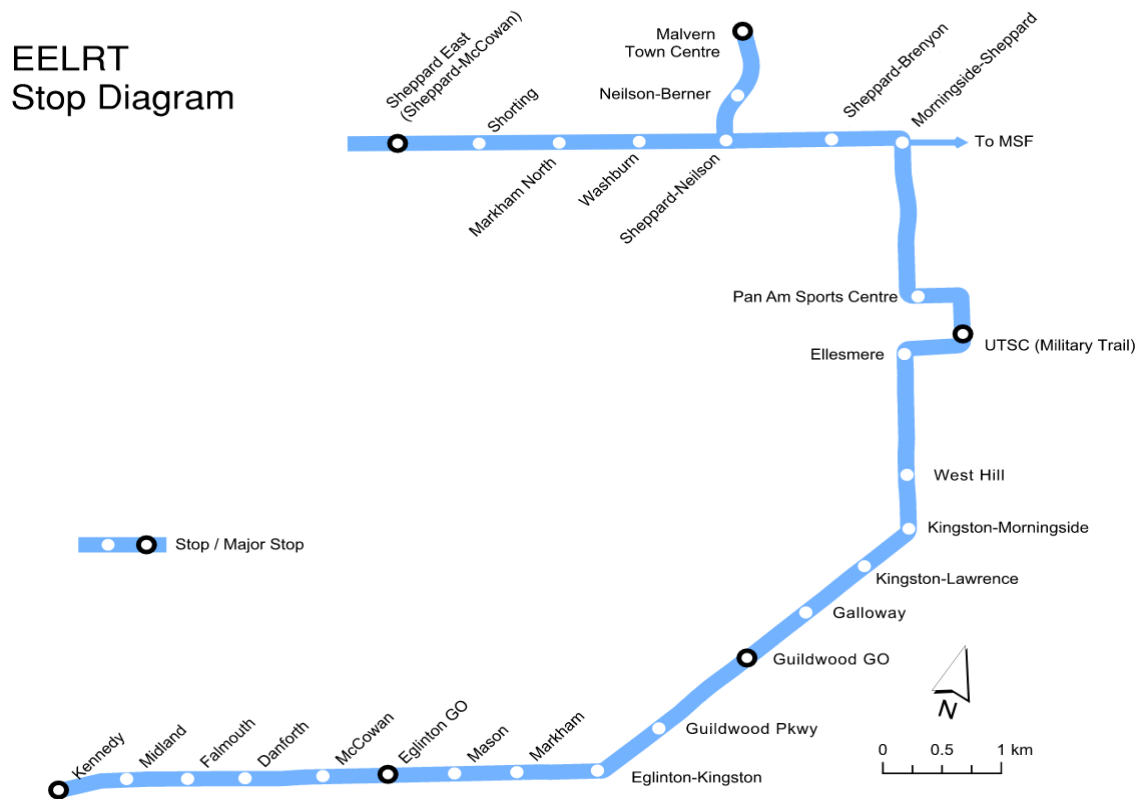
Compared with Option 1 Base Case:

- Option 2 – Option 2 was eliminated as it did not meet TTC operational needs. Removing the stops along Kingston Road and Eglinton Avenue would likely trigger a need for local bus service which could negate the travel time benefits in the business case of removing those stops. It is also preferred to maintain the Berner stop on Neilson Road since the parallel TTC bus service on this segment has a different route than EELRT.
- Option 3 – Option 3 is the preferred stop configuration as it aligns Sheppard more closely with the average LRT stop spacing for the overall project. Deleted stops along Sheppard Avenue would be served by planned parallel local bus service to Meadowvale.

Ongoing revisions to the EELRT Base Case design at Kingston-Lawrence-Morningside (KLM) created the opportunity for an additional stop on Kingston Road to better serve planned development in the area. Following the application of Option 3 and inclusion of the additional KLM area stop, the EELRT 10% design includes 27 stop locations (inclusive of major terminal interchange stations) throughout Scarborough, with an average stop spacing of 670 metres.

Figure 2 shows the alignment and stops for the EELRT.

**Figure 2 EELRT Alignment and Stops**



## 1.2.2 Stations and Stops

The EELRT 10% design stops and stations are described at a high-level in Table 1.

**Table 1: Summary of EELRT Stations and Stops**

Stop	Description
Kennedy Station	<ul style="list-style-type: none"> <li>• 50-metre wedge-shaped centre platform (13 metres wide on the west, 5.5 metres wide on the east)</li> <li>• Located on the Don Montgomery Recreational Centre Parking Lot</li> <li>• Enclosed terminal station building facilitating weather protected connections to all Kennedy Station higher-order transit and bus terminal</li> </ul>
Midland	<ul style="list-style-type: none"> <li>• 5.5-metre-wide centre platform, east of Midland Avenue</li> <li>• Utilizes the shadow of the storage track east of the platform</li> </ul>
Falmouth	<ul style="list-style-type: none"> <li>• 5.5-metre-wide centre platform, east of Falmouth Avenue</li> <li>• Utilizes the shadow of the centre storage track west of Falmouth Avenue</li> </ul>
Danforth	<ul style="list-style-type: none"> <li>• Two 3-metre-wide side-facing platforms, west of Danforth Road</li> <li>• Reduces potential property impact east of Danforth Road, as the area is constrained due to townhouses on both the north and south side</li> </ul>
McCowan	<ul style="list-style-type: none"> <li>• Two 3-metre-wide far side platforms</li> </ul>
Eglinton GO	<ul style="list-style-type: none"> <li>• Two 3-metre-wide side-facing platforms</li> </ul>
Mason	<ul style="list-style-type: none"> <li>• Two 3-metre-wide far side platforms</li> </ul>
Markham	<ul style="list-style-type: none"> <li>• Two 3-metre-wide far side platforms</li> </ul>
Eglinton-Kingston	<ul style="list-style-type: none"> <li>• 5.5-metre-wide centre platform</li> <li>• Utilizes the shadow of the storage track west of the platform</li> </ul>
Guildwood Parkway	<ul style="list-style-type: none"> <li>• Two 3-metre-wide far side platforms</li> </ul>
Guildwood GO	<ul style="list-style-type: none"> <li>• Two 3-metre-wide far side platforms</li> </ul>
Galloway	<ul style="list-style-type: none"> <li>• Two 3-metre-wide far side platforms</li> </ul>

Stop	Description
Kingston-Lawrence	<ul style="list-style-type: none"> <li>• 5.5-metre-wide centre platform, west of Lawrence Avenue</li> <li>• Utilizes the shadow of the storage track east of the platform</li> </ul>
Kingston-Morningside	<ul style="list-style-type: none"> <li>• 5.5-metre-wide centre platform, west of Morningside Avenue</li> <li>• Utilizes the shadow of the centre storage track west of the platform</li> </ul>
West Hill	<ul style="list-style-type: none"> <li>• Two 3-metre-wide far side platforms</li> </ul>
Ellesmere	<ul style="list-style-type: none"> <li>• 5.5-metre centre platform, south of Ellesmere Avenue on</li> <li>• Morningside Avenue</li> </ul>
UTSC (Military Trail)	<ul style="list-style-type: none"> <li>• 5.5-metre centre platform, north of Ellesmere Avenue on New</li> <li>• Military Trail</li> </ul>
Pan Am Sports Centre	<ul style="list-style-type: none"> <li>• Two 3-metre-wide far side platforms at Pan Am Drive on New Military Trail</li> </ul>
Morningside-Sheppard	<ul style="list-style-type: none"> <li>• 5.5-metre-wide centre platform, west of Morningside Avenue</li> </ul>
Sheppard-Brenyon	<ul style="list-style-type: none"> <li>• Two 3-metre-wide far side platforms at Brenyon Way and Breckon Gate</li> </ul>
Sheppard-Neilson	<ul style="list-style-type: none"> <li>• Three 3-metre-wide far side platforms on each of the north, east and west legs of the intersection</li> </ul>
Washburn	<ul style="list-style-type: none"> <li>• Two 3-metre-wide far side platforms at Washburn Way and Lapsley Road</li> </ul>
Markham North	<ul style="list-style-type: none"> <li>• Two 3-metre-wide far side platforms at Markham Road</li> </ul>
Shorting	<ul style="list-style-type: none"> <li>• Two 3-metre-wide far side platforms at Shorting Road and Havenview Road</li> </ul>
Sheppard - McCowan	<ul style="list-style-type: none"> <li>• 10-metre-wide centre platform, east of McCowan Road, to accommodate elevators and staircases to facilitate underground connection with SSE and potential future Line 4</li> </ul>

Stop	Description
Neilson-Berner	<ul style="list-style-type: none"> <li data-bbox="406 331 1487 373">• Two 3-metre-wide far side platforms at Berner Trail and Wickson Trail</li> </ul>
Malvern Town Centre	<ul style="list-style-type: none"> <li data-bbox="406 453 1487 495">• Two 3-metre-wide side-facing platforms north of Tapscott Road</li> </ul>

The EELRT stations and stops will be designed such as to facilitate level boarding and barrier-free access at all stops. Station and stop amenities and features will be confirmed in future phases of the design.