



STAFF REPORT ACTION REQUIRED

Pedestrian Crossing Protection Study and Safety Review of Pedestrian Refuge Island on Eglinton Avenue East, 149 Metres west of Brimley Road

Date:	May 21, 2010
To:	Scarborough Community Council
From:	Director, Transportation Services, Scarborough District
Wards:	Ward 35– Scarborough Southwest, Ward 37- Scarborough Centre
Reference Number:	P:\2009\Cluster B\TRA\Scarborough\sc1068 D09-3309272 Eglinton Brimley pedestrian refuge island

SUMMARY

This staff report is about a matter for which the Community Council does not have delegated authority from City Council to make a final decision.

The purpose of this report is to discuss the feasibility of removing/retaining the Pedestrian Refuge Island on Eglinton Avenue East, 149 metres west of Brimley Road.

Traffic studies reveal that the warrant or technical justification for the pedestrian refuge island is no longer met at this location.

RECOMMENDATIONS

Transportation Services, Scarborough District, recommends that Scarborough Community Council recommend that City Council:

1. Approve the removal of the Pedestrian Refuge Island on Eglinton Avenue East, 149 metres west of Brimley Road.
2. Pursuant to the City of Toronto Act 2006, authorize the appropriate City officials to prepare the necessary Road Alteration By-law.
3. Pass or amend the appropriate by-law(s) accordingly.

Financial Impact

The financial cost of removing the pedestrian refuge island would be approximately \$7,000.00. Once approved, the funding for this removal would be charged through the Safety and Operational Improvements budget.

ISSUE BACKGROUND

Transportation Services staff reviewed the feasibility of removing/retaining the Pedestrian Refuge Island (PRI) and/or upgrading this location to a higher form of traffic control. The policy or technical criteria for the usage of a Pedestrian Refuge Island is currently limited to a five lane cross-section roadway being approximately 16.4 metres wide. Eglinton Avenue East is a seven lane cross-section roadway incorporating High Occupancy Vehicle, (H.O.V.), lanes. During peak traffic period, queuing often occurs on the two eastbound and westbound through lanes leaving faster moving traffic in the H.O.V. lanes. Pedestrians can be hidden from view by these queued vehicles creating a collision potential. The PRI was installed in 1999 but no longer meets current City of Toronto guidelines.

COMMENTS

The following characteristics describe the location of the Pedestrian Refuge Island on Eglinton Avenue East, 149 metres west of Brimley Road:

- Eglinton Avenue East is a seven lane major arterial roadway.
- The seven lane cross-section incorporates a two-way centre left-turn lane and three westbound and three eastbound lanes with the curb lanes serving as High Occupancy Vehicle (H.O.V.) Lanes during peak traffic hours.
- Eglinton Avenue East in the vicinity of Brimley Road has a posted speed limit of 60 kilometres per hour (km/h), an operating speed of approximately 67 km/h and a daily traffic volume of approximately 28,000 vehicles per day (vpd).
- A Pedestrian Refuge Island is located on Eglinton Avenue East approximately 149 metres west of Brimley Road at or near 2685 Eglinton Avenue East.
- Toronto Transit Commission (T.T.C.) bus stops for both the eastbound and westbound directions are in place along Eglinton Avenue East. The nearest stops to the PRI are located to the east at Brimley Road.
- Traffic control signals are located at Eglinton Avenue East at Brimley Road, 149 metres east of the PRI and Eglinton Avenue East at Gilder Drive 256 metres west of the PRI.
- Sidewalks are located on both sides of Eglinton Avenue East.
- The land usage on this section of Eglinton Avenue East is primarily commercial, retail outlets.

Pedestrian Crossing Protection Warrant Studies

Transportation Services staff conducted a Pedestrian Crossing Protection Warrant Study at the Pedestrian Refuge Island on Eglinton Avenue East approximately 149 metres west of Brimley Road. Using traffic volumes recorded over the peak eight hours of a typical weekday, the following results were obtained:

Pedestrian Crossover Warrant Study

Pedestrian Crossover Warrant	Compliance Level
	Tuesday, May 18, 2010*
Pedestrian Volume	41%
Pedestrian Delays	38%

* Study conducted under optimum weather conditions; +20C, sun and some cloud.

As outlined in the above table, none of the categories are met. The installation of a pedestrian crossover and/or upgrading the current Pedestrian Refuge Island to traffic control signals cannot be justified at the subject intersection based on the foregoing information. In addition, this location is not identified as a signalized TTC stop as part of the Scarborough Malvern LRT line.

Pedestrian Refuge Island

Since a pedestrian crossover is not justified, we considered the retention of the existing pedestrian refuge island. However, Eglinton Avenue East, 149 metres west of Brimley Road at the Pedestrian Refuge Island is approximately 25.5 metres wide, far in excess of the required width being 16.4 metres. A minimum of 100 pedestrians are also required in an eight hour periods, and only 60 pedestrians were observed crossing Eglinton Avenue East using the PRI and an additional 19 pedestrians crossed in proximity of the PRI .

Technical Requirement for Pedestrian Refuge Island (PRI)

Roadway	Criterion	Requirement	Warrant Satisfied
Eglinton Avenue East, at PRI , 149 metres west of Brimley Road	Road Width	On streets where PRI are proposed, the minimum road width is 16.4 metres. A PRI can only be installed on a maximum of a 5 lane cross-section roadways.	No, Eglinton Ave E at PRI is 25.5 metres wide, 7 lanes
	Pedestrian Volume	The pedestrian volume crossing Eglinton Avenue East, 149 metres west of Brimley Road to justify this type of installation required eight-hour volume is 100 pedestrians	No, a total of 79 pedestrians crossings
	Turning Movement	Heavy volume of turning movements, at driveways or entrance nearby	No, None nearby
	Minimum Speed	The 85 th percentile speed must be a minimum of 10 km/h over the warranted speed limit. Warranted/Posted Speed Limit is 60 Km/h	No, EB 68 km/h, WB 65 km/h
	Accident History	Collisions is greater than 3 per year	No, Only 1 pedestrian collision in 2005

Collision History

A review of the Toronto Police Service collision records for the five-year period ending December 31, 2009 at the Pedestrian Refuge Island, (PRI) is summarised below.

Five-Year Collision Information	Number of Reported Collisions					
	2005	2006	2007	2008	2009	Total
Collisions Potentially Preventable by the Installation of Traffic Control Signals	1	0	0	0	0	1
Collisions Involving Pedestrians Crossing Eglinton Avenue East at PRI	1	0	0	0	0	1
Collisions Involving Property Damage near the Pedestrian Refuge Island	1	1	0	1	1	4

This collision record is not indicative of a safety problem at this site, over a five-year period only one collision involved a pedestrian.

In summary, the Pedestrian Refuge Island is technically not justified, consequently an upgrade to Traffic Control signals is also not justified.

It is recommended that the Pedestrian Refuge Island on Eglinton Avenue East, 149 metres west of Brimley Road be removed.

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ATTACHMENTS

1. Appendix 1- Proposed Highway Alterations
2. Location Plan - Pedestrian Refuge Island Eglinton Avenue East, Approximately 149 Metres west of Brimley Road

Appendix 1 – Proposed Highway Alterations

Ward	Street	At	To	Description of Highway Alteration	Rational
35 & 37	Eglinton Avenue East	149 Metres west of Brimley Road		Remove the Pedestrian Refuge Island	Safety and Operational Improvement