

Installation of Traffic Control Signals: St. Clair Avenue West at Symes Road

Date:	April 1, 2014
To:	Etobicoke York Community Council
From:	Director, Transportation Services - Etobicoke York District
Wards:	Ward 11 – York South-Weston
Reference Number:	p:\2014\Cluster B\TRA\Etobicoke York\eycc140065-to

SUMMARY

The purpose of this report is to obtain approval to convert the pedestrian crossover (PXO) to traffic control signals at St. Clair Avenue West and Symes Road.

The installation of traffic control signals is justified as the safety audit of the existing pedestrian crossover on St. Clair Avenue West at Symes Road indicated that this location is no longer environmentally suitable for a pedestrian crossover, given the existing operating speed of vehicle traffic on St. Clair Avenue West. Based on the results of the pedestrian crossover audit, staff recommended that the pedestrian crossover be replaced with traffic control signals at this intersection.

As the Toronto Transit Commission (TTC) operates a transit service on St. Clair Avenue West, City Council approval of this report is required. TTC staff has been advised of the proposed signal installation.

RECOMMENDATIONS

Transportation Services Etobicoke York District recommends that City Council:

1. Approve the removal of the pedestrian crossover on St. Clair Avenue West at Symes Road.
2. Approve the installation of traffic control signals at the intersection of St. Clair Avenue West and Symes Road.

Financial Impact

All costs associated with the installation of the traffic control signals at the intersection of St. Clair Avenue West and Symes Road is estimated at \$175,000.00. Funds are available in the Transportation Service Division's Capital Works Budget under Project No. CTP714-01.

ISSUE BACKGROUND

Further to a request from the Ward Councillor, Transportation Service staff conducted an audit of the existing pedestrian crossover at St. Clair Avenue West and Symes Road. One of the primary criteria of this audit is the road's vehicular operating or 85th percentile speed. Pedestrian crossovers are not appropriate if vehicle operating speeds exceed 60 km/h. Our speed studies on St. Clair Avenue West, in the area of Symes Road, did reveal an 85th percentile speed of 62 km/h.

Given the operating speeds on St. Clair Avenue West, the existing pedestrian crossover at St. Clair Avenue West and Symes Road is no longer considered environmentally suitable for pedestrian crossings. A map of the area is shown on Attachment 1.

COMMENTS

The following characteristics describe the area around St. Clair Avenue West and Symes Road:

- a. This stretch of St. Clair Avenue West is classified as a "major arterial" road with a traffic volume of approximately 19,749 per day, having an operating speed of 62 km/h.
- b. St. Clair Avenue West has a posted speed limit of 50 m/h and the pavement width of 10 metres.
- c. Toronto Transit Commission (TTC) bus stops are on located on the nearside of the intersection of St. Clair Avenue West and Symes Road.
- d. Traffic Control Signals are located approximately 193 meters to the east of St. Clair Avenue West and Symes Road and pedestrian crossover (PXO) is located approximately 268 metres west at St. Clair Avenue West and Symes Road.

In response to the public request for traffic signal controls at this intersection, Transportation staff has undertaken several traffic studies including, turning movement counts, recording the speeds at which motorists are travelling and also a review of the collision history along this section of the roadway.

Traffic Control Signals

The results of the eight hour turning movement count at the intersection of St. Clair Avenue West and Symes Road has indicated the technical requirements for the installation of traffic control signals are as follows:

Warrant		Compliance
Warrant 1	Minimum Vehicular Volume	7%
Warrant 2	Delay to Cross Traffic	16%
Warrant 3	Collision Hazard	0%

To satisfy the installation of traffic control signals, one of either the Minimum Vehicular Volume or Delay to Cross Traffic warrants must be 100% satisfied, or both must be satisfied to the extent of 80% or greater. The Collision Hazard warrant is based on the number of collisions susceptible to correction by the installation of traffic control signals, and must be 100% satisfied.

In reviewing the most recent three-year collision history for St. Clair Avenue West and Symes Road intersection, there have been no collisions of a type susceptible to correction by the installation of traffic control signals.

Environmental Audit for PXO Suitability

The Environmental Audit takes into consideration the geometry of the roadway, traffic flow, sight lines and spacing of adjacent traffic control measures. If motorists' speeds are too high, the traffic volumes are too great, or the road is too wide, the operational safety of the pedestrian crossover is compromised.

The following table illustrates the results of the Environmental Audit.

Environmental Audit

Standards or Criteria to be Met for Physical Suitability of a PXO	Met/Not Met	Comment
Vehicle operating speed less than 60 km/h	Not Met	85 th percentile speed is 62 km/h (based on radar speed study, free flow conditions)
Not more than four lanes wide on a two-way street, or more than three lanes on a one-way street	Met	Four lanes
Traffic volume less than 35, 000 vehicles per day (total both directions)	Met	19, 749 vehicles per day
No driveway entrances within 30 metres	Not Met	Driveway and parking for used car lot on the south side of St. Clair Avenue West
No significant volume of turning movements which interfere with PXO	Met	
No visibility problems exist for either pedestrians or motorists	Met	
No loading zones (including T.T.C.) in the immediate vicinity	Not Met	TTC bus stop on both sides of the street
Not less than 215 metres to another PXO or traffic device	Not Met	Traffic signals located at 193 metres east of the PXO location

The results of the audit indicate that four out of eight criteria failed at this location and that a pedestrian crossover is unsuitable. Typically, when the Audit fails the installation

of a traffic control signal would then be considered and would be installed regardless of the warrant requirement for the installation of a traffic control signal.

Based on the results of a pedestrian crossing studies, the signalization of the intersection of St. Clair Avenue West and Symes Road has been identified as necessary in order to accommodate moderate volumes of pedestrian crossings. The proposed traffic control signal will provide pedestrians with a protected pedestrian crossing area and will also provide an increased level of control for vehicular traffic at this intersection. The function of a traffic control signal is to alternate vehicular and/or pedestrian right-of way providing safe, efficient and effective traffic control. Coincident with the installation of Traffic Control Signals, the existing Pedestrian Crossover would be removed.

The Ward Councillor has been advised of the proposal to install traffic control signals at the intersection of St. Clair Avenue West and Symes Road.

CONTACT

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SIGNATURE

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ATTACHMENTS

Attachment 1: Map