

Traffic Control Signals – The Queensway and Penhurst Avenue, The Queensway and Milton Street

Date: July 27, 2017
To: Etobicoke York Community Council
From: Director, Transportation Services, Etobicoke York District
Wards: Ward 5 – Etobicoke Lakeshore

SUMMARY

The purpose of this report is to obtain approval for the installation of traffic control signals at the intersections of The Queensway and Penhurst Avenue and The Queensway and Milton Street.

Although the warrants for the installation of traffic control signals are not met, safety audits of the existing pedestrian crossovers on The Queensway west of Holbrooke Avenue and on The Queensway east of Milton Street, revealed that these locations are no longer environmentally suitable for pedestrian crossovers given the operating speed of vehicular traffic on The Queensway. Based on the results of the pedestrian crossover audits, staff is recommending that the pedestrian crossovers be replaced with traffic control signals.

Since the Toronto Transit Commission (TTC) operates a transit service on The Queensway, City Council approval of this report is required. TTC staff has been consulted on the matter and have provided comments on the signal design.

RECOMMENDATIONS

The Director, Transportation Services, Etobicoke York recommends that:

1. City Council approve the removal of the pedestrian crossover on The Queensway immediately west of Holbrooke Avenue as this location fails the pedestrian crossover safety audit.
2. City Council approve removal of the pedestrian crossover on The Queensway immediately east of Milton Street as this location fails the pedestrian crossover safety audit.
3. City Council approve the installation of traffic control signals at the intersection of The Queensway and Penhurst Avenue.

4. City Council approve the installation of traffic control signals at the intersection of The Queensway and Milton Street.

FINANCIAL IMPACT

The estimated cost for the installation of traffic control signals, removal of two trees and street furniture on the south side and restoration of the lay-by parking area at The Queensway and Penhurst Avenue is \$230,000. The estimated cost for the installation of traffic control signals at The Queensway and Milton Street and reconstruction of the north sidewalk is \$210,000. These funds are included within the Transportation Services future Operating Budget.

DECISION HISTORY

This report addresses a new initiative.

COMMENTS

Transportation Services staff received a request from area residents to assess the safety of the existing pedestrian crossovers (PXO's) on The Queensway west of Holbrooke Avenue and east of Milton Street. The residents also requested staff investigate the feasibility of replacing the PXO's with traffic control signals. A map of the area is shown on Attachment 1.

According to the City of Toronto's road classification system, The Queensway is classified as a 'Major Arterial' roadway. Within the road section between Royal York Road and Grand Avenue, The Queensway has a four lane cross section and a 50 km/h speed limit. Lay-by "Pay and Display" parking is permitted intermittently on the north and south sides of the street. Two pedestrian crossovers (PXO's) are located in this road section; one immediately west of Holbrooke Avenue (180 metres east of Royal York Road) and the second, immediately east of Milton Street (201 metres west of Grand Avenue).

The Toronto Transit Commission (TTC) operates transit service on The Queensway (76 Royal York South, 80 Queensway) with bus stops currently located east of Holbrooke Avenue and west of Milton Street.

The intersection of The Queensway and Holbrooke Avenue / Penhurst Avenue is an off-set intersection with the north and south approaches under STOP sign control. A Pedestrian Crossover is located on the west side of Holbrooke Avenue which serves pedestrian crossings to numerous businesses and commercial retail outlets on The Queensway as well as students attending St. Louis Separate School (11 Morgan Avenue). A school crossing guard provides supplemental crossing protection for students during the morning and afternoon arrival and dismissal periods.

The intersection of The Queensway and Milton Street / Burl Avenue is also an off-set intersection with the north and south approaches under STOP sign control. A Pedestrian Crossover is located just east of Milton Street providing pedestrian crossings to the numerous businesses in the area.

To assess traffic conditions, eight-hour turning movement counts were conducted on a typical weekday at both intersections. Our turning movement study results were applied to the Traffic Control Signal Warrant analysis. The study results are as follows:

The Queensway at Holbrooke Avenue\ Penhurst Avenue

Minimum Vehicular Volume Warrant	22% compliance
Delay to Cross Traffic Warrant	28% compliance
Collision Hazard Warrant	20% compliance

The Queensway at Milton Street \ Burl Avenue

Minimum Vehicular Volume Warrant	18% compliance
Delay to Cross Traffic Warrant	20% compliance
Collision Hazard Warrant	7% compliance

In order to meet the warrants, 100 percent compliance is required in one of the categories or a minimum of 80 percent in both. The warrants for the installation of traffic control signals are not met at either of the intersections.

Given the failure of the intersections to meet the traffic control signal warrants, the safety protocol requires that staff conduct a safety audit of the existing pedestrian crossovers. One of the primary safety criteria is the road's vehicular operating or 85th percentile speed. Pedestrian crossovers are not environmentally suitable if vehicle operating speeds exceed 60 km/h. Our most recent speed studies (November 22, 2013, March 27, 2014) on The Queensway in the area of Winslow Street, revealed 85th percentile speeds of 63 km/h and 62 km/h respectively. Given the excessive operating speeds on The Queensway, the existing pedestrian crossovers are no longer considered environmentally suitable for safe pedestrian crossings. Since pedestrian crossing assistance is essential in both of these areas, the existing pedestrian crossovers should be replaced with traffic control signals.

Our review of the off-set intersections revealed a number of issues most of which involve potential delays to motorists and transit operations on The Queensway if we were to fully signalizing both of these off-set intersections. Upon consultation with the Area Councillor and Traffic Signal Control staff, the preference is to signalize the intersections in a "T"- configuration with only the south approach side streets: The Queensway at Penhurst Avenue and the Queensway at Milton Street. Signalising these intersections would provide the safest pedestrian crossing protection while minimizing delays to motorists on The Queensway. It will also provide a safer opportunity for turning motorists from the community. Working in a semi-actuated signal mode, the signals will only serve the side streets when there is a pedestrian or vehicle demand, therefore, having a limited impact on TTC service on The Queensway.

The TTC have been consulted and have provided the following comments:

"At TTC stops our standard buses require a level passenger platform that is 12 metres in length from the bus stop and 2.4 metres in width. Our buses also require a zone to be designated as "No Standing" to allow them to pull up to the stop, align with the curb to serve passengers, and pull out.

Penhurst Avenue

Due to the signalization, the eastbound nearside stop at Wesley Street would be relocated to eastbound nearside at Penhurst Avenue. The relocation would be done to improve TTC customer convenience and safety by having the stop right at the crosswalk. It also would improve bus operation and customer travel time by preventing having to make two stops (once at the proposed Penhurst signal and again at a bus stop at Wesley Street).

To accommodate the 12 x 2.4 metre platform at Penhurst Street, the trees and street furniture on the south west corner will need to be removed. Depending on the exact location of the stop bar, some of the parking bay will also have to be filled in to provide the 12 metre length. This will result in the reduction of at least 1 parking spaces.

Wesley Street

As mentioned above, the eastbound nearside stop at Wesley Street would be relocated to eastbound nearside at Penhurst Avenue.

Milton Street

Due to the signalization, the existing eastbound nearside stop at Milton Street would be relocated to the west so that it is not downstream of the proposed stop bar. The distance the bus stop needs to be moved would depend on the location of the eastbound stop bar at this location. Depending how far the bus stop has to be moved, the bench on the south side, west of the intersection, may need to be removed/relocated.

The existing westbound nearside stop at Berl Avenue would be relocated to the westbound nearside stop bar at Milton Street. This relocation is necessary because the current stop location is in the middle of the proposed signalized intersection. The sidewalk would need to be reconstructed to provide the 12 x 2.4 metre level bus platform.

Berl Avenue

As mentioned above, the westbound nearside stop at Berl Avenue would be relocated to westbound nearside at Milton Street.

Holbrooke Avenue.

Assuming the westbound stop bar will be located on the west side of Holbrooke Avenue, and the current westbound bus stop does not need to be relocated, changes may not be required for this bus stop.

Also, to mitigate any delays these new closely spaced signals will cause to our bus service, we request that Transit Signal Priority be included at these locations."

Our review of the intersections did reveal that the lay-by "Pay and Display" parking area on the north side of The Queensway opposite Penhurst Avenue will need to be eliminated (loss of four parking spots) to facilitate the signal installation. The removal of 2 trees and the street furniture on the south side as well modification to the lay-by area on the south side will remove one parking spot to accommodate the TTC bus level platform. Re-location of the westbound TTC bus stop at Berl Avenue to the westbound stop bar at Milton Street will also be required as well as reconstruction of the sidewalk on the north side to accommodate the bus platform. The tree located on the north side The Queensway at Milton Street (in front of #706), might be affected by potential root damage or require branch trimming as a result of signal pole installation.

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SIGNATURE

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ATTACHMENTS

1. Location Plan - The Queensway at Penurst Avenue and Milton Street

Location Plan: The Queensway at Penhurst Avenue and Milton Street

