

Pedestrian Crossing Protection Review – Passmore Avenue and Maybrook Drive

Date: January 28, 2019
To: Scarborough Community Council
From: Acting Director, Traffic Management, Transportation Services
Wards: Ward 23 – Scarborough North

SUMMARY

This report recommends that neither traffic control signals, all-way-stop control, nor a pedestrian crossover be approved at the intersection of Passmore Avenue and Maybrook Drive, as the existing conditions do not meet the warrants for the installation of such traffic control devices.

RECOMMENDATIONS

The Acting Director, Traffic Management, Transportation Services recommends that:

1. City Council not authorize the installation of traffic control signals at the intersection of Passmore Avenue and Maybrook Drive.
2. City Council not authorize the installation of all-way-stop control at the intersection of Passmore Avenue and Maybrook Drive.
3. City Council not authorize the installation of a pedestrian crossover on Passmore Avenue on either the west side or the east side of Maybrook Drive.

FINANCIAL IMPACT

There would be no financial impact associated with the staff recommendations.

DECISION HISTORY

This report addresses a new initiative.

COMMENTS

As the result of a legal claim, Transportation Services staff reviewed the feasibility of installing a traffic control signal, all-way-stop control, and pedestrian crossover at the intersection of Passmore Avenue and Maybrook Drive.

Existing Conditions

The following characteristics describe Passmore Avenue at Maybrook Drive:

- Passmore Avenue is a four-lane collector road with a posted speed limit of 60 km/h.
- It consists of two eastbound lanes and two westbound lanes.
- There is a municipal sidewalk on the south side of the road.
- Maybrook Drive is a two-way, two lane local road that runs north to south with a regulatory speed limit of 50 km/h.
- Maybrook Drive forms a T-type Stop-controlled intersection as it connects with Passmore Avenue south side.
- Municipal sidewalks are located on both sides of the road.
- There are two TTC bus stops on Maybrook Drive located nearside and farside 27 metres south of the intersection. One bus stop is for northbound, and one bus stop for southbound commuters.
- The land-use surrounding the intersection consists of a mixture of commercial and industrial use.

Analysis

Pedestrian Crossing Protection Warrant Studies

Transportation Services staff conducted Pedestrian Crossing Protection warrant justification studies at the intersection of Passmore Avenue at Maybrook Drive. The studies provide an assessment of the need for traffic control signal, all-way-stop control, and a pedestrian crossover. The need for these devices is based on recent field observation studies determining existing pedestrian volumes, vehicle volumes, pedestrian delays, and conflicts. The results of the field studies and warrant justification studies are provided below.

Traffic Control Signal Justification Study

Using traffic volumes recorded during the peak eight hours on Thursday, September 27, 2018, the following results were obtained:

Traffic Control Signal Warrant	Compliance Level
Minimum Vehicular Volume	17%
Delay To Cross Traffic	11%
Collision Hazard	13%

For traffic control signals to be numerically justified, one of the “Minimum Vehicular Volume” or “Delay to Cross Traffic” or “Collision Hazard” warrants must be 100% satisfied, or both the “Minimum Vehicular Volume” and “Delay to Cross Traffic” warrants must be at least 80% satisfied.

As outlined in the above table, the traffic volumes do not satisfy the requirements to install traffic control signals.

All-Way Stop Control Warrant Study

A traffic study conducted at the intersection of Passmore Avenue and Maybrook Drive during the morning and afternoon peak hours of a typical weekday on Thursday, October 18, 2018, produced the following results:

All-Way Stop Control Warrant	A Total Approach Vehicle Volume	B Vehicle/Pedestrian Volume Crossing Major Road	C Unit Volume Split* Major/Minor Roads
Peak Four-Hour Study Period Hourly Average	484	44	91/9
Warrant Requirements For Study Period Average For Collector Roads	≥ 375	≥ 150	≥ 30/70 or ≤ 70/30

* "Unit Volume Split": Major Road Volume – Vehicles only.
Minor Road Volume – Vehicles plus pedestrians crossing the major road.

For an all-way stop control to be numerically justified, the traffic volume requirements for the "Study Period Average" must be completely satisfied in Categories A and C, or Categories B and C.

As outlined in the above table, the traffic volumes do not meet the requirements to install an all-way stop control at the subject intersection at this time.

A review of the three year collision history records from January 01, 2015 to December 31, 2017 revealed that there were only two collisions at the subject intersection that could have potentially been prevented if all-way-stop was installed.

Type A - Pedestrian Crossover Warrant Studies

The table below summarizes results of traffic volumes collected during the peak eight hours on of a typical weekday on Thursday, September 27, 2018.

Type A - Pedestrian Crossover Warrant	Compliance Level
Pedestrian Volumes	1%
Pedestrian Delays	0%

For a Type A - Pedestrian Crossover to be numerically justified, both the “Pedestrian Volumes” and “Pedestrian Delays” warrants must be 100% satisfied. As outlined above, the pedestrian volumes and delays do not satisfy the requirements to install a Pedestrian Crossover at this intersection at this time.

The minimum required pedestrian volume to meet the Pedestrian Volume warrant is 469 pedestrian, however only 6 pedestrians (1%) were observed crossing the road over the eight hour study period. Also, 130 pedestrian delays (>10 seconds) are required to meet the Pedestrian Delay Warrant, however total of 0 pedestrian delays (0%) were observed crossing the road.

Furthermore, during the site observation it was found that there are several driveways on Passmore Avenue located east and west from Maybrook Drive. If a Pedestrian Crossover were to be installed on Passmore Avenue it would potentially lead to conflicts between crossing pedestrians and turning traffic entering / exiting the driveways

Collision History

An updated review of the available Toronto Police Service collision records for the three-year period for January 01, 2015 to December 31, 2017 are summarized below.

Three-Year Collision Information	Number of Reported Collisions (By Year)			
	2015	2016	2017	Total
Collisions potentially preventable by the Installation of Pedestrian Crossing Protection device	1	0	1	2
Other	0	1	0	1

There was one pedestrian fatality approximately 15 metres west of this location in December 20, 2017, where a pedestrian crossing from north to south was involved in a collision with a westbound vehicle.

In summary, as a result of the findings of the assessment, a traffic control signal, pedestrian crossover, and all-way-stop control are not recommended on Passmore Avenue and Maybrook Drive since this location does not meet the minimum warrants requirements for such pedestrian crossing protection devices.

CONTACT

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SIGNATURE

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ATTACHMENTS

1. Location Plan (Pedestrian Crossing Protection Review - Passmore Avenue and Maybrook Drive)

Attachment 1 - Location Plan (Pedestrian Crossing Protection Review - Passmore Avenue and Maybrook Drive)

