TORONTO

REPORT FOR ACTION

Traffic Control Signals Review - Middlefield Road at Richmond Park Boulevard

Date: March 15, 2018
To: Scarborough Community Council
From: Director, Transportation Services, Scarborough District
Wards: Ward 41 – Scarborough-Rouge River

SUMMARY

This report recommends that traffic control signals be approved at the intersection of Middlefield Road at Richmond Park Boulevard despite the existing conditions do not meet the warrant for the installation of traffic control signals or a pedestrian crossover (PXO) at this time. Currently, this location is controlled by a stop sign for eastbound traffic on Richmond Park Boulevard at Middlefield Road.

RECOMMENDATIONS

The Director, Transportation Services, Scarborough District recommends that:

1. City Council authorize the installation of traffic control signals at the intersection of Middlefield Road at Richmond Park Boulevard.

FINANCIAL IMPACT

There would be financial impact associated with the staff recommendation.

Should City Council approve the installation of traffic control signals, the cost would be approximately $200,000.00. Funding for such traffic control signals has not been requested in the Transportation Services Capital Budget and would be subject to competing priorities.

DECISION HISTORY

This report addresses a new initiative.

COMMENTS

Further to a request from Councillor Chin Lee, Transportation Services staff reviewed the feasibility of installing traffic control signals or a pedestrian crossover on Middlefield Road at Richmond Park Boulevard.

Existing Conditions

The following characteristics describe Middlefield Road at Richmond Park Boulevard:

- This intersection is located north of Finch Avenue East, south of McNicoll Avenue, and east of McCowan Road.
- Middlefield Road is a four-lane minor arterial road with a regulatory speed limit of 60 km/h.
- Currently, eastbound traffic on Richmond Park Boulevard is required to stop at Middlefield Road.
- A private driveway is located on the east side of Middlefield Road opposite Richmond Park Boulevard.
- The land use in the surrounding area consists mainly of single family residential dwellings and industrial businesses.
- Sidewalks are located on both sides of Middlefield Road.
- Toronto Transit Commission (TTC) operates revenue bus service on Middlefield Road.
- Adjacent traffic control signals are located approximately 650 metres to the north at McNicoll Avenue, and approximately 480 metres to the south at Finch Avenue East.
- There is street lighting on the east side of Middlefield Road and the south side of Richmond Park Boulevard.

Analysis

Pedestrian Crossing Protection Warrant Studies

Transportation Services staff conducted a detailed Warrant Study on Middlefield Road at Richmond Park Boulevard during the peak eight hours of a typical weekday (Monday, February 13, 2017). The study provides an assessment of the need for traffic control signals or a pedestrian crossover based on vehicle turning movements and pedestrian crossing volumes and delays, which are expressed in terms of percent compliance with accepted thresholds.

Traffic Control Signal Justification Study

Using traffic volumes recorded during the peak eight hours on Monday, February 13, 2017, the following results were obtained:

Traffic Control Signal Warrant	Compliance Level
Minimum Vehicular Volume	31%
Delay To Cross Traffic	26%
Collision Hazard	27%

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. Our review of the Collision Hazard is based on the previous three-year (2013 – 2015) collision history available.

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

Pedestrian Crossing Protection Study

Using traffic volumes recorded during the peak eight hours on Monday, February 13, 2017, the following results were obtained:

Pedestrian Crossing Protection	Compliance Level
Pedestrian Volumes	10%
Pedestrian Delays	21%

For a pedestrian crossover to be numerically justified, both the "Pedestrian Volume" and "Pedestrian Delays" warrants must be 100% satisfied.

As outlined in the above table, the pedestrian volumes and delays do not satisfy the requirements to install a pedestrian crossover at the subject intersection at this time.

During the peak eight hour study period, a total of 27 pedestrian crossings and 8,441 vehicles were recorded at this location. For a pedestrian crossover to be numerically justified at this intersection, the required "Pedestrian Volume" must exceed 261 pedestrians crossing Middlefield Road during the peak eight hour period.

Collision History

An updated review of the available Toronto Police Service collision records for the five-year period ending December 31, 2016 are summarised below:

Five-Year Collision Information	Number of Reported Collisions (By Year)					
	2012	2013	2014	2015	2016	Total
Vehicle-Only Collisions Potentially Preventable by Traffic Control Signals	0	2	0	2	1	5
Collisions Involving Pedestrians Crossing Middlefield Road at Richmond Park Boulevard	0	0	0	0	0	0

Notwithstanding the pedestrian crossover and traffic control signal warrants not being meet, Transportation Services acknowledges merit in the installation of traffic control signals at this site of Middlefield Road at Richmond Park Boulevard.

Along the west side of Middlefield Road between McNicoll Avenue and Finch Avenue East, a distance of 1.2 kilometres intersections, there are three public intersecting roads. Each of the side streets are controlled by a compulsory stop sign.

By providing traffic control signals at Middlefield Road at Richmond Park Boulevard, the residential dwellings to the west and transit access, places of worship and commercial business to the east will be improved. Pedestrian crossing protection in the form of traffic control signals at Middlefield Road at Richmond Park Boulevard will aid pedestrian safety and enhanced neighbourhood interconnectedness, especially considering the nearest traffic control signals are 650 metres to the north and 480 metres to the south of Middlefield Road and Richmond Park Boulevard.

CONTACT

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SIGNATURE

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Director, Transportation Services, Scarborough District

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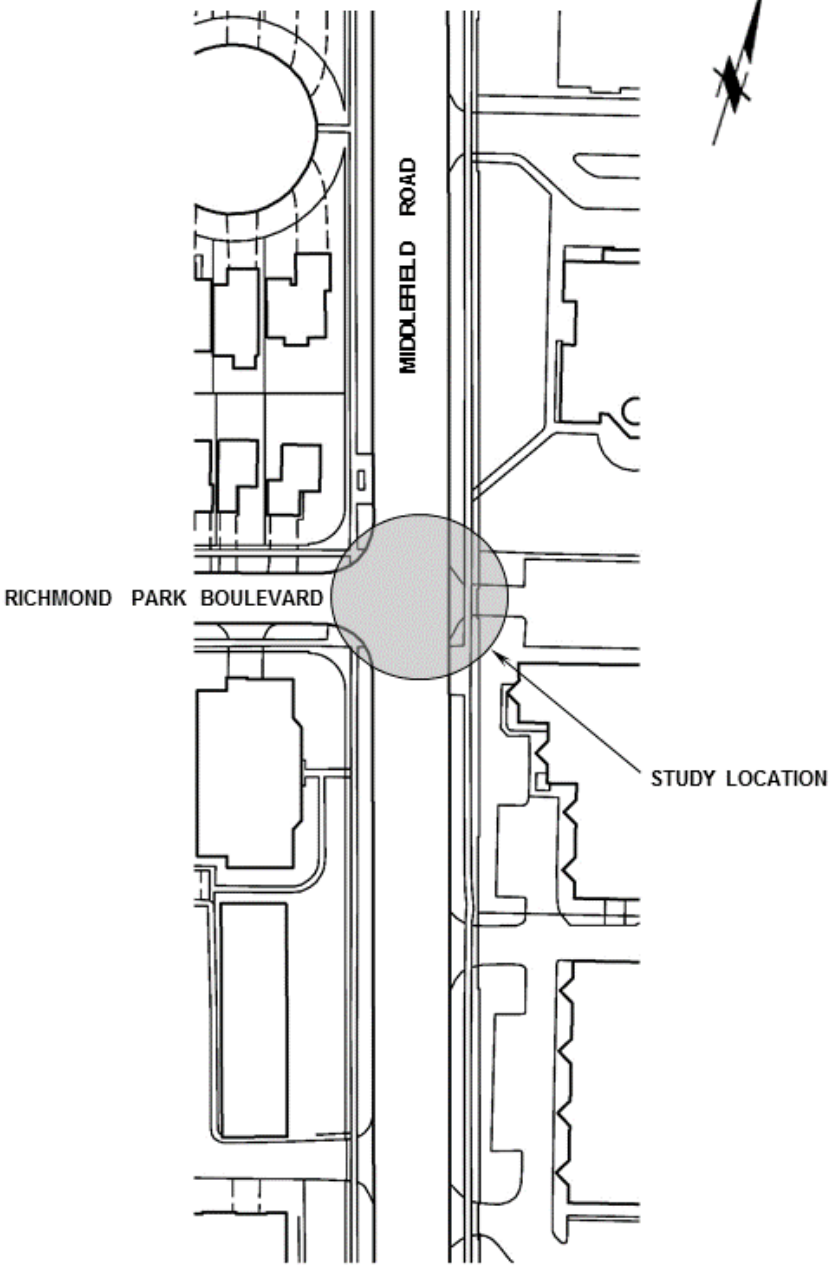
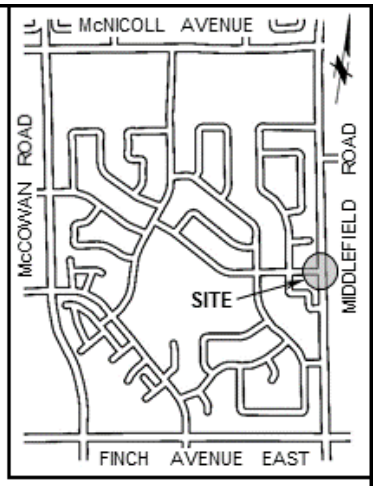
ATTACHMENTS

1. Location Plan (Traffic Control Signals Review - Middlefield Road at Richmond Park Boulevard).



LOCATION MAP



KEY MAP

TORONTO TRANSPORTATION SERVICES

TRAFFIC OPERATIONS
Scarborough District

SCALE:	N.T.S.	TRAFFIC CONTROL SIGNALS REVIEW MIDDLEFIELD ROAD AT RICHMOND PARK BOULEVARD	FILE NUMBER: D17-8602843	
DATE:	JAN., 2018		ATTACHMENT 1	WARD 41
DRAFTING:	O.K. / A.K.			