



**STAFF REPORT
ACTION REQUIRED**

Pedestrian-Cyclist Crossing – Mount Pleasant Road at Roxborough Drive (Beltline Trail)

Date:	July 24, 2016
To:	Toronto and East York Community Council
From:	Acting Director, Transportation Services, Toronto and East York District
Wards:	Toronto Centre-Rosedale, Ward 27
Reference Number:	Ts2016163te.top.doc

SUMMARY

As the Toronto Transit Commission (TTC) operates a transit service on Mount Pleasant Road, City Council approval of this report is required.

Toronto and East York Community Council at its meeting on June 14, 2016, directed Transportation Services to report back to the September 7, 2016 Toronto and East York Community Council meeting on a final recommendation for a safe crossing design for the Beltline Trail where it meets Mount Pleasant Road and Roxborough Drive (Item No. TE17.123).

Transportation Services is requesting approval to install a traffic control signal on Mount Pleasant Road at Roxborough Drive in order to provide a safe crossing for pedestrians and cyclists using the Beltline Trail.

RECOMMENDATIONS

Transportation Services, Toronto and East York District recommends that:

1. City Council approve the installation of traffic control signals on Mount Pleasant Road at Roxborough Drive.
2. City Council rescind the existing westbound left-turn prohibition in effect at all times on Mount Pleasant Road and Roxborough Drive.

3. City Council approve the alteration of the intersection of Mount Pleasant Road and Roxborough Drive, removing the northbound right-turn channel, generally as shown on drawing 421G- 2190, dated August 2016, attached to the report entitled, "Pedestrian-Cyclists Crossing – Mount Pleasant Road at Roxborough Drive", from the Acting Director, Transportation Services, Toronto and East York District.

Financial Impact

The estimated cost of installing traffic control signals on Mount Pleasant Road and Roxborough Drive is \$ 150,000.00. The estimated cost of the proposed road alterations at this intersection is \$150,000.00. Funds to undertake the installation of traffic control signals and the road alterations are contained in the Transportation Services 2017 Capital Budget estimates.

DECISION HISTORY

At its meeting of June 14, 2016, Toronto and East York Community Council directed the General Manager of Transportation Services to report back to the September 7, 2016 Toronto and East York Community Council with recommendations for a safe crossing design for the Beltline Trail where it meets with Mount Pleasant and Roxborough Drive (Item No. TE17.123).

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.TE17.123>

BACKGROUND

The Victor Ford study conducted in 2013 entitled "Conceptual Design for Improvements to the Beltline Trail" identified existing road crossings along the Beltline Trail that required improvement to address issues of safety, accessibility and user ability. The intersection of Mount Pleasant Road and Roxborough Drive was one of these crossings identified in this study.

Currently, there are no traffic control devices or crossing protection of any kind at Mount Pleasant Road and Roxborough Drive (at the Beltline Trail). Pedestrians and cyclists crossing east/west on Mount Pleasant Road must do so in two stages, waiting in the centre median for a gap in traffic before crossing the roadway and connecting with the Beltline Trail.

Transportation Services, Toronto and East York District, was requested to review the pedestrian crossing environment at Mount Pleasant Road and Roxborough Drive and determine what improvements could be made to assist pedestrians and cyclists without jeopardizing their safety and that of other road users.

COMMENTS

The Beltline Trail is a 9 kilometre multi-use trail and public park space that extends through the current midtown neighbourhoods of Forest Hill, Chaplin Estates, Moore Park, Bennington Heights, Governor's Bridge, Rosedale and Deer Park. The Beltline Trail is currently heavily used by local residents for walking, running, cycling, dog walking and passive recreation and viewed as a very important recreational amenity for the City of Toronto.

Roxborough Drive intersects with the east side of Mount Pleasant Road forming a "T" type intersection. Westbound motorists on Roxborough Drive are stop controlled at Mount Pleasant Road, and left-turns are prohibited at all times. Southbound motorists on Mount Pleasant Road can make a left-turn onto Roxborough Drive from an exclusive left-turn lane provided and northbound motorists on Mount Pleasant Road can make a right-turn onto Roxborough Drive from an exclusive channelized right-turn lane.

Sidewalks are currently not available on the north side of Roxborough Drive (Mount Pleasant Road to Highland Avenue), and on the west side of Mount Pleasant Road (Roxborough Street East to a point just south of Inglewood Drive). A jersey barrier separates northbound and southbound traffic on Mount Pleasant Road, between Whitehall Road and Crescent Road. A guardrail also runs along the west side of Mount Pleasant Road, except for a section opposite Roxborough Drive, where it opens to provide access to/from the Beltline Trail. The Beltline Trail continues east of Mount Pleasant Road to Bayview Avenue.

Mount Pleasant Road at Roxborough Drive is classified as a major arterial roadway that operates two-way, with four lanes of traffic and a posted speed limit of 60 km/h. Mount Pleasant Road has a daily two-way traffic volume of approximately 33,000 vehicles. TTC operates the No. 141 Downtown/Mount Pleasant Express bus route on this section of Mount Pleasant Road. As part of the Road Safety Plan 2017-2021 adopted by City Council at its meeting on July 12, 2016, the speed limit on Mount Pleasant Road, between Crescent Road and Inglewood Drive was reduced from 60 km/h to 50 km/h.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.PW14.1>

Roxborough Drive between Mount Pleasant Road and Highland Avenue is classified as a local roadway that operates two-way, has a posted speed limit of 40 km/h, and has a daily two-way traffic volume of approximately 900 vehicles. There is no TTC service on this roadway.

During an eight-hour turning movement count conducted in February 2012, a total of 104 crossings were recorded at Mount Pleasant Road at Roxborough Drive, 65 pedestrians and 39 cyclists. Taking into consideration that this count was conducted during the winter, and that the Beltline Trail has increased in popularity over the years, projected crossings would have increased significantly at this intersection since 2012. An eight-hour turning movement count conducted in September 2007 recorded 223 crossings.

Transportation Services evaluated four potential options that could be implemented at the intersection of Mount Pleasant Road and Roxborough Drive to improve the safety of pedestrians crossing at this intersection. The following options were reviewed:

1. Full Traffic Control Signal (Mount Pleasant Road and Roxborough Drive)
2. Pedestrian Traffic Control Signal
3. Pedestrian Crossing (PXO)

Full Traffic Control Signal

A review of Toronto Police Service collision records revealed that in a three year period ending in December 31, 2015, there was eight reported collisions at this intersection. Upon further review of the details of these collision, it was determined that none may have been susceptible to correction by the installation of traffic control signal.

We applied the results of our traffic study conducted in February 2012 on Mount Pleasant Road at Roxborough Drive to the warrant criteria for the installation of traffic control signals. The following are reviewed to determine if a traffic control signal is technically warranted:

Warrant 1: Minimum Vehicular Volume

Warrant 2: Delay to Cross Traffic

Warrant 3: Collision Hazard

To meet the technical requirements for the installation of traffic control signals, one of the “Minimum Vehicular Volume” or “Delay to Cross Traffic” warrants should be 100 percent satisfied, or any two of the three warrants should be at least 80 percent satisfied. Based on our evaluation, the technical requirements for the installation of traffic control signals cannot be technically justified at this intersection.

Pedestrian Traffic Control Signal

A "pedestrian signal" option was also reviewed by Transportation Services. This option does not fully signalize the intersection, but would provide a pedestrian signal on Mount Pleasant Road, just south of Roxborough Drive. However, a pedestrian signal does not provide the maximum degree of control for all road users (i.e. control of right-of-way movements), does not provide pedestrians with a direct route to/from the Beltline Trail, and the existing jersey barrier must be modified in order to accommodate the pedestrian signal, thereby compromising the safety of all road users.

Motorists are typically not accustomed to a pedestrian traffic control signal operations at an intersection. Given the two levels of control in which the main street is regulated by signal operations, while the side street is regulated by stop signs, drivers may become confused as side street vehicles are not distinctly separated from conflicts with mains street traffic. Main street drivers facing a green signal indication may be confused and unprepared to react to the observed conflict.

Pedestrian Crossover (PXO)

An eight-hour turning movement count conducted in September 2007, recorded 223 crossings at the intersection of Mount Pleasant Road and Roxborough Drive. Based on the data collected, the pedestrian crossover warrant criteria is satisfied to the following extent:

Pedestrian Volume: 100 percent
 Pedestrian Delay: 100 percent

To technically justify the installation of a pedestrian crossover, both warrants must be satisfied to 100 percent. Given the heavy traffic volumes on Mount Pleasant Road, and that pedestrians crossing east/west at Roxborough Drive must do so in two stages, the pedestrian delay component would also be justified in this case.

Given the study results, a pedestrian crossover is warranted on Mount Pleasant Road at Roxborough Drive. A pedestrian crossing would generally not be installed on a major arterial roadway such as Mount Pleasant Road. However, if the pedestrian crossing installation would be unsuitable or unsafe, then traffic control signals would be considered.

A review to assess any deficiencies in the operational and physical suitability of a potential PXO at this location was carried out. By comparing the operation of the potential PXO to an “environmental audit” we determined whether a PXO would operate under acceptable conditions. The standards and the comparative characteristics at this location are described in the table below.

Environmental Audit

Standard/Criteria to be met for physical suitability of a pedestrian crossover	Met / Not Met	Comment
Vehicle operating speed less than 60 km/h	Met	The current posted speed limit on Mount Pleasant Road is 60 km/h
Not more than four lanes wide on a two-way street, or more than three lanes wide on a one-way street	Met	Mount Pleasant Road operates with two lanes of traffic in each direction
Traffic Volumes less than 35,000 vehicles per day (total both directions)	Not Met	Mount Pleasant Road carries approximately 35,000 vehicles per day in both directions
No driveways or entrances nearby	Not Met	Roxborough Drive
No significant volume of turning movements which interfere with PXO	Not Met	NB right turns 135 SB left turns 158
No visibility problems exist for either pedestrians or motorists	Met	None
No loading zones (including TTC) in the immediate vicinity	Met	None
No less than 215 metres to another PXO or traffic control device	Met	710 m south to TCS at Elm Avenue 870 m north to TCS at Inglewood Drive

The results of the audit indicates three out of eight criteria failed at this location and that a pedestrian crossover is unsuitable. Typically, when the Audit fails the installation of traffic control signals would then be considered and would be installed regardless of the warrant requirement for the installation of traffic control signals.

Conclusion

Although this intersection does not meet the technical warrants for a traffic control signal, and taking into consideration that the Beltline Trail is currently heavily used by local residents, fully signalizing Mount Pleasant Road at Roxborough Drive would provide pedestrians with the safest controlled crossing option.

Fully signalizing this intersection should offer the maximum degree of control between motorists and pedestrians. The primary function of any traffic signal is to assign right-of-way to conflicting movements of traffic at an intersection, and it does this by permitting conflicting streams of traffic to share the same intersection by means of time separation. It must be noted, however, that the implementation of a traffic control signal does not necessarily guarantee the reduction of pedestrian/vehicular conflicts. All road users must be aware of their surroundings at all times.

Implementing a traffic control signal at Mount Pleasant Road and Roxborough Drive will also provide a controlled point of entry to/from the neighbourhood to the east (North Rosedale), and will allow westbound motorists on Roxborough Drive to make a southbound left-turn movement onto Mount Pleasant Road which is currently prohibited at all times.

Councillor Kristyn Wong-Tam has been advised of the recommendations of this staff report.

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SIGNATURE

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LIST OF ATTACHMENTS

1. Drawing No 421G-2190, dated July 2016

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