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Traffic Control Signals - Don Mills Road and Rochefort Drive

Date: August 21, 2023
To: North York Community Council
From: Director, Traffic Management, Transportation Services
Wards: Ward 16 - Don Valley East

SUMMARY

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

Transportation Services is requesting approval to install traffic control signals at the intersection of Don Mills Road and Rochefort Drive and rescind the existing southbound and westbound, 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m., Monday to Friday left-turn prohibitions at the intersection. Rescinding the turn prohibitions will result in the traffic control signals justification criteria being met. Traffic signals will enhance safety for all road users and are justified based on the assessment undertaken. This will result in the loss of approximately six pay and display parking spaces.

RECOMMENDATIONS

The Director, Traffic Management, Transportation Services recommends that:

1. City Council authorize the installation of traffic control signals at the intersection of Don Mills Road and Rochefort Drive.

2. In conjunction with the installation of traffic control signals at the intersection of Don Mills Road and Rochefort Drive:

a. City Council rescind the existing southbound and westbound left turn prohibitions, in effect from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 6:00 p.m., Monday to Friday, at the intersection of Don Mills Road and Rochefort Drive.

FINANCIAL IMPACT

The estimated cost for installing traffic control signals at the intersection of Don Mills Road and Rochefort Drive is \$210,000. Funding would be subject to availability and competing priorities within the Transportation Services 2023 Capital Budget. The estimated lost pay and display parking revenue is \$3,485.

DECISION HISTORY

North York Community Council, at its meeting on September 28, 29 and 30, 2004, adopted clause 19 which authorized westbound and southbound left-turn prohibitions, in effect from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 6:00 pm., Monday to Friday, at the intersection of Don Mills Road and Rochefort Drive. The turn prohibitions were authorized as an alternative to traffic control signals which were technically justified at that time.

https://www.toronto.ca/legdocs/2004/agendas/committees/tn/tn040914/it027.pdf

COMMENTS

Transportation Services was requested by the Ward Councillor, on behalf of local residents, to investigate the feasibility of installing traffic control signals at the intersection of Don Mills Road and Rochefort Drive and rescinding the southbound and westbound peak period left-turn prohibitions at the intersection. This was requested to improve community access.

Existing Conditions

Don Mills Road is characterized by the following conditions:

- It is a six-lane, north/south major arterial roadway
- It operates two-way on a pavement width of approximately 24 metres
- The daily TWO-WAY/ONE-WAY traffic volume is approximately 40,000 vehicles
- The speed limit is 50 km/h
- Heavy trucks are permitted at all times
- There is TTC service provided by the 25, 925 and 325 buses
- There are sidewalks located on both sides of the street

Rochefort Drive is characterized by the following conditions:

- It is a two-lane, east/west local roadway
- It operates two-way on a pavement width of approximately 13.5 metres
- The daily two-way traffic volume is approximately 2,700 vehicles
- The speed limit is 50 km/h
- Heavy trucks are permitted at all times
- There is no TTC service
- There are sidewalks on both sides of the street

Rochefort Drive is stop-sign controlled and Don Mills Road operates free-flow. The adjacent land use in this area is a mix of institutional, residential and commercial.

The closest traffic control signals on Don Mills Road are located approximately 280 metres to the north at Eglinton Avenue East and approximately 170 metres to the south at St Dennis Drive.

A map of the area is included in Attachment 1.

Traffic Control Signals

To determine the need for traffic control signals at the intersection of Don Mills Road and St Dennis Drive, staff rely on the justification criteria as outlined in the Ontario Traffic Manual (OTM) Book 12. The OTM justification criteria includes factors such as volume of vehicles and pedestrians, delay to cross traffic, and collision history. In addition to these technical justifications, staff consider an environmental checklist which includes consideration of road width, posted speed limit, operating speeds, adjacent land uses, pedestrian desire lines and demographics, presence of a transit stop, sight lines, and distance between existing crossing opportunities.

As part of the investigation, staff conducted a vehicle and pedestrian count on April 25, 2023 at the subject intersection. The results of the count and collision hazard are summarized in Table 1. The "Collision hazard" criterion is based on the number of collisions potentially preventable by the installation of traffic control signals. Collision history provided by the Toronto Police Service for the three-year period ending December 31, 2023 disclosed nine collisions at the subject intersection that were potentially preventable by the installation of traffic control signals. One of the collisions involved a pedestrian and one involved a cyclist.

| Justification | Compliance level | |
|---|------------------|--|
| Minimum vehicular volume | 69% | |
| Delay to cross traffic (pedestrians and vehicles) | 22% | |
| Collision hazard | 60% | |

Table 1: Warrant Compliance - Don Mills Road and Rochefort Drive

To meet the justification criteria for the installation of traffic control signals, one of the justifications must be 100 percent satisfied or the minimum vehicle volume and delay to cross traffic justifications must be at least 80 percent satisfied. Therefore, the installation of traffic control signals is not justified based on the current traffic volume at the intersection.

Traffic Control Signals - Don Mills Road and Rochefort Drive

However, to determine if signals would be justified if the existing southbound and westbound left-turn prohibitions were rescinded, the criteria was re-evaluated using the traffic volume at the intersection prior to the turn prohibitions being signed in 2004.

Based on this re-evaluation the justification criteria are satisfied, as shown in Table 2.

Table 2: Warrant Compliance - Don Mills Road and Rochefort Drive

| Justification | Compliance level |
|---|------------------|
| Minimum vehicular volume | 81% |
| Delay to cross traffic (pedestrians and vehicles) | 92% |
| Collision hazard | 60% |

Table 3 shows the southbound and westbound left-turn traffic volumes before and after the turn prohibitions were signed.

| Table 3: Before and After | Left-turn Volumes |
|---------------------------|-------------------|
|---------------------------|-------------------|

| Study Date | Southbound Left-turn | | Westbound Left-turn | |
|---------------------------|----------------------|-------------------|---------------------|-------------------|
| | AM Peak Period | PM Peak Period | AM Peak Period | PM Peak Period |
| Sept 23, 2003 (Before) | 420 | 296 | 33 | 42 |
| April 25, 2023 (After) | 59 | 38 | 19 | 5 |

Therefore, the installation of traffic control signals would likely be justified if the southbound and westbound peak period left-turn prohibitions were rescinded.

In regards to the environmental checklist, staff noted the following environmental factors:

- The 450 metre spacing between pedestrian crossing protection on Don Mills Road;
- The pedestrian generators in the immediate area, including residential and institutional that attract vulnerable pedestrians to cross the street; and
- The six lane cross-section on Don Mills Road, as well as the speed and volume of traffic.

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In considering the above environmental factors, Transportation Services recommends the installation of traffic control signals at the intersection of Don Mills Road and Rochefort Drive, contingent on rescinding the southbound and westbound peak period left-turn prohibitions.

The TTC has been consulted and has no comments on the proposed traffic control signals.

Other Considerations

It should be noted that the installation of traffic control signals will have the following additional impacts:

- There will be a loss of approximately six paid parking spaces on Rochefort Drive.
- There is potential for increase in delays to transit service on Don Mills Road.
- There will be an increase in traffic on Rochefort Drive.

The Ward Councillor has been advised of the recommendation in this report.

CONTACT

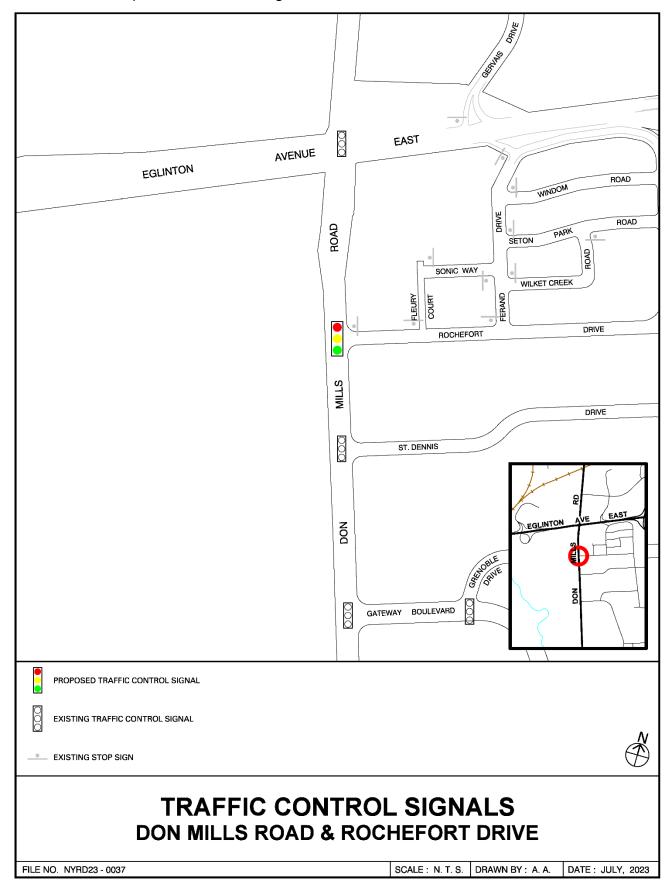
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SIGNATURE

Roger Browne, M.A.Sc., P. Eng. Acting Director, Traffic Management, Transportation Services

ATTACHMENTS

Attachment 1: Map - Traffic Control Signals - Don Mills Road and Rochefort Drive



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