

Vision Zero Road Safety Plan Right-Turn-on-Red Prohibitions - Scarborough

Date: March 30, 2021

To: Scarborough Community Council

From: Director, Project Design and Management, Transportation Services

Wards: Ward 21, Scarborough Centre; Ward 22, Scarborough-Agincourt

SUMMARY

This staff report is about right-turn-on-red prohibitions affecting roadways where the Toronto Transit Commission operates bus service, requiring City Council approval.

One focus action in the Vision Zero 2.0 Road Safety Plan approved by Council in July 2019 is addressing turning collisions at signalized intersections. This can be addressed through the utilization of several tools, including the strategic application of right-turn-on-red prohibitions.

The purpose of this report is to recommend right-turn-on-red prohibitions at three intersections in Scarborough Community Council area and presents the decision making process for selection of these intersections.

RECOMMENDATIONS

The Director Project Design and Management, Transportation Services, recommends that:

1. City Council prohibit right turns on a red signal at the following locations:

- a) Eglinton Avenue East and Danforth Road for southbound and northbound traffic
- b) Danforth Road and Trudelle Street for westbound traffic

2. City Council request the Ministry of Transportation to prohibit right turns on a red signal at the following location:

- a) Victoria Park Avenue and Highway 401 Westbound Off-ramp for westbound traffic

FINANCIAL IMPACT

The financial cost of installing the right-turn-on-red prohibition signs included within this report is approximately \$1,000. Funding is available in the Transportation Services' 2021 Capital Budget.

DECISION HISTORY

At its meeting of December 16, 17 and 18, 2020, City Council approved a number of recommendations to further enhance the Road Safety Program. One such measure was the development of a strategy to identify intersection locations that would benefit from proactive right-turn-on-red prohibitions.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.IE18.4>

COMMENTS

Right-turn-on-Red Prohibitions

One focus action in the Vision Zero 2.0 Road Safety Plan is addressing turning collisions at signalized intersections. Right-turn-on-red (RTOR) prohibitions may improve safety for some people at signalized intersections by restricting drivers facing a red signal from turning right across the path of people walking or cycling with the right-of-way. In Toronto in the last five years about 2% of serious injury or fatal collisions with people walking and 4% of serious injury or fatal collisions with people cycling have been with a right-turning vehicle turning on a red signal.

As part of the Vision Zero 2.0 Road Safety Plan, Transportation Services has begun assessing strategic implementation of RTOR prohibitions. This includes an assessment of historical collision patterns and conflicts between right-turning vehicles and people walking and cycling in addition to prioritizing intersections with geometric and operational conditions that typically lead to conflicts between right-turning drivers and vulnerable road users.

The assessment considered a blanket city-wide ban on RTOR and found that there would be a potential safety benefit at some locations, but that at other locations, introducing RTOR prohibitions may result in less safe conditions for people walking and cycling. Prohibiting the movement of right-turning vehicles during the red phase of a traffic signal inevitably concentrates the entire volume of right-turning vehicle demand to the green phase of the signal.

At some locations, introducing RTOR prohibitions can result in less safe conditions by shifting potential right-turn conflicts to crossings with a higher volume of people walking and cycling. Moreover, vehicles pick up more speed as they complete their turn and approach people walking or cycling crossing with the green signal.

In place of implementing default RTOR prohibitions, staff have developed a strategy to identify locations that could benefit from proactive RTOR prohibitions. Some characteristics of a location that would benefit from RTOR are:

- Locations with a historic trend of collisions or conflicts between people driving and walking/cycling observed during a RTOR movement;
- Skewed intersections where sightline limitations may result in the inability to make right-turn movements safely while noticing and reacting to the presence of crossing vehicles, people walking or cycling;
- Intersections with RTOR movements that could potentially conflict with opposing dual left-turn movements without sufficient receiving lanes to separate the two movements; and
- A combination of operational parameters that increase the exposure of people walking and cycling (i.e. locations where crossing pedestrians and cyclists significantly out-number right-turning vehicles, particularly trucks).

Transportation Services is recommending RTOR prohibitions at three (3) intersections in Scarborough at the following locations:

- Eglinton Avenue East and Danforth Road, for southbound and northbound traffic;
- Danforth Road and Trudelle Street, for westbound traffic; and
- Victoria Park Avenue and Highway 401 Westbound Off-ramp, for westbound traffic.

Staff will be evaluating the safety impact of RTOR restrictions in various scenarios, including the potential impact on conflicts with right-turning vehicles in the green phase, as noted above. Results of the evaluation will help determine conditions when RTOR restrictions are most effective to inform future recommendations for RTOR restrictions.

The Ward Councillors have been informed of the recommendations of this report.

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