

Traffic Safety Study: Steeles Ave West and Torresdale Avenue / Thurman Road

Date:	December 2 , 2015
To:	North York Community Council
From:	Director, Transportation Services, North York District
Wards:	Ward 10 – York Centre
Reference Number:	<i>p:\2015\ClusterB\TRA\NorthYorkDistrict\ny16011</i>

SUMMARY

As the Toronto Transit Commission operates a transit service on Steeles Avenue West, City Council approval of this report is required.

Transportation Services is seeking direction from City Council to modify the intersection of Steeles Avenue West and Torresdale Avenue/Thurman Road, in order to address the concerns of the Ward Councillor and residents by extending the centre medians, relocating the existing crosswalk area on the west and east side of the intersection and relocate the existing pedestrian pushbuttons as required.

The reconfiguration of the centre medians, in conjunction with the relocation of the existing north/south crossing area and traffic signal plant (pedestrian pushbuttons) modifications will improve the overall operation of the intersection for pedestrians.

RECOMMENDATIONS

Transportation Services recommends that:

1. City Council direct Transportation Services to proceed with the improvements to the intersection of Steeles Avenue West and Torresdale Avenue/Thurman Road as follows:
 - a. Centre median extensions on the west and east leg;
 - b. Relocate the existing pedestrian crossings outward on the west and east leg;
 - c. Relocate/Install pedestrian pushbuttons adjacent to the north/south crossings
 - d. Review the location of the existing transit shelter on the southwest corner of the intersection behind the existing sidewalk.

Financial Impact

All costs associated with the reconfiguration of the intersection of Steeles Avenue West and Torresdale Avenue/Thurman Road, estimated at \$50,000, are to be included as part of Transportation Services Capital Works Program, Transportation Safety and Local Improvements Program for 2016, subject to competing priorities and/or available funding.

DECISION HISTORY

At its meeting of September 8, 2015 North York Community Council adopted a motion (Item NY8.51) from the Ward Councillor, requesting that the Director, Transportation Services, North York District, to conduct and complete a safety study and report back with recommendations on how to improve safety at the intersection by the January 2016 North York Community Council Meeting.

Council Link:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.NY8.51>

ISSUE BACKGROUND

The Ward Councillor has advised Transportation Services that their office has been receiving "many calls from constituents questioning the safety of the intersection" since an incident in April of 2014 which had prompted a request to staff in January of 2015 to review the intersection operation. Subsequently, since the initial request the Ward Councillor has received more calls due to a fatality involving a pedestrian crossing the roadway.

COMMENTS

Existing Conditions

The intersection of Steeles Avenue West and Torresdale Avenue/Thurman Road forms a four legged intersection that is controlled by a traffic control signal. This section of Steeles Avenue West is comprised of a seven lane cross-section, consisting of three westbound and three eastbound through lanes and dedicated left-turn lanes at the intersection. The approximate width of the roadway is 25 metres. Municipal sidewalks are located on both sides of Steeles Avenue West and on both sides of Torresdale Avenue and Thurman Road. The posted speed limit is 60 km/h on Steeles Avenue West, and 40 km/h on Torresdale Avenue and 50 km/h on Thurman Road.

At the intersection of Steeles Avenue West and Torresdale Avenue/Thurman Road northbound and southbound through traffic is restricted from 7:00 a.m. to 6:00 p.m., Monday to Friday. Eastbound right turns and westbound left turns are also restricted from

7:00 a.m. to 9:00 a.m., Monday to Friday. These restrictions were installed in order to minimize the traffic infiltration into the community located on the south side of Steeles Avenue West.

Existing Operations

The current pedestrian generators in the area are the high-rise condominiums and townhouse complex located on the southeast and southwest corners of the intersection, and the single family homes located within walking distance of the intersection. Toronto Transit Commission transit stops are located on the southwest and northeast corner and are serviced by the Steeles West surface transit route.

Given the direction from North York Community Council, staff have conducted field observations, reviewed the existing turning movement counts for the intersection and reviewed the collision data for the previous five years.

The eight-hour turning movement count for this intersection has indicated that total intersection volumes are not excessive and that the pedestrian volumes are relatively low with 146 pedestrians crossing Steeles Avenue West during the eight-hour study period. The following table provides a breakdown of the traffic flow during the a.m., average off peak hour and p.m. peak hour traffic movements based on the data collected on May 8, 2012. Our observations confirm that this count is still representative of the conditions at this intersection.

	Northbound			Eastbound			Southbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
A.M	165	6	41	7	1166	23	160	2	23	3	1492	57
OFF-AVG	123	4	49	11	899	100	40	2	15	23	999	52
P.M.	405	13	44	18	1476	254	43	4	7	38	1150	157

A review of Toronto Police Service collision records revealed that in a five-year period ending October 31, 2015, there have been thirty-four collisions in which five collisions involved pedestrians. The collision details are shown in the table below.

Year	AM Peak Period		Off Peak (day/evening)		PM Peak Period		Total
	Total	Pedestrian	Total	Pedestrian(age)	Total	Pedestrian(age)	
2011	0	0	3	0	5	1 (56)	8
2012	0	0	7	1 (83)	3	0	10
2013	2	0	2	0	1	0	5
2014	1	0	4	1 (28)	4	1 (70)	9
2015	0	0	2	1 (85)	0	0	2
Total	3	0	18	3	13	2	34

The collisions analysis has concluded, that although there was no specific time of day that incidents involving pedestrians occurred, four of the five pedestrian collisions involved pedestrians crossing the major roadway. One of the incidents resulted in the pedestrian succumbing to their injuries some time after the collision, and the specific details for this incident are not yet available.

The intersection is currently equipped with pedestrians signal displays and countdown timers which are clearly visible to the pedestrians and zebra-striped crosswalks for all approaches to the intersection.

Pedestrians must activate the push button in order to receive the appropriate pedestrian walk display (walk indication and countdown indication), and be provided the appropriate amount of time to cross the roadway. Our field observations during the a.m., off peak and p.m. peak hours indicated that the majority of the pedestrians that crossed the roadway were either passengers alighting or boarding the Steeles West buses. All pedestrians were able to cross the roadway within the allocated pedestrian crossing time, although they did not consistently use the pushbutton.

Intersection Design

A review of the geometry and intersection layout has also been undertaken. Our review consisted of reviewing the placement of the existing traffic signal plant (pedestrian pushbuttons), pavement markings, civil design (i.e. centre median, accessibility ramps, sidewalk leads) and sightlines for both pedestrians and motorists.

With regards to the traffic signal plant, it was noted that the placement of the existing pedestrian pushbuttons are less than desirable on three of the four corners. Pedestrian push buttons ideally should be located adjacent to the crossing area and as close as possible to the roadway. In this instance they are obscure and awkward to get to and require that pedestrians walk on the sodded boulevard. As for the existing pavement markings identifying the crossing areas on the west and east leg of the intersection, there is some adjustments that can be made to reduce the crossing distance for pedestrians.

Relocating the crossing areas outward away from the intersection would result in a reduced crossing distance for the pedestrians and ultimately minimize their exposure to vehicular traffic, specifically the turning movements. It was also noted that the existing centre median for the traffic signals is setback approximately 9.0 metres from the intersecting roadway, which allows for a very generous turning movement for the southbound and northbound left turns. Extending the centre medians to be closer to the crosswalks should reduce the speed of the left-turning movement and increase driver awareness at the intersection.

In addition to the above, we have requested Toronto Hydro Street Lighting Unit to undertake an assessment of the existing lighting levels at this intersection to ensure that the appropriate lighting levels are present. We have also requested that Transportation Services, Public Realm Unit consider relocating the existing Transit Shelter on the southwest corner of the intersection from within the municipal boulevard to behind the sidewalk. This may improve sightlines for westbound right-turn traffic of the pedestrians crossing on the south leg of the intersection.

The intersection modifications are identified in the attached drawing (Attachment 2). Relocating the pedestrian pushbuttons and crosswalks, extending the centre medians, assessment of the street lighting and possible transit shelter relocation should result in a safer environment for both motorists and pedestrians that travel through this intersection.

The Ward Councillor has been advised about the recommendations in this staff report.

CONTACT

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SIGNATURE

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Director

ATTACHMENTS

Attachment 1: Map – Steeles Avenue W and Torresdale Avenue: Traffic Safety Study
Attachment 2: Map – Steeles Avenue W and Torresdale Avenue: Proposed Pavement Marking and Centre Median Improvements