



**STAFF REPORT
ACTION REQUIRED**

**Proposed Speed Limit Reduction and Other Safety
Issues – Northwest Quadrant Sandhurst Circle at Albert
Campbell Collegiate Institute**

Date:	April 16, 2008
To:	Scarborough Community Council
From:	Director, Transportation Services, Scarborough District
Wards:	Ward 41 – Scarborough Rouge River
Reference Number:	P:\2008\Cluster B\TRA\Scarborough\sc08038 D08-424 Sandhurst Circle, Speed Reduction and Pedestrian Safety

SUMMARY

This staff report is about a matter for which the Community Council has delegated authority from City Council to make a final decision.

The purpose of this report is to obtain approval for the installation of a reduced speed limit along the northwest quadrant of Sandhurst Circle that has its north limit at the west side of McCowan Road and its south limit at the north side of Finch Avenue East. Along this section of Sandhurst Circle a 40 kilometre per hour (km/h) speed limit is technically justified and recommended.

Traffic studies reveal that the existing pedestrian crossover, located along side 1500 Sandhurst Circle between Albert Campbell Collegiate Institute and Wood Square Mall, is operating in a safe and efficient manner and, continues to be a suitable location for a pedestrian crossover. Studies to determine if traffic control signals would be appropriate at this location indicate that the technical warrants for the installation of traffic control signals are not met.

A status report on the use of Community Safety Zones is also provided for information.

RECOMMENDATIONS

Transportation Services, Scarborough District, recommends that Scarborough Community Council:

1. Adopt a 40 kilometre per hour speed limit on the subject portion of Sandhurst Circle, as identified in Appendix 1 of this report,
2. Traffic control signals not be installed on Sandhurst Circle at the existing site of the pedestrian crossover by 1500 Sandhurst Circle between Albert Campbell Collegiate Institute and Woodside Square Mall at this time, and
3. Amend the appropriate by-law(s) accordingly.

Financial Impact

The financial cost of installing these speed limit signs is approximately \$1,000.00. The funding for these signs is available in the Transportation Services 2008 Operating Budget, within Cost Centre TP0226.

DECISION HISTORY

Further to a request from Councillor Chin Lee, Transportation Services staff reviewed this site to determine whether additional or new traffic control measures would be appropriate. This review included an assessment of the existing pedestrian crossover signals and whether traffic control signals would be preferable at the subject location.

Concern about pedestrian safety following an incident in November 2007 in which two pedestrians were struck in the pedestrian crossover by a police cruiser prompted this request.

The released information from the Special Investigations Unit into this collision indicate that, while two pedestrians were admitted to hospital with varying degrees of injuries, there were “no reasonable grounds to support the charge of dangerous driving, or dangerous driving causing bodily harm”. To date, this has been the only reported pedestrian collision at this pedestrian crossover in 2007.

Excessive speed of traffic along this portion of Sandhurst Circle has been raised as a concern and will be reported on accordingly.

ISSUE BACKGROUND

Further to a request from Councillor Chin Lee, regarding speeding concerns on the northwest quadrant of Sandhurst Circle, Transportation Services staff reviewed the feasibility of reducing the speed limit from 50 km/h to 40 km/h on this roadway.

The justification for the installation of traffic control signals in the City of Toronto, the Traffic Control Signal Warrant, has been adopted by Council.

COMMENTS

Key factors involving this portion of Sandhurst Circle include:

- This portion of Sandhurst Circle is located to the northwest of McCowan Road and Finch Avenue East in the neighbourhood of Agincourt North.
- It is a two-lane collector roadway with edge lines used to create a narrowing effect.
- Daily traffic volume on this road is approximately 5,200 vehicles per day (vpd), which is within the volume range for this classification of roadway (between 2,500 to 8,000 vpd).
- The speed limit within the subject area of Sandhurst Circle is posted at 50 kilometres per hour (km/h).
- An All-Way Stop Control and warning beacon on Sandhurst Circle at Brimwood Boulevard presently controls approaching traffic at this three-way intersection and a mall access driveway.
- Sidewalks are located on both sides of Sandhurst Circle.
- A pedestrian crossover is located in the vicinity of Albert Campbell Collegiate Institute across from Woodside Square Mall.

40 Km/h Speed Limit Warrant

Application of this warrant reveals that a 40 km/h speed limit is appropriate on the northwest quadrant of Sandhurst Circle. Specifically, because the Pedestrian Environment category is satisfied a 40 km/h speed limit is warranted on the noted portion of Sandhurst Circle. Within the “Pedestrian Environment” category of this warrant, as parkland abuts the road which is contiguous to, and used to gain access to, an elementary school (Brimwood Boulevard Junior Public School and Our Lady of Grace Separate School) one of the required conditions is met.

As well, as part of this warrant, road width is also considered. In this case, although the road width (curb to curb) is in excess of 10.5 metres, the installation of edge lines has reduced the travelled lane width. Since the functional road width is 8.9 metres with the painted edge lines, a second condition is met that satisfies this speed reduction warrant.

Traffic Control Signal Warrant

Transportation Services staff conducted a Mid-Block Traffic Control Signal Warrant Study (Tuesday, April 15, 2008) at the existing site of the pedestrian crossover on Sandhurst Circle between Albert Campbell Collegiate Institute/Woodside Square Mall. Using traffic volumes recorded over the peak eight hours of a typical weekday the following negative results were obtained:

Warrant	Compliance
1. Vehicle Volume Along Major Street	62%
2. Collision Hazard	7%

For the mid-block traffic control signals to be numerically satisfied, the “Vehicular Volume along the Major Street” warrants must be 100% satisfied.

As outlined in the table, the traffic volumes do not meet the requirements to install mid-block traffic control signals.

To obtain the 7% Collision Hazard compliance information noted in the data table above, a review of the required period (January 1, 2005 to December 31, 2007) revealed that one pedestrian collision incident occurred during the evening of Friday, November 9, 2007.

On this occasion, reviewed by the Special Investigations Unit, during inclement weather, a southbound police cruiser struck two westbound pedestrians within the pedestrian crossover. The Special Investigations Unit indicated that “the overhead flashing lights at the crosswalk were on”. The Director of the Special Investigations Unit summarized their report by saying, “there are no reasonable grounds to support the charge of dangerous driving or dangerous driving causing bodily harm”.

To provide greater insight into these mid-block signal studies, Transportation Services staff observed the operations of the existing pedestrian crossover. In our recent study we observed 3,546 pedestrians cross by the area of the existing pedestrian crossover during our 8 hour study. Of the pedestrians recorded, 2,655 either did not activate the pedestrian button or did not use the pedestrian crossover (PXO). Much of this pedestrian behaviour could be attributed to lack of patience. The table below shows these pedestrian patterns.

Location: Sandhurst Circle – Albert Campbell Collegiate Institute

Date/Time: April 15, 2008, 8-Hours (7:00-9:00 a.m., 11:00-2:00 p.m., 3:00-6:00 p.m.)

Pedestrians	Pedestrians Properly Using PXO	Pedestrians Not Activating Beacons	Pedestrians Did Not Activate Beacons & Did Not Provide Motorist any Stop Time	Pedestrians Did Not Use PXO	Total Pedestrians Observed	Motorist Had Adequate Stop Time, But Travelled Through PXO
Assisted Children	34	7	1	15	57	0
Unassisted Children	1	4	0	0	5	0
Youth & Adults	856	2,455	8	156	3,476	17
Senior Citizens	0	8	0	0	8	0
Handi-capped	0	0	0	0	0	0
Total Pedestrians	891	2,474	9	171	3,546	17

In this table, a pedestrian crossover disobedience by a motorist occurs when the investigator determines that the motorist could have stopped safely, however, failed to do

so. Investigation staff specifically noted these incidents did not expose pedestrians to significant safety risks as the motorists appeared to be aware of the location and walking speed of the pedestrians. The current values shown in this table closely reflect the results observed in a February 2004 study at this pedestrian crossover.

This table vividly shows established non-compliance pedestrian habits with the existing pedestrian crossover at this location. Nonetheless, an advantage of pedestrian crossovers is the quick reaction to pedestrian demand. When a call button at a pedestrian crossover is activated, immediately, alternating beacons flash to warn approaching motorists of the likelihood of pedestrians within the crossing.

The typical activation of mid-block signals would also require pedestrians to physically press a signal call button. After pressing this button, unlike the pedestrian crossover, during most occasions, the mid-block signals would have a programmed wait time before a walk indication would be given to pedestrians. As such, it is anticipated that many students/pedestrians would cross Sandhurst Circle while the mid-block traffic control signals would be showing green for north/south vehicle traffic. The estimated cost to install the unwarranted mid-block signals is approximately \$75,000.00.

Pedestrian Crossover Observations / Safety Review

To assess the suitability of the existing pedestrian crossover in February 2004, we conducted a detailed review of the subject pedestrian crossover. This review compared the standards at this pedestrian crossover with the recommended design standards, or “environmental standards”, for pedestrian crossovers as developed by the Province of Ontario in consultation with Ontario municipalities. These criteria describe a roadway environment suitable for this type of control, and exposure factors, which would make a pedestrian crossover unsuitable or potentially unsafe.

The results of our “environmental standards” review revealed that the pedestrian crossover is operating in a safe and efficient manner, and continues to be a suitable location for a pedestrian crossover. The Provincial standards and the comparative characteristics at this location are described in more detail in the table below.

The following table outlines our review of these criteria and whether they are satisfied at this location. The failure of a location to meet any one standard does not necessarily mean that the pedestrian crossover should be replaced with traffic control signals.

Standards or Criteria to be Met for Physical Suitability of a Pedestrian Crossover	Met/ Not Met	Comment
Vehicle operating speed less than 60 km/h.	Met	85 th percentile speed is 48 km/h *Note: Posted Speed Limit is 50 Km/h, April 7, 2008.
Not more than four lanes wide on a two-way street or more than three lanes wide on a one-way street.	Met	Sandhurst Circle is two-lanes wide (one northbound and one southbound).
Traffic volume less than 35,000 vehicles per day (total both directions).	Met	5,141 vehicles per day, April 7, 2008.
No driveways or entrances nearby (other driveways at the mall, and residential complex are beyond 45 metres away).	Not Met	One school “exit only” driveway is located north of the PXO (21 metres north).
No significant volume of turning movements which interfere with PXO.	Met	The PXO is located mid-block, driveway has relatively low volumes.
No visibility problems exist for either pedestrians or motorists.	Met	Visibility is good.
No loading zones (including TTC) in the immediate vicinity.	Met	There is no school bus loading zone on Sandhurst Circle, and is not a public transit route
Not less than 215 metres to another PXO or traffic control device.	Not Met	All-way stop control 175.5 metres north at Brimwood Boulevard. Traffic control signals 228.6 metres south at Finch Avenue.

We reviewed the pedestrian crossover environmental criteria, which were not satisfied and determined that they are conditions that could be improved or are not a significant safety concern to the operation of the pedestrian crossover. Specifically, the school driveway is for exiting vehicles only, and does not obstruct pedestrian sight lines. Moreover, the distance between traffic controls, although slightly below standard, does not pose a safety concern on Sandhurst Circle.

In view of the above, the subject pedestrian crossover continues to be a safe and suitable form of pedestrian crossing protection for this location.

However, an upgrade of the existing beacons from the existing eight inch lamps to the larger twelve inch lamps will be requested of the Traffic Management Centre. This request will also include the installation of pole mounted side beacons.

Sandhurst Circle - Toronto Police Service Collision Records

To provide an up-to-date assessment of the Toronto Police Services collision record along the study portion of Sandhurst Circle, a five-year review period for which we have complete data (January 1, 2003 to December 31, 2007), is shown in the table below.

Five-Year Collision Period	Pedestrian Related Collisions Involving the Pedestrian Crossing on Sandhurst Circle
2003	1
2004	0
2005	0
2006	0
2007	1
Total Collisions	2

The first noted collision on this table occurred on May 16, 2003 collision at 11:20 a.m. at the pedestrian crossover in front of Albert Campbell Collegiate. The police records indicate that the pedestrian did not activate the beacons. The pedestrian in this instance received minor injuries. The driver was not charged.

The most recent collision occurred on November 9, 2007 at 9:23 p.m. within the pedestrian crossover and has been elaborated on previously in this report. The pedestrians involved in this collision were hospitalized. According to our records, to date, there have not been any charges against either the pedestrians or the police officer driving the cruiser involved in this incident.

This collision record is not indicative of a safety problem at this site.

Community Safety Zones

Councillor Chin also asked Transportation Services to comment on the feasibility of signing this northwest quadrant of Sandhurst Circle as a Community Safety Zone. A Community Safety Zone is a designated road segment where, for example, the fines for speeding violations are approximately 80 percent higher compared to non-Community Safety Zones. The intent of these zones is to create a deterrent to abhorrent driving behaviours in particularly sensitive areas.

However, initial tests within Community Safety Zones revealed that these designations were not generally effective in changing illegal driving behaviour. Other municipalities testing Community Safety Zones, (including the Regional Municipalities of Niagara, Durham and the City of Mississauga), revealed similar results.

Several factors were cited for the initial ineffectiveness of these zones. However, the significance of sustained police enforcement as the primary influence in the reduction of vehicle operating speeds was noted. Furthermore, the impact of special signing alone appeared to have a negligible effect on driver behaviour. Additional concerns included the potential public perception that Community Safety Zones could be seen as revenue generating devices verses a traffic safety initiative.

Amongst the six recommendations adopted by City Council in August 2000 concerning the evaluation of the effectiveness of these zones included the provision that, “additional Community Safety Zones not be installed at this time”. Therefore, until such time City Council lifts this moratorium, a Community Safety Zone designation cannot be given to the study section of Sandhurst Circle. It should also be noted that the the issue of Community Safety Zones is not delegated to Community Councils under Toronto Municipal Code, Chapter 27.

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ATTACHMENTS

1. Appendix 1 – By-law Amendment (enact)
2. Location Plan (Proposed 40 Km/h Speed Limit – Northwest Quadrant of Sandhurst Circle)

Appendix 1

“Maximum Rate of Speed – 40 Kilometres Per Hour”
Regulation to be enacted

<u>Highway</u>	<u>From</u>	<u>To</u>
Sandhurst Circle	north limit at the west side of McCowan Road	south limit at the north side of Finch Avenue East