

# Annual Pedestrian Crossover Program Update

## Background:

In May 2016, a report entitled "[Pedestrian Crossover Facilities](#)" was presented to Operations Committee. The report provided an overview of this new tool and recommended that an annual report prioritizing the installation of pedestrian crossovers (PXOs) based on existing and anticipated pedestrian volumes be presented to the Committee. This report has been prepared to fulfill that commitment.

In 2017 and 2018, the annual [Pedestrian Crossover Program Update](#) report was presented to the Operations Committee highlighting new crossovers to be installed, as well as reporting on monitoring and compliance of previously installed PXOs. As part of that report, staff committed to bring forward future reports to highlight results of analysis conducted to determine whether pedestrian crossovers requested by members of the public were warranted.

This update is being presented at this time, so that potential new pedestrian crossovers locations that were evaluated in 2019 can be approved and installed in 2020.

## Monitoring Program Update:

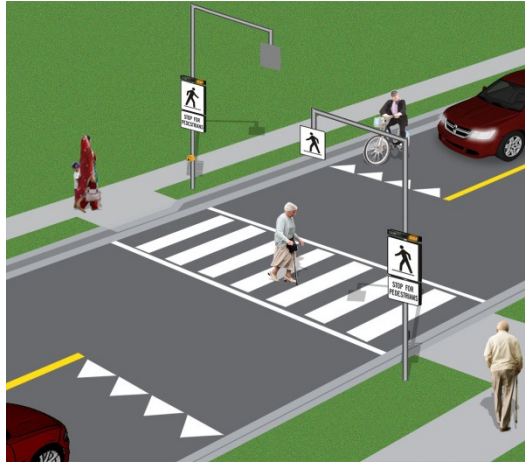
When the Pedestrian Crossover Program for the City was initially developed in 2016, an approach to monitor the success of the program was also planned to ensure the PXOs are achieving their objective of improving pedestrian safety in Greater Sudbury.

To measure motorist compliance, traffic cameras were used to record pedestrian and motorist movements at the various PXOs. To determine motorist compliance, staff were specifically looking for two behaviours: 1) did the approaching motorist stop when a pedestrian was present at the side of the road and 2) did the motorist remain stopped until the pedestrian had completely left the roadway.

Pedestrian compliance is somewhat more difficult to determine, as per the *Highway Traffic Act*, the presence of the 'Stop for Pedestrians' signs are all that is required for motorists to have to stop to allow pedestrians to cross the road. In addition, when flashing beacons are present at the PXO, pedestrians are not required to activate them prior to crossing. Rather, they are required to enter the road only when there would be adequate time for an approaching vehicle to stop. The flashing beacons are a supplemental device which helps draw the attention of motorists that a pedestrian is waiting to cross the road.

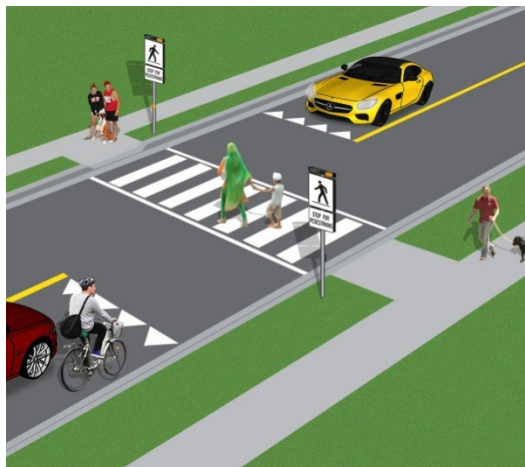
## PXO Type B and Type C Compliance

The type B PXO consists of a roadside mounted regulatory and warning signs leading to a crossing in both directions with an overhead sign, a rapid rectangular flashing beacon (RRFB) with Tell Tale on top of the roadside mounted sign and pavement markings prescribed by Ontario Regulation 615 as illustrated in the layout below.



This system uses both the side mounted and overhead regulatory signs. This type of PXO is designed for medium volume, speed less than 60 km/h, single or multilane roadway, such as major collectors, arterial and high volume multilane roundabouts

Type C consists of regulatory and warning signs, RRFB and pavement markings prescribed by Ontario Regulation 615 as illustrated in the layout below. The system uses only side mounted regulatory signs. This type of PXO is designed for medium volume, speed limited less than 60 km/h, single lane roadway such as major collectors and low volume multilane roundabouts.



Staff reviewed 9 Type B and Type C crossings to measure vehicle and pedestrian compliance. Table 1 below shows the results for each location.

**Table 1. Type B and Type C Locations Monitored for Pedestrian and Motorist Compliance in 2018/2019**

Type B and C Pedestrian Crossing Locations			
Type	Location	Vehicle Compliance	Pedestrian Compliance
B	MR24 @ South of Jacobson Drive (Lively)	64%	98%
B	Walford Road @ Ramsey View Court	62%	90%
C	Brady Street @ Shaughnessy Street	76%	90%
C	Elm Street @ Transit Terminal / Rainbow Centre	80%	92%
C	Kathleen Street @ East of Burton Street	60%	70%
C	Riverside Drive @ East of Cross Street	43%	49%
C	Southview Drive @ Stephen Street	44%	79%
C	Bouchard Street @ Marcel Street	63%	88%
C	York Street @ Hillsdale Crescent	72%	50%

### PXO Type D Compliance

Type D crossing consists of regulatory and warning signs, and pavement markings prescribed by Ontario Regulation 615 as illustrated in the layout below. The system uses only side mounted regulatory signs and does not require flashing beacons. This type of PXO is designed for medium to low volume, low speed, single lane roadway, such as collector, single lane roundabouts and right turn channelized.

The 2018 Pedestrian Crossover Program Update showed lower vehicle compliance at Type D crossings. In an effort to improve compliance at

Type D PXOs, staff trialed a new flexible bollard as shown in the picture below.



The bollard is set up in the middle of the street to increase the visibility of the crossover and to remind motorists to yield to pedestrians. Staff compared the compliance at all Type D locations before and after the installation of the bollards to see if they were effective. The table below shows the results for each location.

**Table 2. Type D Locations Monitored for Motorist Compliance in 2018/2019**

Type D Pedestrian Crossing Locations – Vehicle Compliance			
Type	Location	Vehicle Compliance 2018	Vehicle Compliance 2019
D	Elgin Street @ Nelson Street	30%	22%
D	Elgin Street @ Shaughnessy Street	48%	51%
D	Bond Street @ Murray Street	38%	54%
D	Madison Avenue @ Sagebrush Place	N/A	30%
D	Algonquin Road @ Tuscan Trail	N/A	39%

Due to the low vehicle compliance at a number of PXO locations, staff conducted a more detailed review of driver behavior at Type B, C and D

locations. The data shows the majority of vehicle non-compliance occurs when a pedestrian is standing on the tactile warning panel waiting to cross.

<b>Pedestrian Crossing Locations With Low Vehicle Compliance</b>		
Location	Pedestrians waiting on tactile warning panel *	Pedestrians crossing the road *
Elgin Street @ Nelson Street	94% (30)	6% (2)
Elgin Street @ Shaughnessy Street	60% (17)	40% (11)
Bond Street @ Murray Street	50% (1)	50% (1)
Madison Avenue @ Sagebrush Place	57% (4)	43% (3)
Algonquin Road @ Tuscan Trail	90% (9)	10% (1)
Southview Drive @ Stephen Street	90% (27)	10% (3)
Riverside Drive @ Armoury Trail	88% (7)	12% (1)

\* Number of pedestrians in parentheses.

## **Pedestrian Collisions**

During the past year, the first two collisions involving a pedestrian at a pedestrian crossover occurred. One occurred on Elm Street near the transit depot and the other occurred on Brady Street at Shaughnessy Street.

On Brady Street, the pedestrian who was struck had waited for the curb lane of traffic to stop before starting to cross. As they crossed into the inside lane a vehicle failed to yield and struck the pedestrian. The pedestrian suffered injuries from the collision.

On Elm Street, the pedestrian was struck while crossing the inside lane by a vehicle travelling eastbound that failed to yield.

All collisions involving pedestrians are concerning to staff. Staff will continue to monitor the safety of pedestrians at all PXOs and explore various countermeasures as appropriate.

## **Education Strategy**

Based on the reported collisions and the results of the compliance studies, staff have begun working with Corporate Communications and Greater Sudbury

Police Services to create an education strategy to be released in the fall of 2019. The strategy will focus on reinforcing the rules for pedestrian crossovers.

## **2020 Pedestrian Crossover Locations:**

In 2019, staff received one request for a pedestrian crossovers to be installed throughout the community. Staff proceeded to complete the warrant process for these requested crossings to determine whether they met the guidelines outlined in Book 15 of the Ontario Traffic Manual. Analysis concluded that the one the requested PXO is warranted and staff recommend implementation of the PXO at the following location in 2020:

**Table 2: Pedestrian Crossings which Qualify for a Pedestrian Crossover**

Intersection	Pedestrian Volume	Vehicular Volume	Raised Refuge	Number of Lanes	Type
Van Horne Street at Shaughnessy Street	509	3277	No	3	B

## **New PXO Requests:**

Requests for pedestrian crossings received since implementation of the initial program launch continue to be reviewed by staff on an ongoing basis. Staff regularly conduct sight line analyses and complete traffic counts to determine if PXOs are warranted at any of the requested locations. Staff will continue to bring forward an annual update report which will outline any additional warranted pedestrian crossovers.

## **Next Steps:**

Staff will continue to work with Corporate Communications and Greater Sudbury Police Services to develop public communication materials to inform drivers and pedestrians of new locations for the pedestrian crossovers.

It was also brought to staff's attention that playgrounds that have been identified in the Playground Revitalization Report (<http://agendasonline.greatersudbury.ca/index.cfm?pg=agenda&action=navigator&id=1155&itemid=13213&lang=en>) should be reviewed after the revitalization work has been completed due to the expected increased volume of pedestrians who will be trying to walk to these facilities. Staff will work with Leisure Services to see if any increase in use of revitalizing parks results in a warranted pedestrian crossover.