

Pedestrian Collisions (2011 to 2015)

Introduction

Walking is the oldest and most basic method of active transportation and is a fundamental part of the transportation network. It promotes good health, social well-being, personal independence and mobility all while minimizing the negative environmental impacts of motorized vehicles.

The decision of whether or not to walk usually takes into account the distance of the trip, perceived safety of the route and the comfort and convenience of walking versus an alternative mode of transportation. For many it is the only available mode of transportation and at various times all road users are pedestrians.

Over the past decade, the City of Greater Sudbury has adopted policies and guidelines to improve pedestrian facilities throughout the City. The Official Plan which was adopted in 2006 identified an active transportation network as an element of the transportation system and recommended protecting and expanding the existing pedestrian and bicycle network. Also in 2006, City Council endorsed the Municipal Pedestrian Charter as prepared by the Sudbury Heart Health Coalition to be utilized as a guideline in the planning and development of walking opportunities within the City of Greater Sudbury. The City has also adopted many new pedestrian safety initiatives since prior to amalgamation which are detailed in a report to the Operations Committee titled *"Pedestrian Safety Initiatives."* In addition to the already adopted policies and guidelines, the draft Transportation Master Plan recommends sustainability focused planning alternative which focuses on creating transportation choices to better support walking, cycling and transit. By limiting the extent of new road projects and reallocating resources to create a balanced multi-modal system, the sustainability focused alternative aims to improve the transportation system through the betterment of both the road network and increased use of transit systems, ridesharing, cycling and walking.

The Traffic and Transportation Engineering Services section is responsible for the safe and efficient operation of the road network, including traffic control and pedestrian facilities within the public right-of-way. Safety is a key consideration in the planning, design and operation of pedestrian facilities. Since pedestrians are the most vulnerable road users, particular attention to pedestrian safety is required.

Scope of Analysis

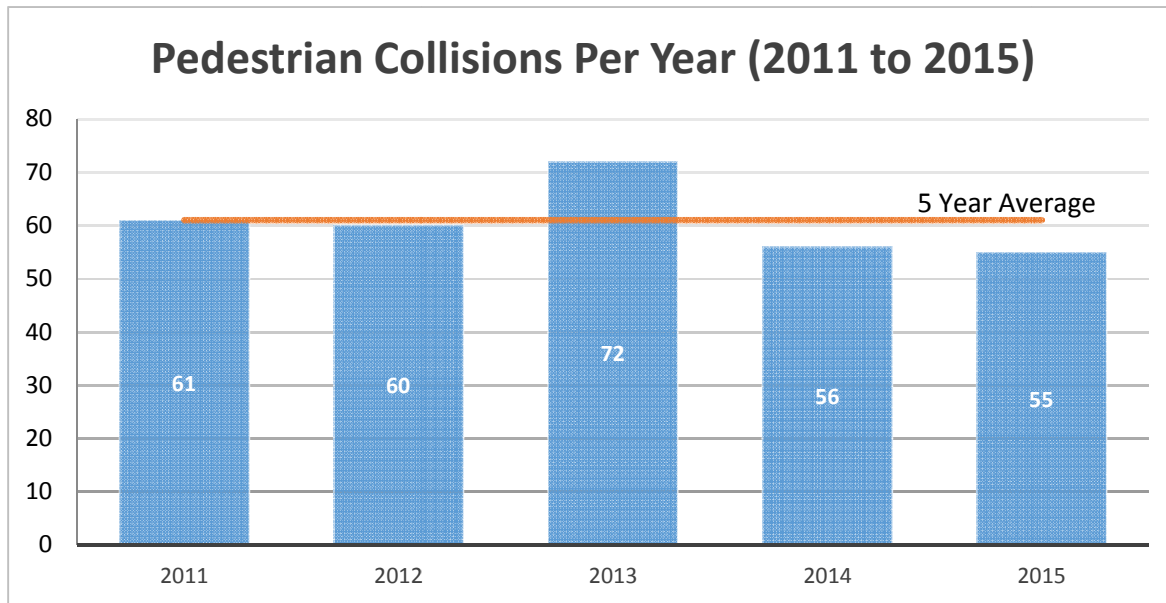
To evaluate the performance of pedestrian facilities in the City, a review of pedestrian collision data from 2011 to 2015 was completed. For this review, only collisions on public right-of-ways were considered. This excludes any collisions which may have occurred in parking lots or off-road trails.

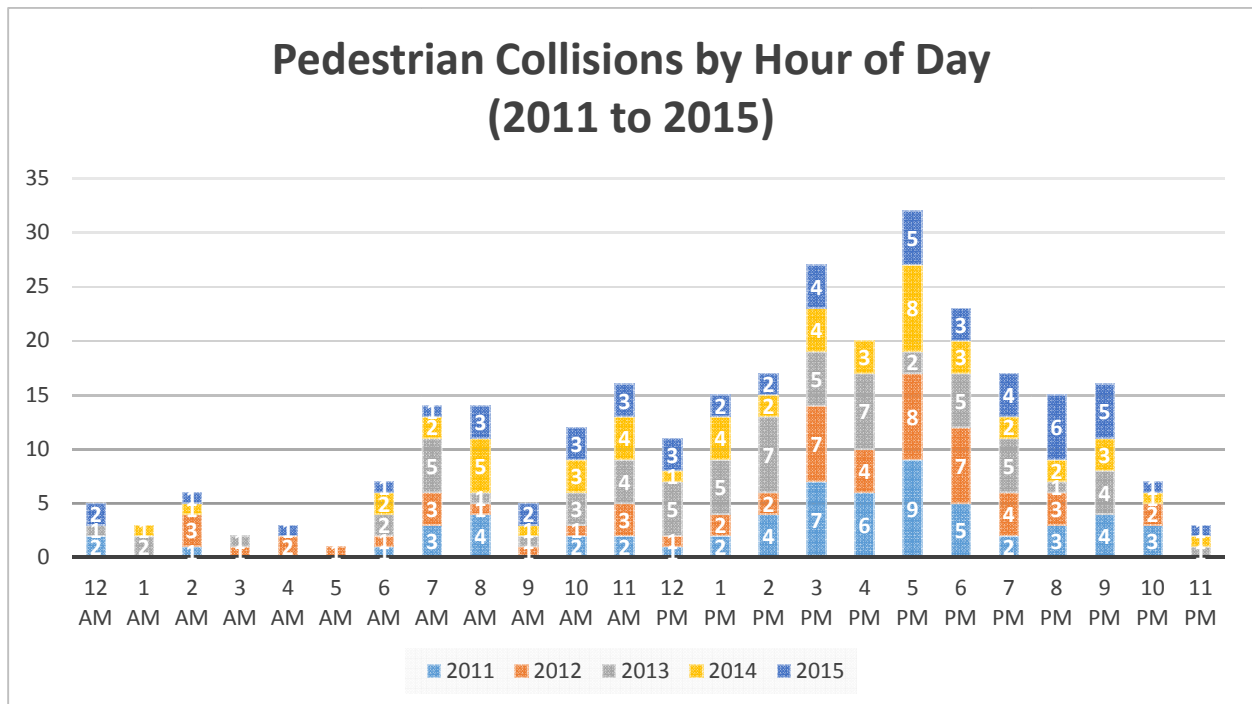
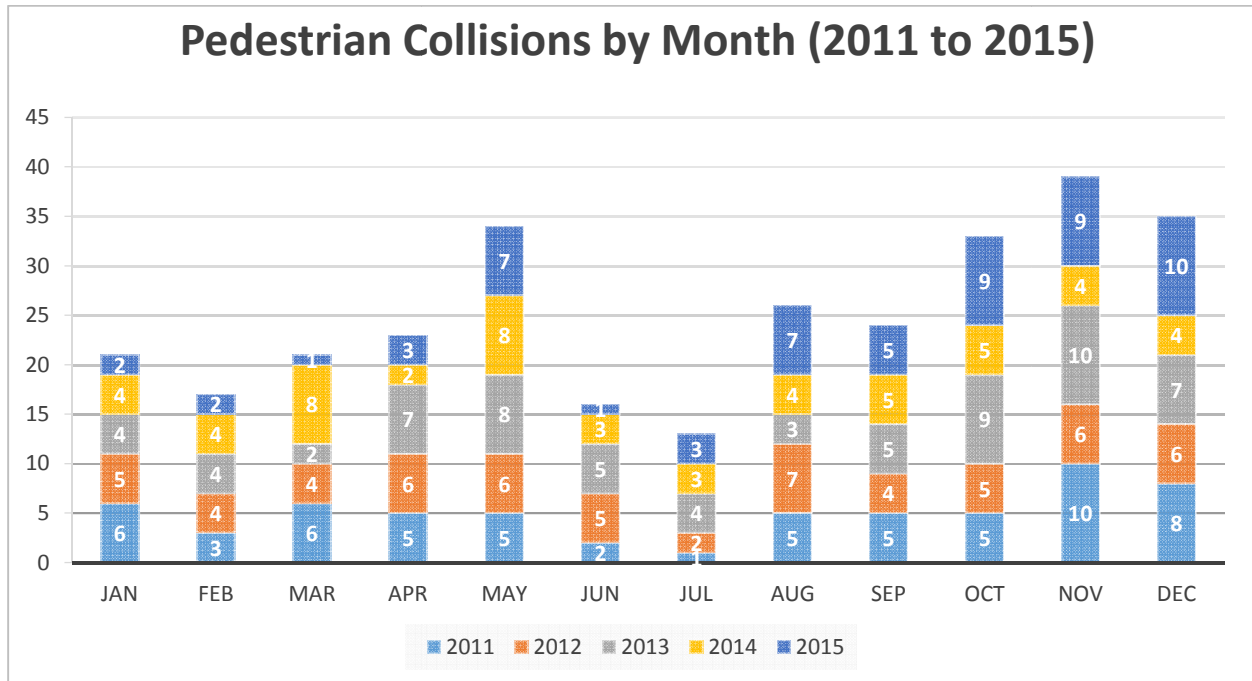
Pedestrians are defined in this report as people who travel on foot or who use assistive devices, such as wheelchairs, for mobility. Cyclists are not included in this review as they have different characteristics than pedestrians and bicycles are considered a vehicle under the Highway Traffic Act.

Demographic information regarding pedestrians involved in collisions was provided by the Sudbury District Health Unit. The remaining data used in this report comes from fields on the Ontario Motor Vehicle Collision Report which are completed by an officer from Greater Sudbury Police Services.

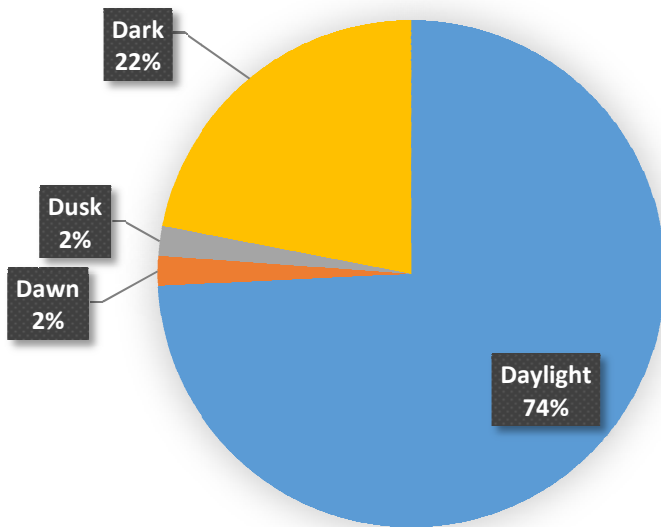
A five year period is used because collisions are random events that naturally fluctuate over time. These fluctuations make it difficult to determine whether changes in the observed collision frequency are due to changes at the location or due to natural fluctuations. In addition, when a period with a relatively high collision frequency is observed, it is statistically probable that the following period will be one with a relatively low collision frequency if no changes are made to the location. This statistical phenomenon is known as regression to the mean and also applies in reverse; a low collision frequency period will likely be followed by a period with a high collision frequency if no changes are made to the location.

When do they happen?

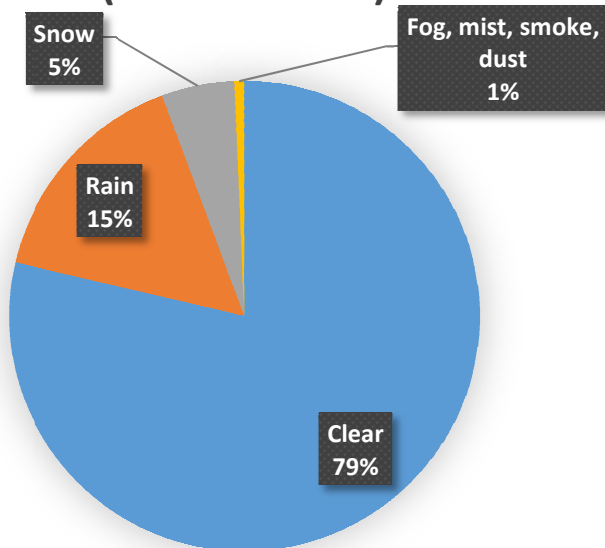




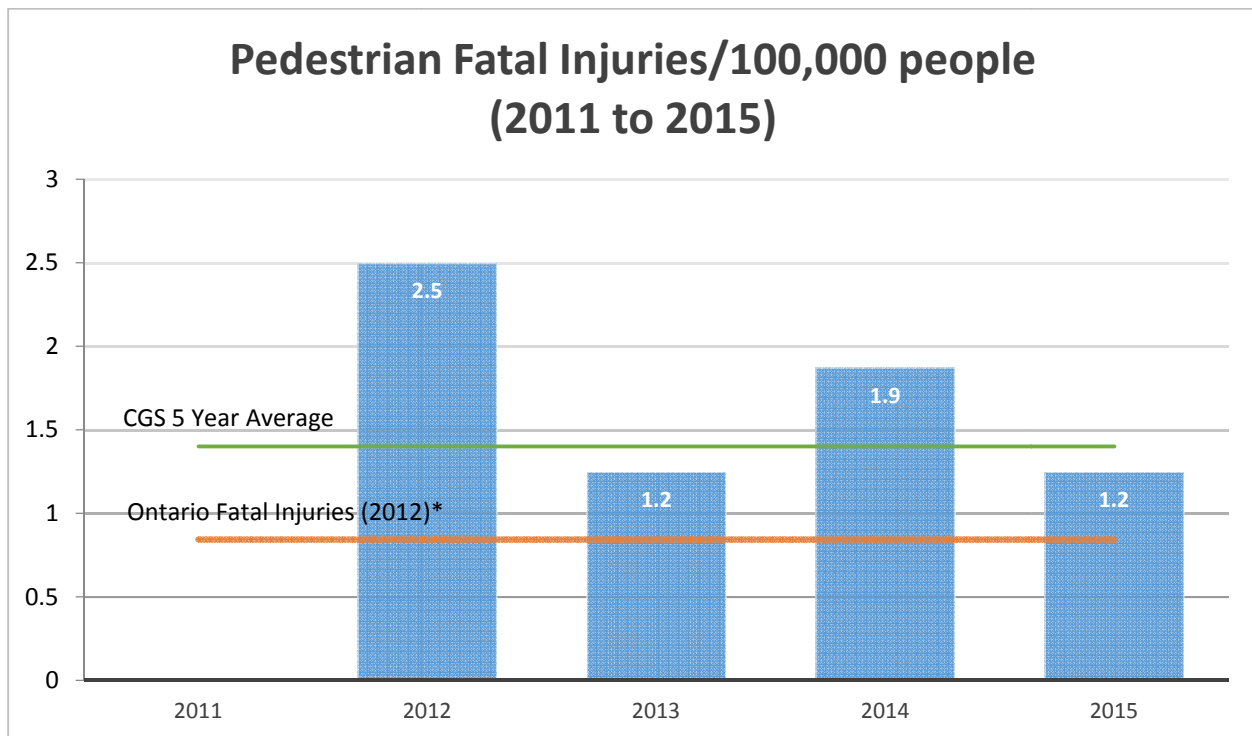
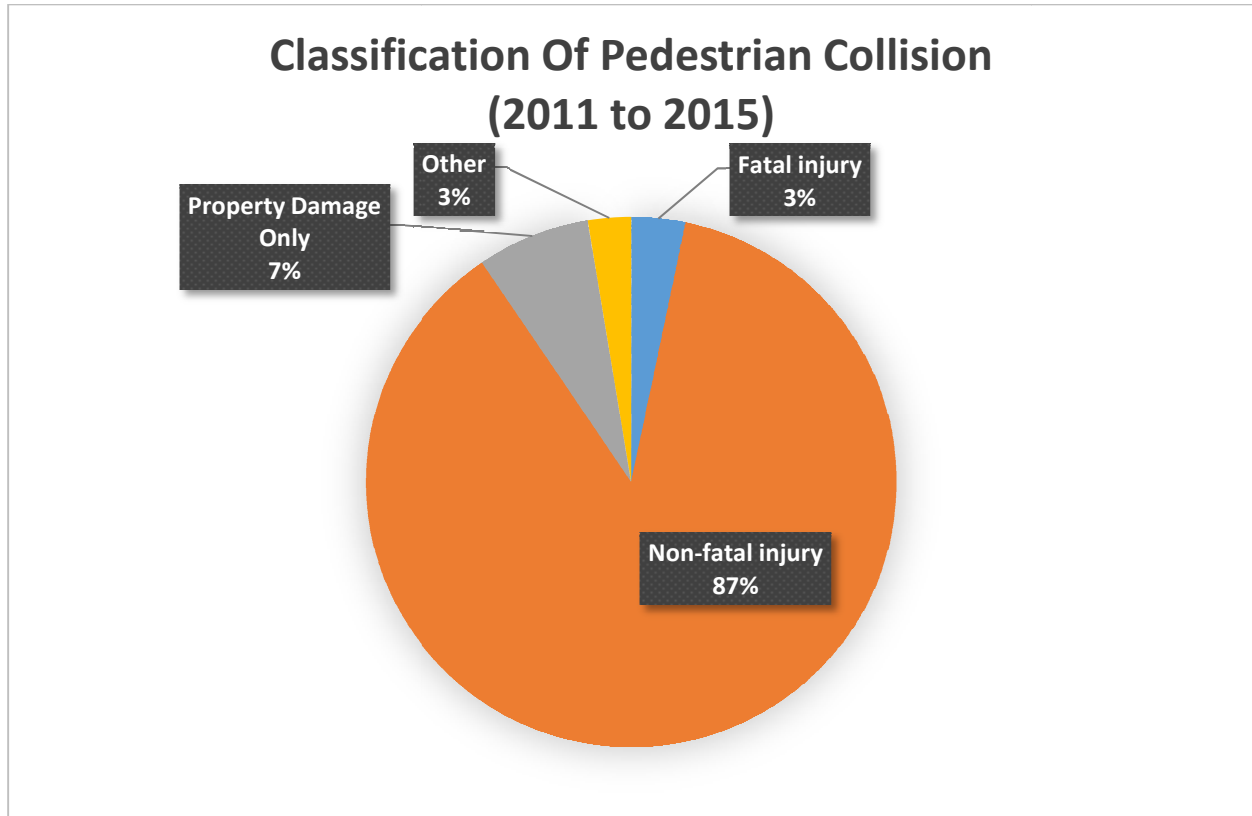
Pedestrian Collisions by Type of Natural Light (2011 to 2015)



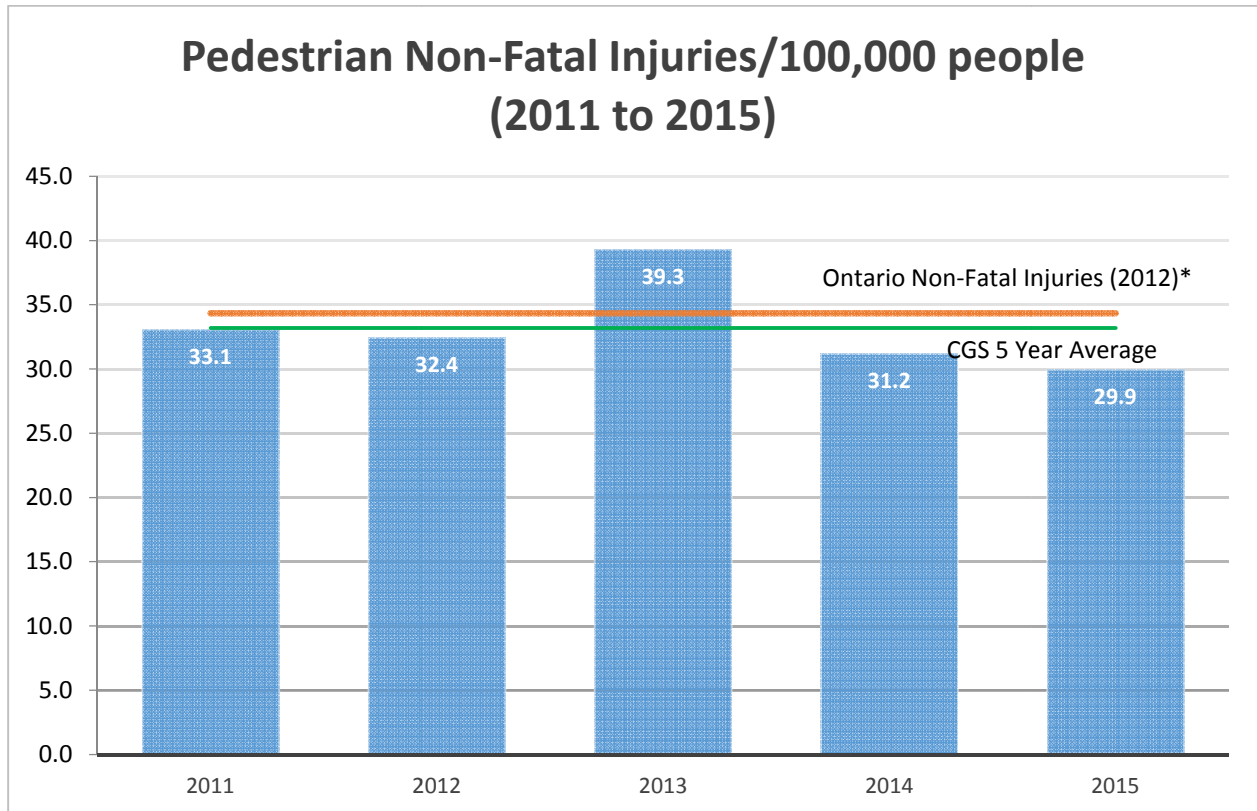
Pedestrian Collisions by Weather Condition (2011 to 2015)



How severe were the pedestrian collisions?

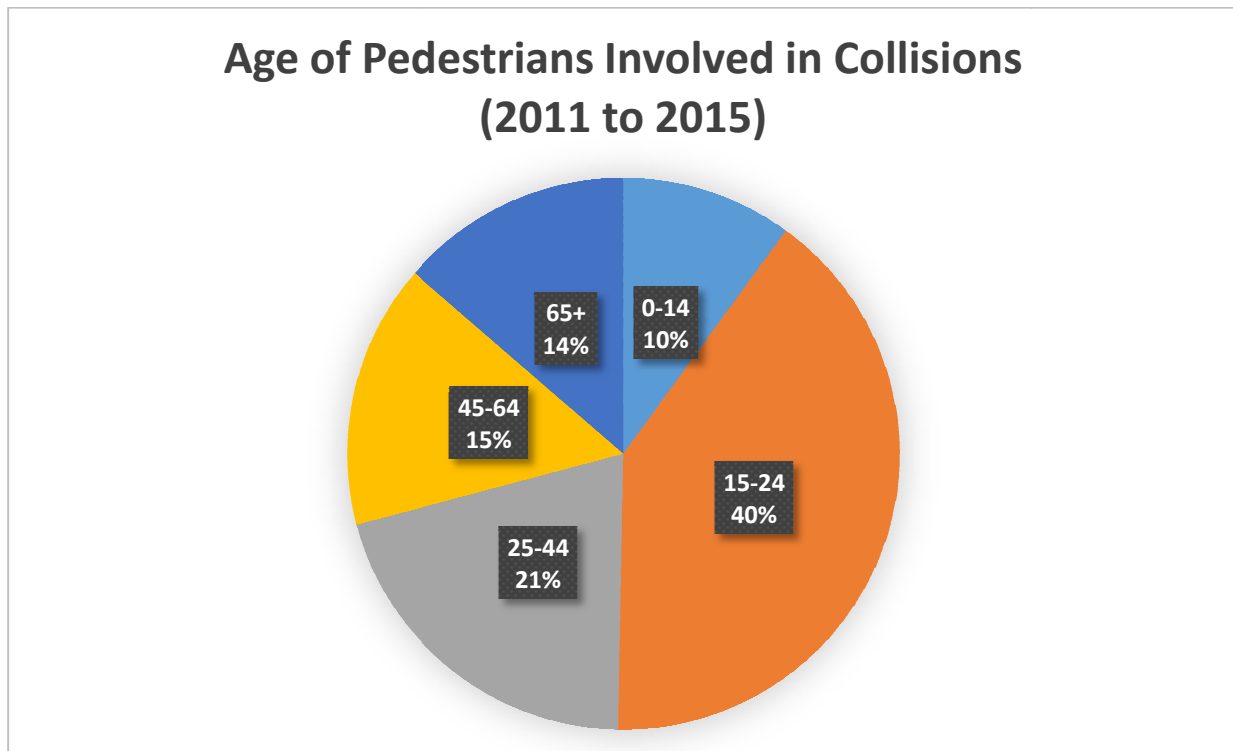


*The rate for Ontario Fatal Injuries was obtained from the *Ontario Road Safety Annual Report 2012*.

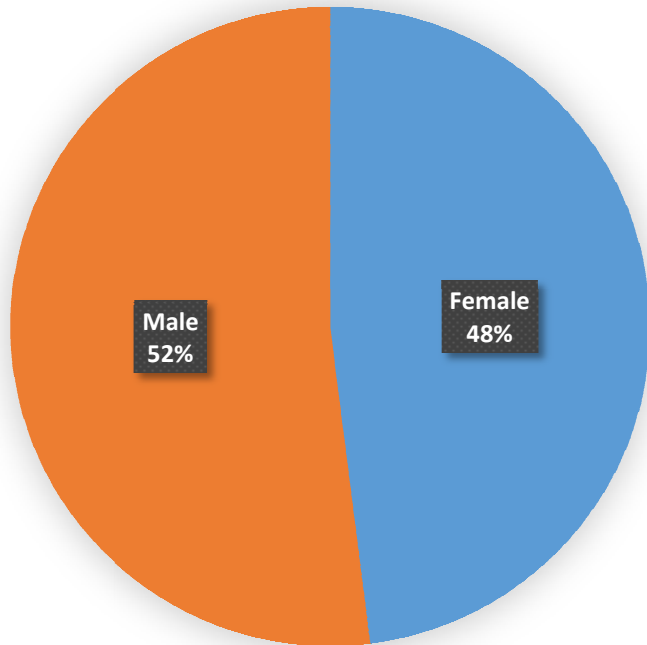


*The rate for Ontario Non-Fatal Injuries was obtained from the *Ontario Road Safety Annual Report 2012*.

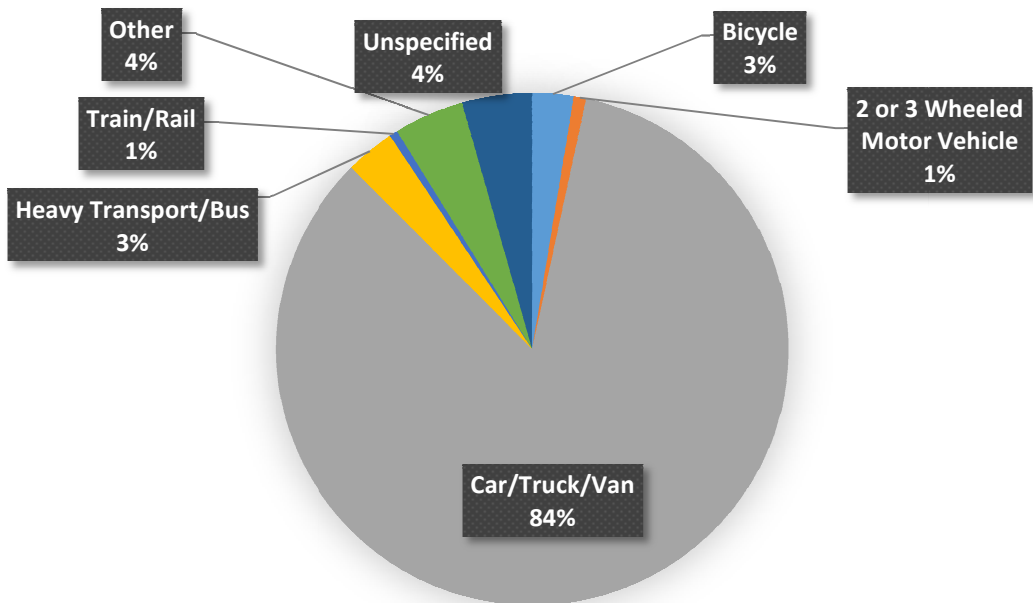
Who are involved in collisions?



Sex of Pedestrians Involved in Collisions (2011 to 2015)

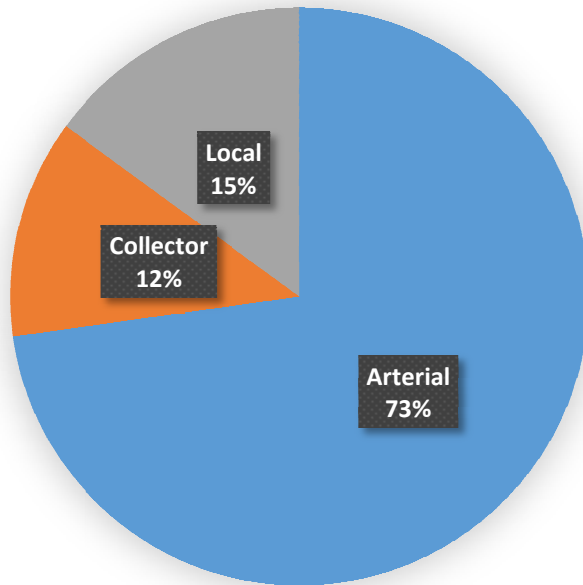


Types of Vehicles Involved in Pedestrian Collisions (2011 to 2015)

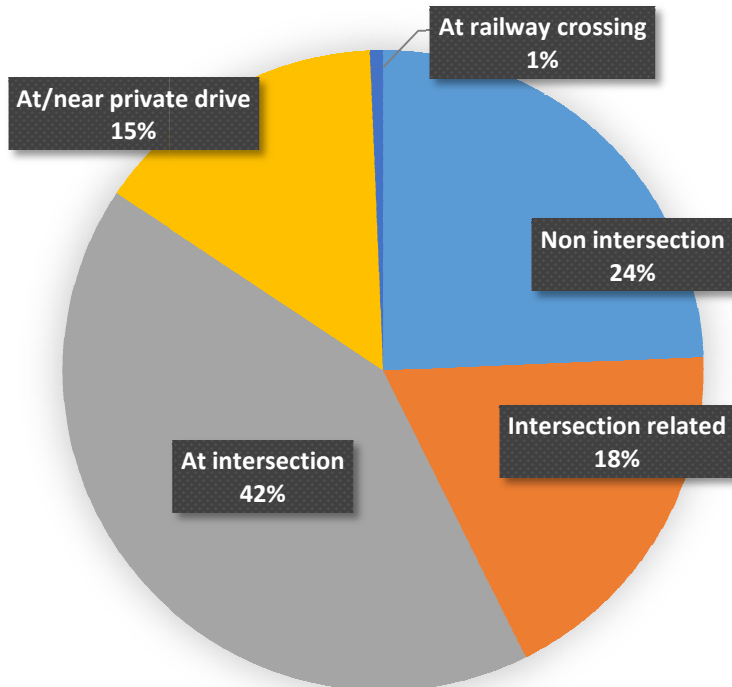


Where do the collisions occur?

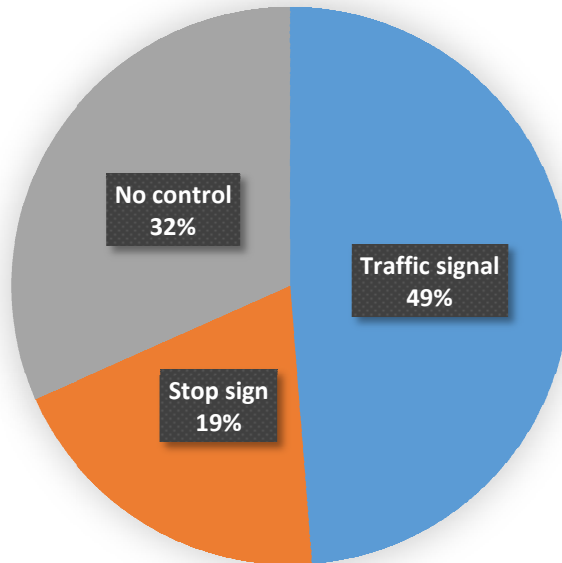
**Pedestrian Collisions by Road Classification
(2011 to 2015)**



Pedestrian Collision Location (2011 to 2015)

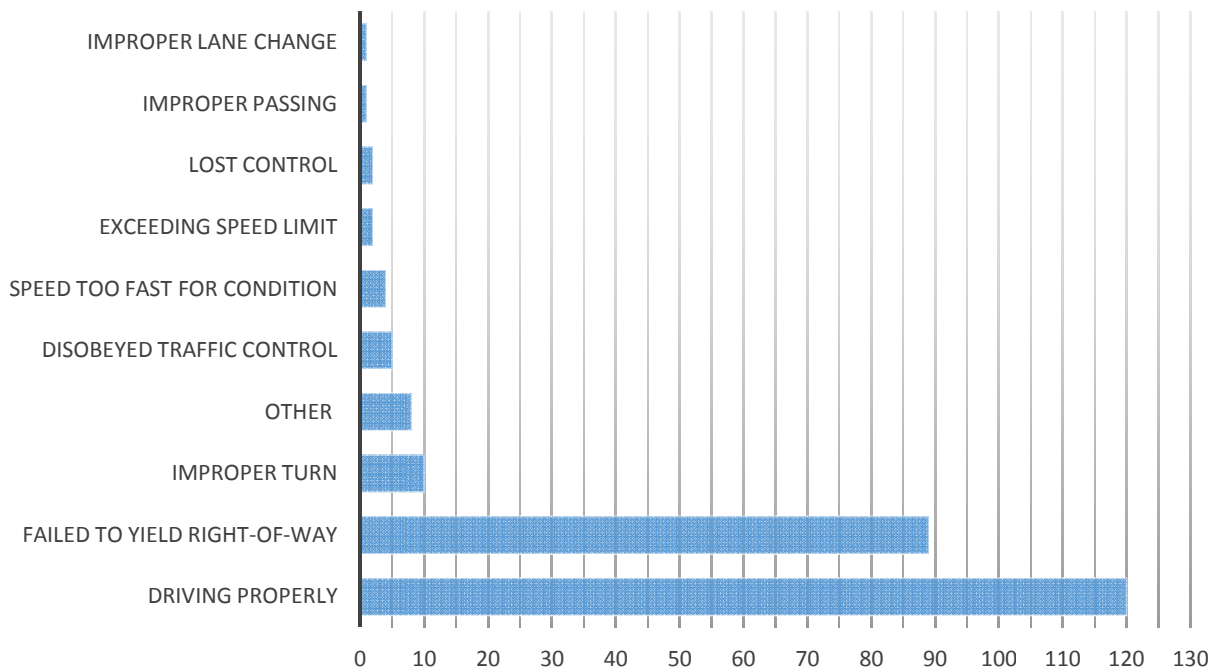


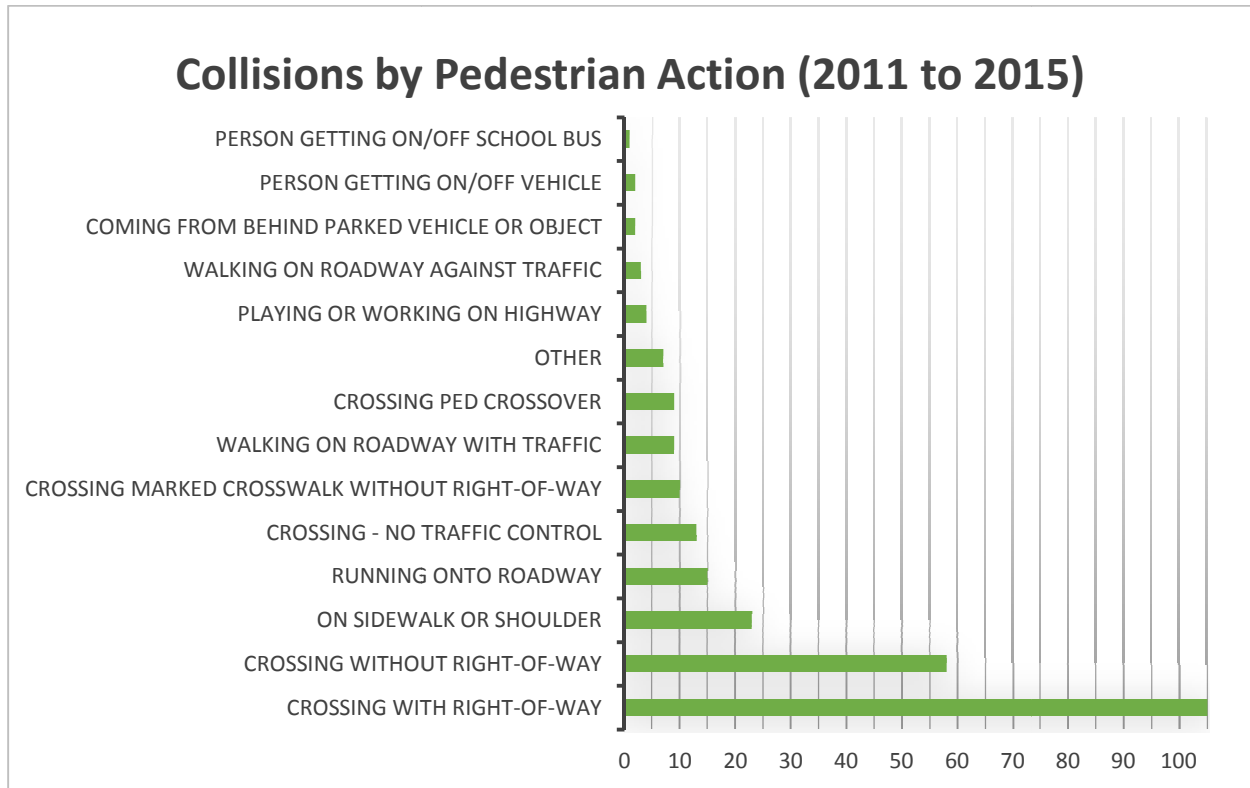
Intersection Pedestrian Collisions by Type of Traffic Control (2011 to 2015)



Why do they happen?

Collisions by Driver Action (2011 to 2015)





Key Findings

- Overall, pedestrian collisions have been down for the past two years and below the five year average
- Pedestrian collisions are most common in November. This is likely due to a reduction in daylight hours (end of Daylight Savings Time) and the weather still being warm enough to comfortably walk for extended periods.
- Pedestrian collisions are most common between the hours of 5:00 pm and 6:00 pm. This is expected since this is typically the peak hour for traffic in the City and would be the time period with the most potential conflict between pedestrians and drivers.
- 74 percent of pedestrian collisions occur during daylight and 79 percent occur on clear days. This is expected since these are the times when most people choose to walk.
- The City's five year average for Fatal Injuries/100,000 people of 1.4, is above the provincial average of 0.8. Based on the population of the City of Greater Sudbury, this equates to just over two pedestrian fatalities per year. If the provincial average were applied to the City of Greater Sudbury's population, it would equate to just over one pedestrian fatality per year.
- The City's five year average for Non-Fatal Injuries/100,000 people is below the provincial average from 2012.
- Based on the number of people who live in the City of Greater Sudbury within in each age group, people ages 15 to 24 are involved in almost two times as many collisions as the next highest age group.
- 73 percent of pedestrian collisions are occurring on roads classified as arterial roads. Arterial roads typically carry the highest volumes of vehicle traffic, have the most number of lanes of traffic to cross, are the roads where most commercial destinations are located, and most transit routes are accessed.

- 60 percent of collisions are occurring at intersections. Intersections are the most complex parts of the road network and represent a high percentage of all types of collisions.
- 49 percent of intersection related collisions are occurring at traffic signals.
- 37 percent of drivers failed to yield the right-of-way when striking a pedestrian.
- 40 percent of pedestrians were crossing with the right of way when struck by a vehicle.

Next Steps

Due to the random nature of collisions, there is no one measure that could be implemented which could eliminate all pedestrian collisions. However, the City's goal is to have the safest transportation network for all road users. As previously mentioned, the City has implemented many new pedestrian safety initiatives over the past number of years and is committed to researching and implementing new safety initiatives as they are developed throughout the industry. Safety initiatives already implemented in the City are detailed in the report to the Operations Committee titled "*Pedestrian Safety Initiatives*".

In the short term, staff will complete a review of all pedestrian collisions involving a fatality and a review of pedestrian collisions locations with the highest ratio of collisions to pedestrians to vehicular traffic. Where an identifiable pattern of collisions is discovered, staff will implement appropriate countermeasures to try to mitigate future pedestrian collisions. In addition, staff will setup a program to monitor the long term effectiveness of any implemented countermeasures.

Education is also an important tool for improving road safety. Based on the findings of this review, staff will work with its community partners and the City's Communication Services section to develop educational campaigns targeting drivers and pedestrians between the ages of 15 to 24.

Finally, staff will continue to complete annual pedestrian collision reviews which will be presented to the Operations Committee in the form of a report.