

2019 Road Safety Assessment

Resolutions:

For information only.

Relationship to the Strategic Plan:

This report refers to operational matters.

Report Summary:

This report presents collision statistics and trends for roadways in the City of Greater Sudbury and outlines steps that have been taken to improve road safety for all users. In addition, the report provides an update on the status of the network screening program.

Financial Implications:

The review of previously identified locations for potential safety improvements was completed within existing approved budgets and staff complement. Any additional funding required to implement identified countermeasures will be included as part of the 2020 Road Safety budget item.

Background:

The Transportation and Innovation Services section is responsible for the safe and efficient movement of people and goods on the City of Greater Sudbury's transportation network. Road jurisdictions have found that the most successful way to improving road safety is through the 3 Es; Engineering, Enforcement and Education. Over the last number of years, the City of Greater Sudbury has implemented a variety of initiatives to improve safety for cyclists, pedestrians and motorists.

In 2018, staff presented the first [Road Safety Assessment](#) of all roads under the jurisdiction of the City of Greater Sudbury and outlined a network screening process. The 2019 Road Safety Assessment will focus on the following areas:

- 1) Provide collision statistics and trends over the past 5 years.
- 2) Identify improvements that have been undertaken to enhance safety for road users.
- 3) Present countermeasures to improve safety for the top five locations outlined in the 2018 Road Safety Assessment.
- 4) Outline planned safety improvements for the next five locations.
- 5) Identify next steps in the network screening process.

1) Collision Statistics and Trends

The City of Greater Sudbury receives copies of collision reports from Greater Sudbury Police Services. These reports are received on a regular basis and data entry is completed to enter the records into the City's database. It is not unusual for the City to receive a copy of a report 3 to 6 months after a collision has occurred. As such, the statistics provided below represent the data the City has available as of June 2019 and these statistics will be updated as more reports are received by the City. In addition, the statistics below do not include collisions which have occurred in parking lots or on off road trails.

In 2018 there were a total of 1,847 reported collisions on roadways in the City of Greater Sudbury. Figure 1 illustrates the breakdown of collisions by the classification of the collision.

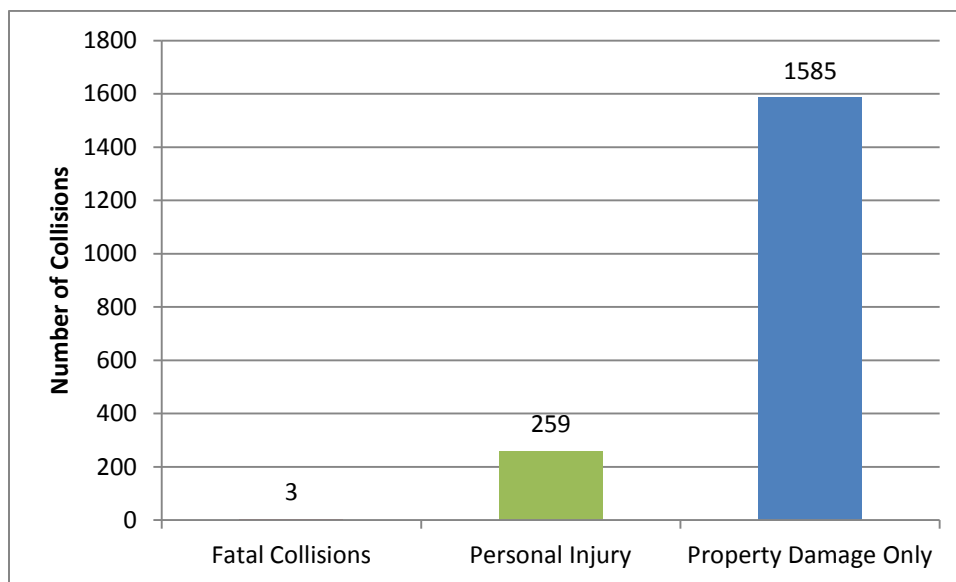


Figure 1: 2018 Collisions by Classification

When looking at a five year trend from 2014 to 2018, the total number of collisions has decreased (Figure 2). In addition the total number of fatal and injury collisions as a percentage of total collisions has declined.

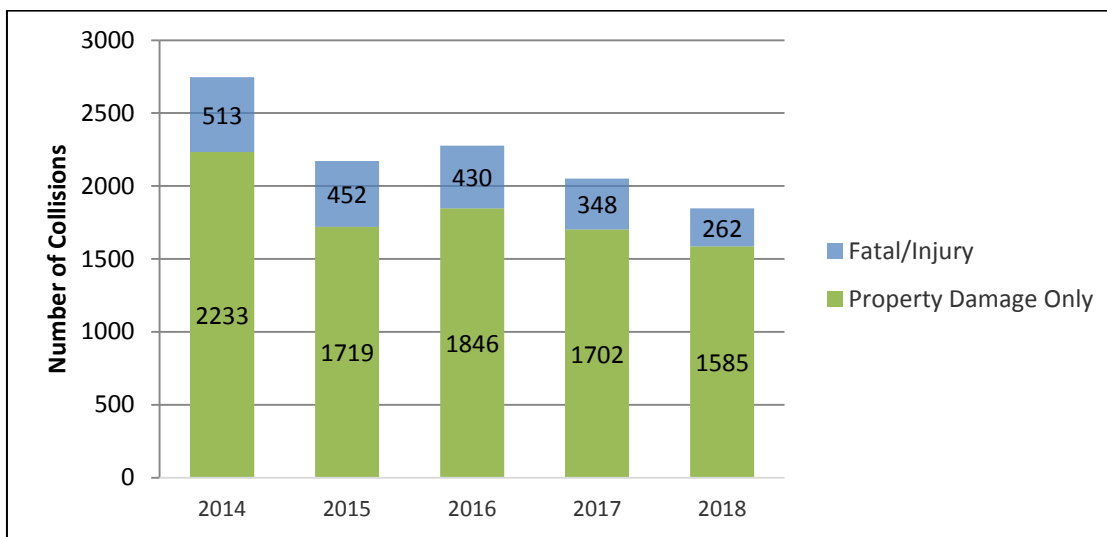


Figure 2: 2014-2018 Total Collisions by Classification

Total collisions per month from 2014 to 2018 shows an above average number of collisions during the winter months while spring and summer months are below average (Figure 3).

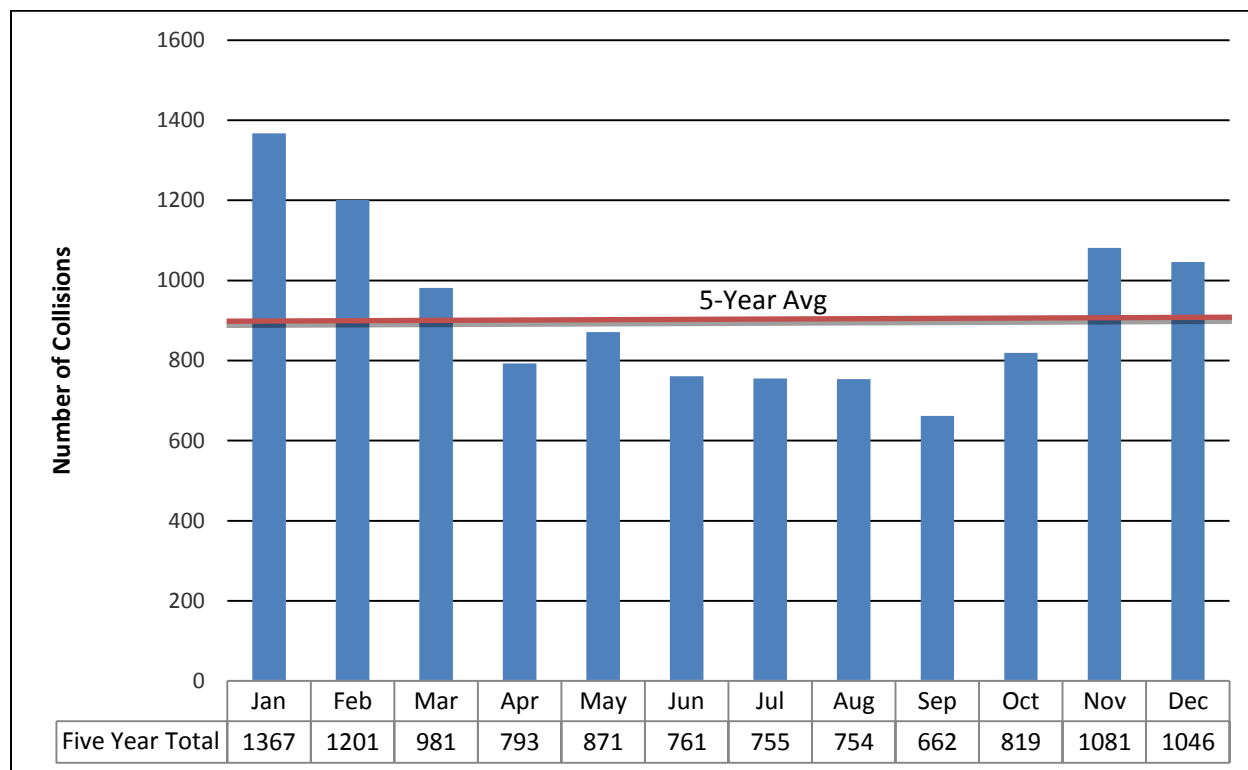


Figure 3: 2014-2018 Total Collisions by Month

Over a five year period, the number of collisions taking place during weekdays exceeds those on the weekend, with Friday experiencing the most collisions overall (Figure 4).

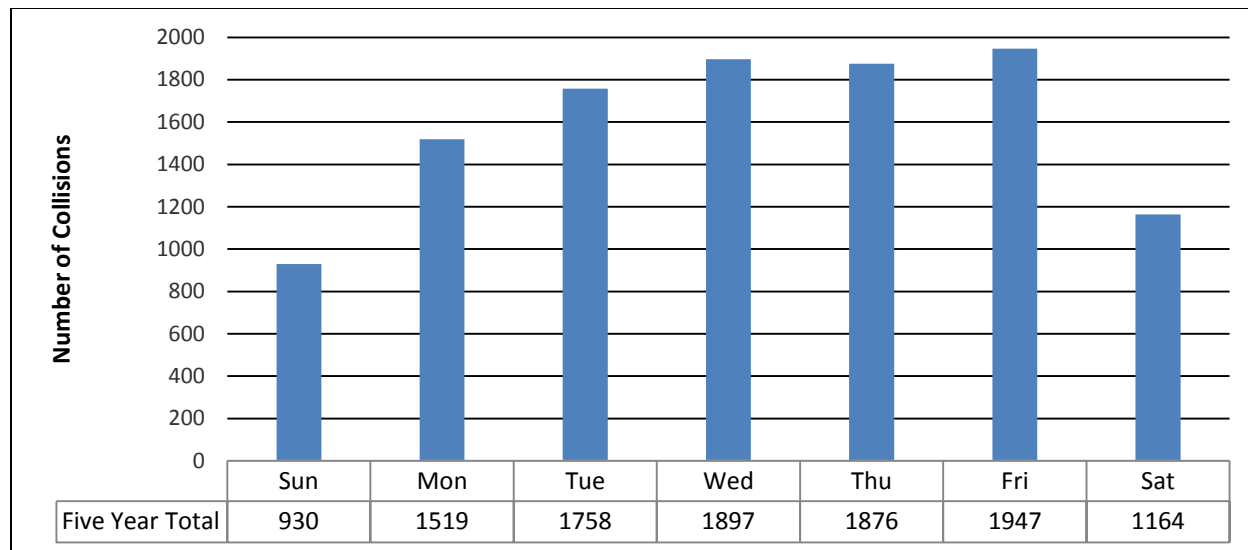


Figure 4: 2014-2018 Collisions by Day of the Week

The number of collisions by house of the day shows that there are an increased number of collisions during the tail end of the typical Greater Sudbury morning rush hour (9 AM to 10 AM) and throughout the afternoon rush hours from 3:00 pm to 7:00 pm (Figure 5).

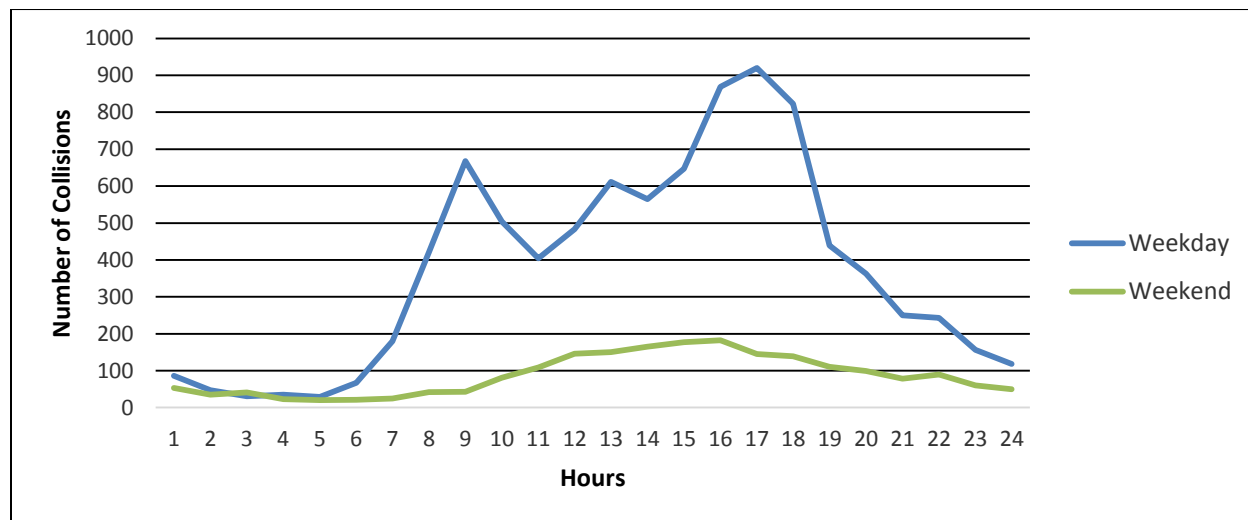


Figure 5: Collisions by Hour of the Day

The number of collisions by road classification highlights that the majority of serious collisions occur on arterial roads, which are typically higher volume, higher speed roads than collector or local roads (Figure 6).

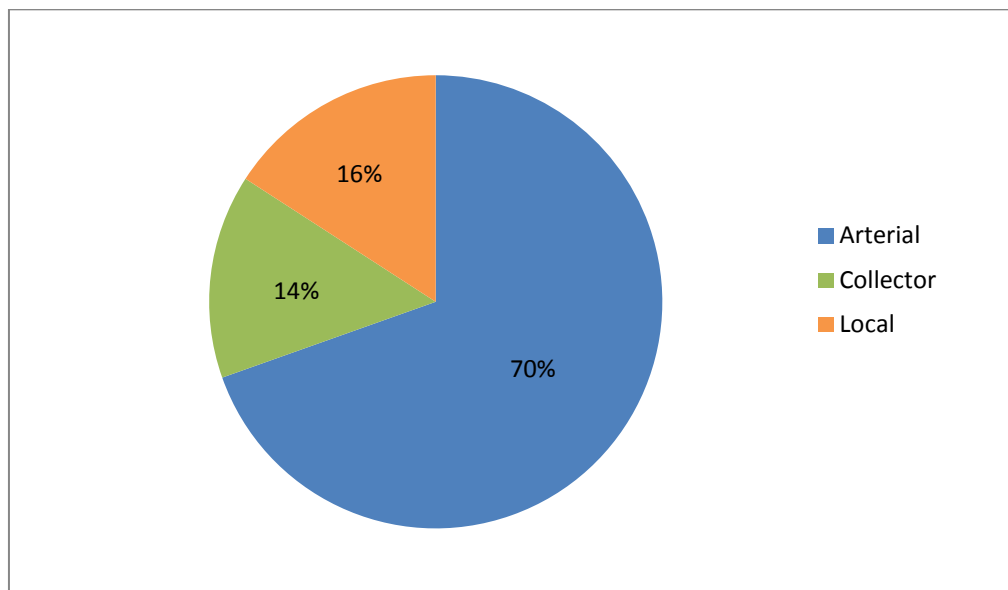


Figure 6: Collisions by Road Classification Type

Over 80% of collisions in Greater Sudbury occur on roadways where the posted speed limit is 50 km/h or 60 km/h (Figure 7).

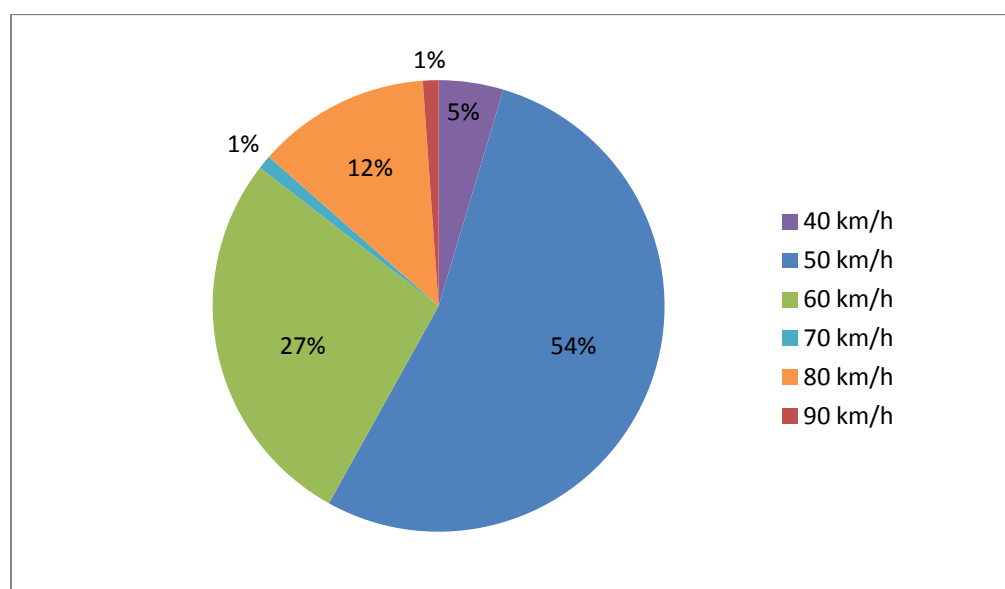


Figure 7: 2014-2018 Collisions by Posted Speed Limit

The numbers remain consistent for fatal and injury collisions by posted speed limit with 72% of collisions occurring when the speed limit is 50 km/h or 60 km/h (Figure 8). It should be noted that a higher proportion of fatal and injury collisions are occurring on roads with a speed limit of 80 km/h when compared to the total number of collisions by speed limit.

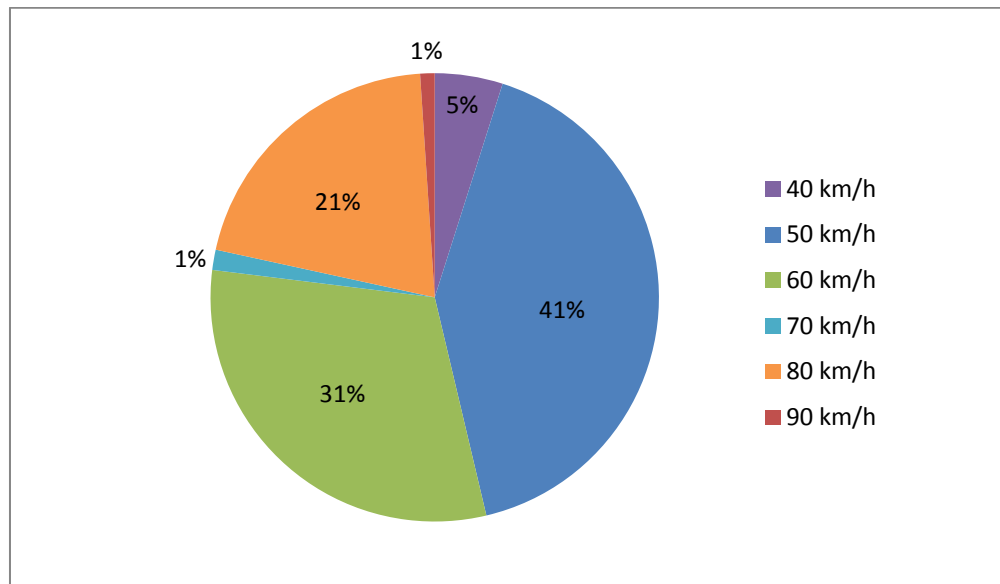


Figure 8: 2014-2018 Fatal/Injury Collisions by Posted Speed Limit

2) Improvements for Road Users

Policies

In July 2018, City Council approved a Complete Streets Policy for the City of Greater Sudbury. This policy will guide current and future transportation infrastructure planning and delivery to ensure citizens of all ages and abilities, using all modes of transportation, are best accommodated during the planning, design, construction and maintenance of City infrastructure.

The Complete Streets Policy report, originally presented to the Operations Committee on June 18, 2018 may be accessed at

<https://agendasonline.greatersudbury.ca/?pg=agenda&action=navigator&lang=en&id=1256&itemid=14595>

Pedestrians

The pedestrian crossover program continues to be expanded. By the end of 2019 there will be 46 pedestrian crossovers installed throughout the community including two new

crossovers at Westmount Avenue and William Street and on Loach's Road at Windle Drive. Staff continues to monitor compliance for those areas and evaluate new requests as they are received. A detailed report on the current status of the pedestrian crossover program will be presented at the August 2019 Operations Committee meeting.

The Leading Pedestrian Interval (LPI) program also continues to be expanded. A LPI gives pedestrians a head start when crossing an intersection while traffic on all sides have a red light. In 2017 a LPI was piloted at the intersection of Notre Dame Avenue and Kathleen Street. This pilot project demonstrated a significant reduction in the number of conflicts between pedestrians and turning vehicles. In January 2018, a policy was adopted to formalize the process to implement additional LPIs in the city.

More information on the policy and LPIs is presented in the January 15, 2018 Operations Committee report entitled Leading Pedestrian Interval Policy, <http://agendasonline.greatersudbury.ca/index.cfm?pg=agenda&action=navigator&id=1251&itemid=14364&lang=en>.

In 2018 the City implemented additional LPIs at the following intersections:

- Elgin Street at Ste Anne Road
- Notre Dame Avenue at Ste Anne Road
- Notre Dame Avenue at King Street
- Notre Dame Avenue at Wilma Street
- Lasalle Boulevard at Lasalle Court Mall

Cyclists

For the City of Greater Sudbury, improving safety for cyclists begins with building cycling infrastructure. In 2018 the city installed approximately 16.4 centreline kilometres of cycling infrastructure. In 2018 the City of Greater Sudbury also had its first dedicated bicycle signals installed at the Regent Street crossing at the Junction Creek Waterway Park and its first bike box installed at Second Avenue and Scarlett Road.

Staff also began stakeholder engagement for the design of the Paris-Notre Dame Bikeway project. This 9 km cycling route, along Paris Street and Notre Dame Avenue from Regent Street in the south to Turner Avenue in the north will form the spine of the City's growing cycling network.

More information on cycling initiatives that were completed in 2018 can be found in the January 21, 2019 Operations Committee Report entitled 2018 Active Transportation Annual Report,

<https://agendasonline.greatersudbury.ca/index.cfm?pg=agenda&action=navigator&lang=en&id=1338&itemid=15931>.

Motorists

Over the last several years, the City has implemented a number of initiatives to improve safety for people who drive. While categorized as safety improvements for motorists, many of these initiatives also improve safety for vulnerable road users such as pedestrians and cyclists. In the past year, the most significant safety improvement for motorists was the removal of potentially hazardous loose rock at over 20 locations throughout the City. These locations were identified through the City's rock cut inventory and inspection program with the scope of work defined by a consulting rock engineer.

3) Review of Network Screening Process

In 2018, the city adopted a network screening program, based on the Highway Safety Manual (HSM), as a proactive way to analyze areas that have higher than expected number of collisions. The network screening tools and methodology in the HSM identify and prioritize locations in the City's road network that have a high potential for safety improvements (PSI). This proactive approach will allow staff to better prioritize resources for road safety based on a ranking of locations based on its Potential for Safety Improvement (PSI).

The network screening process is as follows:

1. Conduct a network screening on all intersections and roads in the city network and ranking them based on the PSI score.
2. Once the ranking is complete, the top 20 locations are selected for review by staff and community partners.
3. On an annual basis, five locations plus upcoming capital projects will be reviewed. Each location will have a series of countermeasures selected to address the number of severity of collisions. This will continue for three years.
4. Provide an annual update to Operations Committee showing locations that have been selected for review and the countermeasures that have been identified.
5. At the end of the three year period, the network screening will be refreshed and locations that have already been reviewed will not be looked at for another three years so that the effectiveness of the countermeasures can be analyzed.

4. Recommendations for Safety Improvements

The top 20 ranking of locations presented in the Road Safety Assessment report in 2018 has been revised. Barry Downe Road at Lasalle Boulevard has been removed from the list, as it was already improved as part of a capital project delivered in 2015. Based on the revised top 20 ranking, staff have reviewed 10 of the 20 locations. The table below includes all 20 locations and the analysis and recommendations for the 10 locations that have been reviewed to date. As previously indicated, five additional locations will be reviewed in the upcoming year.

PSI Rank	Location	Year of Improvement	Analysis	Recommendation
1	Brady Street at Paris Street	2019	There is a large number of turning movement and angle collisions involving southbound and northbound vehicles	Implement a fully protected left turn phase for southbound vehicles so that they turn on a left turn arrow.
2	Long Lake Road at Paris Street /Regent Street	2019	There are turning movement and angle collisions caused by confusion over lane configurations for west bound traffic on Regent Street. Drivers seem to be having trouble determining if they are in a through lane or turning lane.	It is recommended to improve the pavement symbols on all west bound lanes of Regent Street.
3	Falconbridge Road at Kingsway / Second Avenue	2019	The majority of incidents are rear end collisions occurring during ideal driving conditions. In most instances the number one driver behaviour is distracted driving or follow too close to another vehicle.	Staff is working with its partners on the Sudbury Road Safety Committee to develop and implement a distracted driving education campaign.
4	Lasalle Boulevard at Notre Dame Avenue	2019	The majority of incidents are rear end collisions occurring during ideal driving conditions. In most instances the number one driver behaviour is distracted driving or follow too close to another vehicle.	Staff is working with its partners on the Sudbury Road Safety Committee to develop and implement a distracted driving education campaign.
5	Falconbridge Road at Lasalle Boulevard	2019	The majority of incidents are rear end collisions occurring during ideal driving conditions. In most instances the number one driver behaviour is distracted driving or follow too close to another vehicle.	Staff is working with its partners on the Sudbury Road Safety Committee to develop and implement a distracted driving education campaign.
6	Paris Street at Van Horne Street	2020	The majority of incidents are angle collisions that	The Red Light Camera report identified Paris Street

PSI Rank	Location	Year of Improvement	Analysis	Recommendation
			occur when a driver is disobeying a traffic signal.	at Cedar Street as a location that would benefit from the red light camera being installed. As detailed in the Red Light Camera study from AECOM, staff anticipate the halo effect of installing a Red Light Camera system at Paris and Cedar Street will reduce the number of angle collisions at this intersection. Staff will closely monitor this intersection to see if these expected safety benefits materialize.
7	Regent Street between Caswell Drive and Paris Street/Long Lake Road			
8	Kingsway between the private road east of McDonalds and Silver Hills Drive			
9	Paris Street at Ramsey Lake Road			
10	Municipal Road 80 at Main Street			
11	Lasalle Boulevard at Auger Avenue			
12	Barry Downe Road at Westmount Avenue	2020*	The majority of incidents are rear end collisions occurring during ideal driving conditions. In most instances the number one driver behaviour is distracted driving or follow too close to another vehicle.	Staff is working with its partners on the Sudbury Road Safety Committee to develop and implement a distracted driving education campaign. In addition, as part of the upcoming Barry Downe Road capital project, asphalt will be replaced at this location. This is expected to improve roadway friction which may result in reduced rear end collisions.
13	Lasalle Boulevard at Attlee Avenue	2020*	The majority of incidents are rear end collisions occurring during ideal driving conditions. In most instances the number one driver behaviour is distracted driving or follow too close to another vehicle.	Staff is working with its partners on the Sudbury Road Safety Committee to develop and implement a distracted driving education campaign.
14	Elm Street at Lloyd Street / Notre Dame Avenue			
15	Notre Dame Avenue at Louis Street / Ste			

PSI Rank	Location	Year of Improvement	Analysis	Recommendation
	Anne Road			
16	Paris Street at Cedar Street	2020	The majority of incidents are angle collisions that occur when a driver is disobeying a traffic signal.	Through the Red Light Camera Report, staff has identified Paris Street at Cedar Street as a location for a red light camera.
17	Barry Downe Road at Kingsway	2020*	The majority of incidents are rear end collisions occurring during ideal driving conditions.	Staff is working with its partners on the Sudbury Road Safety Committee to develop and implement a distracted driving education campaign.
18	Notre Dame Avenue between Wilma Street and Cambrian Heights Drive			
19	Paris Street at Centennial Drive			
20	Lorne Street at Douglas Street			

* Location was evaluated in advance of locations with a higher priority due to an upcoming scheduled capital project.

Next Steps:

As described in the recommended network screening process, staff will continue working with community partners to review the next five locations with the greatest potential for safety improvement along with any other locations that have a scheduled capital project. It is important to note that locations within the Top 20 presented above, which have road rehabilitation projects scheduled in the upcoming year, will be reviewed ahead of locations with a higher PSI.

Staff will include funding for the development and implementation of a distracted driving educational campaign as part of the 2020 Road Safety budget item.