



Hamilton

# INFORMATION REPORT

<b>TO:</b>	Chair and Members Public Works Committee
<b>COMMITTEE DATE:</b>	June 17, 2020
<b>SUBJECT/REPORT NO:</b>	The City of Hamilton Annual Collision Report – 2019 Statistics and Trends (PW20035) (City Wide)
<b>WARD(S) AFFECTED:</b>	City Wide
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<b>SIGNATURE:</b>	

## COUNCIL DIRECTION

The Public Works Committee approved the Hamilton Strategic Road Safety Program and Vision Zero Action Plan for 2019-2025 on February 4, 2019, through Report PW19015. As part of the report, a component of the program is the development of an Annual Collision Report. This report serves as an update on the 2019 Annual Collision Statistics and Trends.

## INFORMATION

The City of Hamilton 2019 Annual Collision Report is the third annual edition of a high-level review of motor vehicle collisions occurring on City of Hamilton roadways. It is attached to Report PW20035 as Appendix "A".

The report provides an analysis of collision trends over a five-year span (2015-2019) and collision statistics for 2019.

The report is divided into four sections with appendices as follows:

- Section 1 – Five Year Collision Trends (2015 to 2019);

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OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

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- Section 2 – Lincoln M. Alexander Parkway (LINC) and Red Hill Valley Parkway (RHVP) Five Year Collision Trends (2015 – 2019);
- Section 3 – Fatal Collisions;
- Section 4 – Red Light Camera Program Statistics;
- Appendix A – 2019 Collisions Statistics;
- Appendix B – 2019 Red Hill Valley Parkway Collisions Statistics; and
- Appendix C – 2019 Lincoln M. Alexander Parkway Collisions Statistics

The following is a list of notable collision statistics and trends for 2015-2019.

City-Wide Statistics and Trends

Year	Total Collisions	Fatal and Injury Collisions	Property Damage Collisions	Fatal Collisions
2015	8,385	1,945	6,440	14
2016	8,259	1,947	6,312	11
2017	8,789	1,698	7,091	16
2018	9,325	1,571	7,754	11
2019	9,876	1,477	8,399	14

While in 2019 there were the highest total number of collisions, the combination of fatal and injury collisions was the lowest in the past five years. This is a positive outcome because, in overall terms, collisions are trending towards being less severe.

The number of cyclist collisions decreased from 193 in 2016 to 128 in 2019. The lowest number of cyclist collisions were recorded in 2019 when compared to the previous five years. Nearly 80% of cyclist collisions result in an injury and therefore the downward trend in the number of instances is particularly significant. Hamilton has made significant investments in on-street cycling infrastructure over the past five years with 75 lane-kilometers built. Approximately 14% of these include a buffer or barrier between cyclists and motorized traffic.

The important downward trends in injury collisions align with the primary goal of Hamilton’s Vision Zero Program: the elimination of fatalities and serious injuries on our roadways.

A summary of the Collision Report’s data is offered as follows:

- 89.7% of pedestrian collisions resulted in an injury, and 1.8% of pedestrian collisions resulted in a fatality;
- 79.1% of cyclist collisions resulted in an injury and 0.3% resulted in a fatality;

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- Approximately 60% of all drivers involved in collisions over the past five years were male and there were more male drivers than female drivers involved in collisions in all age groups;
- Approximately 52% of all people injured, both drivers and passengers, in collisions overall in the past five years were female and more females were injured in collisions than males in each of the past five years;
- More collisions and most fatal and injury collisions occurred during Fridays compared to any other day of the week;
- Most weekday collisions, regardless of their severity, occurred in the PM peak of traffic (4:00 p.m. – 6:00 p.m.), mid-day peak of traffic (around noon), and a.m. peak of traffic (8:00 a.m. – 9:00 a.m.);
- Fewer collisions occurred on weekends and the time period in which they occurred was more spread out; from 10:00 a.m. to 6:00 p.m.;
- June, July, September, and October experienced the highest number of fatal and injury collisions;
- The majority of collisions (72.4%) occurred on dry surface conditions;
- 53.4% of all collisions occurred at intersections and among those, 58.6% occurred at signalized intersections and 30.9% occurred at stop-controlled intersections;
- The most common type of collisions at signalized intersections were rear-end and sideswipe impact; and
- The most common type of collisions at mid-block locations were single motor vehicles striking unattended vehicles and rear-end impact.

#### LINC and RHVP Statistics and Trends

- The frequency of fatal and injury collisions has been decreasing on the LINC and the RHVP over the past five years;
- The majority of collisions on the RHVP occurred on non-dry road surface conditions (64.1%) whereas 19.3% of LINC collisions occurred on non-dry roads;
- The most common collision type on the RHVP was rear-end impact at 48.3% followed by single motor vehicle collisions at 30.1%;
- The most common collision types on the LINC was rear-end impact at 70.4% followed by sideswipe impact at 16.5%;
- The month with the highest average number of collisions on the LINC was November while on the RHVP it was October; and
- Weekday and weekend collision patterns generally aligned with city-wide trends where most weekday collisions take place during peak traffic periods and weekend collisions were more spread out throughout the daytime.

## Fatality Statistics

Fatal collisions are relatively uncommon, and it is difficult to derive patterns from their frequency; even over a five-year period. The low frequency of fatal collisions between 2015-2019 shows no clear statistically significant patterns.

In 2019, there were 14 fatal collisions. A summary of the fatal collisions is as follows:

- 21% of fatal collisions occurred on rural roadways and 79% occurred on urban roads;
- 36% of fatal collisions occurred at intersections and 64% occurred at road sections;
- 7% of fatal collisions occurred on wet road conditions and 93% on dry roadways;
- 71% of fatalities were the result of a single motor vehicle collision;
- 43% of fatal collisions involved pedestrians; and
- 30% of fatal collisions occurred when a driver lost control of the vehicle, 22% from a driver exceeding the speed limit or driving too fast for the condition and 15% because a driver failed to yield the right-of-way.

## Spatial Trends

A number of specific locations have been identified throughout the 2019 Annual Collision report to be further investigated. These locations are being reviewed as part of the 2020/2021 collision counter measure program to determine further enhancements to improve safety. The following locations identified in the Annual Collision report have previously received various safety enhancements:

- RHVP – Repaving, speed limit reductions, signage enhancement, target enforcement, monthly monitoring of collision statistics;
- Dundurn and Main – Signal timing modifications, enhanced pedestrian markings and timings, lane designation modifications; and
- Upper James – Installation of pedestrian signals, signal timing modifications.

Evidence regarding the effectiveness of safety measures is an output of the annual collision statistics. In many cases it requires multiple years of study until meaningful data is apparent. Fulsome evaluation of a location to determine the effectiveness of changes requires 3 to 5 years of post-implementation evaluation.

## Red Light Camera Program

The City of Hamilton began installing Red Light Cameras (RLC) in 2000 as a road safety measure to reduce the number of right-angle collisions which can more commonly result in serious injury or fatalities. There were four new cameras added in

2019 and early 2020, bringing the total to 33 RLC's installed at 32 intersections across the City.

Most RLC intersections have generated many violations; this helps to deter the public from running red lights and ultimately assists in changing driver behaviour. 21,000 violations were recorded by RLC's in 2019.

RLC's have had a positive impact in reducing injury collisions at the intersections that they are installed, however there are many factors that can also positively influence long-term safety performance after an RLC is installed. Some of these factors include other collision counter measures, local and network-wide changes in signal operation.

The statistics and analysis within the 2019 Annual Collision Report provides the City of Hamilton with information that is used to identify priority roadway safety issues, develop initiatives to improve roadway safety, provide evidence about the effectiveness of safety improvements and undertake public education campaigns. These efforts directly contribute to improving roadway safety and aligns with Vision Zero - zero fatalities or serious injuries on Hamilton roadways.

#### **APPENDICES AND SCHEDULES ATTACHED**

Appendix "A" to Report PW20035 – 2019 Annual Collision Report