



Hamilton

INFORMATION REPORT

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	October 2, 2023
SUBJECT/REPORT NO:	City of Hamilton Annual Collision Report – 2022 Statistics and Trends (PW23062) (City Wide)
WARD(S) AFFECTED:	City Wide
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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. An important part of the action plan is to report on collision performance through annual reporting. This report serves as an update on the City's 2022 collision statistics and trends.

INFORMATION

Since 2020 the City of Hamilton has been experiencing impacts to the transportation network including reductions in vehicular traffic volumes as a result of the COVID-19 pandemic. Through the months of April to December in 2020 there was approximately a 50% average reduction in vehicular traffic volumes during the morning and afternoon rush hour. Consequently, the number of collisions in 2020 and 2021 were significantly lower than the pre-pandemic levels. Travel time and travel pattern data shows that traffic volumes and delay have increased in 2022 compared to 2021 and 2020. The City of Hamilton data suggests that traffic volumes have increased 10% - 16% in 2022 compared to 2021; with the transportation network not returning to pre-pandemic

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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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conditions. Information and statistics being presented should be viewed using a COVID-19 pandemic lens for proper context.

The City of Hamilton 2022 Annual Collision Report is the sixth edition and provides a high-level review of collisions occurring on roadways over a five-year span (2018-2022). It is attached to Report PW23062 as Appendix “A”.

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

- Section 1 – Five Year Collision Trends (2018-2022); and
- Section 2 – Lincoln M. Alexander Parkway and Red Hill Valley Parkway Five Year Collision Trends (2018-2022).

The goal of Vision Zero is to eliminate fatal and serious collisions and it recognizes that collisions will occur but should not result in fatalities or injuries. A reduction in fatal and injury collisions is an important key performance indicator related to the effectiveness of the City’s Vision Zero Action Plan, and the total number of collisions is important, but a lesser significance when compared to the total number of fatal and injury collisions.

The categorization of collisions by vehicle type is a new addition to the annual collision report. While this information has always been contained within the City’s collision database, including it in the annual collision report is intended to provide enhanced public awareness of possible trends and to better understand relationships between vehicle types and occurrences of fatal and injury collisions.

The following is a list of statistics for 2018-2022:

- One collision occurs every 65 minutes;
- One person injured every eight hours;
- One fatality every 23 days;
- One collision involved a pedestrian every two days; and
- One collision involved a cyclist every three days

The following is a list of trends between the previous reporting term (2017-2021) and the current reporting term (2018-2022):

- Total collisions decreased by 1.69%;
- Injury collisions decreased by 8.3%;
- Fatal collisions did not change;
- Pedestrian collisions decreased by 3.3%; and
- Cyclist collisions decreased by 7.9%

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City-Wide Statistics and Trends

Year	Injury Collisions	Fatal Collisions	Property Damage Collisions	Total Collisions
2018	1,561	11	7,761	9,333
2019	1,469	14	8,417	9,900
2020	1,141	13	5,465	6,619
2021	1,162	16	5,637	6,815
2022	1,144	16	6,927	8,087

In 2022 there was an 18.7% increase in total collisions and a 1.5% decrease in injury collisions compared to 2021. Distracted driving was a contributing factor to 19.4% of fatal and injury collisions while impairment/alcohol consumption was a contributing factor in 4.1% of fatal and injury collisions.

Collisions that occurred at intersections were 55.4% of total collisions. Among those, 66.4% occurred at signalized intersections and 29.1% occurred at stop-controlled intersections.

The predominant vehicle type involved in all collision types, including those which impact vulnerable road users, are cars (ranging between 74-83%), followed by pick-up trucks (ranging between 7-10%) and then van (ranging between 3-6%).

The fatal and injury collisions that occurred at intersections were mostly split between arterial-arterial (32%), arterial-local (29%), and arterial-collector (18%) intersections. A total of 37% of fatal and injury collisions that occurred on road sections were on major arterial roads followed by minor arterial roads (32%), major collector roads (11.4%), and local roads (10.9%).

Fatal and injury collisions decreased by 20.6% in 2021 and by 21.8% in 2022, compared to 2019.

There were seven fatal pedestrian collisions in 2022, in which nine pedestrians were fatally injured. The number of pedestrians involved in collisions increased by 23.3% (213 total) when compared to 2021, however, it is less than in 2019 (245).

There was one fatal cyclist collision in 2022. The number of cyclist collisions decreased from 139 in 2021 to 128 in 2022. The lowest number of cyclist collisions in ten years was recorded in 2019 and 2022. There is generally a decreasing trend from 2016 onward.

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The City of Hamilton experiences 1.5% fewer pedestrian and 1.1% fewer cyclist fatalities when compared to the Provincial average.

Collisions involving vulnerable road users regularly result in injury as 89.2% of the time pedestrians suffer injury in a collision and 77.8% for cyclists. Most of these vulnerable road user injury collisions occurred at intersections, specifically signalized intersections.

Fatal collisions represent 0.20% of all collisions and a review of the fatal collisions over a five-year period is summarized as follows:

- 37.5% occurred at intersections;
- 62.5% occurred mid-block locations;
- 50% were a result of a single motor vehicle collision;
- 43.8% involved pedestrians;
- 6.3 % involved cyclists;
- 6.3 % occurred when a driver exceeds the speed limit;
- 12.5 % occurred when a driver made an improper turn; and
- 25% occurred when a driver lost control

In 2022, the Lincoln M. Alexander Parkway and Red Hill Valley Parkway showed an increased number of collisions compared to 2021. The following is a list of relevant statistical information:

- In 2022 the Lincoln M. Alexander Parkway had 3.9% more collisions and 44% more injury collisions than in 2019;
- There were no fatal collisions on the Lincoln M. Alexander Parkway in the 2018-2022 period;
- Total collisions on the Red Hill Valley Parkway in 2022 were 3.3% lower than in 2019;
- Fatal and injury collisions on the Red Hill Valley Parkway in 2022 were 60% lower than in 2019;
- There was 1 fatal collision on the Red Hill Valley Parkway in 2022 and a total of two in the 2018-2022 period;
- Speeding accounted for 17% of all police-reported collisions. The percentages of speed-related collisions on the Lincoln M. Alexander Parkway and the Red Hill Valley Parkway were 27.9 and 18.2% respectively. This represents an increase in speed-related collisions of 41% on the Lincoln M. Alexander Parkway and 5.2% on the Red Hill Valley Parkway compared to the 2017-2021 period; and
- Total collisions occurring on the Red Hill Valley Parkway on non-dry road surface conditions declined to 31.5.% (2018-2022) vs 45.7.% (2017-2021) which is significantly reduced from 2016–2020 (57.8%)

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The statistics and analysis within the 2022 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 targeted education campaigns.

The City implemented its Vision Zero Action Plan in 2019. The action plan is a multidisciplinary approach that requires the collaboration of policymakers, engineers, planners, and everyday road users to ensure a holistic approach is applied when considering how we can make streets safer for motorists, pedestrians, and cyclists. With support from Hamilton Police Services, the City of Hamilton continues to remain focused on improving roadway safety and formally recognizes that traffic-related deaths and serious injuries are preventable.

Motorists, pedestrians, and cyclists can make mistakes and the Vision Zero safe systems approach (safe drivers, safe speeds, safe roads, and safe vehicles) is crucial to reducing the chance of collisions and preventing severe injuries and fatalities.

The City of Hamilton has many initiatives that are completed or underway as outlined in the Vision Zero Action Plan. The following is a highlight of some key initiatives:

- Comprehensive review of the existing Vision Zero program with the objective of identifying successful program elements and identification of enhancements to aid in further enabling goal achievement
- The approval of 10 new intersections which will receive red-light cameras in 2023/2024, bringing the total number of red-light camera intersections to 52
- The permanent establishment of an automated speed enforcement program which began in 2022 (based on 2021 pilot results), which includes the installation of automated speed enforcement cameras at 24 various locations across the city for the period of 2023-2025 as approved by Council in May 2023
- Collision Counter Measure Program Video Analytics review of the top 10 network screening ranked signalized intersections with a focus on vulnerable road users
- In-Service Road Safety Reviews of 28 locations either completed or currently underway
- Neighbourhood Speed Limit Reduction Program which reduces neighbourhood roadway speed limits to 40 km/h and school zones to 30 km/h, is expected to be substantially completed by July 2023

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- Continued development and refinement of the City of Hamilton’s collision database, including expanded data availability on the City’s open data portal
- Development and updating of the online Vision Zero Dashboard which publishes data and progress on various road safety initiatives City-wide, including interactive mapping for injury and fatal collisions
- The City of Hamilton has developed a Complete Streets Design Manual, which was endorsed by City Council in July 2022. This manual provides a set of consistent guidelines and tools to inform the design, implementation, maintenance, and monitoring of complete and liveable streets across the city. The Complete Streets Design Manual provides an expanded toolbox of ways to improve Hamilton's streets
- Various Vision Zero education campaigns with a focus on themes such as speeding, distracted driving, community safety zones, bike safety, and pedestrian safety
- Development of a Traffic Calming Policy; and
- Left Turn Calming pilot underway to reduce the risk of left turn collisions at signalized intersections with results expected in the fourth quarter of 2024

The 2022 Annual Collision Report illustrates that roadway safety initiatives, measures, and the application of Vision Zero principles are making a positive difference, when considering the impacts of the change in travel patterns caused by the COVID-19 pandemic, and statistically reveals areas where more work still needs to be done. Collision statistics from 2022 must be observed with the understanding that the COVID-19 pandemic has fundamentally impacted the way in which people travel and that interpreting data, identifying trends, and determining roadway safety actions is more complex than pre-pandemic.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report PW23062 – 2022 Annual Collision Report