

VISION ZERO



BRANTFORD

The City of Brantford's
Road Safety Plan



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Introduction

Vision Zero is a global initiative that emerged from Sweden in 1997 with a simple and clear goal of zero fatalities or serious injuries on city roadways.

Vision Zero Road Safety stresses that no loss of life is acceptable, and that road safety is a **shared responsibility** that requires people to work together to contribute to a safe road network. Recognizing that human error can lead to mistakes on the road, Vision Zero proposes a multi-pronged approach to support the transportation system and eliminate fatalities and serious injuries.

The City of Brantford adopted the Vision Zero initiative in 2018, aiming to make Brantford streets safer through improved education, enforcement, engineering, evaluation, and engagement. The City is committed to Vision Zero Brantford and accepts its fundamental message: fatalities and serious injuries on our roads are preventable, and we must strive to reduce traffic-related deaths and injuries to ZERO.

Having a strategic plan to guide the City's efforts in achieving the goals of Vision Zero is a key to ensuring the measures being undertaken are clearly laid out, and that the City is consistently tracking its progress towards the initiative. This document, "Vision Zero: The City of Brantford's Road Safety Plan", is a five year plan outlining the various projects the City of Brantford along with community partners has committed to delivering to achieve the Vision Zero goals, and identifies the ways in which the City's progress towards Vision Zero will be evaluated.

Vision Zero: The City of Brantford's Road Safety Plan

Vision Zero: The City of Brantford's Road Safety Plan aims to address a number of goals and priorities for the City, including promoting safe, healthy, and age-friendly built environments; ensuring all neighbourhoods in the City are safe, vibrant, attractive, and inclusive; and promoting a safe and efficient transportation system that connects Brantford neighbourhoods and neighbouring communities.

In developing the Vision Zero: The City of Brantford's Road Safety Plan, the City is focusing on three pillars to emphasize road safety:

1. Engineering;
2. Education; and
3. Enforcement.

Engineering safety measures are about the physical, built environment in which we live. Engineering measures target the design and operation of the city streets and focus on how they can be configured to prevent collisions, while minimizing the impact of human error.

Education measures involve widespread communication to deliver messaging to the community regarding the importance of road safety. The purpose of education is to change road user behaviour and make drivers more aware of their surroundings to avoid human error while on the roadways.

Enforcement measures can be incorporated into the overall safety strategy to complement the physical changes to the built environment. Through increased enforcement, the City will ensure that road users are complying with the rules of the road, and adjusting their behaviour to protect the health and safety of those around them.

Each of these three pillars has its own set of measures and targets which will be delivered over the next five years.

The City of Brantford's Road Safety Plan emphasizes safety for all users of the roads, including:

- Pedestrians (school children, older adults, persons with accessibility challenges, etc.)
- Cyclists
- Motorized Vehicle Users (drivers of automobiles, motorcycles, etc.)










In addition to the three pillars identified, the City will focus efforts on ongoing evaluation of the road safety measures and engagement with the community to inform them of any new measures being implemented.

Quick Facts

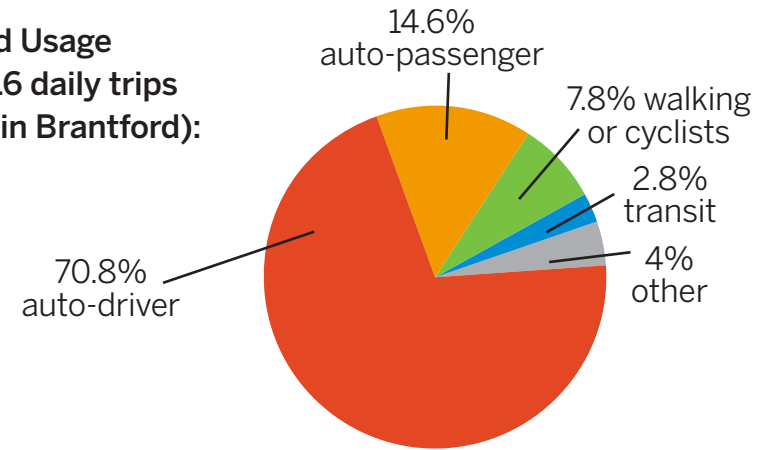
Demographics

- Population: 101,700 (2016)
- Employment: 44,900 (2016)
- Projected population by 2051: 165,000

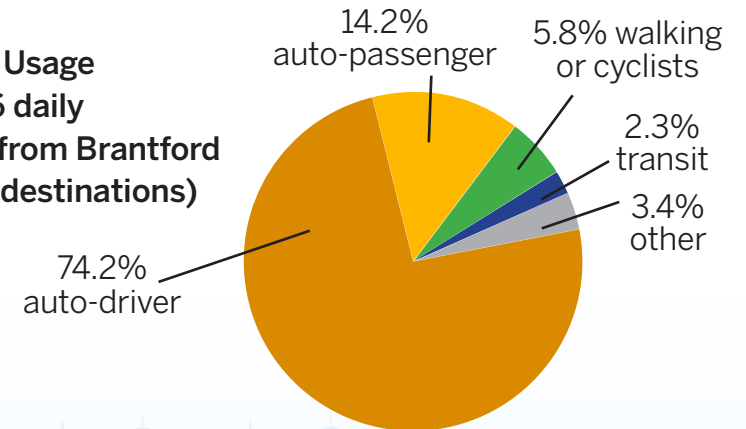
Road Infrastructure

 <p>587 KM of sidewalks</p>	 <p>1,151 KM of roads</p>	 <p>38 KM of separated bike lanes</p>
 <p>63 KM of multi-use trails</p>	 <p>28 signalized pedestrian crossings</p>	 <p>120 signalized traffic intersections</p>
 <p>2287 stop signs</p>	 <p>8 mobile radar feedback signs</p>	 <p>12 permanent vehicle activated traffic calming signs</p>

Road Usage (2016 daily trips within Brantford):



Road Usage (2016 daily trips from Brantford to all destinations):



Collision Statistics (2019):

Total Collisions: 1,800

- 30 collisions involving cyclists
- 64 collisions involving pedestrians
- 217 collisions resulting in injuries
- 3 collisions causing fatal injuries

2021 – 2026 Strategic Vision

The City of Brantford is committed to improving the safety of all road users in the City. In preparing the Vision Zero: The City of Brantford's Road Safety Plan, the City has outlined the following goals to accomplish before the year 2026:

1. Establish an understanding of the costs associated with road collisions in the City for the following areas to help evaluate the progress of road safety initiatives:
 - a. Cost of insurance claims;
 - b. Cost to repair municipal assets (staff operating costs and material costs); and
 - c. Healthcare costs.
2. Partner with community organizations to stress the importance of road safety and reinforce that it is a shared responsibility between the City, community partners, and members of the public:
 - a. Shift the focus of road safety to reframe it as a public health issue;
 - b. Increase understanding in the community about actions different stakeholders can take to contribute to road safety; and
 - c. Focus on educating all road users, including drivers, transit users, pedestrians, and cyclists, about how they can improve road safety in the City.
3. Reduce the number of total road collisions on municipal roads by 10% from the 2019 figures by the end of 2026:
 - a. Reduce the number of total collisions on roadways by 10%;
 - b. Reduce the number of collisions involving cyclists and pedestrians by 25%; and
 - c. Reduce the number of personal injuries resulting from collisions by 25%.
4. Reduce the number of fatalities resulting from collisions to ZERO.

Each year, the City of Brantford will identify the various actions that are being undertaken to contribute to the four goals identified for the 2021-2026 period. The actions being undertaken by the City will be grouped based on the three pillars of the strategy: Engineering, Education, and Enforcement.

In addition to identifying the actions being undertaken to improve road safety, the City will provide evaluation metrics to ensure that the progress towards Vision Zero can be tracked on an ongoing basis.

Engineering

Engineering safety measures are about the physical, built environment in which we live. Engineering measures target the design and operation of the city streets and focus on how they can be configured to prevent collisions, while minimizing the impact of human error.

Engineering projects can include traffic calming measures; changes to traffic control through intersection configurations, traffic signal timing/coordination and pavement markings; signage; policy changes; review of design standards; and changes to regulation such as traffic flow and parking rules. Engineering actions can be site specific to focus on areas that have been known to have higher collision rates, or be inclusive of a number of sites that are grouped together based on common characteristics.

Engineering projects in the City of Brantford are reviewed on an ongoing basis, and the merits of changes to the road network including addition of bike lanes, additional turning lanes at intersections, review of posted speed limits, and many others are supported in the City's Transportation Master Plan. The following sections provide specific actions that may be taken by the City of Brantford with the goal of improving road safety over the next five years.

Traffic Calming

The City of Brantford has identified a number of traffic calming measures that are applicable to the City's road network, where warranted. Generally there are four approaches to calming traffic within a neighbourhood:

- **Vertical Deflection Measures** – variations in pavement height and alternative paving materials to contribute to a driver's discomfort at high travel speeds. These measures are inclusive of:
 - Raised crosswalks
 - Raised intersections
 - Speed humps/cushions
 - Speed tables
- **Horizontal Deflection Measures** – use raised islands and curb extensions to deflect the motorist's path away from a straight line along roadways and through intersections to reduce speed through a corridor. These measures are inclusive of:
 - Raised islands
 - Mountable islands
 - Curb extensions
 - Chicanes
 - Traffic circles
 - Roundabouts
 - Realigned intersections
 - Pavement markings
 - Flexible bollards

- **Horizontal Narrowing Measures** – use raised island and/or curb extensions to narrow the street, making the area more “pedestrian friendly” and to increase the motorist’s awareness of pedestrian activity. These measures are inclusive of:
 - Neckdowns (curb extensions at an intersection)
 - Chokers (curb extensions at mid-block location)
 - Centre islands
- **Traffic Volume Reduction Measures** – physical diverters, street closures, and median barriers that restrict vehicles from turning at specific locations and reduce traffic volumes through residential streets. These measures are inclusive of:
 - Full street closures
 - Half closures
 - Diagonal diverters
 - Median barriers

Traffic Control

Traffic control is another way that road safety can be improved in communities. Traffic control, while instrumental to the road operations and not specifically for slowing traffic, are essential to road safety and can help improve the experience of all road users.

Traffic control is inclusive of any measure that is put in place to control the flow of traffic. For example, stop signs, street lights, pedestrian crossings, four way intersections, etc. are measures used to control the flow of traffic rather than the speed of drivers.

The City of Brantford has developed policies to assist in reviewing the use of traffic control measures on an ongoing basis, including the installation of stop signs, traffic signals, bike lanes, and bike boxes.

When combined with traffic calming measures, traffic control can have a significant impact on the behavior of drivers and contribute to an overall safer road network for all users.

2021 – 2022 Engineering Actions and Evaluation

Action A: Continue examining feasibility of roundabouts and identify potential areas for implementation.

In 2020, the City of Brantford adopted a Roundabout Installation Policy, identifying the purpose of the traffic calming measure, and how it might be implemented. In order to achieve a safer road network, the City will continue to evaluate the feasibility of roundabouts as an alternative at any location where a traffic signal would be warranted. By focusing on identifying potential areas where roundabouts will be suitable, the City will be taking a data-driven approach with the ultimate goal of improving road safety.

Evaluation Metric(s): Number of locations identified as suitable for implementing roundabouts.

Action B: Continue implementation of the City's traffic calming policy and conducting community outreach to identify priority areas for the installation of additional measures.

The City of Brantford's Traffic Calming Policy outlines clearly the policies, objectives, and procedures that are to be used as a guideline when undertaking a traffic calming study. As directed in this policy, the City is to investigate the feasibility of various traffic calming measures in areas that are identified as having safety concerns, and following a technical study, consult with public in the proposed affected neighbourhoods. Depending on the public consultations and traffic calming study, the City may receive direction from Council to implement the traffic calming measures.

Evaluation Metric(s): # of traffic calming studies undertaken; # of public consultations regarding traffic calming measures, and % of public in affected neighbourhoods in favour of traffic calming measures; # of traffic calming reports forwarded to City Council; # of traffic calming measures implemented

Action C: Continue expansion of cycling network in identified areas through multi-use trails and segregated bike lanes to improve safety.

The City of Brantford received funding from the Ontario Municipal Commuter Cycling Program in 2018 to enhance the active transportation network. To date, several projects have been completed to increase bicycling facilities in the City, including bike lanes and bike boxes on Memorial Drive and North Park Street, and bike lanes on Erie Avenue. Throughout 2021, the City will enhance road safety by introducing more bike lanes.

Evaluation Metric(s): KM of bike lanes; # of bike boxes; bicycle traffic counts

2021 – 2022 Engineering Actions and Evaluation

Action D: Continue to work with applicants on development applications to incorporate traffic calming measures into the design, where applicable.

As part of the development process, City staff work with applicants to incorporate traffic calming measures into the design of new subdivisions. Through the development process, the City is able to refer to standards for traffic calming as identified in the Transportation Design Study, and work closely with developers to ensure road safety is incorporated into the design. The Transportation Design Study includes a Terms of Reference that is required to be submitted as part of development applications, and identifies traffic control and calming measures that are suitable for the location.

Metric: # of development applications that have considered traffic calming measures.

Education

Education measures involve widespread communication to deliver messaging regarding the importance of road safety. The purpose of education is to change road user behaviours and make drivers more aware of their surroundings to avoid human error while on the roadways. In addition, with a focus on education the City of Brantford will raise awareness and improve the understanding of the issues we face and the targeted interventions being undertaken to address them.

Many different measures exist for public education, such as increased signage, public engagement about changes to the roadways, and information sharing about the costs associated with dangerous driver behaviour. A key to Brantford's education campaigns will be to provide messaging to the community regarding the importance of road safety, information about how to stay safe on the roads in all conditions, and informing the public about the rules of the road.

Signage

The use of signage throughout the City of Brantford will serve two functions: to inform drivers and other road users of the rules of the road, and to alert the public about any specific cautions they should be taking when using the road. Some common uses of signage to alter driver behaviour include:

- Signage on lawns alerting people to slow down
- Signage identifying areas as community safety zones or school zones
- Signage alerting drivers of children or seniors crossing in the neighbourhoods
- Radar speed signs that display the speeds at which people are driving



Public Engagement

The use of public engagement through social media, advertisements, public surveys, etc. can be effective in delivering messaging on how road users can adjust their behaviour to improve safety. Examples of public engagement activities include:

- Public education campaign and outreach on pedestrian safety
- Messaging to emphasize safe crossing areas for seniors
- Social media messaging about new bicycle lanes or changes to rules on the roadways
- Media messaging during extreme weather events informing the community of how to remain safe on the roadways
- Public information campaign focused on risks and consequences of distracted driving

Information Sharing

It is important that the City and community be equipped with the information necessary to properly implement road safety measures. Messaging informing the community about how the City is implementing road safety measures is a key part of the strategy. Information sharing can take many forms, including:

- Displaying collision data and information regarding problem or priority areas in the City
- Posting information online about new public safety measures in place in specific locations

2021 - 2022 Education Actions and Evaluation

Action A: Consistent information sharing and updating of the City of Brantford's Vision Zero webpage and social media accounts.

The City of Brantford uses project specific webpages to deliver messaging about various initiatives and projects that will impact the community. By ensuring that the Vision Zero webpage is up-to-date with the latest information about new safety measures being undertaken, key statistics, and media campaigns, it will ensure that the public is able to locate the information with ease, making it more accessible.

Evaluation Metric(s): # of page views; # of website updates; # of social media posts regarding Vision Zero; # of interactions with social media posts

Action B: Distribute signage to property owners to display messaging about slowing traffic in select neighbourhoods.

Beginning in 2021, the City of Brantford is distributing signs to members of the public who wish to display signage on their lawns urging drivers to slow down. These signs are being provided free of charge and are part of the City's efforts to promote safe driver behaviour in select neighbourhoods.

Evaluation Metric(s): # of signs distributed

Action C: Increase social media messaging about new cycling facilities and active transportation projects.

Throughout the implementation of the various projects to increase cycling facilities in the City, social media messaging has been used regularly to communicate with the public about changes to the roadways. In 2021 when additional bike lanes and bike boxes are added to the active transportation network, the City will utilize social media to communicate information about these projects and the impact to the public in the affected neighbourhoods.

Evaluation Metric(s): # of social media posts; # of interactions with social media posts

Enforcement

The City of Brantford recognizes that there are many causes of traffic collisions, and that enforcement strategies need to be incorporated into the overall road safety strategy to complement the physical changes to the built environment. Typical enforcement measures that may be undertaken can include the use of red light cameras, use of automated speed enforcement cameras, and increased police presence in targeted areas.

Red Light Cameras

Red light cameras are a type of traffic enforcement measure that captures images of vehicles that enter intersections when the traffic signal indicates red (during the red phase). By automatically photographing vehicles that run red lights, the photo is evidence that assists authorities in enforcement of traffic laws. Cameras are triggered when vehicles run the red lights, and the tickets are mailed to the driver registered to the specific vehicle caught on camera. While no demerit points are issued as a result of this offence, the financial penalty is designed to discourage the driver behaviour.

Locations for red light cameras are selected through a data-driven approach that takes into account collision data. Running red lights is a serious traffic offence, and the purpose of these cameras is to discourage individuals from driving dangerously. Discouraging drivers from running red lights will shift driver behaviour, and contribute to an overall safer road network by preventing potential serious accidents that can be caused by this offence.

Automated Speed Enforcement Cameras

Automated Speed Enforcement (ASE) is an automated system that uses a camera and a speed measurement device to detect and capture images of vehicles travelling faster than the posted speed limit. ASE is designed to work together with other strategies and measures for traffic calming. ASE is focused on altering driver behaviour to reduce speeds and increase public safety.

Tickets from ASE offences are mailed directly to the driver registered to the specific vehicle caught on camera. While no demerit points are issued as a result of this, the financial penalty is designed to discourage driving faster than the speed limit.

Locations for ASE are selected through a data-driven approach that takes into account both speed and collision data. Before implementing ASE, the location needs to be established as a Community Safety Zone or School Zone.

2021-2022 Enforcement Actions and Evaluation

Action A: Complete feasibility study for Red Light Camera (RLC) Program.

The City of Brantford is in the process of conducting a feasibility study to determine the need and potential effectiveness of a RLC in the City. The feasibility study will include a detailed analysis of collision data, identify potential locations for cameras to be installed if the City chooses to join the program, as well as outline an implementation plan and timelines.

Evaluation Metric(s): # of locations identified for red light cameras

Action B: Complete high level feasibility study for Automated Speed Enforcement (ASE) Program.

The City is conducting a high level analysis of the ASE program to determine if it would be feasible in Brantford in terms of costs and benefits. In addition, the study will determine the steps for joining the ASE program and identify potential locations where the cameras can be installed based on collision data.

Evaluation Metric(s): # of locations identified for automated speed enforcement cameras



Conclusion

Achieving Vision Zero is a critical goal and important in promoting safe, healthy, and age-friendly built environments; ensuring all neighbourhoods in the City are safe, vibrant, attractive, and inclusive; and promoting a safe and efficient transportation system that connects Brantford neighbourhoods and neighbouring communities.

Over the next five years, the City of Brantford will focus attention on actions to ensure that road safety is at top of mind when implementing any changes to roadways. The Vision Zero plan outlines the importance of developing data-driven approaches to improving road safety in Brantford, developing partnerships with community organizations, and emphasizing that road safety is a public health concern that affects everyone.

Vision Zero: The City of Brantford's Road Safety Plan sets out clear strategic goals for the next five years, between 2021 and 2026. Focusing on the three pillars of Vision Zero: Engineering; Education; and Enforcement, the Plan lays out several action items for the City to complete in 2021. In addition, the Plan identifies metrics that will be used to evaluate the City's progress towards its road safety goals.

Over the next five years until 2026, the City of Brantford will provide annual updates on the metrics that have been included in this Plan, and will identify action items each year to help achieve Vision Zero.

Stay connected: For more information, please visit www.brantford.ca/VisionZero

Relevant Documents

- City of Brantford Corporate Policies
- City of Brantford Official Plan
- City of Brantford Transportation Master Plan
- Transportation Design Study
- City of Brantford Downtown Master Plan