GEORGINA

# SAFE STREETS POLICY

Operations - Town of Georgina

## Table of Contents

# INTRODUCTION

The Town of Georgina is responsible for ensuring that the roadway network serves the needs of all users, both pedestrians and motorists, in a safe and efficient manner. Safe roads revolve around the balance of the four pillars of the traffic safety program:

**Community -** fosters community safety by implementing Community Safety Zones, appointing a transportation advisory committee, and promoting a Road Watch program to reduce traffic incidents.

**Education -** aims to inform and educate the public about traffic safety and can include public awareness campaigns, school programs, community outreach, and training programs, amongst others.

**Enforcement -** ensures that traffic laws and regulations are followed to maintain safety, and can include police presence, by-law enforcement and speed enforcement.

**Engineering -** focuses on designing and constructing safer roadways and traffic environments, based upon a required need (reduced crossing width, speed reduction, etc...) and can include road design, traffic calming, intersection improvements, 'complete streets' design, and infrastructure improvements.

This comprehensive approach strives to reduce traffic accidents and enhance safety for all roadway users. The Safe Street Policy forms the framework for implementing traffic calming measures to promote safety. Traffic calming measures involve interventions that reduce vehicle speed, minimize traffic shortcuts, and prevent conflicts between pedestrians, cyclists and motorists.

## OBJECTIVE

The overall purpose of the Safe Streets Policy is to:

- **Prioritize the safety of roadway users, both pedestrians and motorists**
- **Identify locations that require traffic calming measures through the continual review of traffic data and public feedback**
- **Address issues with appropriate traffic calming interventions to restore roads to their intended use**

The objective of the policy is met through conducting preliminary screening procedures, public surveys, data collection and review, traffic calming action plans, prioritization systems, and calming measure installation. These actions and procedures allow the Town to effectively support the traffic safety program.

## SCOPE

This policy is adopted by the Town's departments and applies to all employees of the Town of Georgina operating under the Traffic Safety Program. Procedures and guidelines contained in the policy covers all assumed and owned roads within all five wards of the Town. This does not include unassumed, private, provincial and regional roads.

## REFERENCE

Highway Traffic Act, 2024

## DEFINITIONS / ACRONYMS

| | |
|---|---|
| *Aggressive Driving* | consists of speeding, following too close, failure to yield right-of-way, improper lane changes, improper passing, disobeying traffic signs and signals and impaired driving |
| *Arterial* | An arterial road or arterial thoroughfare is a high-capacity urban road that sits below freeways/motorways on the road hierarchy in terms of traffic flow and speed |
| *Collector* | A low-to-moderate-capacity road which serves to move traffic from local streets to arterial roads |
| *Community Safety Zones (CSZ)* | Areas with high pedestrian activity requiring extra caution from drivers. |
| *Local* | A street that is primarily used to gain access to the property bordering it |
| *Pedestrian Facilities* | Are design elements refering to walkways, sidewalks, and crosswalks that are to be exclusively used by pedestrians. |
| *Preliminary Screening Procedure* | Initial assessment to determine if traffic calming is needed based on factors like speed and traffic volume |
| *Ranking System* | Point-based system to prioritize traffic calming projects based on road conditions. |
| *Reassessment* | Evaluation of traffic calming effectiveness after installation. |
| *Road* | A wide way leading from one place to another |
| *Road Allowance* | Road allowances refer to allowances originally laid out for roads by a Crown surveyor |
| *Street* | A road in a city or town, typically with properties and infrastructure on one or both sides |
| *Survey* | Community input on traffic calming measures. |
| *Traffic Calming* | Measures to reduce vehicle speeds and enhance road safety |

| | |
|---|---|
| *Traffic Calming Measures* | Actions to slow traffic |
| *Traffic Calming Plan* | A detailed plan for implementing traffic calming measures. |
| *Warrant* | Criteria that justify collecting data or implementing traffic calming measures |

*Table 1: List of definitions and acronyms used in this document*

# 1.0 COMMUNITY

The Town of Georgina fosters a collaborative approach to community safety. By implementing Community Safety Zones, appointing committees and promoting road watch programs. The goal is to enhance safety by reducing the number of incidents that occur within the roadway network.

## 1.1 COMMUNITY SAFETY ZONES

### PURPOSE

The Town of Georgina has established a proactive approach to identifying areas where the public is most vulnerable to traffic related incidents. These areas are called Community Safety Zones (CSZ) and are designated roadways where motorists are alerted to the increased need for public safety. Measures are put in place to reduce vehicle speeds and increase driver vigilance within CSZs.

### DESCRIPTION

Community Safety Zones typically span between 500 meters to 2.5 kilometers and are marked with specific signage, including a "begins" sign at the start, signs every 300 meters, and an "ends" sign to indicate the conclusion of the zone.

The layout for traffic calming measures within a Community Safety Zone are shown in Appendix A for areas with a school and Appendix B for areas without a school.

Traffic data will be reviewed within Community Safety Zones to assess performance of traffic calming measures. Town Council has authority to designate CSZs in areas under municipal jurisdiction based on concerns for public safety.

# 1.2 TRAFFIC COMMITTEE

## PURPOSE

The Georgina Safe and Active Transportation Advisory Committee (GSATAC) is responsible for advising Council and staff on active transportation issues. GSATAC provides strategic recommendations to enhance safety and efficiency of the roadway network within Georgina.

## DESCRIPTION

To ensure a diverse range of perspectives and expertise, the Georgina Safe and Active Transportation Advisory Committee (GSATAC) members are appointed by Council. In total there are seven members that compose the GSATAC:

- Two Council Members
- One representative from the York Regional Police, or, if such a representative is not available to serve, a resident of Georgina
- One representative of the Georgina Trail Riders Snowmobile Club, or, if such a representative is not available to serve, a resident of Georgina
- Three citizen appointments

A collaborative approach shall be taken in meetings allowing the committee to address active transportation recommendations. Town staff with knowledge in relevant fields provide guidance and share insights on current and future Town practices.

# 1.3 ROAD WATCH

## PURPOSE

Road Watch is a community driven program that provides citizens with a means to report aggressive driving or unlawful motorist behaviour. The Town of Georgina has collaborated with York Region Police, and the Ontario Ministry of Transportation to fight unsafe driving within the Town.

## DESCRIPTION

Road watch can be used in incidents even when the suspect driver is unknown, and only the license plate number is obtained. Incidents of unsafe lane changes, disobeying traffic lights and stop signs are some typical types of behaviors that qualify for a Road Watch submission.

Road watch submissions can be done through the York Regional Police website and are reviewed by a police officer.

# 1.4 ASSOCIATED DOCUMENTS AND REFERENCES

Georgina Safe and Active Transportation Advisory Committee

Town of Georgina Road Safety

York Regional Police Road Watch Program

# 2.0 EDUCATION

## PURPOSE

Educating residents about traffic calming helps create a safe and efficient roadway network for pedestrians, cyclists and motorists. Education initiatives encourage public involvement in traffic calming activities and help residents understand the Town's decision making rational.

## DESCRIPTION

The following resources are used by the Town of Georgina to educate residents on traffic safety:

**Town website** – Provides education on pedestrian and cyclist safety and strategies to reduce traffic related incidents.

**Social Media (Instagram, Facebook, Twitter, YouTube) -** Informs the community on up-to-date strategies and campaigns that involve traffic calming initiatives.

**School programs –** Raise awareness for roadway safety among the youth.

**Georgina Safe and Active Transportation Advisory Committe (GSATAC)** - Provides opportunities for residents to speak directly with Town representatives regarding traffic safety questions and concerns.

**Local Media Outlets** – Report traffic related incidents and encourage responsible roadway use.

**Public Signage** - Signs are used to make motorists more conscious of their speed as they pass through residential areas.

# 3.0 ENFORCEMENT

Traffic laws and regulations are enforced to maintain safety, and can include police presence, by-law enforcement and speed enforcement. Enforcement not only addresses immediate safety concerns but also contributes to long-term improvements in urban infrastructure and community well-being.

## 3.1 TRAFFIC BYLAWS

### PURPOSE

Bylaw 2023-0087, as amended, is a council-endorsed regulation to govern and control the parking of vehicles and regulate traffic in the Town of Georgina.

### DESCRIPTION

There are two main areas of concern addressed in this By-Law:

**Parking Provisions** – Outlines when and where parking is allowed/restricted, parking during the winter season, parking prohibitions within designated fire routes, etc.

**Traffic Provisions –** Details the rights of motorists, cyclists and pedestrians, outlines the general rules of the road and authorizes the use of traffic control signal systems. References the Highway Traffic Act which describes maximum speed limits and allows Council to establish Community Safety Zones.

Rules and regulations contained in Bylaw 2023-0087 set clear standards to ensure that traffic violations are handled in a fair and transparent manner. This enactment prioritizes public safety and minimizes the risk of traffic related incidents.

## 3.2 AUTOMATED SPEED ENFORCEMENT (ASE) PROGRAMS

### PURPOSE

Automated Speed Enforcement (ASE) is a proven and efficient method to improve maximum posted speed limit compliance. The Safe Streets Monitoring Program aims to reduce the

number of speeding related accidents and increase safety for motorists, pedestrians, and cyclists by reducing vehicular speeds.

### DESCRIPTION

Automated speed enforcement is commonly used by municipalities throughout Ontario to improve maximum posted speed limit compliance. The Town of Georgina's Safe Streets Monitoring Program uses automated speed cameras and other technology to detect speeding and issue citations (tickets) to the registered owner of the vehicles.

Cameras can only be installed within community safety zones where there is an increased concern for public safety.

The Safe Streets Monitoring Program is supported by local enforcement, York Regional Police, as it provides an option for continuous speed enforcement at a designated location without requiring physical deployment of officers.

## 3.3 ASSOCIATED DOCUMENTS AND REFERENCES

*Pending Council Approval* – Safe Streets Monitoring Program

By-Law 2023-0087

# 4.0 ENGINEERING

The Town of Georgina focuses on designing and constructing a safer roadway network, based on public and required need.

## 4.1 SPEED LIMIT REDUCTIONS

### PURPOSE

Benchmarking Transportation Association of Canada (TAC) guidelines, the Town of Georgina can effectively modify and reduce posted speed limits. Speed limit reductions enhance road safety by lowering vehicle speeds, reducing the likelihood and severity of accidents.

### DESCRIPTION

Speed limit reduction involves lowering the maximum allowable speed on specific roadways and streets with the overall goal of improving road safety. Speed limit reduction is deemed necessary on roads with high traffic volumes, pedestrian activity, or hazardous road conditions.

Appropriate speed limits are assessed using the Transportation Association of Canada's *Canadian Guidelines for Establishing Posted Speed Limits (2009)*. Classification, function and physical characteristics are considered to evaluate the risks associated with a certain roadway and determine an appropriate posted speed limit. The higher the level of risk, the lower the recommended posted speed limit.

When a new speed limit is established, changes are marked with updated signage to keep motorists informed and ensure compliance. Adjustments are typically part of a broader traffic calming strategy aimed at creating safer road environments for all users.

## 4.2 TRAFFIC CALMING

Traffic calming measures reduce vehicle speeds and enhance safety in residential and high-traffic areas. These interventions prevent accidents and improve street environments. The flowchart shown in Appendix C outlines the traffic calming processes:

- for preliminary screening and conducting surveys,
- collecting and reviewing traffic data,

- developing a traffic control plan,
- implementation of traffic calming measures and installation review.

## 4.2.1 PRELIMINARY SCREENING PROCEDURE

### PURPOSE

The Town of Georgina follows a robust Preliminary Screening Procedure that filters out areas that do not meet the basic and essential criteria for traffic calming measures to be implemented. By employing this screening procedure at the outset, this approach ensures the appropriate allocation of resources in order to stay current with requests.

### DESCRIPTION

When investigating the need for a traffic calming measure on a specific street, section of a street, or multiple streets, there is a Preliminary Screening Procedure.

This procedure involves analyzing several factors including road classifications, grades, traffic volumes, speeds, existing infrastructure, the length of the street, and the characteristics of surrounding areas. The mandatory requirements assessed during the preliminary screening are listed in Appendix D. If criteria is not met, the roadway under review is considered not suitable for a traffic calming intervention. Regardless of the outcome of the preliminary screening procedure, community education and awareness will remain a priority.

## 4.2.2 SURVEYS

### PURPOSE

Public surveys assess the level of support for the implementation of traffic calming initiatives amongst residents who live in affected areas. This ensures that the perspectives of those most impacted are part of the decision-making process.

### DESCRIPTION

If a requested location/road segment passes the preliminary screening procedure, surveys are distributed to residents. The survey will seek endorsement for traffic calming interventions and

feedback on specific types of traffic calming measures that would best suit the local community. Surveys are conducted in one of two ways:

**Town Driven –** Surveys are distributed by Town staff when the preliminary screening procedure is initiated internally.

**Resident Driven –** If a resident initiates a review, they are responsible for having Town provided surveys completed by residents within the affected area, as defined by the Town.

Completed surveys are valid if they contain the name, address, phone number and/or email of the resident (occupant or property owner), and clear indication of support/opposition of the traffic calming implementation. If applicable, residents may be asked to select a preference during the survey.

A majority support of **66%** is required for the traffic calming procedures to continue. This level of support ensures that future traffic calming initiatives are widely accepted and reflect the values of the local community.

## 4.2.3 DATA REVIEW AND COLLECTION

### PURPOSE

Traffic data is collected and reviewed to assess the need for traffic calming interventions and prioritization. Resources are allocated to where they will have the greatest impact on public safety based on data review.

### DESCRIPTION

Traffic data collected by the Town includes:

- Vehicle speeds (Max speed, 85$^{th}$ percentile, speed by vehicle type)
- Traffic volumes (average annual daily traffic, hourly, daily)
- Collision history (as available from YRP)
- Roadway measures and design, inclusive of private and public infrastructure

A study examining traffic data is conducted after the Town has received majority support from residents for traffic calming interventions. If a study has taken place within the previous 3 years

and there are no significant changes to the road allowance usage, new data will not be collected and the existing data will be used.

The results of the study will inform whether a Traffic Calming Plan will be created and if a location is calculated for priority of implementation.

Data results from the study shall meet the following thresholds in order to qualify for a Traffic Calming Plan:

From March 15 – November 14:

- Where no pedestrian facility exists, the 85$^{th}$ percentile must be more than 10% above the posted speed limit to warrant a Traffic Control Plan
- Where a pedestrian facility exists, the 85$^{th}$ percentile must be more than 20% above the posted speed limit to warrant a Traffic Control Plan

From November 15 – March 14:

- Where no pedestrian facility exists, the 85$^{th}$ percentile must be more than 5% above the posted speed limit to warrant a Traffic Control Plan
- Where a pedestrian facility exists, the 85$^{th}$ percentile must be more than 10% above the posted speed limit to warrant a Traffic Control Plan

Using reduced thresholds in the winter period allows the study periods to continue uninterrupted year-round, while still providing valid results for a location to exceed a threshold, qualifying for a traffic calming plan.

The area studied is prioritized (section 4.2.5) based on the severity of the traffic related issues present. This influences the type of traffic calming interventions required and the timeframe for installation.

## 4.2.4 TRAFFIC CALMING PLAN

### PURPOSE

Traffic Calming Plans include traffic calming measures and timeframes for interventions which promote and enforce compliance with posted speed limits.

## DESCRIPTION

Traffic Calming Plans involve at least one physical installation based on current data review and community engagement. Traffic calming selection depends on factors including, but not limited to:

- Roadway width, curvature, design and posted speed limits
- Community feedback
- Number of driveways within a section of roadway
- Associated cost and disruptions due to installations
- By-Laws effecting the area
- Pedestrian facilities
- Required reduction of speed based on 85$^{th}$ percentile travelled

Appendix E details the types of calming measures with descriptions, an image and the expected range of speed reduction each measure can have on vehicular traffic. This catalog is used by the Town to customize and optimize Traffic Calming Plans to ensure that the measure(s) installed have a forecasted combined speed reduction from the studied 85$^{th}$ percentile, down to the posted maximum speed limit for that road.

# 4.2.5 PRIORITIZATION

## PURPOSE

The Town of Georgina uses a point-based framework to rank intervention implementation. This system ensures that traffic calming measures are implemented where they are most urgently needed.

## DESCRIPTION

Traffic Calming Plans priorities are generated using a point-based evaluation system that considers factors such as vehicle speeds, traffic volumes, and existing infrastructure.

Appendix F outlines this prioritization system which uses related factors assigned to a point value. A total score is then aggregated, representing the overall priority of each area; higher scores indicate a higher urgency for traffic calming measures.

## 4.2.6 CALMING MEASURE INSTALLATION

### PURPOSE

Once the Traffic Calming Plan is established, the traffic calming measures are installed. These installations will enhance road safety by reducing vehicle speeds, minimizing traffic-related incidents, and addressing specific roadway issues.

### DESCRIPTION

Installation takes place based on the location's prioritization (Appendix F); higher points indicated higher priority. There can be multiple types of calming measures installed at one location, each determined by the Traffic Calming Catalogue, and planned to achieve a desired reduction back to the posted speed limit. The timing of the installation outside of the prioritization may vary based on budget constraints, award of contract, other scheduled works in the area and time of year. Where a significant backlog of measures occurs, Council will be informed, and a project will be requested to be initiated to clear the backlog.

## 4.2.7 INSTALLATION REVIEW

### PURPOSE

After installing traffic calming measures, the Town of Georgina will initiate follow-up data collection to assess the traffic calming plan's success and effectiveness. This analysis will determine whether the measures have enhanced traffic safety and reduced speeds, while also pinpointing areas that may need further optimization.

### DESCRIPTION

After a traffic calming measure is installed, the Town of Georgina will gather and systematically review post-installation data. If the data shows that the traffic calming intervention is not successful, a further, in-depth review will be conducted. This process includes:

- Gathering feedback from residents and other stakeholders to identify areas for improvement and ensure the measures enhance traffic safety and reduce speeds.

- Monitoring traffic flow and patterns to assess changes in vehicle behavior and identify any unintended consequences.
- Conducting surveys to gauge public perception and satisfaction with the implemented measures.

## 4.3 ASSOCIATED DOCUMENTS AND REFERENCES

*Canadian Guidelines for Establishing Posted Speed Limits (2009)*

# 5.0 IMPROVING AND MONITORING

## PURPOSE

The Town of Georgina is dedicated to continuously improving the effectiveness of its Safe Streets Policy by adopting best practices and implementing remedial measures. This policy is dynamic, allowing the Town to evaluate and phase-in any changes, new approaches, and technologies related to traffic safety.

## DESCRIPTION

To ensure continual improvement, programming associated with this policy will be regularly assessed for feasibility and implementation. Improvement measures, identified through management reviews, document reviews, and ongoing monitoring of opportunities for improvement, will be systematically addressed and evaluated. This ensures that any corrective measures taken effectively enhance the road allowance safety.

# 6.0 CONCLUSION

The Safe Streets Policy is designed to address traffic safety both reactively and proactively through a structured and systematic approach. By following outlined procedures, including preliminary screening, public surveys, data collection, and traffic-calming measure installation, the policy ensures interventions are data-driven and community-supported. This policy improves traffic conditions across the municipality.

Through careful selection, prioritization, and review of traffic calming measures, the Town seeks to create safer and more efficient streets for all users. Continuous evaluation and community feedback are integral to the policy's success, ensuring that implemented measures meet their intended goals and adapt to evolving traffic conditions. This approach addresses immediate traffic issues and fosters long-term improvements in the overall safety of the community.

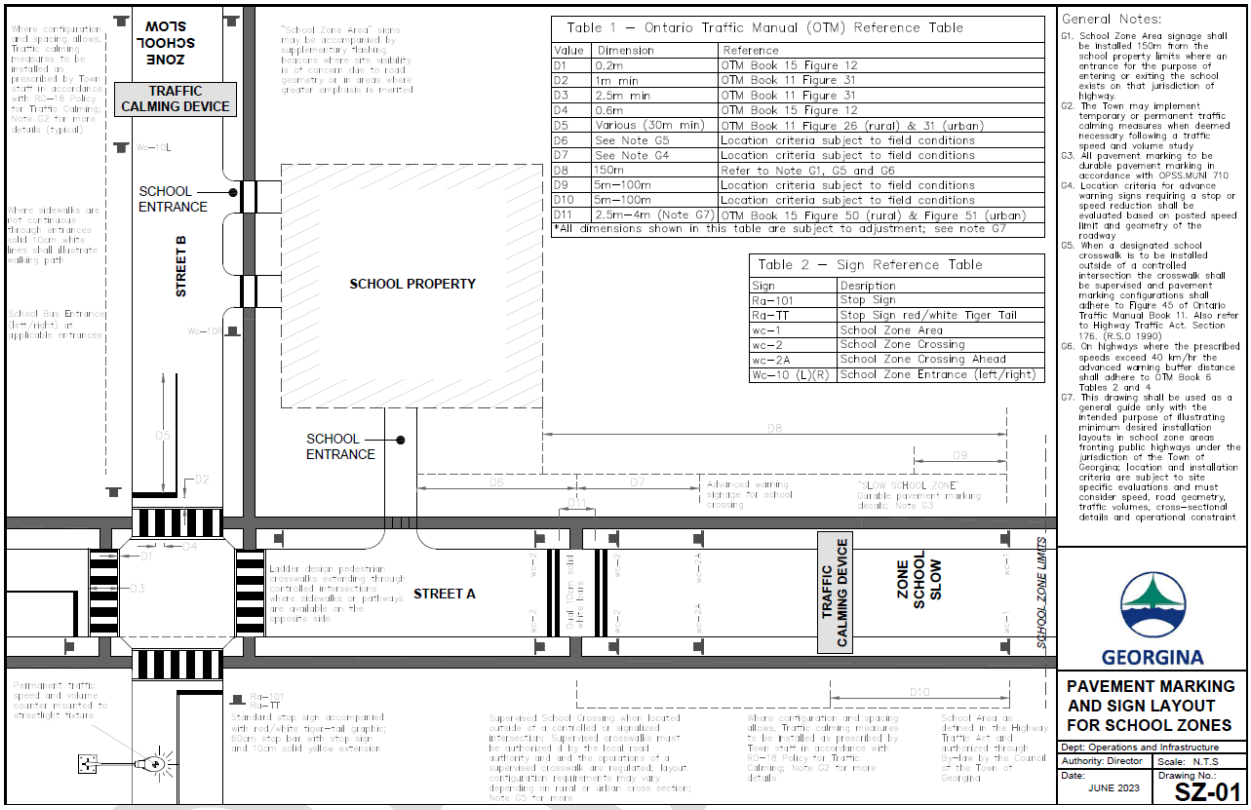
**History of Changes**

History of Changes Revisions of documents are identified at the end of each document. Revision number, date, description of revision, and individual completing the revision are included for each controlled document.

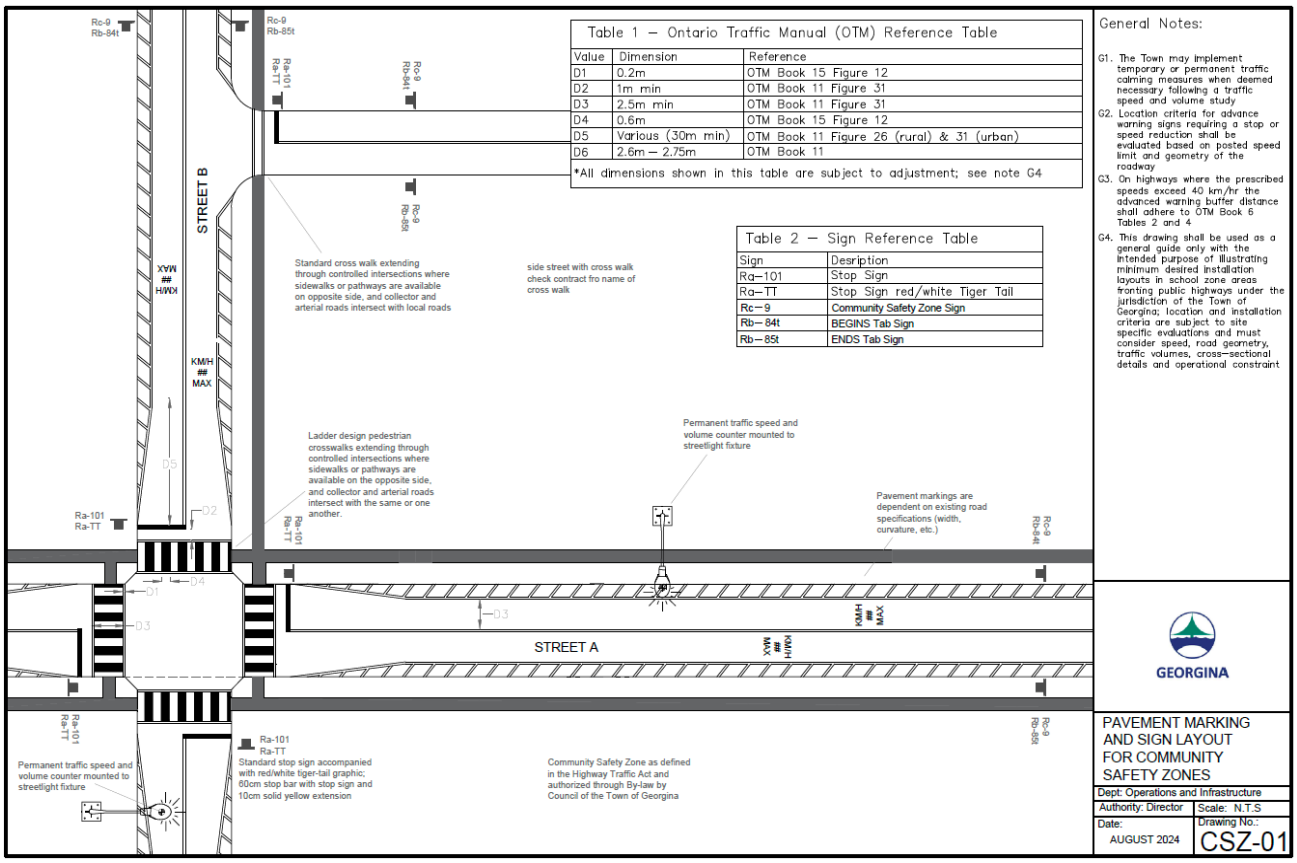
| Version No. | Date | Description | By |
|---|---|---|---|
| 001 | 2024 | Created Safe Streets Policy document and all associated documents (Section 1 – 6) | Niall Stocking, Matthew Deluca, Zaim Mirza |
| | | | |
| | | | |

# APPENDIX

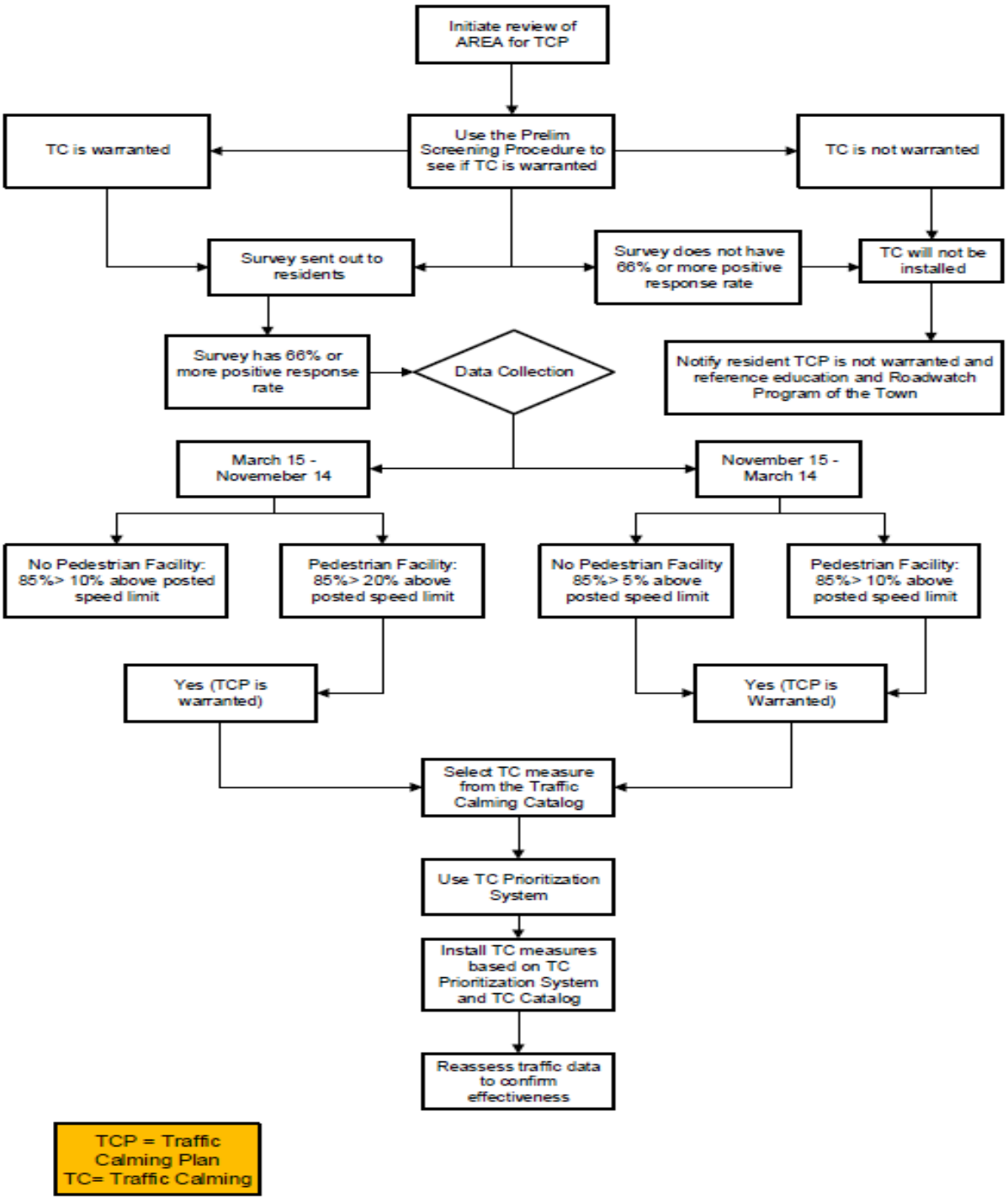
## APPENDIX A – Community Safety Zone in proximity to a school



# APPENDIX B – Community Safety Zone without school



# APPENDIX C – Safe Streets Flowchart



# APPENDIX D – Preliminary Screening Procedure Requirements

| | **Requirement** | ***Description of requirement*** |
|---|---|---|
| **Mandatory Requirements** | Road or Street must be Town-Owned | *The Town does not have permission to install traffic calming measures on private, regional or provincial roads or streets.* |
| | Road or Street must be equal to or greater than 250 m | *The Town will not install traffic calming measures on any road or street shorter than 250 m. Educational and Community awareness is the best approach for street safety in these scenarios.* |
| | An existing traffic calming assessment has not been completed within the last 3 years and no significant changes have occurred on the section of roadway or street that would indicate a change of use. | *This will ensure Town resources are being deployed in the most efficient manor* |
| **Additional Requirements (must meet 3 of 7 criteria)** | Road or street has an existing Community Safety Zone | Community Safety Zones have an increased risk of speeding concerns due to high demand of pedestrian activity |
| | Road or Street has a shared use or trails | Shared use or trails means cyclists, motorists and pedestrians are sharing the road, which exposes a higher risk of conflict |
| | Block section of requested road contains crosswalks or sidewalk connections perpendicular to the street section | These parameters indicate a potential increased frequency for high-risk pedestrian-vehicle conflict. |
| | Road and Street has a traffic volume of or more than 250 vehicles per day | Higher traffic volumes are a sign of increased probability of high-risk vehicle encounters |
| | Data collected within the last 3 years shows the 85th percentile speed exceeds of or more than 20% of posted speed limit. | This threshold accounts for minor discrepancies in speedometers and varying driving conditions, allowing the Town to focus on significant offenders who pose real safety risks. |
| | Section of requested road contains a Transitional zone of equal to or greater then 20km/hr | Transitional zones have a speed reduction change, without awareness it is possible that the operator of the vehicle will not lower the operating speed to the lesser speed limit |
| | Grade of road does not exceed +-8% | The Town cannot install certain calming measures on roads that have an excess amount of grade due to safety and hazard issues |

# APPENDIX E – Traffic Calming Catalog

| Traffic Calming Measures | Expected Speed Reduction (range) | Description | Image |
|---|---|---|---|
| **Pavement Marking** | | | |
| Converging chevrons | 5 km/h - 8 km/h | Converging chevrons are pavement markings painted in the shape of a forward-facing V pointing in the roadway travel direction. They can be spaced closed together or painted thinner as distance increases to create the illusion that a vehicle's speed is increasing. This is done to alert the driver of the need to reduce speed |  |
| Full-lane transverse bars | 5 km/h - 8 km/h | Full-lane transverse bars are a series of parallel pavement markings which extend across the majority of the travelled lane width. The series of markings may be placed closer together with distance to create the illusion that a vehicle's speed is increasing to alert the driver of the need to reduce speed |  |
| On-Road "sign" | 6 km/h - 14 km/h | On-road 'sign' pavement markings provide information that would typically be shown to drivers through signage but are painted on the roadway to provide a larger image, and one that is directly in the driver's line of sight. Some examples could be speed limit, 'SLOW', 'Stop ahead, etc. |  |
| Peripheral transverse bars | 0 km/h - 8 km/h | Peripheral transverse bars are a series of parallel pavement markings along the edge of the travelled lane widths. The series of markings may be placed closer together with distance to create the illusion that a vehicle's speed is increasing. This is done to alert the driver's awareness of the need to reduce speed. |  |

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| Lane narrowing pavement centrelines | 0 km/h - 10 km/h | Lane narrowing is the process of reducing lane widths using pavement markings or other features (for example, bicycle lanes, street beautification programs, pavement texture). The intention is for drivers to perceive the roadway to be less comfortable at higher speeds due to the narrowing of the lanes and ultimately reduce operating speeds |  |
| Optical illusions pavement markings | 0 km/h - 1 km/h in mean speed | Optical illusion pavement markings use colours and shading to create an optical illusion in an attempt to influence drivers to reduce their speed |  |
| LED pavement markings | Not Available | LEDs can be used in pavement to create dynamic road markings. The linear strips of LEDs are coated in plastic and use induction power connections allowing them to be used in a variety of ways such as displaying an advisory speed limit for a curve. The use of LEDs is not limited to dark conditions, since these active markings can be seen in daylight as well. |  |
| **Vertical deflections** | | | |
| Raised crosswalk | 5 km/h - 13 km/h | A raised crosswalk is a marked pedestrian crosswalk at an intersection or mid-block location constructed at a higher elevation than the adjacent roadway. The purpose of a raised crosswalk is to reduce vehicle speeds, improve pedestrian visibility, and reduce pedestrian–vehicle conflicts. |  |
| Raised intersection | 0 km/h - 10 km/h | A raised intersection is an intersection, that may include crosswalks, constructed at a higher elevation than the adjacent approach roadways. The purpose of a raised intersection is to reduce vehicle speeds, better define crosswalk areas, and reduce pedestrian–vehicle conflicts. |  |
| Speed hump | 6 km/h - 13 km/h | A speed hump is a raised area of a roadway, which causes the vertical upward movement of a traversing vehicle. The purpose of a speed hump is to cause discomfort for drivers travelling at higher speeds and to reduce vehicle speeds. |  |

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|---|---|---|---|
| Speed cushion | 0 km/h - 8 km/h | A speed cushion does not cover the entire width of the road. The width is designed to allow a large vehicle, such as a bus, to "straddle" the cushion, while light vehicles will have at least one side of the vehicle deflected upward. Speed cushions are intended to produce sufficient discomfort to limit passenger vehicle travel speeds yet allow the driver to maintain vehicle control, while allowing larger vehicles such as buses and emergency vehicles to pass without difficulty. |  |
| Speed table | 6 km/h - 13 km/h | A speed table is an elongated raised speed hump with a flat-topped section that is long enough to raise the entire wheelbase of a vehicle. They may be constructed with brick or other textured materials on the flat section. |  |
| **Horizontal deflections** | | | |
| Chicanes | 6 km/h - 10 km/h | A chicane is a series of curb extensions on alternating sides of a roadway, which narrow the roadway and require drivers to steer from one side of the roadway to the other to travel through the chicane. Multiple series of curb extensions can be used. The purpose of this measure is to discourage shortcutting or through traffic and reduce overall speeds by forcing the lateral shifting of vehicles travelling through the chicane. |  |
| Curb radius reduction | Speed reduction for right-turning vehicles | A curb radius reduction is the reconstruction or modification of an intersection corner with a smaller radius, usually between the 3.0 m to 5.0 m range. The purpose is to slow down right-turning vehicles, reduce crossing distances for pedestrians, and to improve visibility of pedestrians. |  |

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|---|---|---|---|
| Lateral shift | Not Available | A lateral shift in a roadway occurs where an otherwise straight section is redesigned using pavement markings or curb extensions to create a curvilinear alignment (a 'jog') in the roadway similar to a chicane. This effect can also be achieved with the use of a central island.A lateral shift causes drivers to have to negotiate the alignment and increases awareness in attempt to reduce vehicle speeds. |  |
| Speed Kidney | 0 km/h - 5 km/h | A speed kidney is an arrangement of three speed humps elongated with a curvilinear shape in the direction of traffic. Vehicle drivers choosing to drive in a straight path will experience discomfort as two or four wheels traverse the different parts of the speed kidney. Vehicles are required to take a curvilinear path in order to avoid the vertical deflection |  |
| Traffic circle/round about | 0 km/h - 14 km/h | A traffic circle/traffic button/mini-roundabout is an island located at the centre of an intersection, which requires vehicles to travel through the intersection in a counterclockwise direction around the island. |  |
| **Roadway Narrowing** | | | |
| Curb extension | 2 km/h - 8 km/h | A curb extension (also known as neckdown, choker, curb bulb, or bulb-out) is a horizontal intrusion of the curb into the roadway resulting in a narrow section of roadway. The purpose of a curb extension is to reduce vehicle speeds, reduce crossing distance for pedestrians, increase visibility of pedestrians, and prevent parking close to an intersection |  |
| On-street parking | Not available | On-street parking is the reduction of the roadway width available for vehicle movement by allowing motor vehicles to park adjacent and parallel to the curb. Angled parking is not appropriate as a traffic calming measure, due to the increased potential for conflicts. The effect of using on-street parking to narrow the effective roadway space is to reduce vehicle speeds and to reduce possible short-cutting or through traffic. |  |

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|---|---|---|---|
| Raised median island | 3 km/h - 8 km/h | A raised median island is an elevated median constructed on the centerline of a two-way roadway to reduce the overall width of the adjacent travel lanes. The purpose of a raised median island is to reduce vehicle speeds and to reduce pedestrian–vehicle conflicts |  |
| Road diet | 5 km/h - 12 km/h | A road diet is a reconfiguration of a roadway where the number of travelled lanes and/or the effective width of the road is reduced in order to allocate the reclaimed space for other uses, such as wider sidewalks, turning lanes, bus lanes, pedestrian refuge islands, bike lanes, parking, etc. May require an MCEA. |  |
| Flexible bollards | 0 km/h - 5 km/h | The use of vertical treatments such as flexible post-mounted delineators or raised pavement markers to create a centre median. This could be used to give drivers a perception of lane narrowing and create a sense of constriction |  |
| **Surface Treatment** | | | |
| Sidewalk extension | | A sidewalk extension is a sidewalk continued across a local street intersection at the level of the roadway. Textured/patterned elements that contrast the roadway can be incorporated into the sidewalk extension. The purpose of a sidewalk extension is to visually enhance a pedestrian crossing location so drivers become more aware of its presence |  |
| Textured Pavement | | Textured pavement is roadway pavement that incorporates a textured and/or patterned surface which contrasts other adjacent roadways in the surrounding area. The difference in texture alerts drivers of the potential need to reduce speed |  |

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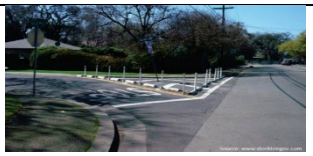
|---|---|---|---|
| Transverse rumble strips | 3 km/h - 8 km/h | Transverse rumble strips are raised buttons, bars or grooves closely spaced at regular intervals on the roadway that create both noise and vibration in a moving vehicle. The purpose of a rumble strip is to alert motorists to a traffic control device which is associated with unusual or changing conditions ahead. |  |
| **Access Restriction** | | | |
| Intersection Channelization | Not available | Intersection channelization is the use of raised islands or bollards located in an intersection to obstruct specific traffic movements and physically direct traffic through an intersection. Intersection channelization can improve pedestrian crossing safety by reducing crossing distances and providing refuge areas |  |
| Right-In/Right-Out island | Not available | A right-in / right-out island is a raised triangular island at an intersection approach which obstructs left turns and through movements to and from the intersecting street or driveway. Bicycles are typically permitted to make left turns and through movements from the side street, either through gaps or depressions in the island, or by travelling around the island. The purpose of a right-in / right-out island is to obstruct short-cutting or through traffic. |  |
| Directional Closure | 0 km/h - 11km/h | A directional closure is a curb extension orvertical barrier extending to approximately the centerline of a roadway, effectively obstructing (prohibiting) one direction of traffic. |  |
| Diverter | | A diverter is a raised barrier placed diagonally across an intersection that forces traffic to turn and prevents traffic from proceeding straight through the intersection. Diverters can incorporate gaps for pedestrians, wheelchairs and bicycles and can be mountable by emergency vehicles |  |

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|---|---|---|---|
| Full closure | | A full closure is a barrier extending the entire width of a roadway, which obstructs all motor vehicle traffic movements from continuing along the roadway. A closure can change a four-way intersection to a three-way intersection, or a three-way intersection to a non-intersection. Gaps can be provided for cyclists or to allow for emergency vehicles. The purpose of a full closure is to eliminate short-cutting or through traffic. |  |
| Raised Median | | A raised median through an intersection is a concrete or asphalt island located on the centerline of a two-way roadway through an intersection, which prevents left turns and through movements to and from the intersecting roadways. |  |
| **Enforcement** | | | |
| ASE camera | | Automated Speed Enforcement (ASE) cameras photographs vehicles operating exceeding the threshold speed limit without the presence of police officers. Legal provision is required. Ideal use when thresholds are exceeded in Community Safety Zones. |  |
| **Education** | | | |
| Speed display signage | 3 km/h - 14 km/h | A speed display device is an interactive sign that displays vehicle speeds as oncoming motorists approach. Vehicle speed is captured using radar and can trigger the display board to show when vehicles approach at predetermined unsafe speeds. Can be used upstream of manned speed enforcement. |  |

# APPENDIX F – Point-based Prioritization

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| **Traffic Volumes** | 1 point for each 50 vehicles above the specified AADT threshold (250 vehicles) |
| **Traffic Speed** | 1 point for every 1 km/h the 85th percentile speed is above the speed limit |
| **Collision History** | 5 points per collision at any location within the study area in the last 3 years |
| **Sidewalks** | 10 points if there are no sidewalks/MUP<br>5 points if there is a sidewalk/MUP on only one side of the street in the concerning area<br>0 points for sidewalk/MUP on both sides |
| **Pedestrian Facilities** | 5 points per designated pedestrian generators (ex. crosswalks, schools, parks, senior centres, places of worship) within the study area |
| **Active Transportation** | 10 points if there are active transportation facilities on a shared use road |