

Appendix “A”



POLICY MANUAL

POLICY NUMBER: PUBLIC WORKS-008

SUBJECT: TRAFFIC CALMING POLICY

POLICY STATEMENT: (Purpose/Objective)

To provide a guideline for the City of Brantford to determine when it is appropriate to undertake a traffic calming study. Provides for a standardized procedure for the analysis of a street section to determine whether traffic issues can be addressed through the use of traffic calming measures.

Policy Objectives

The goal of the Traffic Calming Policy is to develop a set of integrated policies, objectives and procedures that will be used as a guideline when undertaking a traffic calming study. The objectives are as follows:

- Provide a warrant procedure to determine whether traffic calming measures are applicable based on various operating conditions such as speed, volume, and collisions;
- Provide a standard format for handling traffic calming requests;
- Improve neighbourhood livability by mitigating the impacts of vehicular speeds on local and collector streets;
- Promote safe and pleasant conditions for residents, motorists, cyclists, and pedestrians;
- Encourage public involvement in the traffic calming activities.

The secondary outcome of the Traffic Calming Policy subsequently is:

- Increase the motorist's awareness of the street functions and thereby reduce vehicular speeds;
- Discourage non-local traffic from travelling through a neighbourhood on local streets, thereby reducing the traffic volume;
- Increase compatibility between various street users, including motorists, cyclists, and pedestrians;
- Aesthetically enhance the neighbourhood environment with landscaping and design features;
- Make efficient use of City of Brantford resources by prioritizing traffic calming projects.

Traffic Calming Measures

Public Works has identified a number of traffic calming measures that are applicable to the City's road network. Generally, there are four (4) approaches to calming traffic within a neighbourhood:

- Vertical Deflection Measures
- Horizontal Deflection Measures
- Horizontal Narrowing Measures
- Traffic Volume Reduction Measures

1) Vertical Deflection Measures

Vertical deflection measures use variations in pavement height and alternative paving materials to contribute to motorist's discomfort at high travel speeds. The purpose of the deflection is to reduce speeds along a street within a neighbourhood or at a specific location in order that other users, such as pedestrians, are presented with a roadway feature that better meets their needs. Some common vertical deflection devices include:

- Raised Crosswalks
- Raised Intersections
- Speed Humps/Cushions
- Speed Tables

2) Horizontal Deflection Measures

Horizontal deflection measures use raised islands and curb extensions to deflect the motorist's path away from a straight line along streets and through intersections. The intention of the deflection is to reduce the vehicular speed through a corridor in order that others in the area are not impacted by speeding traffic. Some common horizontal deflection devices include:

- Raised Islands
- Mountable Islands
- Curb Extensions

- Chicanes
- Traffic Circles
- Roundabouts
- Realigned Intersections
- Pavement Markings
- Flexible Bollards

3) Horizontal Narrowing Measures

Horizontal narrowing measures use raised islands and/or curb extensions to narrow the street, making the area more “*pedestrian friendly*”. The intention of the narrowing is to increase the motorist’s awareness of pedestrian activity, and to reduce their speed through an intersection or mid-block pedestrian crossing. Some common horizontal narrowing devices include:

- Neckdowns (curb extensions at an intersection)
- Chokers (curb extensions at mid-block location)
- Centre Islands

4) Volume Control Measures

Volume control measures include physical diverters, street closures, and median barriers, which restrict vehicles from turning at specific locations. Their main purpose is to divert, and ultimately reduce traffic volumes from residential streets. Volume control measures typically move traffic volumes and the associated negative impacts from one street to an adjacent street, and therefore, will only be considered under special circumstances. Some volume control devices include:

- Full street closures
- Half closures
- Diagonal Diverters
- Median Barriers

A document providing illustrated descriptions of traffic calming measures available for consideration is attached as Appendix “1”.

RELATED POLICY PROCEDURES/GUIDELINES:

To initiate a traffic calming review, Public Works requires a request in writing from a Councillor, constituent, or neighbourhood association. In the event that a constituent initiates the traffic calming study, the individual will be designated the spokesperson for the affected neighbourhood and will be the contact person should further public involvement be required.

The affected neighbourhood is defined as households that will be affected by a

proposed traffic calming installation. All households fronting or flanking a local street where traffic calming is proposed are part of the affected neighbourhood. Where traffic calming is proposed on a collector road, households that rely on the corridor for passage are considered part of the affected neighbourhood. The affected neighbourhood for a collector road is generally one block of intersecting streets and may include an expanded area based on staff feedback.

Program Criteria

Upon receipt of a complaint, an investigation will be undertaken to determine whether the specified street section meets all of the traffic calming program **criteria**. The program **criteria** are as follows:

- Street must have a classification of local or **two-lane** collector;
- Posted speed limit on the street must be 50 km/h or less;
- **A minimum of one (1) year has passed since the posted speed limit was reduced, if applicable;**
- Street must have adequate sight distance for the proposed design speed.

Traffic Calming Study

If all the above criteria are met, Public Works staff will conduct a traffic calming study, which may include traffic counts, speed studies, collision analysis, pedestrian counts, parking studies, documentation of roadside environment, and a review of the surrounding street network.

Based on the findings from the investigation, the data will be applied to the Severity Scoring Point Scale shown in Table 1 below, in order to calculate a score for the street section. A six (6) point minimum severity score is required to continue with the program. Streets that score less than six (6) may be considered again in three (3) years. The severity score will also be used to prioritize projects, wherein the street having the highest score will have the highest priority.

Table 1: Severity Scoring Point Scale

Points	Average Daily Traffic (2-way total)	85th Percentile Speed (40 km/h speed limit)	85th Percentile Speed (50 km/h speed limit)	Collisions/Year within one block of study location (5-year history)
1	500 – 1200	45 - 47	55 - 57	0.5 – 0.9
2	1201 – 1900	47.1 - 49	57.1 - 59	0.9 – 1.3
3	1901 – 2600	49.1 - 51	59.1 - 61	1.3 – 1.7
4	2601 – 3300	51.1 - 53	61.1 - 63	1.7 – 2.0
5	3301 – 4000	53.1 - 55	63.1 - 65	2.0 – 2.3

6	More than 4000	More than 55	More than 65	More than 2.3
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One (1) additional point will be awarded if the street section meets any of the following criteria:

- School property fronting or flanking the street;
- No sidewalks on either side of the street;
- Street wider than 9.0 metres measured from edge of pavement to edge of pavement;
- Greater than 10% cut-through traffic.

If a street does not satisfy the traffic calming warrant at any point of the evaluation process, the requester that initiated the study will be advised that the street does not presently meet the City’s traffic calming criteria, and that the street may be reviewed again in three (3) years.

In the event that the traffic calming warrant concludes that traffic calming is not warranted, however the requester is of the opinion that the affected neighbourhood would support traffic calming, they have the option to circulate a petition for traffic calming on their street. Greater than 60% of the affected neighbourhood must be in favour of traffic calming on the specified street or street section to proceed to the neighbourhood opinion survey (described in the “Public Involvement” section of this policy). Staff would assist with defining the affected neighbourhood and providing the petition form. If the petition reveals less than 60% support, traffic calming would not be considered. A copy of the petition form to be used for requests for traffic calming is attached as Appendix “2”.

Public Involvement

When the traffic review is completed and it is determined that the street has operational conditions that satisfy the traffic calming warrant, the process will continue. Prior to the planning of the traffic calming measures, input is requested from the residents of the affected neighbourhood by way of a neighbourhood opinion survey. The purpose of the survey is to determine the level of support for pursuing the study of traffic calming measures on a particular street. The goal is to receive a community driven response and majority support for the project. A majority (more than 50% of the households within an affected neighbourhood) must be in support of pursuing traffic calming for the project to continue. Each household will be counted as one vote. A household is a property with a unique mailing address. Each legal unit within a multi-dwelling location is considered a household.

A copy of the Neighbourhood Opinion Survey is attached as Appendix “3”. A document providing illustrated descriptions of traffic calming measures

available for consideration will be included with the survey when distributed to an affected neighbourhood.

In the event that majority support from the affected neighbourhood is not achieved, however more than 50% of those that responded to the opinion survey support traffic calming, temporary traffic calming measures may be installed for a trial period for up to one (1) year to further assess affected neighbourhood acceptance.

After the completion of the temporary measures trial period, an additional survey would be conducted to further assess affected neighbourhood acceptance of the traffic calming measures and their impact on the street. If the majority of the affected neighbourhood does not respond to the survey or if the majority of those that respond reject the traffic calming measures, no further traffic calming will be considered on that street for at least three (3) years.

In the event that the majority of affected neighbourhood supports the installation of some form of traffic calming measures in their neighbourhood, Public Works staff will develop alternative traffic calming designs using the information received from the public.

Following the development of alternative traffic calming designs, Public Works staff will schedule a public meeting for the purpose of collecting feedback from residents and presenting the alternative traffic calming design plans. The desired outcome of the public meeting is a traffic calming plan that is both feasible and supported by the majority of those in attendance.

Implementation

When all the previous steps of the process are completed, a report will be prepared and forwarded to City Council. Subject to Council approval of both the traffic calming plan and the required funding, the work can proceed.

Depending on the number of requests received, it may become necessary to use a priority ranking system to determine which traffic calming projects are prioritized in a given year. As there will be a limit to the number of projects that can be completed in a year, the “*worst case*” scenario would be focused on.

Table 2 below shows how projects will be ranked. This will be used in conjunction with the Severity Scoring Point Scale.




Table 2: Priority Ranking

Criteria	Points	Basis
Speed	0 to 40	5 points assigned for every km/h greater than 5 km/h above the posted speed limit [(85 th percentile speed limit – 5 km/h – posted speed limit) x 5]
Volume	0 to 40	ADT divided by 100
No Sidewalks	0 or 5	5 points if no continuous sidewalk
Collisions	0 to 5	1 point for each collision / year at one location
School Crossing (signed, adult crossing guard and/or student safety patrol)	0 or 10	10 points if children must cross street to get to school
Total Points Possible	100	




Date of Enactment: August 2007	Related By-law Number/Staff Report Number: EN2007-133 70-2010 (consolidation) 2020-160/ 176-2020 246-2021 / 2021-403
Review and Amendment Dates: October 27, 2020 December 21, 2021	Department Responsible for Review: Public Works
Date of Next Review: 2024	Applicable Legislation/Legislative Authority:



APPENDIX "1"

Traffic Calming Measures Available for Consideration



Measure	Description	Illustration
VERTICAL DEFLECTION MEASURES		
<p>Raised Crosswalk</p>	<p>Elevate the level of a pedestrian crossing. Pedestrians are more visible to approaching motorists. They are often constructed with brick or textured materials on the ramps to increase visibility for approaching motorists. The walking surface is typically asphalt.</p>	
<p>Raised Intersection</p>	<p>Flat raised areas covering an entire intersection, with ramps on all approaches. They often have brick or other textured materials on the ramp section. They usually raise the intersection to the level of the sidewalk. As a result, the crosswalks are more visible to motorists.</p>	
<p>Speed Hump</p>	<p>Raised pavement areas placed across the road. They are generally 3 to 4.5 metres long measured in the direction of travel, and are typically 10 centimeters high. Speed humps are very distinct from the shorter "speed bumps" found in many parking lots.</p>	




<p>Speed Table</p>	<p>Flat-topped speed humps often constructed with brick or other textured materials on the flat section. They are typically long enough for the entire wheelbase of a passenger car to rest on the flat section, and allow for higher design speeds than speed humps. The brick or other textured materials improve the appearance of speed tables, draw attention to them, and may enhance safety and speed-reduction.</p>	
<p>Speed Cushion</p>	<p>A raised area of the road, similar to a speed hump, but does not cover the entire width of the road. The spacing is designed to allow larger vehicles, such as emergency vehicles, to travel between the cushions without difficulty, whereas light vehicles will have at least one side of the vehicle deflected upward.</p>	



HORIZONTAL DEFLECTION MEASURES		
Curb Extensions	Extend the sidewalk or curb line out into the parking lane, which reduces the effective street width. Curb extensions significantly improve pedestrian crossings by reducing the pedestrian crossing distance, visually and physically narrowing the roadway, improving the ability of pedestrians and motorists to see each other, and reducing the time that pedestrians are in the street.	
Chicane	Curb extensions that alternate from one side of the street to the other, forming S-shaped curves. Alternating on-street parking from one side of the street to the other can also create chicanes. Each parking bay can be created either by striping the roadway or by raised islands at the ends of the parking bay.	
Traffic Circle	Raised islands, placed in intersections, around which traffic circulates. They are good for calming intersections, especially within neighborhoods, where large vehicular traffic is not a major concern but speeds, volumes, and safety are problems.	
Roundabout	Require traffic to circulate counterclockwise around a center island. Roundabouts are used on higher volume streets to allocate right-of-way between conflicting movements, where	

	<p>traffic circles are used on low volume roads. Roundabouts are effective at intersections with a history of collisions, and where queues need to be minimized.</p>	
<p>Realigned Intersections</p>	<p>Change street alignments at T-intersections from straight approaches into curving streets that meet at right-angles. A former "straight-through" movement along the top of the T-intersection becomes a turning movement.</p>	

HORIZONTAL NARROWING MEASURES

<p>Neckdown</p>	<p>Curb extensions at intersections that reduce the street width from curb to curb. They effectively make an intersection more pedestrian friendly by shortening crossing distances and drawing attention to motorists. The curb radii at the corners are also tightened, reducing the speed of vehicles turning at the intersection. Neckdowns are good at intersections with high pedestrian activity.</p>	
<p>Choker</p>	<p>Curb extensions at midblock locations that narrow a street. Two-lane chokers leave the street cross section with two lanes that are narrower than the normal cross section. One-lane chokers narrow the width to allow travel in only one direction at a time. They are good for areas with substantial</p>	

	<p>speed problems and no on-street parking shortage.</p>	
<p>Centre Island</p>	<p>A raised island located along the centerline of a street that narrows the travel lanes at that location. Placed at the entrance to a neighbourhood, and combined with textured pavement or landscaping, they create an attractive gateway to a neighbourhood. Centre islands work well on wide streets where pedestrians need to cross.</p>	
<p>VOLUME CONTROL MEASURES</p>		
<p>Full Street Closure</p>	<p>Barriers placed across a street to completely close the street to through motor vehicle traffic. Only the sidewalk is open. Access for cyclists may be maintained.</p>	
<p>Half Street Closure</p>	<p>Barriers that block travel in one direction for a short distance on two-way streets.</p>	

<p>Diagonal Diverter</p>	<p>Barriers placed diagonally across an intersection, blocking through movements and creating two separate, L-shaped streets. Like half closures, diagonal diverters are often staggered to create circuitous routes through the neighborhood as a whole, discouraging non-local traffic while maintaining access for local residents.</p>	
<p>Median Barrier</p>	<p>Islands located along the centreline of a street and continuing through an intersection so as to block through movement at a cross street. They are ideal at intersections where left-turns to and/or from the side street are unsafe.</p>	

Appendix “2”



TRAFFIC CALMING PETITION

We, the undersigned residents wish to request traffic calming on _____ between _____ and _____
(STREET NAME) (INTERSECTING STREET NAME)

(INTERSECTING STREET NAME)

We request traffic calming to address the following traffic safety concern(s):

Contact Information:

Name (print): _____
Telephone: _____ E-mail: _____

Important Information:

This petition is a pre-screening process requiring greater than 60% (>60%) support before a formal opinion survey will be distributed by Public Works. Your signature is not binding. The purpose of obtaining >60% support is to confirm the general support for traffic calming prior to a survey being issued. Only one (1) vote from each household will be accepted. Please note that staff may randomly contact residents to confirm their support.

ONLY ONE (1) SIGNATURE PER HOUSEHOLD IS REQUIRED AND MUST BE 18 YEARS OF AGE OR OLDER

Name	Address	Phone Number	Signature

PLEASE READ AND UNDERSTAND THE TRAFFIC CALMING PETITION STATEMENT ON PAGE #1 BEFORE SIGNING.

Name	Address	Phone Number	Signature

PRIVACY DISCLOSURE:
The personal information being collected by Public Works under authority of Section 10(1) of the Municipal Act S.O. 2004 c25 on this petition will be used only for the purpose of the traffic calming review and will be protected under the Municipal Freedom of Information and Privacy Act. The information collected on this petition may be included in a public document.

Appendix “3”

 STREET TRAFFIC CALMING
NEIGHBOURHOOD OPINION SURVEY

As a result of a request to Public Works, staff is undertaking a review of the traffic operations on _____ Street between _____ Street and _____ Street. In conformance with the City of Brantford’s Traffic Calming Policy, this street section warrants traffic calming measures. For traffic calming to be successful, the process requires the participation of the affected neighbourhood. The results of this survey will determine whether the evaluation process will continue.

Attached is a list of traffic calming measures available for consideration on your street. Traffic calming is the implementation of physical measures that enhances traffic safety on residential streets for all street users.

Please provide your comments on the attached form and return it to Public Works. You may also provide your feedback via e-mail or telephone to the staff person noted below. We would like to receive all comments by [Date].

Once the City has received your response, the results of the survey will be summarized. If the majority of the affected neighbourhood supports the installation of traffic calming measures on your street, staff of Public Works will take a recommendation to Committee of the Whole – Operations for traffic calming on _____ Street. If approved, you will be kept informed of the planning process. If the majority of the affected neighbourhood does not support the installation of traffic calming measures, the project will not continue. A street section can be reviewed again in three (3) years.

Your input is important. Please provide feedback regarding this proposal by [Date] to [Name], directly at 519-759-4150 Ext. [Extension] or E-mail at [E-mail Address]. All feedback will be reported to Council for a decision on this proposal.

Yours truly,

[Name]

[Title]

STREET TRAFFIC CALMING
NEIGHBOURHOOD OPINION SURVEY

As a result of a request to Public Works, staff is undertaking a review of the traffic operations on _____ Street between _____ Street and _____ Street. As per the City of Brantford's Traffic Calming Policy, this street section warrants traffic calming measures. For traffic calming to be successful, the process requires the participation of the affected neighbourhood. The results of this survey will determine whether the evaluation process will continue.

Name: _____

Address: _____

As a resident of _____ Street, I

- Support**
 DO NOT Support

the installation traffic calming measures on _____ Street.

Comments:

All personal information will be kept confidential.
All responses must be received by [Date].