

TECHNICAL MEMORANDUM

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Subject: Transportation Master Plan – Appendix 6 – Traffic Calming Policy Update – City of Welland

1.0 Introduction

Traffic calming is the act of managing driver behaviour and operating speeds through the application of various passive and/or physical roadway measures. By doing so, the roadway can foster a safe environment for road users and adjacent residents. A street that is well traffic calmed usually results in operating speeds and traffic volumes that are suitable for the intended function of the street, which reduces cut-through traffic on local streets and aligns with the Vision Zero strategy.

The City of Welland currently implements traffic calming measures when there is sufficient resident support and technical evidence that a speeding issue exists. A literature review has been completed to update the existing traffic calming policy (SER-018-0005 last updated in 2007) for the City of Welland. This document considers traffic calming policies from similar municipalities within the Province of Ontario, in addition to the principles outlined in the Transportation Association of Canada (TAC) Guide to Traffic Calming (2nd Edition).

2.0 Types of Traffic Calming

Traffic calming can be implemented in a variety of ways, although the types of measures can generally be classified as either passive (soft) or physical. For both types, however, education and enforcement initiatives should be undertaken to supplement the implemented measures.

Passive traffic calming measures include road signage, pavement markings, lawn signs, as well as flexible signs and flexible bollards (see **Figure 2.1**). These measures are typically quick and cost-efficient to implement, with the intended purpose being to reduce driver operating speeds through increased driver workload and perceived risk. Many municipalities start with passive traffic calming and only implement physical traffic calming if the speeding/cut-through issues still persist.



Figure 2.1 – Flexible Sign

Physical traffic calming measures, as the name suggests, are any traffic calming measures that include a physical alteration to the travelled path of the roadway. The City of Welland Municipal Design Standards (February 2013) recognize a number of these measures including curb extensions, chicanes, traffic circles, speed humps, raised crosswalks, lane narrowing, speed cushions and more. However, the most frequently employed measures in Welland are speed cushions and speed humps. While physical traffic calming measures are more effective in reducing operating speeds and cut-through traffic, they are more expensive and are usually met with discord among residents. Examples of speed cushions, speed humps, traffic circles, and lane narrowing, are shown in **Figure 2.2**, **Figure 2.3**, **Figure 2.4**, and **Figure 2.5**, respectively.



Figure 2.2 – Speed Cushions



Figure 2.3 – Speed Hump



Figure 2.4 – Traffic Circle

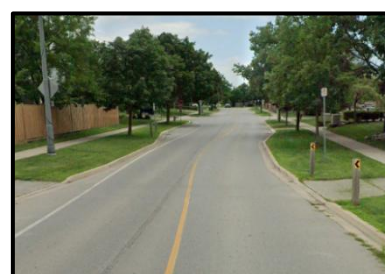


Figure 2.5 – Lane Narrowing

3.0 Common Practices

The common process as outlined in the TAC Traffic Calming guidelines consist of the following stages:

Stage 1:	Stage 2:	Stage 3:	Stage 4:	Stage 5:
Initiation	Development	Approval	Implementation	Evaluation

Each one of these stages is robust and can include many subtasks depending on the scale of the project. However, in the case of many local streets, the process is fairly streamlined. The **Initiation** stage is triggered by a resident request and begins the traffic calming process. If the request is made for a suitable roadway (i.e., local or minor collector road), the **Development** stage begins. This stage consists of a site visit and data collection, followed by a screening that usually includes minimum requirements for traffic volumes, 85th percentile driver operating speeds, and resident support. Where the screening is met, FINAL alternatives are devised and taken to the public for **Approval**. The final two (2) stages include **Implementation** of the traffic calming measure(s) and **Evaluation** of results to determine if further measures are required.

While the foregoing process serves as a general foundation for all municipalities within the province of Ontario, many municipalities have altered the process to best serve the desires of their residents. These alterations typically consist of changes to the screening process, with each municipality setting their own requirements for traffic volumes, 85th percentile operating speeds, and resident support.

4.0 City of Welland Traffic Calming Policy

The recommended process for traffic calming within the City of Welland is described below, with a graphical representation of the traffic calming process shown in Appendix 1.

Level 1: Passive Traffic Calming

Where desire for traffic calming exists, the first step is to review if the subject corridor is suitable for passive traffic calming measures as an immediate and cost-effective response.

Pre-Screening

After receiving a request from a resident or elected official, the following initial screening will be completed to verify the eligibility of the request:

- Road segment must be at least 150 metres in length;
- Traffic calming has not been requested or removed within two (2) years of request;

- Road segment resides in an urban area; and,
- Road segment is classified as a local or minor collector.

Where the pre-screening criteria is not met, the process ends. However, the City may install a temporary speed radar sign and send a referral to the Niagara Regional Police Service (NRPS). If the pre-screening criteria is met, the City will install a speed radar sign and monitor posted speeds.

Flex Signage

Where speeding persists at an 85th percentile travelling 10km/hr or more over the posted speed limit, the City will install flex signs along the roadway given that the following criteria for a flex sign are met:

- If there is no on-street parking or bike lanes present, the lane width must be greater than 3.2 metres.
- If there is on-street parking or bike lanes present, the lane width must be greater than 5.5 metres (allowing for 3.5-metre vehicular travel lanes and 2 metres for cycling or parking).

The combination of speed radar and flex signage will be monitored for a period of six (6) months. If speeding is resolved, the radar and flex signage will remain. If speeding continues at an 85th percentile travelling 10km/hr or more above the posted speed limit, the traffic calming process proceeds to Level 2.

Level 2: Physical Traffic Calming

The first step of Level 2 is to complete a resident petition to quantify the community desire for physical traffic calming measures. The threshold for the resident petition is 70% of households in favour of physical traffic calming measures, with one (1) signature per household being valid. If the threshold is not met, the process ends, and the City may choose to continue implementing passive traffic calming initiatives as desired. If the threshold is met however, the process continues, and the City will prescribe physical traffic calming measures to the roadway, primarily taking the form of either speed humps or speed cushions. It is important to note that the prescribed measures must receive approval from emergency services and must not be placed along a transit route. If either one of these requirements are not met, the process ends.

After the physical traffic calming measures have been formulated, they will be sent to City Council for approval. If approved, physical traffic calming measures will be implemented.

Implementation Timing

The implementation of physical traffic calming measures is subject to the capital budget process. Passive traffic calming measures can be implemented immediately upon the warrant process being met. Where streets do not meet the warrant process, residents may choose to re-initiate the traffic calming process after two (2) years.

Removal of Traffic Calming

In the event that the implemented traffic calming measures are unsafe, consistently ineffective, or deemed a hindrance to the adjacent community, the City of Welland reserves the right to remove traffic calming measures for the betterment of the community.

Residents have the right to remove traffic calming measures if support is garnered by 70% of the application zone residents. However, where residents choose to remove traffic calming measures, the roadway will not be eligible for reassessment for a minimum of five (5) years from the date of when the neighbourhood petition is received by City staff.

New Developments

Developers must work with the City staff to provide street designs that manage driver operating speeds. In absence of resident input, the City reserves the right to incorporate traffic calming measures into development plans as needed.