



# Traffic Calming Practices & Procedures For Existing Neighbourhoods



2018



## **ACKNOWLEDGEMENTS**

The source of some of the reference material contained in this manual was retrieved from the following Municipalities:

1. Town of Milton, ON, Canada
2. Town of Oakville, ON, Canada
3. City of Toronto, ON, Canada
4. City of Oakhill, Tennessee, USA
5. City of Surrey, BC, Canada
6. Canadian Guide to Traffic Calming (Second Edition)

# City of London – Traffic Calming Program

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## 1. INTRODUCTION

### 1.1 Background

The City of London is responsible for ensuring roadways serve the needs of all transportation users such as cars, transit, pedestrians including those with accessibility needs, cyclists, emergency vehicles and snow removal equipment. When the rules of the road are not followed, residents may no longer feel safe walking or riding their bikes on the street, in these cases traffic calming measures may be needed to restore the street to its intended function in the neighbourhood.

Every year the City receives numerous complaints or concerns from residents regarding speeding, traffic volumes and/or cut through traffic in residential areas. The Transportation Planning & Design Division responds by investigating the need for neighbourhood traffic calming measures to potentially mitigate these unfavourable driving conditions.

While some residents perceive they already have the solutions to traffic issues in their neighbourhood, studies across North America have shown that using the wrong tool to address a traffic issue not only doesn't solve the problem, but may result in creating additional safety issues in the area. This document defines what is traffic calming and clarifies what is not traffic calming. The goal of introducing traffic calming is to create safe and attractive streets, promote pedestrians, bicycle and transit use, and improve the quality of life in residential neighbourhoods.

Temporary traffic calming measures are not part of this document. The City installs temporary traffic calming measures such as centerline speed reduction markers and rubber speed cushions on residential streets adjacent to major construction projects in order to reduce potential speed of diverted traffic. These temporary traffic calming measures are removed at the end of construction season before winter.

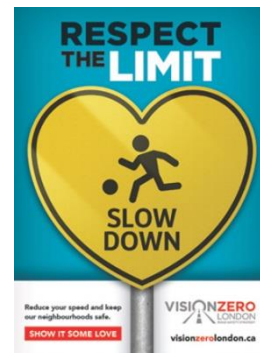
Traffic calming is a contentious subject and should be dealt with in a clear, concise and transparent process that will meet the needs and expectations of the community. This document outlines how investigations into traffic calming measures should be initiated and implemented based on the experience gained by the City of London and other North American municipalities over the last decade.

### 1.2 Vision Zero

Vision Zero promotes a culture shift and questions current attitudes toward road fatalities and injuries. Vision Zero states that no fatalities and serious injuries are acceptable. Achieving the aspirational goal requires a shared responsibilities from road operators and users. City Council adopted the following Vision Zero Principles:

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- No loss of life is acceptable
- Traffic fatalities and serious injuries are preventable
- We all make mistakes
- We are all physically vulnerable when involved in motor vehicle collisions
- Eliminating fatalities and serious injuries is a shared responsibility between road users and those who design and



The speed limit in School Zones has been reduced from 50 km/h to 40 km/h on all local and primary/secondary collector roads where schools are located. Reducing the speed limit at schools should improve safety for pedestrians and cyclists, and thus respond to Vision Zero Principles. Safer routes to and from school also encourages a more active lifestyle by addressing some of the safety concerns that parents and caregivers have with respect to students walking/cycling to school. Traffic calming measures in School Zones are not subject to the traffic calming process identified in this document. The City can install traffic calming measures in School Zones without the petition & survey requirements identified in this document.

## 1.3 Traffic Calming Purpose & Goals

The overall purpose of this document is to provide a comprehensive process that addresses local neighbourhood traffic issues in London. The program is intended to restore City streets, with an identified problem, to their intended function through applicable traffic calming measures, and hence, preserve and enhance the quality of London communities.

The specific goals of this traffic calming practices and procedures document are to develop an integrated set of objectives and procedures that will combine to form a set of overall working guidelines that will:

- Educate residents about traffic calming so they can make more informed decisions and also understand the rationale behind the City's decision making process.
- Provide a procedure that City officials and the general public are confident is an effective and fair tool in evaluating speeding and/or traffic volume problems.
- Provide a standard format for dealing in a consistent manner with complaints regarding speeding and traffic safety concerns.
- Create efficiencies in responding to resident traffic concerns.
- Educate residents on how to create a safe and a pleasant roadway environment for residents, motorists, cyclists and pedestrians.
- Encourage public involvement in the traffic calming activities.
- Educate residents on pedestrian and cyclist safety.

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This program will also provide the guideline, procedure and criteria for the initiation, investigation and implementation of traffic calming measures within existing residential neighbourhoods. The practices and procedures will ensure safety concerns related to speeding and excessive volume are handled in a fair, transparent and efficient manner. The London Plan introduced new street classification system. Secondary & Primary Collectors are referred to as Neighbourhood Connectors, and Local Streets are referred to as Neighbourhood Streets. Guidelines included in this program will be applied to as Neighbourhood Connectors and Neighbourhood Streets within residential neighbourhoods.

The practices and procedures do not apply to arterial roadways nor do they apply to anticipated future problems. This program only applies to identify operational issues within existing residential areas. While similar traffic related issues may exist on arterial roadways, the primary function of an arterial road is to move traffic efficiently to reduce the amount of traffic and speeds on lower class streets. Therefore, traffic calming measure(s) that may be appropriate for use on non-arterial roadways would not be suitable for use on arterial roadways.

### 1.4 What is Traffic Calming

Traffic calming, as defined by the Institute of Transportation Engineers (ITE) Subcommittee on Traffic Calming, 1997 is:

*“The combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behaviour and improve conditions for non-motorized street users.”*

According to the Canadian Guide to Neighbourhood Traffic Calming, prepared by the Institute of Transportation Engineers (ITE) and the Transportation Association of Canada (TAC), December 1998 and the Canadian Guide to Traffic Calming (Second Edition-February 2018:

*“The purpose of traffic calming is to restore streets to their intended function.”*

The primary purpose of traffic calming is to reduce high traffic speeds within residential neighbourhoods and thus improving safety for pedestrians and area residents.

### 1.5 What is Not Traffic Calming

Over the past 30 years there has been a significant amount of knowledge gained through the implementation of successful projects to determine what traffic calming measures work and which traffic calming measures are not effective. The all way stop signs, children at play signs, posted speed signs, and rumble strips are all devices commonly mistaken for being traffic calming tools. Implementation of these devices to calm traffic is not recommended for the reasons listed below:

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## Unwarranted All Way Stop Signs

- .
- Results in poor compliance with stop signs due to driver frustration, as low as 1% in some studies in the City of London.
- Results in more frequent rear-end collisions caused by low percentage of motorists who actually do come to a complete stop.
- Requires frequent police enforcement as some motorists' compliance is low which creates a pressure on enforcement resources and is ineffective in the long term.
- Potential risk to pedestrians **especially children and seniors** crossing an intersection, since not all motorists approaching an intersection will stop.
- Inconsistent application of all way stops can create motorists confusion, unexpected maneuvers and collisions.

In light of the above, all-way stop signs should not be used as a tool to calm traffic.

There are established criteria for all-way stop control based upon the numbers of pedestrians and vehicles sharing an intersection, the collision history and visibility.

When these criteria are followed, risks are minimized and new safety concerns are not created. There have been numerous studies completed in North America which have validated all of the above findings.

## 'Children at Play' Sign

- 'Children at Play' signs can give parents a false sense of security since motorists often disregard these signs.
- Children playing in the streets, while common place, is not condoned and prohibited in the Highway Traffic Act and the Traffic By-law.
- Since children live on nearly every residential block, 'Children at Play' signs would need to be placed on every roadway.
- Residential blocks with no signs might imply that no children live there, so it is acceptable to exceed the posted speed limit.

## Rumble Strip

A rumble strip is a raised pavement section that can be closely spaced along a roadway at regular intervals. Rumble strips are a road safety feature used to caution inattentive motorists of potential danger. As the motorist travels over the rumble strips, the vehicle experiences both noise and vibration to alert the motorist.

They are typically installed along freeways and higher speed roadways to alert motorists that may begin to veer from the travel lane to the shoulder. Their purpose is to reduce the number of vehicles that depart the roadway; this is a common example of rumble strips used to enhance safety. Rumble strips can also be installed across the travel lane itself when unusual conditions exist ahead.

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Rumble Strips can be installed along the travel lanes of a higher speed roadway that contains an isolated all-way stop controlled intersection. A motorist may grow accustomed to traveling at a certain speed and otherwise may not expect to stop; the purpose of the rumble strip is to alert the driver. This is a common example of rumble strips to alert motorists of a condition that is unusual to a specific roadway.

Rumble strips should not be used as traffic calming measures. These measures become less effective over time as the motorists grow accustomed to them. Rumble strips also increase noise levels for nearby residents and commonly require additional maintenance.

### 1.6 Advantages and Disadvantages of Traffic Calming

Traffic calming if used properly will address identified operational traffic issues. However it will also introduce some disadvantages to a residential neighbourhood that will impact area residents after the project is complete. Listed below are some of the advantages and disadvantages created or caused by traffic calming measures:

#### Advantages

- Reduced vehicle speeds
- Reduced traffic volumes
- Reduced number of cut through vehicles (motorists traversing a residential neighbourhood with no local destination)
- Improve neighborhood safety especially for pedestrians
- Reduced conflicts between roadway users
- Increase compliance with regulatory signs

#### Disadvantages

- May make it more difficult to get into and out of your neighbourhood every day
- Potential increase in emergency vehicle response time. All traffic calming plans are reviewed to ensure there is no negative impact on emergency services
- May result in expensive solutions (time and resources)
- May shift or divert traffic onto other neighbouring streets
- Increase maintenance time and costs
- Add visually unattractive warning signs to a residential area
- May create dissension in neighbourhood with strong 'for and against' traffic calming opinions



### 1.7 Pedestrians & Traffic Calming

The principal purpose to reducing the speed of traffic in residential areas is to protect all vulnerable road users, such as pedestrians. Copied below is an excerpt from the Ontario Traffic Manual Book 15 - Pedestrian Crossing Treatments:

#### Pedestrians' Rights and Responsibilities

*Notwithstanding the distinction between controlled and uncontrolled crossings, the rights and responsibilities for pedestrians are recognized in the Highway Traffic Act:*

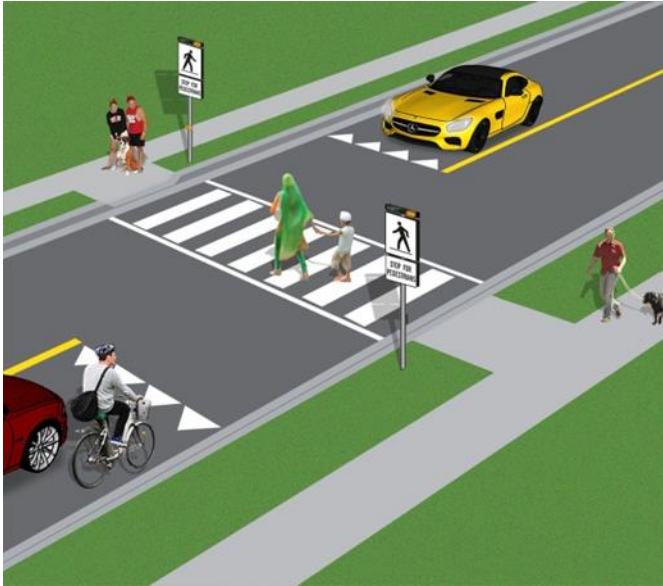
- 1. In the absence of statutory provisions or bylaw, a pedestrian is not confined to a street crossing or intersection and is entitled to cross at any point, although greater care may then be required of him or her in crossing. However, pedestrians crossing the highway must look to ensure the crossing can be made safely or possibly be held responsible for any ensuing collision.*
- 2. Pedestrians must exercise due care even when they are lawfully within a crossing and have right-of-way. It is not an absolute right and they must still exercise care to avoid a collision with a vehicle.*
- 3. If there is a crosswalk at a signalized intersection, pedestrians have to walk within the crosswalk*

The above excerpt is stating whenever a pedestrian crosses a road they have a duty of care to themselves to cross when it is safe. It is important to remember under the Highway Traffic Act motor vehicles are only required to stop or yield to pedestrians at a controlled crossing such as traffic signals or pedestrian signals. At all uncontrolled crossings pedestrians must wait for a safe gap in traffic sufficient for them to cross before entering the road.

On January 1, 2016, Bill 31, the Transportation Statute Law Amendment Act (Making Ontario's Roads Safer) took effect. Bill 31 deals included amendment to the HTA to allow for new pedestrian crossing devices for low-speed and low-volume roads. The Province introduced three new pedestrian crossover (PXO) types. The new crossing treatment will allow pedestrians to cross with the right-of-way under a greater number of conditions than before, and will provide municipalities with additional solutions to increase pedestrian safety.

The new PXOs are a defined set of roadside signs and road pavement markings which form a new passive treatment to provide pedestrians the right-of-way when crossing the roadway where the treatment is installed.

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When an area is studied for traffic calming pedestrian crossing points are primary focus points, since this potential conflict point is exactly where you want drivers to slow down. The installation of traffic calming measures such as speed cushions, raised crosswalks, raised intersections, or curb extensions does not change the rules of the Highway Traffic Act, pedestrians must still cross the road responsibly.

## 2. TYPES OF TRAFFIC CALMING

Traffic calming for the purpose of this program is broken into two categories:

- i. Passive: Speed and display boards, on street parking, road line markings and/or signage
- ii. Physical: i.e. Intrusive treatments that modify the shape and/or form of the roadway forcing drivers to slow down.

### 2.1 Passive Traffic Calming

Passive traffic calming treatments are simple modifications in comparison to physical treatments. Passive modifications are intended to visually reduce effective lane width for a motorist and in most circumstances re-allocate some of road space to cyclists and on-street parking. These treatments have proven to be capable of reducing 85<sup>th</sup> percentile operating speeds by up to 5 km/h in London and other municipalities.

Passive treatments are implemented on a proactive and reactive basis and are typically applied uniformly over the entire road section, unlike physical treatments which are best described as spot treatments. The modifications associated with passive calming treatments are typically well received by the public. Staff provides the public with advance notification, including a plan of the proposed modifications prior to implementation. This level of public interaction appears to work well for the application of passive traffic calming.

### 2.2 Physical Traffic Calming

Physical traffic calming can be broken down into three categories vertical deflections, horizontal deflections and physical obstructions.

Vertical traffic calming measures provide an obstruction that vehicles are able to travel over. The change in pavement height (and sometimes pavement materials) can cause discomfort to the occupants of vehicles that are exceeding the design speed of the traffic calming measure.

Horizontal traffic calming tries to prevent vehicles from traveling in a straight line at excessive speeds by using measures such as raised islands and curb extensions.

Physical obstructions involve a full or partial closure of the road.

Examples of passive and physical traffic calming techniques are listed in **Table 1**. Appendix A provides a more detailed explanation of the traffic calming devices listed below, including the advantages and disadvantages.

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**Table 1- Applicability of Traffic Calming Measures in London**

Traffic Calming Technique	Measure may be Applicable on:			
	Road Classification			Other Considerations
	Neighbourhood Street (Local Road)	Neighbourhood Connector (Secondary Collector)	Neighbourhood Connector (Primary Collector)	Transit Route
<b>Passive and Mitigating Measures</b>				
Education	YES	YES	YES	YES
Community Entrance Sign	YES	YES	YES	YES
Targeted Enforcement	YES	YES	YES	YES
Speed Display (PEEP)	YES	YES	YES	YES
On Street Parking	YES	YES	YES	YES
Road Diet	YES	YES	YES	YES
<b>Physical Vertical Deflection</b>				
Speed Cushion	YES	YES	YES	YES
Raised Intersection	YES	YES	YES	YES
Raised Crosswalk	YES	YES	NO	YES
Speed Table	YES	YES	NO	YES
Speed Hump	YES	NO	NO	NO
<b>Physical Horizontal Deflection</b>				
Curb Extension	YES	YES	YES	YES
Curb Radius Reduction	YES	YES	NO	NO
Neighbourhood Traffic Circle	YES	YES	NO	NO
Centre Island Median	YES	YES	YES	YES
One-Lane Chicane	YES	YES	NO	NO
Lateral Shift	YES	YES	YES	YES
Roundabout	YES	YES	YES	YES
<b>Physical Obstruction</b>				
Directional Closure	YES	YES	NO	NO
Raised Median Through Intersection	YES	YES	YES	YES
Right-In/Right-Out Island	YES	YES	YES	NO
Intersection Channelization	YES	YES	YES	YES
Diverter	YES	NO	NO	NO
Full Closure	YES	NO	NO	NO

## 2.3 Streets That Qualify for Traffic Calming

### *Local and Collector Streets*

Traffic calming will only be considered on local and collector “neighbourhood” streets roads and not on arterial roadways in the city. Through application of this program and by applying good engineering judgment, traffic calming measures, when deemed prudent, will be installed in a manner that will ensure they provide the most effective solutions while continuing to support the intended function of the roadway. For example, to ensure that transit service remains efficient on collector routes, curb radius reduction would not be recommended at locations where transit vehicles must turn right since curb radius reductions significantly slow the turning speed of larger transit vehicles.

### *Neighbourhood Streets (Local Roads)*

The primary function of neighbourhood streets (local roads) is to provide access to adjacent properties. Local streets are not intended for use as through routes or as important links to move traffic within an area’s overall road network. An acceptable volume of traffic for a local road is up to 1,500 vehicles a day.

### *Neighbourhood Connectors (Secondary and Primary Collectors)*

Neighbourhood Connectors (Secondary and Primary Collectors) typically carry traffic volume between 5,000 and 15,000 vehicles per day. These streets help circulate traffic within individual neighbourhoods, and link smaller local roadways to the larger road network but are relatively short as compared to arterial roadways which may extend from one side of the city to the other. Primary collector roads carry traffic in larger neighbourhoods, distribute traffic between local road, secondary collector roads, and arterial roads, as well as connect between arterial roadways. Many neighbourhood connector roads may also carry transit.

### 3. PRACTICES AND PROCEDURES GUIDELINES

The following guidelines will be considered when investigating, selecting and implementing traffic calming measures. These guidelines will ensure that the appropriate measures are considered and the potential negative impacts are minimized. Following these guidelines will maximize the effectiveness of traffic calming while building community acceptance and support for the final recommendations.

Traffic calming measures will:

- Be considered when there is a demonstrated safety, speed or short-cutting traffic concern and acceptable alternative measures have been exhausted.
- Include consideration as to whether an area-wide plan versus a street-specific plan is more suitable: an area wide plan should be considered if a street-specific plan would likely result in displacement of traffic onto adjacent streets.
- Be predominantly restricted to two lane roadways or less (one lane of through traffic in each direction) and a posted speed limit no greater than 50 km/h.
- Not impede non-motorized, alternative modes of transportation and be designed to ensure pedestrian and cycling traffic is unaffected.
- Not unduly impede emergency and transit services access unless alternate measures are agreed upon.
- Maintain reasonable automobile access to City roads.
- Only be installed after Transportation Planning & Design staff has investigated existing traffic conditions and the necessary approvals have been received.
- Be monitored; follow-up studies will be completed to assess effectiveness and the results will be communicated to the community if requested.

## 4. TRAFFIC CALMING PROCESS

The following process will be used when proceeding with a request for traffic calming. An established and formal process for investigating roads provides consistency and equality in the determination of whether traffic calming is warranted in a given location. The process is illustrated in the flow chart shown in **Figure 1**.

### Public Input

In order for traffic calming to achieve the goal of restoring residential streets to their intended purpose, community involvement and support is paramount. Throughout the process, residents are encouraged to participate in the development of a traffic calming plan suitable to the neighbourhood and the concerns within it. A general description of the process is provided below followed by more detail in this section of the document.

Before an area is considered for traffic calming, a petition must be submitted to the City with the signatures and addresses of at least ten (10) separate households on the street of concern. The City wishes to ensure that there is minimum level of neighbourhood concern with traffic conditions, since traffic calming is not always favourable to all.

If signatures were received from ten or more separate households with proven interest in traffic calming, the traffic calming process starts by collecting the necessary traffic data, considering the obtained data with the Traffic Calming Point Assessment

If enough points are awarded to warrant traffic calming, area residents will be asked by survey or at a Public Information Centre (PIC) for input on minor adjustments into a proposed physical traffic calming plan for the area.

In order for a traffic calming plan to be approved it must be circulated amongst all impacted area residents and must receive a majority response rate in favour from all residents surveyed before being considered for implementation.

The benefit of community involvement is that it generates support for a traffic calming program and assists in the implementation of a plan without significant opposition upon completion. Community involvement also enhances the credibility of the traffic calming program, particularly when it is eventually presented to Council for approval.

### 4.1 Process Initiation and Pre-Screening

Residents with traffic related concerns are instructed to submit their written request to investigate traffic calming within their neighbourhood to the City. Staff will then conduct a brief preliminary assessment to determine if the requested roadway meets the Initial Screening Criteria, shown in **Table 2**.

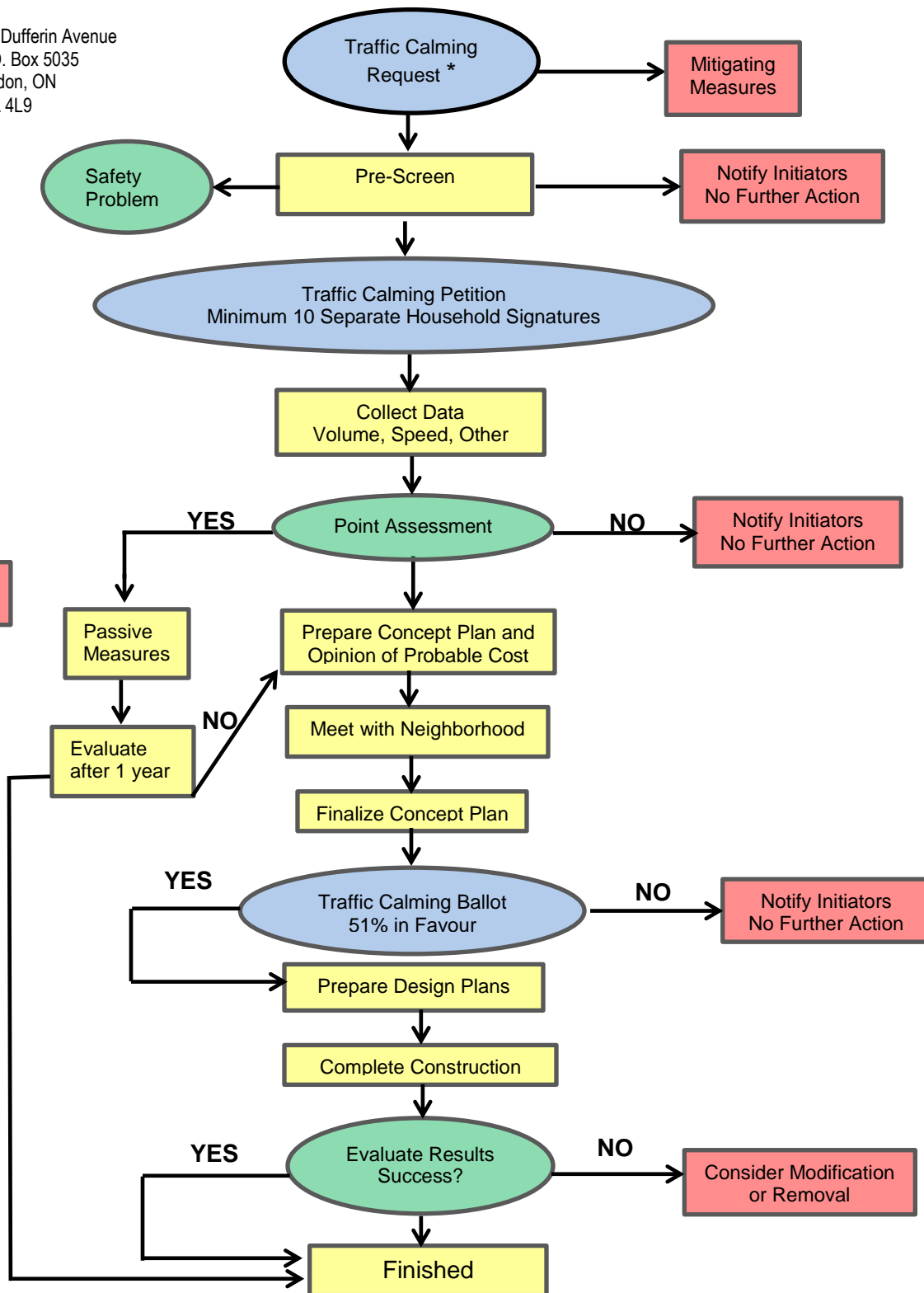
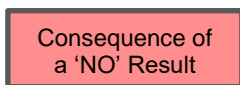
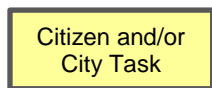
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**Figure 1 - Traffic Calming Process**



300 Dufferin Avenue  
P. O. Box 5035  
London, ON  
N6A 4L9

**Legend**



\* School's located on Neighbourhood Connectors/Streets automatically qualify



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**Table 2 – Traffic Calming Pre-Screening Process**

*Completed during initial contact / review*

1. Is the road a local or collector road?	<b>PASS</b>	<b>FAIL</b>
2. Is the average daily traffic volume estimated to be more than 500 vehicles per day?	<b>PASS</b>	<b>FAIL</b>
3. Is the posted speed limit equal to or lower than 50 km/h?	<b>PASS</b>	<b>FAIL</b>
4. Is the road assumed (maintained) by the City?	<b>PASS</b>	<b>FAIL</b>
5. Is the adjacent land uses primarily residential?	<b>PASS</b>	<b>FAIL</b>
6. Does the street provide an obvious bypass to a major intersection?	<b>PASS</b>	<b>FAIL</b>
7. Is the road longer than 300m?	<b>PASS</b>	<b>FAIL</b>
8. Have no previous studies or assessments occurred within the past 36 months?	<b>PASS</b>	<b>FAIL</b>

If the road in question fails any of the 8 areas listed in the pre-screening it does not qualify for traffic calming, and the process does not continue forward.

It should be noted that School Zones are excluded from the traffic calming process identified in this document. Where schools have speed limit of 40 km/h, traffic calming plans will be prepared and residents of the street will be notified of the implementation plan.

### **4.1.1 Traffic Calming Ineligibility based on Pre-screening**

For locations not meeting the above-noted initial screening criteria, staff will consider front-line mitigating measures to address the neighbourhood traffic concerns. These methods could include tools such as the use of driver feedback boards, targeted police enforcement, sign installation and pavement marking modifications.

Front-line mitigating measures very rarely require public involvement such as surveys and public meetings. However, they may require monitoring and evaluation to assess

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their effectiveness. Details regarding front-line mitigating measures are provided in Appendix 'A'.

### 4.1.2 Traffic Calming Neighbourhood Petition

To initiate an evaluation for an eligible residential street, a petition showing the names, addresses, and signatures of at least ten (10) separate households with direct frontage on the street of concern must be provided to the City of London.

The petition must include the location, the nature of the problem, the time of the day when problems are most significant, as well as any suspected contributing factors. The name, address and contact information of the petition organizer are also necessary so a City staff member can follow up on the request for traffic calming. The petition process is required, as the City needs to be confident that there is some neighbourhood support for the initiative.

The City's traffic calming program is intended to address long-term speeding issues. Therefore, traffic calming is not implemented where there is ongoing development and changing traffic patterns. Residents should only contact the City to request initiation of the evaluation process if traffic concerns persist once traffic patterns have had the opportunity to stabilize.

## 4.2 Data Collection

Once a successful petition is received, and it was established that there is support for traffic calming, the collection of data is scheduled based on a priority list. The City shall collect information and data along roadway(s) in the project as deemed necessary by Transportation Planning & Design staff to qualify and quantify the extent of the local traffic problem. The data collection may include any of the following:

- Vehicle volume count to determine 24-hour traffic
- Speed study to determine existing speed data
- Classification count to determine heavy vehicle traffic
- Collision data for the most recent three (3) years
- Study to quantify cut-through traffic, if necessary
- Existing roadway conditions (e.g. pavement condition, signing, marking)
- Pedestrian activity
- Presence of sidewalks on one or both sides of the road
- Presence of special pedestrian generators such as schools, seniors homes, playgrounds, etc. in the area
- History of traffic operations for the area within last 5 years

A review of the data will be completed using recognized engineering standards. Once collected and summarized, the data will be utilized in the point assessment system to

determine a total point value. This assessment will be used to determine the need for traffic calming and assist in setting priority for locations of consideration.

### 4.2.1 Point Assessment System

The point assessment system is a screening process focused on the various attributes of a roadway in order to quantify its potential need for traffic calming. By means of assigning weighted points based on the severity of certain road attributes (e.g. 85th percentile speed), this process will bring to the forefront roadways requiring consideration while quantifying the current conditions. A point assessment system is provided in Appendix 'C'.

The point assessment system will also be used to prioritize locations for consideration. Those locations with an extremely high point assessment will be given priority based on the quantitative nature of the point assessment system. Depending on funding availability, locations will be selected based on the point system with those locations with the highest points constructed first. If funding does not permit all locations to be constructed in one year, roadways will be carried forward to the next year when they will then be re-prioritized to include any new locations.

The point assessment establishes minimums to ensure the appropriate application of traffic calming. The minimums consider that traffic calming often creates challenges for road operations such as winter plowing, influences emergency services response times and service level, can be followed with resident dissatisfaction and incurs capital and ongoing operating costs. Additionally, the impact of new traffic calming devices is minimized if the current traffic conditions on a street are not excessive. The minimum number of points required to proceed with the investigation of traffic calming measures differs based on the classification of roadway. In keeping with the objective of restoring roadways to their intended function, local and collector roadways are designed and expected to convey varying levels of traffic volume. This, in turn, has a bearing on the minimum point value required to proceed, as traffic volume is a major consideration. Based on this, the following are minimum point values for each road type:

Neighbourhood Streets (Local roads) minimum: **35 points**

Neighbourhood Connectors (Collector roads) minimum: **52 points**

Should a location fail to meet these requirements, residents will be notified in writing and the investigation for traffic calming measures will discontinue. However, staff will continue to address the concerns of the residents by means of the front-line mitigating measures.

### 4.2.2 Traffic Calming Design Considerations

The data collected combined with site visits, historical information, future maintenance and construction plans, as well as resident feedback will be taken into consideration to determine potential traffic calming measures.

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Appropriate traffic calming measures will be determined based on the list of traffic calming measures outlined in Appendix 'A' of this report. The traffic calming design could include one or more different types of traffic calming techniques. The proposed traffic calming measures will be in accordance with the design Guidelines found in the City of London Standards Document, The Canadian Guide to Neighbourhood Traffic Calming, engineering judgement and experience of staff.

The preferred design will first be presented to emergency and/or roadside operations services. It will then be presented at a public meeting. After any required modifications to the preferred design as a result of public input, a traffic calming survey will be delivered to affected residents.

### **4.3 Public Information Centre & Public Input Notice**

Staff will host a Public Information Centre (PIC) to present the purpose, objectives and implementation process of traffic calming in general. The PIC notice will be circulated to all residents who have direct frontage or flankage of the street in question. Staff will then present and explain the rationale behind the specific preferred traffic calming design. The public meeting will provide residents with an opportunity to become involved in the process, learn more about the proposed traffic calming treatment(s) and to provide their feedback. Each plan will include a procedure to communicate with and engage the neighbourhood, in keeping with the Council Policy on Community Engagement and its principles.

### **4.4 Community Support Survey**

Based on input received from the public at the public information meeting, the preferred design may be modified. The objective of the community support survey is to determine the level of support for the traffic calming design and to provide an opportunity for the most directly affected residents to oppose any modifications to the road. It is also intended to measure the support of the preferred design proposed to the residents.

#### **4.4.1 Survey Scope**

A survey will be delivered by mail to residents who live on the street being studied and at a minimum, will contain:

- A brief description of traffic calming, including its advantages and disadvantages;
- The results of the traffic studies undertaken by staff;
- A survey question asking if residents are in favour or opposed to the implementation of traffic calming measures in the identified location(s);
- The preferred traffic calming design;
- A request for comments and feedback; and
- An indication that this is the final opportunity to modify and improve the preferred design to address any outstanding concerns and to incorporate resident input.

### **4.4.2 Measuring Community Support**

In order for the process to continue, a majority (minimum of 51%) of total surveys delivered must be returned to the City indicating they approve the future installation of the recommended traffic calming plan. This required level of support reinforces that community support is vital for the ultimate success of traffic calming. The confirmation of community support is important prior to implementing changes to existing neighbourhood recognizing that any safety or operational concerns are addressed on a proactive basis by staff upon their identification earlier in the process.

If this support rate is not met, the process will cease and a notification of failure to meet the community support levels will be sent to the residents on the mailing list.

### **4.5 Resident Notification**

Residents will be notified that traffic calming has been either approved or not approved by the City on the subject roadway. The notice will be sent to the same mailing list used to deliver the traffic calming survey and any other persons having requested notification throughout the process.

### **4.6 Finalize Preferred Traffic Calming Plan**

Using technical data, community feedback, and in keeping with the goals, objectives and principles set out in this document, staff will finalize the preferred traffic calming design to be put forward as the recommended preferred traffic calming plan. In finalizing the preferred traffic calming plan, general consideration will be given to the various aspects of road design such as utility placement, landscaping, sign requirement and drainage.

If, during the detailed design stage, limitations are identified which challenge the feasibility of the plan, alternatives will need to be considered. This may include alterations or a re-development of the preferred plan. If significant or major changes to the plan are required due to design constraints, agencies and residents on the mailing list will be consulted and notified of any changes. If staff believe that the required modifications to create the detailed design result in a significantly different final design from that which was presented to residents as part of the survey, staff may recommend additional agency consultation, another survey and/or public meeting.

### **4.7 Implementation of Traffic Calming Measures**

Upon approval of the community, resident notification, and sufficient funding, traffic calming measures will be implemented. Residents will be notified of implementation timelines through the contact mailing list. Where feasible, staff may decide it is beneficial to phase in the traffic calming plan through the use of temporary or removable traffic calming measures such as pavement markings. This will allow time to examine the impact of the measures and their effectiveness before committing funding to permanent treatments.

### **4.8 Evaluation and Monitoring**

Traffic engineering staff will monitor the roadway to determine the effectiveness of the utilized measures and their impact on the surrounding road network. This information will be used in recommending similar measures in the future. In addition to conducting before and after speed studies the City will conduct studies to assess if the traffic calming plan has resulted in significant amounts of traffic diverting to adjacent, parallel streets in some cases. These after studies will be compared with the City's 'before' studies to determine the change in traffic volume.

### **4.9 Removal of Traffic Calming Measures**

Traffic calming devices may be removed, at the request of residents after 2 years provided that at least the same level of support exists to remove as was measured for installation.

A majority (minimum of 51%) of property owners within the impact area must indicate their approval by signing the neighbourhood-initiated Traffic Calming Removal Request. The signatures must come from households with direct frontage or flankage onto the section of roadway that has been identified as the location for the potential implementation of traffic calming measures, as defined by Traffic Engineering Staff. Each household is represented by one signature, regardless of the number of people in the household.

When Transportation staff receives a successful petition, a survey will be sent out to all the area residents who were initially surveyed. The survey will be delivered to the same residents as was initially done to gauge support for traffic calming. The survey must indicate majority of respondents surveyed agreeing to the removal to be deemed successful. Traffic calming measures must be installed for at least 2 years before starting the process to remove them. If traffic calming devices are removed, the subject street must wait at least 5 years before requesting a new traffic calming plan; at this point the approval process will start over.

If a request to remove a single traffic calming device, within an overall traffic calming plan, is received, all traffic calming devices will be considered for removal. Depending on circumstances, it could be possible to remove a single device constructed as part of an overall plan, however, in most cases all devices work together to be effective and to ensure that traffic is not diverted where it should not be. The City reserves the right to remove traffic calming measures if it determines that they are ineffective or unsafe, or if they have created a negative impact that cannot be corrected. The City will mail out a notification and advertise in local newspapers informing of its decision to remove traffic calming measures.