

## CITY OF WATERLOO - TRAFFIC CALMING POLICY

This policy will be used to determine when traffic calming measures will be used on streets within the City of Waterloo.

### Definitions:

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

**Affected Residents** - An affected resident is a resident that lives on the street under study within the limits of the block or blocks being considered for traffic calming.

### Purpose:

To restore streets to their intended function by reducing vehicular speeds, discouraging through traffic, and minimizing conflicts between street users.

### Process:

The following recommendations are proposed to deal with requests from the public for traffic calming:

- 1) The resident inquiring is directed to the City's Roads Unit, Traffic Section. Traffic Section Staff will advise the resident of the City's policy and procedures applicable to developing and implementing traffic calming measures and require that the resident provide the request in writing.
- 2) City Staff will undertake an investigation to identify whether the location in question satisfies the warrants as set out in the City's Traffic Calming Policy in Appendix 1. This investigation will involve compiling data on vehicle counts, vehicle speeds, road classification, road geometry, sidewalk availability, surrounding street network, collision review, etc.
- 3) City Staff will then advise the resident whether the present conditions satisfy all warrants as illustrated in Appendix 1 and the process can continue. If the

warrants are not presently met, the resident will be advised that the request could be considered again in two (2) years time.

If the warrants are met, the person will be advised that in order to continue with the process, City Staff will circulate a survey to the affected residents and at least 60% of the affected residents (on the street or section of the street) must be in support of pursuing traffic calming.

- 4) Following the receipt of the survey, the City will lead a Class EA study to evaluate all alternatives in consultation with the Public. Once a recommended plan is established, the City will conduct a second survey of the affected residents to determine if support exists for the recommended traffic calming plan (subject to receipt of a minimum response rate of 40% of the affected residents, 60% of which must approve of the recommended traffic calming plan). The City will then issue a "Notice of Completion". If no request is granted for a Part II order by the Ministry of the Environment, City Staff will prepare a report for City Council recommending approval of the plan. If a Part II order is received, Staff will determine if it is appropriate to proceed with the EA process.
- 5) Subject to City Council approval of both the traffic calming plan and the required funding, the work can proceed.

### Traffic Calming Criteria

Appendix 1 indicates the criteria that Staff would use to determine if a traffic calming study is warranted. Agencies that will be contacted under item 2.2 include:

Waterloo Regional Police Service	Ambulance Services	Grand River Transit
Waterloo Fire Department	School Boards	Region of Waterloo
Adjacent Municipalities		

### Funding

All traffic calming measures will require approval for funding from City Council.

### Typical Traffic Calming Measures

Appendix 2 indicates the types of typical traffic calming measures the City of Waterloo would install on our street system.

# APPENDIX 1

## Criteria for Traffic Calming Studies

Warrant	Criterion	Requirement
<b>Warrant 1</b> Survey	1.1 Survey	The City will conduct a survey of the affected residents on the street to determine if general support for traffic calming exists. In order to proceed, a minimum response rate of 40% of the affected residents is required, 60% of which must support traffic calming measures. Warrants #2 and #3 will not be considered until Warrant #1 is satisfied.
<b>Impacts to Adjacent Street</b>		Should the Traffic section anticipate that the proposed traffic calming will have significant traffic impacts on adjacent streets, the review of the traffic calming proposal shall be modified to include the proposed street as well as the adjacent streets where traffic is expected to divert.
<b>Warrant 2</b> Safety Requirements  (Both criteria must be fulfilled to satisfy this warrant)	2.1 Road Grade  2.2 Emergency Response/ Service Delivery	Traffic calming measures must not be installed at or near locations where the road grade exceeds 8%.  On streets where traffic calming is proposed, impacts on Emergency services and operational services will be not significant.
<b>Warrant 3</b> Technical Requirements  (All 3 criteria must be fulfilled to satisfy this warrant)	3.1 Minimum Speed  3.2 Minimum Traffic Volume  3.3 Transit Service	On streets where traffic calming is proposed, the 85 <sup>th</sup> tile is greater than 10 km/hr over the speed limit.  Local Roads - For streets where traffic calming is proposed, the traffic volume must be at least 900 vehicles per day (vpd).  Physical traffic calming measures as indicated in Appendix 2 will not be constructed on collector or arterial roadways.  On streets where traffic calming is proposed, impacts on Grand River Transit will not be significant.

Definition for 85<sup>th</sup>tile - The speed at which 85% of the vehicles in the sample travel at or below and 15% travel above.

## APPENDIX 2

### TYPICAL TRAFFIC CALMING MEASURES

<b>Measure</b>	<b>Description</b>
Curb Extension	A horizontal intrusion of the curb into the roadway resulting in a narrower section of roadway.
Intersection Channelization	Raised islands located in an intersection, that forces traffic to turn and prevents traffic from proceeding straight through the intersection.
On-Street Parking	The presence of parked cars on street can have a traffic calming effect. Parking as a traffic calming measure contains an inherent contradiction, the same cars that calm the traffic by decreasing the road width are also driven on the street to arrive at the parking spaces.
Raised Crosswalk	A marked pedestrian crosswalk at an intersection or a mid-block location constructed at a higher elevation than the adjacent roadway.
Raised Intersection	An intersection - including crosswalks - constructed at a higher elevation than the adjacent roadway.
Road Closures	<p>Roads can be closed to motor vehicles at intersections, preventing through movement and requiring access to be gained from other streets. This should only be done when traffic will not simply divert to adjacent residential streets. Pedestrian and cyclists accesses are generally maintained.</p> <p>Partial intersection closures can be achieved by narrowing a street to one lane at an intersection and prohibiting entry. Another technique is to introduce a "diagonal diverter" or barrier diagonally across the intersection which forces traffic off a favoured short-cut. Gaps can be left to allow access for pedestrians and cyclists.</p>
Speed Humps	<p>These are raised sections of the road placed across the roadway to deter transient traffic and speeding. Although speed humps seem to reduce vehicles speeds, the following issues also occur:</p> <ul style="list-style-type: none"><li>-lose of vehicle control due to vehicles travelling too quickly over the humps</li><li>-response time for emergency vehicles is significantly reduced</li><li>-Transit is not in favour of using streets with humps</li><li>-adequate winter maintenance is compromised</li></ul>
Stop Signs	Stop signs may be used to calm traffic, however, their use is not encouraged strictly as a traffic calming device.

Surface Treatment	This is used to achieve reductions in speed by installing a surface that creates an uncomfortable ride at higher speeds. For example, interlocking brick, concrete pavers, rough pavement surface, etc. influence driver behaviour. Coloured markings installed in different patterns on pavement, make the driver more aware of changes in the surroundings.
Textured Crosswalk	A crosswalk incorporating a textured and/or patterned surface which contrasts with the adjacent roadway.
Traffic Circles	A traffic circle is a raised island located in the centre of an intersection, which requires vehicles to travel through the intersection in a counter-clockwise . They require specific width of right-of-way to be effective in reducing speeds. They create an obstacle which could affect the ability of large vehicles to travel on the roadway.

Bicycle Lanes	The implementation of bicycle lanes will have an affect towards traffic calming, however, they are not primarily used for this purpose and would not be subject to the Traffic Calming policy.
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