

Date: 2018-05-07

Subject: **Neighbourhood Traffic Management Guide Updates – Introduction of New Device – Speed Cushions**

Contact: Kevin Minaker, Supervisor, Municipal Parking Operations
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Recommendations:

1. That the report from, Kevin Minaker, Supervisor, Municipal Parking Operations, Roads Maintenance, Operations and Fleet, Public Works and Engineering Department, dated May 7, 2018 to the Committee of Council meeting of June 20, 2018, re: **Neighbourhood Traffic Management Guide Updates – Introduction of New Device – Speed Cushions (All wards) – File I.AC – (TRAF)** be received;
2. That temporary and permanent speed cushions be added to the Neighbourhood Traffic Management Guide to be used as a traffic calming measure in the City of Brampton through consultation with emergency services and other key stakeholders;
3. That temporary speed cushions be utilized to assist police in disrupting and stopping organized illegal street racing; and
4. That all-way stops not be included as a measure to reduce vehicle speed and volume.

Overview:

- In 2007, City Council adopted a resolution (CW143-2007) approving the use of the “Neighbourhood Traffic Management Guide” intended to improve the safety and the livability of neighbourhoods by implementing a wide range of measures including physical road modifications, generally referred to as traffic calming.

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- **Resolution CW143-2007 indicates “That the City of Brampton not install speed humps or speed bumps as traffic management options when addressing concerns on local roadways.”**
- **In 2013 temporary rubber speed cushions were approved for use on a trial basis in Churchville Village (Council resolution CW079-2013).**
- **Staff consulted with internal and external stakeholders (Fire/Paramedic/Police/Transit/Road Operations) to discuss the use of speed cushions in Brampton.**
- **Speed Cushions have shown to be an effective measure at combating speeding and cut-through traffic in local neighbourhoods when supplemented with enforcement and education.**
- **The intent of an all-way stop is to control right-of-way at an intersection. All-way stops are ineffective at reducing vehicle speeds and volume.**

Background:

Council adopted the Neighbourhood Traffic Management Guide (NTMG) in 2007. In accordance with the NTMG staff have implemented traffic calming on various roadways throughout the city based on a priority list. By way of traffic analysis, observations and resident input, staff have determined that the NTMG has been successful at achieving its intent to improve quality of life on residential roadways.

The use of speed humps or cushions was not considered a viable option at the time as concerns were raised related to increased response times for emergency vehicles having to slow down to traverse them, and the negative impacts in administering life saving health procedures while driving (Ambulance Services).

In 2013, Council endorsed a trial of the use of temporary speed cushions in Churchville Village to deter traffic cut through in the village, and to provide an opportunity for emergency services to assess the device. This trial was subsequently extended in 2015. Based on staff guidance, Council directed staff to install speed cushions in Churchville Village permanently and report back to Council after consulting with emergency services on the inclusion of this device in the NTMG.

In addition to evaluating the use of speed cushions and inclusion in the NTMG, residents (and some Council members) have requested the inclusion of all-way stops in the NTMG to address neighbourhood speeding concerns and traffic infiltration.

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Current Situation:

The use of temporary rubber speed cushions has been completed seasonally for the past 3 years in Churchville Village.

Speed cushions (see photo below) are a raised area on a road, similar to a speed hump, but which does not cover the entire width of the road. Speed cushions are usually configured in two segments depending on the width of the road. The width of each cushion is designed intentionally so that the wider axle of emergency vehicles and buses can pass unaffected but that smaller passenger vehicles must ride over the raised area. This configuration addresses one of the main concerns with speed humps: the fact that emergency vehicles are also forced to slow down. There are both permanent (asphalt or concrete) and temporary (typically rubber) variations available for speed cushions.



Churchville Village Pilot Project

Generally, other than maintenance challenges (speed cushions coming loose or unfastened from the asphalt and the need for regular inspections) experienced by staff, reception to the speed cushions has been positive. Before and after studies confirmed that speed cushions were effective at reducing vehicle speed and volume.

Based on the success of the temporary speed cushions in Churchville Village, and as directed by Council, staff are replacing the temporary speed cushions with permanent ones. Installation is expected to be completed by the end of June 2018.

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Speed Cushion Design and Consultation

Staff consulted with internal and external stakeholders to discuss the design and potential applications of speed cushions in Brampton. Some key stakeholders included:

- Brampton Fire;
- Peel Paramedics;
- Peel Regional Police;
- Roads Operations; and
- Brampton Transit.

Most agencies expressed no concerns, however, Brampton Transit cited concerns with potential health and safety issues due to unexpected vertical deflection if buses are forced over the raised portion of the cushion. Staff is confident that through the implementation of parking/stopping restrictions, enforcement and the education of bus operators that these concerns can be resolved to ensure buses are able to straddle the cushion fully. All agencies asked to be consulted on prospective locations prior to speed cushions being installed.

Location Selection and Implementation

It is recommended that speed cushions be utilized as follows:

- To be added as an additional tool to reduce vehicle speeds and volumes on local roadways as part of the Neighbourhood Traffic Management Guide.
- To be installed on roadways identified by Peel Regional Police where illegal street racing is taking place.

Neighbourhood Traffic Management Guide Update

Though the NTMG was implemented in 2007, the content remains relevant today. The NTMG outlines the processes, data collection requirements, road ranking criteria, public outreach guidance as well as providing descriptions of common methods and techniques to manage traffic issues. However, with new techniques and different philosophies emerging, there is a requirement to update the guide to ensure staff have the most up-to-date tools at their disposal. That being said, upon approval of this report the guide will be updated to ensure the appropriate tools are available for use with traffic calming projects.

Staff recommends that the speed cushion only be utilized through the NTMG process when Traffic Services staff deems it to be an appropriate measure for a given roadway. Given that each roadway presents a different set of characteristics (width, curves, access points, transit and school buses etc.), not every roadway will be able to safely accommodate speed cushions. As with the current process, staff will identify roadways

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(typically two) each year that most require traffic calming. The normal consultation process, identified in the NTMG, will take place once staff have determined the appropriate design(s) for the roadway.

Illegal Organized Street Racing

During discussions with Peel Regional Police, the ongoing challenge of enforcing organized illegal street racing, which generally occurs on a select few industrial roads, was discussed. The desire and potential to utilize temporary speed cushions as a deterrent was mentioned.

Based on this, staff support the use of speed cushions to assist police in combating this issue and recommend, on a trial basis, obtaining and utilizing a set of speed cushions, seasonally, on industrial roads to assist in addressing this problem.

The location selection and use of the cushions for this purpose will involve similar consultations with emergency services, transit, road maintenance, as well as with the area Councillors and businesses.

All-way Stop as a Traffic Calming Measure

It is important to note that staff do not recommend the use of all-way stops at locations that do not meet the technical justification. Based on local, provincial and national guidelines, all-way stops should only be used to control right-of-way at an intersection, and are strongly discouraged to be used to address speeding or traffic infiltration.

Studies have shown that all-way stops are ineffective in reducing vehicle speeds, while unwarranted all-way stops result in safety concerns for pedestrian. When the conditions of an all-way stop warrant are not satisfied, in many circumstances there will be compliance issues due to drivers becoming accustomed to not seeing any conflicting cross street traffic. As such, drivers intentionally and illegally do not stop at the intersection, as they deem stopping to be unnecessary.

Corporate Implications:

Financial Implications:

There are no immediate financial implications resulting from the recommendations in this report. Speed cushion costs are estimated at approximately \$10,000 to \$36,000 per location. Funding requirements for traffic calming measures are requested through capital budget submissions, subject to Council approval.

Strategic Plan:

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This report achieves the Growth Management Priority of the Strategic Plan by improving the roadway network to accommodate pedestrians, cyclists, transit and the mobility-impaired.

Living the Mosaic – 2040 Vision:

This report supports the Brampton Vision 2040 – Living the Mosaic – Vision 4: Transportation and Connectivity.

Conclusion:

Traffic staff have met with stakeholders and recommend the use of speed cushions be adopted by the city for use in both neighbourhood traffic calming (following the existing Neighbourhood Traffic Management Guide) and to assist police in addressing organized street racing. All-way stops are not recommended for inclusion in the NTMG as they are ineffective at reducing vehicle speed and volume.

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