

То:	Members of the General Committee
From:	Cynthia Fletcher Commissioner of Infrastructure and Planning Services
Meeting Date:	May 10, 2021
Subject:	Report IPSTR21-007 Approval of a Traffic Calming Policy and Five Neighbourhood Traffic Calming Study Plans

## Purpose

A report to recommend approval of a City-wide Traffic Calming Policy and five Neighbourhood Traffic Calming Study Plans.

# Recommendations

That Council approves the recommendations outlined in Report IPSTR21-007, dated May 10, 2021, of the Commissioner, Infrastructure and Planning Services as follows:

- a) That the presentation by Paradigm Transportation Solutions Ltd on the Traffic Calming Policy and five Neighborhood Traffic Calming Studies be received;
- b) That the recommended City-wide Traffic Calming Policy attached in Appendix A be approved;
- c) That the recommended Traffic Calming Plan for Otonabee Ward (Sherbourne -Morrow Street area) attached in Appendix B, be approved;
- d) That the recommended Traffic Calming Plan for Monaghan Ward (Westridge Boulevard / Cherryhill Road) attached in Appendix B, be approved;

- e) That the recommended Traffic Calming Plan for Ashburnham Ward (Auburn Street/Dunlop Street) attached in Appendix B, be approved;
- f) That the recommended Traffic Calming Plan for Northcrest Ward (Franklin Drive) attached in Appendix B, be approved;
- g) That an education and enforcement program be implemented for Romaine Street (Town Ward) for a trial period of at least 12 months, and that the neighbourhood developed Traffic Calming Plan be re-evaluated after the trial period;
- h) That Parking By-law 09-136 be amended to authorize implementation of Recommendations c), d), e) and f);
- i) That Traffic By-law 91-71 be amended to authorize implementation of Recommendation e);
- j) That Heavy Truck By-law 91-39 be amended to authorize implementation of Recommendation e);
- k) That the 2021 approved Capital Budget of \$220,000 for the Traffic Calming Project be increased by \$125,000, to \$325,000, with \$50,000 transferred from the approved 2021 capital budget for Traffic Improvements (ref 5-17.05) and \$75,000 transferred from the 2020 approved capital budget for Tourism Wayfinding Sign Program (ref 5-17.03); and
- I) That staff report on the potential for an annual Traffic Calming program, as part of the 2022 budget review.

# **Budget and Financial Implications**

The total estimated costs for implementing the Trial traffic calming measures in the fivephase 1 pilot study neighbourhoods, as summarized in Table 1 is expected to cost approximately \$325,000.

Neighbourhood	Trial
	Installation
Otonabee Ward – Sherbourne – Morrow Street area	\$ 80,000
Monaghan Ward – Westridge Boulevard / Cherryhill Road	\$125,000
Town Ward – Romaine Street	\$ 35,000
Ashburnham Ward – Auburn Street / Dunlop Street	\$ 20,000
Northcrest Ward – Franklin Drive	\$ 65,000

 Table 1 – Estimated Capital Cost of Pilot Study Neighbourhoods

Total Estimated Cost	\$325,000
Pre-Approved Funding (2021 Capital Budget)	\$200,000
2021 Transfer from Traffic Improvements Budget (ref 5-17.05)	\$ 50,000
2020 Transfer from Tourism Wayfinding Sign Program (ref 5- 17.03)	\$ 75,000
Total Budget	\$325,000

The approved 2021 Capital Budget (project ref 5-17.02) included \$200,000 to fund the implementation of temporary measures in each study area on trial basis. To complete the recommended trial installations in all five neighbourhoods this year, an additional \$125,000 in funding is required.

Recommendation k) will authorize the transfer of \$50,000 in 2021 approved capital funding from the Traffic Improvement project budget (ref 5-17.05) and the transfer of \$75,000 in 2020 approved capital funding from the Tourism Wayfinding Sign Program (ref 5-17.03) to provide sufficient funding to allow the trial installations to proceed this year. Implementation of the Tourism Wayfinding Sign program was held off in 2020 due to the financial implications associated with COVID-19, and it is anticipated that new funding to replace the transferred amount will be included in future capital budget requests, once the program is ready to resume.

Traffic Calming Studies for three additional neighbourhoods will be completed in 2021. Funding for these additional projects will be requested as part of the draft 2022 capital budget for implementing trial installations in these areas. It is anticipated that additional capital funding for installation of the permanent installations for the five study areas noted above, along with the three additional study areas in Phase 2, will be included in the draft 2023 Capital Budget.

Additional operating funding would also be required to support an ongoing Traffic Calming Program to accommodate future Traffic Calming requests. The costs for a program of this nature, including staffing requirements, will be identified in the draft 2022 budget for consideration by Council.

## Background

City Council at its meeting of October 28, 2019, passed the following motion:

"That staff report back to Council prior to the 2021 budget review process on traffic calming measures such as, but not limited to, Bollards, Humps, Intersection Bulbs, Rumble Strips, Painting Techniques, in Residential Neighbourhoods, and a plan to implement them in at least 5 neighbourhoods, one in each ward of the City, in 2021"

Traffic calming measures are usually applied in locations experiencing excessive vehicle speed and/or high volumes of shortcutting traffic. Traffic calming plans seek to alter the street and/or modify driver behaviour in such a way as to reduce vehicle speeds, discourage shortcutting, minimize conflicts between street users, and improve the neighbourhood environment.

The City of Peterborough currently does not have a formal policy regarding traffic calming. In 2015, in response to a number of requests for traffic calming, staff surveyed twelve municipalities and identified a number of common criteria typically used to evaluate requests for traffic calming measures. Using this information, an internal screening process was developed to evaluate traffic calming requests and this process has been used since 2016.

As part of Report USDIR18-002, the scope of the planned City-Wide Traffic Operations Study was increased to include the development of a traffic calming policy and implementation process, along with an additional focus on arterial road operational improvement plans. With the approval of the October 28, 2019 resolution from Council, the Traffic Calming portion of this study was separated from the larger Traffic Operations Review project and staff initiated the Traffic Calming Project.

Report IPSTR20-032 provided Council with an update and overview of the scope of the project, which includes three main components:

- 1) Development of a formal Neighbourhood Traffic Calming Policy that will cover items such as conditions that warrant a formal traffic calming study, the suitability of traffic calming for various categories of the roadway, the process for residents to request a study and for staff to respond to requests for traffic calming, the neighbourhood consultation process, and the degree of neighbourhood support that should be required to move forward with any traffic calming plan.
- 2) Development of Traffic Calming "Tool Box", which is essentially a listing and description of various traffic calming devices and applications that have been used in other jurisdictions and might be considered for use in Peterborough. The tool kit also summarizes the types of applications the devices should be used for, relative cost, effectiveness, maintenance issues, emergency access issues etc. This information is intended to assist staff and help residents understand the types of solutions that may/may not work in specific neighbourhoods.
- 3) Completion of the Phase 1 Traffic Calming Studies in five neighbourhoods (one in each Ward) to pilot the new processes, the approach to neighbourhood public engagement and tools/devices recommended. This part of the project responds to Council's October 2019 direction. An additional three neighborhoods have been identified for completion in Phase 2 of the project.

Report IPSTR20-011 awarded the Traffic Calming study project to the consulting team led by Paradigm Transportation Solutions. LURA Consulting, a firm specializing in public engagement activities, is supporting Paradigm in this project. The consultants commenced the work on the project in June 2020. Work on the new Traffic Calming Policy, the Traffic Calming Toolbox, and the Phase 1 neighbourhood studies are now complete.

#### **Community Engagement**

Community engagement has been an important aspect of this project and has been undertaken at numerous points in the study process.

Initial city-wide engagement focused on collecting information about traffic calming concerns from residents across the City. Subsequent targeted engagement approaches were used in each of the five neighbourhoods where detailed traffic calming plans have been developed.

With the restrictions imposed on public gatherings, new forms of community engagement had to be implemented on this project. To reach out to the maximum number of residents in the neighbourhood several engagement strategies have been used, including:

- Door-to-door mail drop: A copy of the Notice of Study Commencement which includes a short project background and information about engagement opportunities and the project webpage was distributed to all residents within the five study areas.
- Online Engagement: The City launched a project webpage on the www.connectPtbo.ca engagement platform. The website presents a detailed overview of the project scope, the process, latest engagement opportunities, surveys, information about project milestones, and contact information for the project team. Updates about the project and information about engagement events are regularly posted on City's social media sites as well. As of March 31, 2021, there have been approximately 3,400 visits to the Calm Streets PTBO project page.
- Community Ambassador Program: A Community Ambassador was identified from each of the five neighbourhoods. The ambassadors were hired by the consulting team to make connections with individuals and families in each of the neighbourhoods to share information and gather feedback about traffic calming concerns in the study area. In advance of the first and second neighbourhood workshops, the ambassadors displayed and distributed promotional materials including posters, sidewalk stickers and project business cards within the neighbourhoods. Ambassadors also connected with individual residents and encouraged them to participate in the workshops.

- Online Survey: Residents in the specific study area neighbourhoods were invited to participate in an online survey to provide feedback regarding traffic concerns in their neighbourhood and recommend potential solutions to mitigate traffic concerns. The survey was open from August to October,2020 on the project web page <a href="https://www.connectptbo.ca/trafficcalming">www.connectptbo.ca/trafficcalming</a> and generated 157 responses.
- Online Community Workshops: The consultants conducted two rounds of workshops with community members in each of the five study areas. The residents provided feedback on traffic issues in their neighbourhood and contributed to developing preliminary traffic calming concept plans during the first workshop. Preliminary concept plans developed during workshop 1 were further refined by the project team and preferred traffic calming plans were identified during the second round of workshops organized in early December.
- Neighbourhood Survey: The City conducted a neighbourhood survey between February 22 and March 10, 2021, to gather inputs from neighbourhood residents on whether there is a desire to implement the traffic calming proposal developed for the study areas. Residents in the study area were mailed the proposed traffic calming plans for their respective neighbourhood along with a survey. Residents had the option to either use the prepaid return envelope provided or submit the survey online using City's engagement portal connectptbo.ca/trafficcalming. There were 299 responses to this survey, with 280 of these responses coming from residents within the study area neighbourhoods. Approximately 60% mailed back their survey responses with the other 40% using the online option.
- Posting of Draft Reports and Materials: A Draft of the proposed Traffic Calming Policy Report was posted on the connectptbo website and residents were invited to submit comments to the study team. During the neighbourhood Traffic Calming studies draft copies of Traffic Calming plans developed during workshop sessions were also posted online to facilitate review and comments by members of the neighbourhoods who were unable to participate in the online workshops.

#### **Recommended City- Wide Traffic Calming Policy and Toolbox**

The consulting team has developed a new traffic calming policy framework for the City through an extensive review of best practices from Municipalities across the Country. The Policy will help City staff identify eligible locations for traffic calming and provide a guide to the types of traffic calming measures that could be considered on city-owned roads.

The Traffic Calming Policy has been designed as a neighbourhood driven and neighbourhood focussed process, and is therefore targeted for application primarily on Local, Low-Capacity Collector Roads and High Capacity Collector Roads. This was in direct response to the motion approved by Council. Where traffic and neighbourhood characteristics meet the basic screening criteria for application of Traffic Calming measures, a Traffic Calming Study will be initiated to work with residents to develop a Traffic Calming Plan and seek agreement of the neighbourhood, and Council, to proceed to implementation.

While Arterial Roads are not the primary focus of this policy, the policy directs that Traffic Calming measures for Arterial Roads will largely consist of measures aimed at education and enforcement of existing speed limits and traffic laws, rather than implementation of physical measures to restrict access or force vehicles to slow down. This approach reflects the fact that arterial roads are intended to facilitate the efficient city-wide movement of a wide variety of vehicle types and users, including trucks, autos, buses, public transit, emergency vehicles (fire, police and EMS), cyclists and pedestrians.

Implementing measures to frustrate the through movement of traffic on arterial roads will only lead to drivers seeking "better short-cut" routes through neighbourhoods. During the traffic calming workshops held as part of this project, numerous residents noted problems with the arterial road network or with key intersections on arterial roads which contributed to drivers cutting through and speeding within their neighbourhoods. The study team recognizes that the best way to solve short cutting traffic issues is often to fix the underlying issue with the arterial road network first, however it is recognized that these projects can often take multiple years to proceed from idea to design, to funding, and then to implementation.

The approach to Traffic Calming on Arterial Roads does not preclude opportunities to consider implementing physical improvements to arterial roads to address operational enhancements, improve safety performance, add cycling lanes, or to implement "complete streets" improvements as part of road reconstruction projects. These types of improvements will continue to be considered through other City programs or capital projects as they are today.

The Traffic Calming policy includes a process to allow residents to submit future traffic calming requests, technical criteria and a screening process to initiate a study, the various stages of community engagement activities to develop a neighbourhood-based traffic calming plan, and a process to manage the implementation of approved plans. The outcome of the five-neighbourhood studies and inputs received through engagement with the community and various stakeholders helped develop the city-wide Traffic Calming Policy.

The Traffic Calming Toolbox is not part of the formal policy but is intended to be a guide that City staff and residents can use to design context sensitive Traffic Calming plans for neighbourhoods. The Toolbox is intended to be a "living" document; one that can be updated to reflect new or emerging best practices on an ongoing basis without having to change to overall policy document. To develop the Toolbox, the consulting team researched and shortlisted a series of potential traffic calming measures that have been successfully used in other municipalities and may be considered for implementation in Peterborough.

The Toolbox groups various traffic calming measures into a series of categories including:

- Vertical Deflections (i.e., speed cushions, raised crosswalks);
- Horizontal Deflections (i.e., curb radius reductions, chicanes);
- Roadway Narrowing (i.e., curb extensions, lane narrowing);
- Surface Treatments (i.e., enhanced crosswalks or textured pavements);
- Pavement Marking Treatments;
- Access Restrictions (i.e., full or partial closures, turn restrictions);
- Gateway Treatments (to be used at the entrance to a neighbourhood);
- Shared Space Treatments; and
- Education and Enforcement Measures (i.e., radar speed message boards, lawn signs, enforcement programs, etc.)

As certain measures are better suited to different areas, the Toolbox also provides guidance on the applicability of various measures to different classifications of roadway. For example, most vertical and horizontal deflections and access restrictions are recommended for use only on Local and Low-Capacity Collector Roads, while less impactful and intrusive measures have broader application on High-Capacity Collector Roads and Arterial Roads.

A technical stakeholder group including staff from Engineering, Operations & Maintenance, Accessibility, Police, Fire, Transit, Parking, and Insurance & Risk Management were consulted to solicit feedback on technical, operational and risk-related concerns regarding the various shortlisted traffic calming measures and their applicability to different types of roadways.

Concerns were expressed by Fire and to some extent Transit, about the impact of vertical deflection measures (like speed cushions, speed humps or raised crosswalks) on their operations. There has been a significant evolution in the design of these measures over the past 20 years since they first started to be used in Canadian Municipalities. The speed cushion is one of the measures that have been designed specifically to address the concerns of emergency service vehicles in other communities. The modern speed cushion is designed with gaps in the raised portion of the device to allow larger emergency vehicles to straddle it without having to slow as much as smaller passenger vehicles with smaller wheelbases. The design of modern speed cushions also avoids the problem of jarring occupants in the rear of larger vehicles, like buses and fire trucks, which was the main concern raised with the older style speed bumps. Speed cushions are proposed in a couple of the neighbourhood traffic calming plans reviewed in this study, and upon approval they will be implemented on a trial basis to allow for an evaluation of their effectiveness and any adverse effects on emergency service vehicles.

The recommended City-wide Traffic Calming Policy is attached in **Appendix A** for approval. The detailed project report describing the traffic calming policy, process, and the traffic calming toolbox is posted on the connectptbo.ca/trafficcalming website.

#### **Traffic Calming Studies in Five Neighbourhoods**

Five neighbourhoods (one in each ward area) were chosen at the outset of the study to serve as pilot cases to assist with the development of the policy and the community engagement process.

Ward	Area of Study
Otonabee (Ward -1)	Sherburne Street, Morrow Street, Montgomery Street neighbourhood
Monaghan (Ward -2)	Westridge Boulevard, Cherryhill Road and neighbourhood
Town (Ward -3)	Romaine Street and neighbourhood
Ashburnham (Ward -4)	Auburn Street, Dunlop Street and neighbourhood
Northcrest (Ward -5)	Franklin Drive and neighbourhood

These neighbourhoods were selected prior to the beginning of this project based on requests that had been received from residents for area traffic calming reviews. Selecting the neighbourhoods in advance allowed for the collection of baseline traffic data in 2019, in advance of starting the project, given the timeline set for completion of the 5 neighbourhood studies.

The City worked with residents in the five neighbourhoods to develop traffic calming plans unique to each study area. Community members provided initial feedback on traffic issues in their neighbourhood through an online survey, which was followed by two rounds of virtual workshops with community members in each of the five study areas to discuss their perspective on traffic issues in their neighbourhood and to develop preliminary traffic calming concept plans. While each of the neighbourhood workshop sessions were well received and provided important feedback to the study team, attendance levels at each workshop were not necessarily representative of the entire neighbourhood. In part this was due to the challenges in attracting people to participate in online engagement events.

The proposed Traffic Calming Plans developed during the workshop sessions were then circulated to the entire neighbourhood, through a neighbourhood survey undertaken between February 22 and March 10, 2021, to gather inputs from all neighbourhood residents as to the degree of support for the proposed traffic calming plans developed for each of the study areas. A summary of the Community engagement undertaken for the

five neighbourhood studies has also been posted on the connectptbo.ca/trafficcalming website.

The results of these neighbourhood surveys are presented in Table 2, below:

Neighbourhood	Number of Residents	Number of Responses received (%)	% Residents <u>Supporting</u> Traffic Calming	% Residents N <u>ot</u> <u>Supporting</u> Traffic Calming
Sherburne Street, Morrow Street, Montgomery Street	195	51 (26%)	67 %	33%
Option 1 – Directional Diverter			41 %	
Option 2 – Parking Chicane			59 %	
Westridge Boulevard, Cherryhill Road	412	70 (17%)	69 %	31%
Romaine Street	209	12 (6 %)	67 %	33 %
Auburn Street, Dunlop Street	111	31 (28 %)	81%	19 %
Franklin Drive	400	107 (27%)	80 %	20 %

 Table 2 – Resident Support for Proposed Traffic Calming Plans

Gaining the support of a broad cross section of residents in a neighbourhood is an important aspect of the proposed Neighbourhood Traffic Calming Policy. Traffic Calming measures can have positive results from a number of perspectives, but there can also be some negative implications for some measures. Attempting to gauge the overall level of support for a proposed plan up front, allows all neighbourhood residents to voice their opinions on a plan before it is implemented.

The Traffic Calming Policy, attached in Appendix A, recommends a minimum response rate of 25% of all eligible households (participation rate), with a minimum of 51% of respondents in agreement (support rate), as being required to move forward to the next step in the Traffic Calming process. For larger neighbourhoods, or neighbourhoods where over 40% of the households are in apartment units, a smaller response rate of 15% is proposed to be an acceptable indication of neighbourhood support. Larger

neighbourhoods often include side streets that may not be directly impacted by the proposed measures and this may impact response rates. In neighbourhoods with a higher share of apartments it can also be difficult solicit a larger response rate due to generally lower participation rates. A smaller response rate will ensure that barriers to participation in some neighbourhoods do not preclude obtaining sufficient support to proceed with Traffic Calming measures.

Based on the survey results received the following recommendations for each study area are described below:

Ward 1 – Sherburne Study Area: Sherburne study area residents identified cut-through traffic as a major traffic concern. Drivers use Sherburne Street, Morrow Street and Montgomery Street to bypass the Lansdowne Street and Lock Street intersection, in part to avoid potential delay at the signalized intersection. All three of these roads are local roads. Residents on Sherburne Street, Morrow and Montgomery Streets (between Lock Street and Sherburne Street) are most impacted by cut-through traffic.

During the neighbourhood consultation process there were two different approaches to Traffic Calming advocated by residents at the two separate meetings. To account for this, this neighbourhood survey asked residents to select between two traffic calming plans that were developed by the community. Approximately 26% of residents in the study area participated in the survey, and of the residents participating in the survey 67% voted in support of implementing traffic calming on the streets, while 33% of the total respondents voted to retain the status quo. From the respondents in favour of traffic calming, 41% preferred the 'Directional Diverter and Speed Cushions' option, while 59% supported implementing 'Parking Chicane and Speed Cushions'.

The 'Parking Chicane and Speed Cushions' option received the highest support and is the recommended plan for the neighbourhood. Staff recommends implementing the following traffic calming measures in the Sherburne study area, as illustrated in Appendix B:

- Create a 'Chicane' effect with car parking by implementing alternating side "calendar" parking i.e. the side of the road on which parking is permitted alternates on the 15th of the month. The Calendar parking will be on Morrow Street and Montgomery Street;
- Install curb extensions on Montgomery Street at Lock Street, on Morrow Street at Lock Street, and on Montgomery Street at Sherburne Street (west side) intersections;
- Install speed cushions on all approaches to the Sherburne Street intersections with Morrow Street and Montgomery Street;
- Install pavement markings, stop bars, crosswalks and traffic calming signs; and

 Implement signal timing changes at Lansdowne Street and Lock Street intersection to add an advance westbound left-turn phase (green arrow).

**Ward 2 – Westridge/Cherryhill Study Area:** Study area residents identified cut-through traffic and speeding as the major traffic concerns. Drivers use Westridge Boulevard and Cherryhill Road to bypass the Lansdowne Street and Brealey Drive signalized intersection to avoid any potential delay at the eastbound left turn on to Brealey. Cut-through vehicles tend to speed on these collector roads due to low traffic volume and wide pavements.

Approximately 17% of residents in this neighbourhood participated in the survey, and of these residents, 69% voted in favour of implementing the recommended traffic calming plan. This neighbourhood features a number of apartment and condominium households, and therefore the 15% response rate threshold has been used to satisfy the neighbourhood response criteria.

Staff recommends implementing the following traffic calming measures in the Westridge/Cherryhill study area, as illustrated in Appendix B:

- Install speed cushions on Westridge (2 sets) and Cherryhill (2 sets);
- Install pavement markings and flexible post delineators to reduce curb radii at Westridge and Cherryhill intersection;
- Install gateway features at Westridge and Lansdowne and Cherryhill and Brealey intersections;
- Install raised crosswalk and Level 2, Type C pedestrian crossover (includes signs and flashing lights) at Cherryhill and Mapleridge intersection; and
- Install pavement markings, stop bars, crosswalks and traffic calming signs.

**Ward 3 – Romaine Study Area:** Residents on Romaine Street identified speeding as the major traffic concern on this collector class road.

For this area, 209 households were sent a survey asking if they supported the proposed Traffic Calming Plan, and only 8 (6%) of residents provided a response. While 67 % of respondents voted in favour of implementing the recommended traffic calming plan, the response rate for Romaine Street did not meet the minimum thresholds to ensure that there was broad community support for implementation of the Traffic Calming plan developed by the community.

Staff recommends that an education and enforcement program be implemented for Romaine Street (Town Ward) including the installation of 3 radar speed feedback signs (one on each block) for a trial period of at least 12 months, and that the neighbourhood developed Traffic Calming Plan, as illustrated in Appendix B, be re-evaluated after the trial period has been completed, including additional neighbourhood consultation to review the results and potential measures.

**Ward 4 – Auburn Study Area:** Residents in the neighbourhood identified cut-through traffic, speeding and improper parking on local streets as the major traffic concerns. Cut-through vehicles use Dunlop Street and Auburn Street to by-pass the Armour Road and Parkhill Road signalized intersection to avoid any potential southbound right turn delay. These cut-through vehicles often speed on these local roads. Residents also identified concerns about trail users parking cars unsafely near the Rotary Greenway Trail access on Auburn.

Approximately 28% of residents participated in the survey and of these residents 81% voted in favour of implementing the recommended traffic calming plan.

Staff recommends implementing the following traffic calming measures in the Auburn Street study area, as illustrated in Appendix B:

- Install curb extension to restrict westbound entry for vehicles onto Dunlop Street from Armour Road;
- Install "No Left Turn" and No Right Turn Restrictions, Except Bicycles" on Armour Road at Dunlop Street, and install "One-Way" sign on Dunlop Street at Armour Road;
- Pave and install pavement markings to create a formal vehicle parking area on Auburn Street (west side);
- Install "No Parking" signs along east side of Auburn Street, from Parkhill Road to Dunlop Street;
- Install "No Heavy Trucks" signs on Auburn Street at Parkhill Road; and
- Install pavement markings, stop bars, crosswalks and traffic calming signs.

**Ward 5 – Franklin Study Area:** Residents identified cut-through traffic and speeding on Franklin Drive as the major traffic concerns. Franklin Drive is a shortcut route for vehicles northbound on Hillard Street that are destined towards Cumberland Avenue. Shortcutting vehicles frequently speed on Franklin Drive raising safety concerns for residents on this collector class road.

Approximately 27% of residents participated in the survey and of these residents 80 % voted in favour of implementing the recommended traffic calming plan.

Staff recommends implementing the following traffic calming measures in the Franklin Drive study area, as illustrated in Appendix B:

- Install three sets of speed cushions on Franklin Drive;
- Install raised crosswalk and pedestrian crossover on Franklin Drive at the walkway entrance to Northland Park;
- Install pavement markings, stop bars, crosswalks and traffic calming signs; and
- Monitor the diversion of traffic to Cumberland Avenue and review the need for traffic signals at the Cumberland Avenue / Hilliard Street intersection during the trial implementation period.

#### Implementation Strategy

Following Council approval, detailed plans will be prepared for each of the five neighbourhoods to allow for implementation. Where physical changes to the streets are being recommended, a trial installation of the plan using temporary materials is proposed to be completed during the summer / fall of 2021 to allow the neighbourhood to see the effects of the measures, and to allow the City to monitor the effectiveness of each plan for at least 12 months.

Following this trial period, the City will conduct another neighbourhood survey to assess resident support for implementing the traffic calming plan on a permanent basis, including any refinements identified through the monitoring and consultation process. Installation of permanent traffic calming measures would be scheduled for the summer of 2023, pending future budget approvals.

As summarized in Table 3, implementation of the trial installations in the five neighbourhoods as recommended in this report is expected to cost approximately \$325,000. The approved 2021 Capital Budget (project ref 5-17.02) included \$200,000 to fund the implementation of temporary traffic calming measures. In order to complete the recommended trial installations in all five neighbourhoods this year, an additional \$125,000 is required. Funding for this is recommended to be transfer from the uncommitted balance in two other capital accounts, as follows:

- \$50,000 in 2021 approved capital funding from the Traffic Improvement project budget (ref 5-17.05); and
- \$75,000 in 2020 approved capital funding from the Tourism Wayfinding Sign Program (ref 5-17.03)

Implementation of the Tourism Wayfinding Sign program was held off in 2020 due to the financial implications associated with COVID-19, and it is anticipated that new funding to replace the transferred amount will be included in future capital budget requests once the program is ready to resume.

The estimated costs to install permanent traffic calming measures in the five Phase 1 study areas is \$520,000. It is expected that the permanent installations will be installed in 2023, following the monitoring period and additional neighbourhood consultation. Funding to support these permanent installations will be requested in the draft 2023 capital budget.

Neighbourhood	Trial Installation	Permanent Installation	Total Cost
Otonabee Ward – Sherbourne -Morrow Street area	\$ 80,000	\$115,000	\$195,000
Monaghan Ward - Westridge Boulevard / Cherryhill Road	\$125,000	\$115,000	\$240,000
Town Ward - Romaine Street	\$ 35,000	\$0	\$ 35,000
Ashburnham Ward – Auburn Street / Dunlop Street	\$ 20,000	\$250,000	\$270,000
Northcrest Ward - Franklin Drive	\$ 65,000	\$ 40,000	\$105,000
Total - 5 Original Neighbourhoods	\$325,000	\$520,000	\$845,000
Pre-Approved Funding (2021 Capital Budget)	(\$200,000)		
2021 Transfer from Traffic Improvements Budget (ref 5-17.05)	(\$50,000)		
2020 Transfer from Tourism Wayfinding Sign Program (ref 5-17.03)	(\$75,000)		
Total Budget	\$325,000		

Table 3 – Estimated Capital Cost of Pilot Study Neighbourhoods

1 Additional cost to convert trial physical measures to permanent measures

# Next Steps

Following Council approval of the traffic calming policy and five neighbourhood plans in the Phase 1 study, traffic calming works related to the following three neighbourhoods identified for Phase 2 will commence:

- High Street;
- Whitefield Drive, Golfview Road and Silverdale Road; and
- Highland Road.

Costs for these three studies are included within the approved scope of work and budget for the current project and the Consulting team will initiate these studies using the recommended policy framework, following Council approval. Recommendations for Traffic Calming measures in each of these study areas will be presented to Council for approval following completion of the studies, expected by Q1 of 2022.

### Summary

The recommended Traffic Calming policy outlines the process for submitting future traffic calming requests, technical criteria for determining if a street or neighbourhood is eligible for traffic calming, screening criteria to initiate and prioritize future studies, the approach to community engagement during a traffic calming study, and the approval and implementation process.

To help create the draft Traffic Calming Policy, the City chose five neighbourhoods (one in each ward area) to serve as pilot cases to assist with the development of the policy and the community engagement process. The City worked with residents living in each of the five identified neighbourhoods to develop recommended traffic calming plans.

A capital budget of \$200,000 has been approved as part of the approved 2021 budget, which, along with the budget reallocations recommended in this report, will allow for the implementation of traffic calming measures on a trial basis in each of the five neighbourhoods in the summer of 2021. An additional budget allocation for implementing the permanent installations will be requested in the 2022 budget.

Submitted by,

Cynthia Fletcher Commissioner, Infrastructure and Planning Services

#### **Contact Name:**

Kevin Jones Manager, Transportation Phone 705-742-7777 ext. 1895 Toll-Free: 1-855-738-3755 Fax 705-876-4621 E-mail address: kjones@peterborough.ca

Vinod Soman Senior Project Manager- Transportation Phone 705-742-7777 ext. 1749 Fax (705)-876-4621 E-mail address: <u>vsoman@peterborough.ca</u>

#### Attachments:

Appendix A – Neighbourhood Traffic Calming Policy Appendix B – Neighborhood Traffic Calming Plans for Phase 1 Study Areas

### **Appendix A- Neighbourhood Traffic Calming Policy**

####
Neighbourhood Traffic Calming Policy (Draft)
Infrastructure and Planning Services
Transportation
Transportation Services
Council
2021-05-26
N. A

### 1.0 Purpose

- 1.1. The purpose of the Neighbourhood Traffic Calming Policy is to:
  - a) Set-up a transparent and systematic process to receive and process neighbourhood Traffic Calming requests from residents;
  - b) Establish Screening Criteria to identify neighbourhoods/locations eligible for Traffic Calming;
  - c) Create a uniform Ranking system across the City to prioritize neighbourhood Traffic Calming project implementation; and
  - d) Establish community support threshold requirements for implementing neighbourhood Traffic Calming.

### 2.0 Application

- 2.1 This Policy applies to all City-owned Local Roads, Low Capacity Collector roads, High Capacity Collector Roads and Arterial Roads.
- 2.2 This Policy applies to all road users within the City and those responsible for or involved in leading or delivering Traffic Calming initiatives for the City.

### 3.0 Definitions/Acronyms

**85th Percentile Speed-** The speed separating the fastest 15% of vehicles from the slowest 85%. This speed is typically used by traffic professionals for a variety of reasons including to gauge the magnitude of a speeding problem.

**Arterial Road** – A high-capacity urban road (identified in Schedule B of the Official Plan) which is intended to carry all types of traffic (cars, trucks, buses, bicycles) between major land use areas through the City. Examples include McDonnel Street, Monaghan Road, Hilliard Street and Lansdowne Street.

**City** – The Corporation of the City of Peterborough, its agencies, boards, and commissions.

**Collector Road** – A low to moderate capacity road (identified in Schedule B of the Official Plan) which serves to move traffic from local streets to arterial roads. Examples include Cherryhill Road, Weller Street, and Royal Drive.

**Horizontal Deflection** – A traffic calming measure that hinders the ability to a motorist to drive in a straight line by creating a horizontal shift in the roadway. The shift forces a motorist to slow the vehicle in order to comfortably navigate the measure.

**Hospital Routes-** Any local road, low-capacity collector roads, high-capacity collector roads, arterial roads or any roads assumed by the City providing access to a hospital and frequently used by ambulance.

**Operating Speed-** The speed at which motor vehicles generally operate on that road.

**Primary Fire Route-** Any local road, low-capacity collector roads, high-capacity collector roads, arterial roads or any roads assumed by the City and identified by Peterborough Fire Services for frequent use by authorized emergency vehicles.

**Shortcutting Traffic-** Traffic which is travelling through a neighbourhood to bypass congestion on the arterial street network, or to make use of a more direct route.

**Traffic Calming-** The process and measures applied by road authorities to address concerns about the behavior of motor vehicle drivers travelling on streets within their jurisdictions.

**Transit Routes-** Any local road, low-capacity collector roads, high-capacity collector roads, arterial roads or any roads assumed by the City and identified by Peterborough Transit for frequent use by transit vehicles.

**Vertical Deflection** – A traffic calming measure that creates a change in the height of the roadway that forces a motorist to slow down in order to maintain an acceptable level of comfort while navigating the measure.

- 4.1 Neighbourhood Traffic Calming measures can be applied in locations experiencing excessive vehicle speed and/or high volumes of Shortcutting Traffic and/or demonstrated safety concerns. The application of these measures is intended to restore neighbourhood streets to their desired function of providing mobility and access in differing combinations depending on the specific location, role, and classification of the roadway.
- 4.2 For the purposes of this policy, Traffic Calming measures are broadly categorized into the following two groups:
  - **Physical Measures** consist primarily of Vertical and Horizontal Deflections in the roadway. This group also includes treatments that narrow the roadway, alter the road surface, or restrict access; and
  - **Non-Physical Measures** include tools and strategies intended to influence or modify driver behaviour, often described as education and enforcement.
- 4.3 The City will consider the installation of physical Traffic Calming measures in the following situations:
  - When there is a demonstrated safety, excessive speed, and/or Shortcutting Traffic concern and acceptable alternative measures have been exhausted or are not appropriate;
  - After exploring methods to improve operation of the arterial road network, such as signal timing optimization; and
  - After Non-Physical Measures have failed to produce the desired results.
- 4.4 For arterial roads, Primary Fire Routes, signed Hospital Routes and Transit Routes, Traffic Calming will typically be limited to Non-Physical Measures.
- 4.5 The City may consider implementing Traffic Calming in new developments as part of the development approval process.
- 4.6 The City may consider implementing Traffic Calming on-road reconstruction projects where safety, excessive speed, and/or Shortcutting Traffic concerns are anticipated to occur upon (re)opening the road to traffic.
- 4.7 The City will not entertain resident requests for Traffic Calming on streets in new development areas until the roads have been assumed by the City.
- 4.8 Where the installation of physical Traffic Calming measures is deemed the preferred course of action, the City will:

- Determine whether an area-wide plan or street-specific scheme is more suitable. An area-wide plan will be pursued if a street-specific scheme would likely result in the displacement of traffic onto adjacent streets.
- Take into consideration the needs of non-motorized modes of transportation through the introduction of Traffic Calming. Measures will typically be designed to enhance or minimize impacts to pedestrian and cyclist movement.
- 4.9 The City will not consider the use of regulatory signs for the sole purpose of Traffic Calming. Traffic control devices in this category include all-way stop control and maximum speed limit signs.
- 4.10 The City will consider initiating a Traffic Calming Study following the Neighbourhood Traffic Calming Study Process for streets meeting the Screening Criteria listed in Table 3.1. Requests for a study that do not satisfy these minimum thresholds will be denied.
- 4.11 The City will not entertain new requests for a Traffic Calming Study for a period of at least:
  - Three years, on streets that have been reviewed and denied for physical Traffic Calming at any stage in the process; or
  - Five years, on streets where Traffic Calming measures have been removed.
- 4.12 The City will gauge the level of resident support to proceed to subsequent stages or steps in the Neighbourhood Traffic Calming Study Process through neighbourhood surveys. For each survey, a minimum response rate of:
  - 25% of all eligible households, for study areas comprising up to 40% apartment units; or
  - 15% of all eligible households for study areas comprising 40% or more apartment units; and
  - a minimum of 51% of respondents in agreement (support rate), is required to move forward.

Surveys not meeting these minimum thresholds will typically result in the study being ended. The City will issue only one survey questionnaire to each household within the study area regardless of the number of residents living at the address.

Criteria	Threshold	A Traffic Calming Study may be considered if:		
All Criteria Must be Met				
Previously Requested	Within Last Three Years	A prior request for Traffic Calming has not been denied within the last three years.		
Measures Removed	Within Last Five Years	Traffic Calming measures have not been removed within the last five years.		
Roadway Classification	Local Street, Low Capacity Collector, or High Capacity Collector	The subject street is designated a Local Street, Low Capacity Collector or High Capacity Collector in the City of Peterborough Official Plan (Schedule B – Roadway Network).		
Location	Transit Routes, Signed Hospital Routes, or Primary Fire Route	The subject street does not serve as a transit route, signed hospital route, and/or Primary Fire Route in the City.		
Speed Limit	≤ 50 km/h	The posted speed limit on the subject street is 50 km/h or less.		
Road Grade	< 8%	The grade of the subject street is less than 8%.		
Segment Length	≥ 150 metres	The distance between stop-controlled intersections along the subject street is 150 metres or more.		
At Least One C	riteria Must be Met for <u>L</u>	ocal Streets and Low Capacity Collectors		
Operating Speed	≥ 5 km/h above posted speed limit	The 85 <sup>th</sup> Percentile Speed is 5 km/h or more above the posted speed limit.		
Shortcutting Traffic	> 30%	The percentage of non-local traffic is more than 30%.		
At Least One Criteria Must be Met for <u>High Capacity Collectors</u>				
Operating Speed	≥ 10 km/h above posted speed limit	The 85 <sup>th</sup> Percentile Speed is 10 km/h or more above the posted speed limit.		
Shortcutting Traffic	> 60%	The percentage of non-local traffic is more than 60%.		

Table 3.1:	Screening Criteria f	or Initiating A Traff	ic Calming Study
		<u> </u>	

Notes:

1. The 85<sup>th</sup> Percentile Speed is calculated from data collected using automated traffic recorders (or similar units) over a 7-day period.

2. The percentage of non-local traffic is estimated by comparing the expected trip generation for an area to the actual volume counts. Alternatively, data will be collected through a license plate trace survey or data collection units with Bluetooth readers.

4.13 Figure 3.1 illustrates the Neighbourhood Traffic Calming Study Process

Figure 3.1: Neighbourhood Traffic Calming Study Process



4.14 Requests satisfying the initial Screening thresholds listed in Table 3.1. will be assessed against other eligible locations to determine relative priority for a Traffic Calming Study. The point system shown in Table 3.2 for Local Streets and Low Capacity Collectors and Table 3.3 for High Capacity Collectors provides the basis for ranking requests, with projects achieving the highest scores given top priority. The maximum score, calculated by summing the individual criteria points, is 100 points based on this methodology. Note the final prioritization score is not determined until after the neighbourhood survey results are incorporated.

Assessing technical merit is the first step in determining priority. City staff will assign a point score to each criterion in Table 3.2 or Table 3.3 except "Resident Support" using data on existing traffic and road conditions to gauge the potential benefit of installing physical Traffic Calming measures on the subject street. Requests meeting the following minimum scores for the technical criteria (out of 75) will proceed to a neighbourhood survey:

- 25 points for Local Streets and Low-Capacity Collectors; and
- 40 points for High-Capacity Collectors.

Requests not attaining these minimum scores will only be considered for nonphysical Traffic Calming measures such as education and enforcement.

Criteria	Point Assignment	Maximum Points
Collision History	1 point for each qualifying collision <sup>1</sup> over the last three years	15
Pedestrian Generators	5 points for each designated pedestrian generator (i.e. school, recreation centre, park, senior's home or centre, daycare, etc.) within the study area	15
Operating Speed	1 point for each 1% of vehicles observed 5 km/h or more over the posted speed limit	10
Total Traffic Volume	<ul> <li>Based on total daily traffic volumes<sup>2</sup>, 1 point for each:</li> <li>50 vehicles over 1,000 vehicles per day <u>OR</u> 5 vehicles over 100 vehicles per hour in the peak hour for Local Streets</li> <li>50 vehicles over 2,000 vehicles per day for Low-Capacity Collectors</li> </ul>	10
Shortcutting Traffic	Based on estimated non-local traffic (see <b>Table 3.1</b> ), 5 points for each 5% increment in share above 30%	10
Sidewalks	5 points if there are no sidewalks on the subject street	5
Cycling Facilities	5 points if there are designated cycling facilities on the subject street	5
Adjacent Land Use	0 points for 0% adjacent residential land use <u>OR</u> 5 points for 100% adjacent residential land use <u>OR</u> 2 points for between 0% and 100% adjacent residential land use	5
Total Maximum Points After Technical Assessment (Stage 3)		
Resident Support	<sup>1</sup> ⁄ <sub>4</sub> point for each 1% of respondents on the subject street voting in favour of Traffic Calming <sup>3</sup>	25
Total Maximum Points After Neighbourhood Survey (Stage 4) <sup>4</sup> 100		

#### Table 3.2: Priority Ranking Criteria for Local Streets/Low-Capacity Collectors

Notes:

- 1. Includes all collisions along the subject street except for crashes occurring at intersections with arterial roads.
- 2. Traffic volumes used in the evaluation are two-way average daily volumes over a 24-hour period.
- 3. If the minimum response rate is not achieved, community support is deemed insufficient and 0 points are assigned. Physical Traffic Calming measures will not be considered in this case. Points awarded based on the percentage of "yes" votes compared to total eligible votes received through the neighbourhood survey in Task 4.
- 4. In case of a tie, priority will be determined using a risk-based approach, considering the relative safety benefit of installing Traffic Calming in competing locations. Priority

will typically be given to streets that serve more vulnerable users such as seniors and children. If still tied, the lower cost project will receive priority since the investment in Traffic Calming would generate greater benefit per dollar spent.

Criteria	Point Assignment	Maximum Points
Collision History	1 point for each qualifying collision <sup>1</sup> over the last three years	15
Pedestrian Generators	5 points for each designated pedestrian generator (i.e. school, recreation centre, park, senior's home or centre, daycare, etc.) within the study area	15
Operating Speed	1 point for each 1% of vehicles observed 10 km/h or more over the posted speed limit	10
Total Traffic Volume	Based on total daily traffic volumes <sup>2</sup> , 1 point for every 50 vehicles over 5,000 vehicles per day	10
Shortcutting Traffic	Based on estimated non-local traffic (see <b>Table 3.1</b> ), 5 points for each 10% increment in share above 60%	10
Sidewalks	5 points if there are sidewalks on only one side of the subject street	5
Cycling Facilities	5 points if there are designated cycling facilities on the subject street	5
Adjacent Land Use	0 points for 0% adjacent residential land use <u>OR</u> 5 points for 100% adjacent residential land use <u>OR</u> 2 points for between 0% and 100% adjacent residential land use	5
Total Maximum Points After Technical Assessment (Stage 3)		
Resident Support	<sup>1</sup> ⁄ <sub>4</sub> point for each 1% of respondents on the subject street voting in favour of Traffic Calming <sup>3</sup>	25
Total Maximum Points After Neighbourhood Survey (Stage 4) <sup>4</sup> 100		

### Table 3.3: Priority Ranking Criteria for High Capacity Collectors

Notes:

- 1. Includes all collisions along the subject street except for crashes occurring at intersections with arterial roads.
- 2. Traffic volumes used in the evaluation are two-way average daily volumes over a 24-hour period.
- 3. If the minimum response rate is not achieved, community support is deemed insufficient and 0 points are assigned. Physical Traffic Calming measures will not be considered in this case. Points awarded based on the percentage of "yes" votes compared to total eligible votes received through the neighbourhood survey in Task 4.

- 4. In case of a tie, priority will be determined using a risk-based approach, considering the relative safety benefit of installing Traffic Calming in competing locations. Priority will typically be given to streets that serve more vulnerable users such as seniors and children. If still tied, the lower cost project will receive priority since the investment in Traffic Calming would generate greater benefit per dollar spent.
  - 4.15 The recommended Traffic Calming Plan may be implemented on a trial basis using temporary/seasonal measures to:
    - Further understand the Plan potential and its desirability before investing in a permanent installation, thereby allowing for refinement of the final design;
    - Avoid or defer the initial capital cost of more expensive permanent installations;
    - Gauge community reaction on a concept in reality prior to permanent installation; and
    - Retain flexibility to remove Traffic Calming measures seasonally.
  - 4.16 After evaluating the trial application and surveying neighbourhood residents, the City will decide whether to install the approved Traffic Calming Plan permanently.
  - 4.17 In certain circumstances, the City may decide to move forward with permanent installation without a trial application after taking into consideration the possible negative aspects of using temporary/seasonal measures, which can include:
    - Lower relative aesthetic value;
    - On-going operational costs and/or additional operational resource requirements;
    - Requirements for seasonal installation and removal;
    - Potential to have similar or higher overall costs than permanent installations;
    - Potentially lower effectiveness than permanent materials; and
    - Quicker degradation of roadway surfaces (specifically where measures are anchored into existing road surfaces).

- 4.18 The City may elect to conduct Traffic Calming pilot projects to test new innovations and technologies. Requests of this nature will be brought to City Council for approval prior to consideration.
- 4.19 The City may consider removal of permanent Traffic Calming installations if a majority of residents directly fronting the subject street support the request. The approved Traffic Calming Plan must be installed for at least three years before removal can be requested. If the measures are removed, the subject street must wait at least five years before submitting a new request for Traffic Calming.
- 4.20 If the City receives a request to remove one Traffic Calming measure within an overall approved Traffic Calming Plan, all measures may be considered for removal. While it may be possible in certain circumstances to remove only one Traffic Calming measure, in most cases, the entire plan will need to remain to be effective.
- 4.21 The City reserves the right to remove Traffic Calming measures determined to be ineffective or causing a safety risk, or if the treatments have created unplanned consequences that cannot be rectified. This may include an unintended diversion of traffic onto a parallel or adjacent Local Street, Low Capacity Collector, and/or High Capacity Collector rather than onto the arterial road network.

### 5.0 Appendix, Related Documents & Links

#### **Pertinent Resources:**

• www.connectptbo.ca/trafficcalming

### **Related Policies:**

- Policy ####, Name of Policy
- Policy ####, Name of Policy

### **Related Procedures:**

- Procedure ####-P##, Name of Procedure
- Procedure ####-P##, Name of Procedure

### **Related Forms:**

• Form ####-P##-F#, Traffic Calming Request Form

# 6.0 Amendments/Reviews

Date (yyyy-mm- dd)	Section # Amended	Comments
2021-05-26		Policy Approved by Council as Appendix A to Report IPSTR21-007
Next Review Date:		

# Appendix B – Neighborhood Traffic Calming Plans for Phase 1 Study Areas



