INFRASTRUCTURE SERVICES
Staff Report

REPORT NO:	IS-2024-27
TO:	Council
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REVIEWED BY:	Greg Clark, Acting Chief Administrative Officer
DATE:	2024-09-23
SUBJECT:	**Traffic Calming Policy and Implementation Plan**

RECOMMENDATION:

THAT Council endorse the Traffic Calming Policy and Implementation Plan as outlined in this report; and,

THAT the following budget items be included for consideration in the 2024/25/26 Work Program and the 2025 Budget Process: annual data collection consulting resources: +50,000 Operating Budget, Regional traffic calming program (one-time) – +35,000 Capital Studies, RFP for Huron Road, Mannheim Road, Wilmot Line EA's (capital budgeted, timelines adjusted), EA study Huron Road, Mannheim Road, Wilmot Line (capital budgeted, timelines adjusted), Intersection Safety Review (Huron Road) - +40,000 Capital Studies, Speed Zone Review +20,000 Capital Studies and TWO additional locations for calming from list (unbudgeted, unknown)

SUMMARY:

Council passed a motion at the January 15, 2024, meeting asking staff to report back during the 2024 budget process on developing a comprehensive and collaborative speed mitigation and traffic safety strategy in the Township. The report outlined key portions of traffic safety strategies. This report outlines a Traffic Calming Policy and Implementation Plan, including Work Program items to be considered as part of the implementation plan.

BACKGROUND:

In 2023 Budget, Council approved a full-time resource with partial position responsibility to address traffic and corridor issues related to traffic operations. This position is responsible for corridor management for Township roads, including the following:

- Municipal consent and right of way work permit approvals
- Municipal access agreement management
- Traffic and parking by-law schedule management
- RSDS program management

In 2023, the role was vacant, with inability to fill with experienced candidates for the position. A part-time staffing resource was hired in mid-2023 and operated in a part-time capacity until Q2 2024.

In late Q2 2024, the part-time staff person took on full-time duties, and has been advancing the work of corridor management and traffic calming since that time. As time permits, this staffing resource has reviewed industry best-practice related to traffic calming programs and has drafted an initial policy framework which is the subject of this report.

REPORT:

Traffic calming is defined as the combination of mainly physical measures that alter driver behavior to reduce the potential of negative effects of motor vehicle use and improve conditions for alternate modes of transportation. Traffic calming measures combined with engineering, educational and enforcement tools, can significantly improve the safety of neighbourhoods and related roads.

Things to consider when planning traffic calming efforts:

- **Legislation and Regulations:** Any planned traffic calming should not conflict with the current legislation and relevant by-laws in place, at all levels of government.
- **Liability:** Developing a traffic calming policy is helpful to minimize potential liability for the installation and impact of traffic calming that may arise from perceived conflict with other reference documents. For the safety of all road users, a number of steps can be taken to minimize potential liability issues in the future: developing the policy and documenting the process which includes the design, implementation and maintenance of traffic calming

measures. Support from the decision-makers would be easily made with a well-thought-out process that considers all road users and affected town staff.

- **Accessibility:** Traffic calming measures should consider road users of all ages and abilities that will allow them to be independent and safe.
- **Enforcement:** Understanding that enforcement resources are limited and that not all locations can be monitored at all times, consideration of various measures that are self-enforcing may have greater chance of success. However, these measures tend to include physical changes to the road characteristics, therefore a good balance between different types of traffic calming measures is important.
- **Emergency services:** While slowing down daily vehicular traffic is the objective, this may have negative impacts on emergency services' response times. Over time, enhanced designs have been developed to minimize the impact on emergency service vehicles while still providing functionality to the general traffic. These design considerations are crucial when selecting traffic calming measures.
- **Maintenance and Operations:** Consultation with the maintenance and operations staff of the municipality throughout the process is important to ensure the implementation of traffic calming measures does not conflict with their operations. Snow removal, pavement markings, damages due to roadway geometry changes are common concerns however, there may be other locally specific issues that may arise.
- **Modes of transportation:** Active transportation and transit operations are important aspects to consider since the objective of traffic calming to enhance safety of all road users. Careful consideration of the measures and thorough consultation process can improve the road user's experience.
- **Compatibility with municipal land use and transportation plans:** Incorporating traffic calming implementation throughout other long-range plans and policies confirms uniformity across the municipality and potentially within the region as well.

An effective process for administering traffic calming reviews should consider the following principles:

1. Identify the source of the problem and quantify the extent of the problem through data collection or analysis
2. Consider first cost-effective options such as increased enforcement, education or community-led community road watch programs, installation of driver speed feedback boards, and/or better street signage.
3. Consider widening the scope by studying an area-wide plan instead of a localized, street-specific plan that would likely result in displacement of traffic onto adjacent streets.
4. Generally, traffic calming measures that are effective at all hours of the day and do not require the enforcement of officers are both preferred and supported
5. Verify that the intervention does not impede upon the accessibility of non-motorized modes of transportation such as pedestrians, cyclists, and wheelchairs
6. Ensure that all service providing vehicles including transit, police, fire, ambulance, garbage collection, snow plowing, and other emergency or service vehicles are able to handle the proposed infrastructure and calming measures

7. Continue to monitor any traffic calming measures for six months or a year following implementation to analyze the effectiveness and success or to prepare a contingency plan in case the measure does not produce ideal results.
8. Engage with all relevant stakeholders (community, emergency service, public works staff, Council, other organizations) in the investigation and implementation process to reflect the needs of multiple users and analyze the traffic calming measure through different lenses. This would maximize opportunities of consensus/participation and reduce the risk of other factors not being considered in time.

There are advantages and disadvantages to establishing traffic calming within the traffic and transportation network, including:

- **Advantages:** Reduce motor vehicle speeds, reduce traffic volume, discourage through traffic, improve overall road safety, improve neighbourhood livability, reduce conflicts between road users

- **Disadvantages:** Increase emergency vehicle response time, reduce ease of access in and out of neighbourhoods, result in expensive solutions (time and resources), divert traffic onto neighbouring roads, increase maintenance time and costs (e.g. snow clearing, garbage pick-up)

The purpose of establishing this policy is to provide a clear, consistent and data-based framework for initiating, developing, assessing, implementing, and monitoring traffic calming measures for local and collector roads in the Township. The purpose of traffic calming is to address concerns about the behaviour of motor vehicle drivers and develop measures to mitigate the concerns resulting in safer roads for all modes of transportation. Creating a policy allows the Township Staff, members of Council and the public to understand and agree on an approach and criteria that can be used objectively to respond to and prioritize requests.

The ultimate goal of traffic calming is to address the negative effects of motor vehicle use and driver behaviour. Most traffic calming measures address speeding, reckless driving, and conflicts between street users. The objective of implementing a traffic calming policy is to determine the best combination of measures that result in the greatest improvement in the quality of life and community safety at a reasonable cost.

Effective Calming Measures utilized within the proposed policy are broken into physical and non-physical measures, including the following:

Physical measures such as:

- Speed humps / bumps
- Speed tables
- Raised intersections
- Traffic circles
- Roundabouts
- Street closures (full or partial)

- Diagonal diverters
- Median barriers

Non-Physical measures such as:

- Police enforcement
- Pavement markings and signage
- Radar speed display signs
- Community Safety Zones; where applicable

POLICY

The Traffic Calming Policy is applied to assess local and collector roadways assumed by the Township of Wilmot within the following initial qualifying parameters:

- Have a posted speed limit of less than 60km/hr
- Have a minimum Annual Average Daily Traffic (AADT) of 500.
- Have a minimum 150m in length

The initial screening is recommended to focus traffic calming needs on higher risk areas as a result of the roadway use, traffic types and potential for issues to be what was reported. For example, it is unlikely that a short cul-de-sac would be recommended for traffic calming needs as the road length would not meet standard separation requirements for installations, has low volume and very likely most road users will not need calming applied to their driving behaviour. In those cases, it is better to involve WRPS with information such that they can address the one-off behaviour. In the case of the speed limit threshold, it is in place as most roads with posted limits over 60km/hr are meant to move vehicle traffic primarily, and it would not be advisable to restrict these at it will negatively affect the road network and frustrate most law-abiding road users. While not a 60km/hr zone, the automated speed enforcement on Snyder's Road is a good example of the frustration road users experience when calming measures and lower limits are put in place for roads meant to move traffic through primarily.

Requests will be screeded using a combination of existing collected traffic data (collected within a 3-year window), site investigation, and new collected traffic data. The Township will intake and review the following types of requests under the policy:

- Traffic Calming / Speed reduction
- Parking Restrictions
- Road Operating and Safety Reviews

All requests will be submitted via online or hard copy form and will be documented and tracked. Requests that meet initial criteria will be analyzed by existing collected data. Data collected for the 85th percentile speed will be analysed based on a points method to recommend next steps (Appendix B: Traffic Calming Assessment Tool).

Temporary installs are proposed to only be used in summer condition, usually around detour, other Township induced traffic flow interruptions, or to test as a permanent future traffic calming solution.

PROCESS

The process will generally follow the below steps:

Step 1 – Initial Screening: Resident or other concern brought forward, goes through initial documentation and screen
Step 2 – Data Collection
Step 3 – Data Assessment
Step 4 – Neighbourhood Petition/ Survey
Step 5 – Design Considerations and Community Feedback
Step 6 – Finalize and implement plan
Step 7 – Review and evaluate effectiveness

There is also a provision within the process for removal of traffic calming measures, as most municipalities with this policy recognize the need for residents to provide feedback after implementation and depending on changes of use or traffic patterns in the neighbourhood. (Appendix C: Process Flow Chart)

Type 1 and Type 2 Traffic Calming Measures Examples

Type 1 Less intrusive measures *Typically involve lower cost and quicker implementation.*	**Type 2** Physical road changes *Typically, more effective solutions.*
Lane Reduction (sidewalks, parking)	Vertical Deflection (speed hump)
Interactive Speed Display Devices	Horizontal Deflection (traffic circle)
Lane Narrowing (bollards)	Access/Volume Control (raised median, directional closure)

DATA COLLECTION

A critical element and starting point of an effective traffic calming program is data collection efforts. Currently, the Engineering division has a limited number of data collection tools that can be deployed to collect preliminary, rough data to gain a sense of confidence in the issues being reported. With these internal resources, staff have the flexibility and responsiveness to begin addressing issues reported from the field. However, these resources are limited and cannot cover the extent of data collection that would be needed to support traffic reviews and other engineering programs.

Historically, the Township has relied on Radar Speed Display Signs (RSDS) deployment as data-collection tool, but also as a passive traffic calming measure. This has created conflicting outcomes as in most cases, the RSDS has the effect of temporarily calming traffic by notifying the driver of their habits (awareness), or in some cases road users attempt to get a higher number reported. This could in turn impact the speed data collected by showing slower or faster traffic movements than if the driver was not aware of their current speed. The majority of drivers adjust their driving behaviour to slow down when made aware of their speed. Under the new policy, RSDS would be deployed as a Type 1 calming measure only.

Under the new policy, staff will request that consulting resources be expanded for traffic counting needs. This would be an annual request. Currently, the Engineering division undertakes traffic counts on a rotating program basis as needed for Minimum Maintenance Standard program compliance. This works out to roughly $25,000 annually. This was located under operating budget historically. Staff would be requesting this be expanded to scope in more flexible and responsive deployment of counting tools, as well as consulting support for general traffic issues. Staff would request this be expanded to $50,000 for a traffic counting program and consultant support annually.

Data collection is a key element of a reasonable and effective strategy to mitigate qualified traffic management issues. In particular, it is important to quantify what the issues are related to what is being reported such that an effective treatment can be considered to rectify the issue. Further to that, it is important to look at what effects installation of treatments can create on the adjacent and surrounding road network, if any, as typical road users may try to find alternate routes to avoid traffic flow nuisances.

LEVEL OF SERVICE

As has been reported previously, the current level of service for traffic related efforts consists of a portion of an Engineering resource to plan and deliver the RSDS (Radar Speed Display Sign) rotating program. Roads staff are also used on a bi-weekly basis to relocate a number of RSDS units. In establishing this program, the RSDS will be utilized differently and likely would not have the same deployment effort needs.

Staff are recommending to maintain the current Engineering complement allocated to Traffic Calming efforts to assess the workload capabilities and determine if more resourcing is required to address the volume of requests received. With the intake process being expanded, we anticipate effort needed to address the workload will be on-going, but it is not known to what extent. As such, staff can commit to 2024 and 2025 workload priorities and will assess program effectiveness and resourcing needs in future annual reporting. It is noted, the capacity of this Engineering resource will be dictated by the workload of other corridor management activities that take place under a fee for service environment (road closures, Municipal Consent approvals, Right of Way work and special events permits, etc.).

From an administration standpoint, it is anticipated that project-based reporting will take place on an as-needed basis. This will include Traffic and Parking By-Law updates. Additionally, staff plan to provide an annual Traffic Calming summary report to Council for information.

Installation of calming elements can range in terms of cost, with minor treatments being in the $1000 range, and other major treatments (Type 2 measures) ranging between $15-30,000. Common traffic calming program capital figures from other like size municipalities are in the range of $100-200,000 annually.

2024 and 2025/26 WORK PROGRAM PRIORITIES

To effectively plan program resourcing, the following items are noted in need of further consideration for funding and placement in the work program for the year noted, and are outlined for planned timing:

2024, 2025 & 2026

- 2025 - Data Collection consulting resources – +50,000 Operating Budget
- 2024/25 - Regional traffic calming program (one-time) – +35,000 Capital Studies
- 2024/25 - RFP for Huron Road, Mannheim Road, Wilmot Line EA's (capital budgeted, timelines adjusted based on Council motion)
- 2025 - ONE LOCATION FOR CALMING from list (unbudgeted, unknown)
- 2025/26 - EA study Huron Road, Mannheim Road, Wilmot Line (capital budgeted, timelines adjusted based on Council motion)
- 2025 - Intersection Safety Review (Huron Road) – +40,000 Capital Studies
- 2025 - Speed Zone Review – +20,000 Capital Studies
- 2026 - ONE LOCATION FOR CALMING from list (unbudgeted, unknown)

As noted, the workload for the Engineering and Corridor Management Technologist is split among general road corridor permitting and approval duties, traffic and parking bylaw management, and other corridor management activities that take up a significant portion of the available utilization of this resource. With the addition of Traffic Calming Program Management, including the above multi-year work program, it is expected that this resource will be over capacity with respect to available utilization. The workload outlined above includes major initiatives that have been planned in more recent years, and have been backlogged due to staffing needs and budget constraints. In addition, Council has motioned to advance Mannheim Road in the budget process, and so other major road/traffic-related planned EA's are added to the work schedule. If Council wishes to see more advancement of general Traffic Calming Program outcomes, as well as quality of service in other corridor management activities, an additional staffing resource will need to be considered in future budget processes.

It is expected that annualized traffic calming capital budgeting would be necessary and would be more effective as an annualized budget line item in capital. As such, staff are expecting $100-200,000 annually in capital/study needs in addition to the outlined work program above. It is noted that this work in capital will draw from an infrastructure reserve, and so staff would identify that additional reserve draws are needed to support this new work. As such, it would be

recommended to increase the infrastructure levy portion related to building reserves to help annually fund a program such as this without impact to the general tax levy.

ALIGNMENT WITH THE TOWNSHIP OF WILMOT STRATEGIC PLAN:

Goal: Quality of Life
Active Transportation and Transit

- Support the implementation of safe, maintainable, active transportation in the cycling facility and multi-use trail network, while being fiscally prudent.
- Support safe and efficient roadway use

Goal: Community Engagement
Belonging

- Respect and acknowledge the urban and rural elements of a growing community to balance competing interests.

Goal: Economic Prosperity
Smart Growth

- Seek opportunities to optimize existing infrastructure, including opportunities to improve, consolidate or enhance through growth.
- Ensure that infrastructure growth needs are supported and coordinated through general operations and capital planning

FINANCIAL CONSIDERATIONS:

The required budget will be presented in the 2025 Operating Budget for consideration, as outlined previously. This estimation considers data collection and traffic counting program support, review, processing, design and implementation of the policy outcomes, as well as capital program needs.

ATTACHMENTS:

Traffic Calming Policy 2024
Appendix A Traffic Request Form
Appendix B Traffic Calming Assessment Tool
Appendix C Process Flow Chart
Speed Sign Locations
2021-2024 Compiled Traffic Speed and Requests data