

## MANAGEMENT REPORT

**Date:** October 25, 2023  
**To:** Infrastructure, Transportation and Safety Sub-committee  
**From:** Nathan Bottema, Project Engineer  
**Report Number:** ITS23-028  
**Attachments:** Attachment 1 – Existing Street Classification and Posted Speed Limit;  
Attachment 2 – Reduced Speed Limit Initiatives in Other Municipalities;  
Attachment 3 – Neighbourhood Area Speed Limit Implementation Map

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**Title:** 40 km/h Speed Limits in Residential Areas

**Objective:** To review the reduction of the speed limits on local residential streets and seek direction on next steps.

**Background:** At the October 25, 2021, Regular Council meeting, the following motion was passed:

**THAT staff be requested to review the reduction of the 50km/hour speed limit to 40 km/hour on local streets and to bring a report back to Sub-committee.**

Concerns about vehicular speeds are one of the most common issues brought forward by residents to Engineering Staff. Often, residents express that the vehicle speeds they are witnessing on their street reduces safety by increasing the likelihood and severity of collisions. Residents look to Police for enforcement and City staff, to reduce speed limits and to install physical measures to control vehicular speeds.

All streets within the City of Stratford are 50km/h unless otherwise posted. Speed limits have been set based on the street classification and geometric design, and reduced in areas due to operational or public concerns, engineering studies, or in school zones. Approximately 6% of the arterial streets, 37% of the collector streets, and 4% of local streets, are posted at 40km/h or less. A map of the current posted speed limits can be found in Attachment 1.

Changes to the Highway Traffic Act (HTA) in 2017 authorizes municipalities to establish speed limits lower than 50 km/h within a designated area through the use of gateway speed limit signs. Gateway speed limit signs are posted at the entrances and exits to a specified neighbourhood to indicate to motorists a reduced speed area, eliminating the need for speed limit signs along every street within the designated area. Figure 1 illustrates a typical gateway signage layout for designated neighbourhood areas.

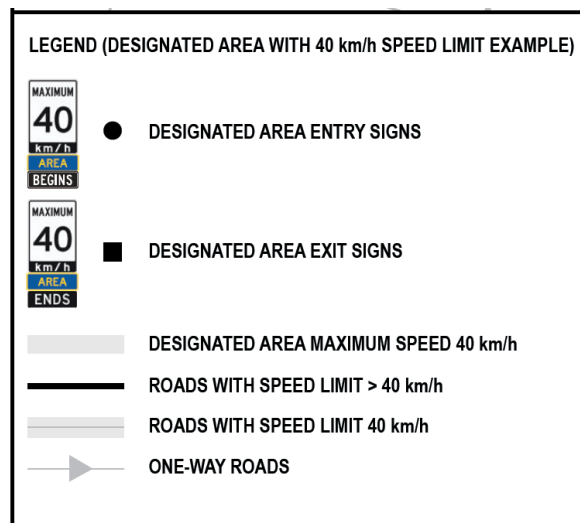
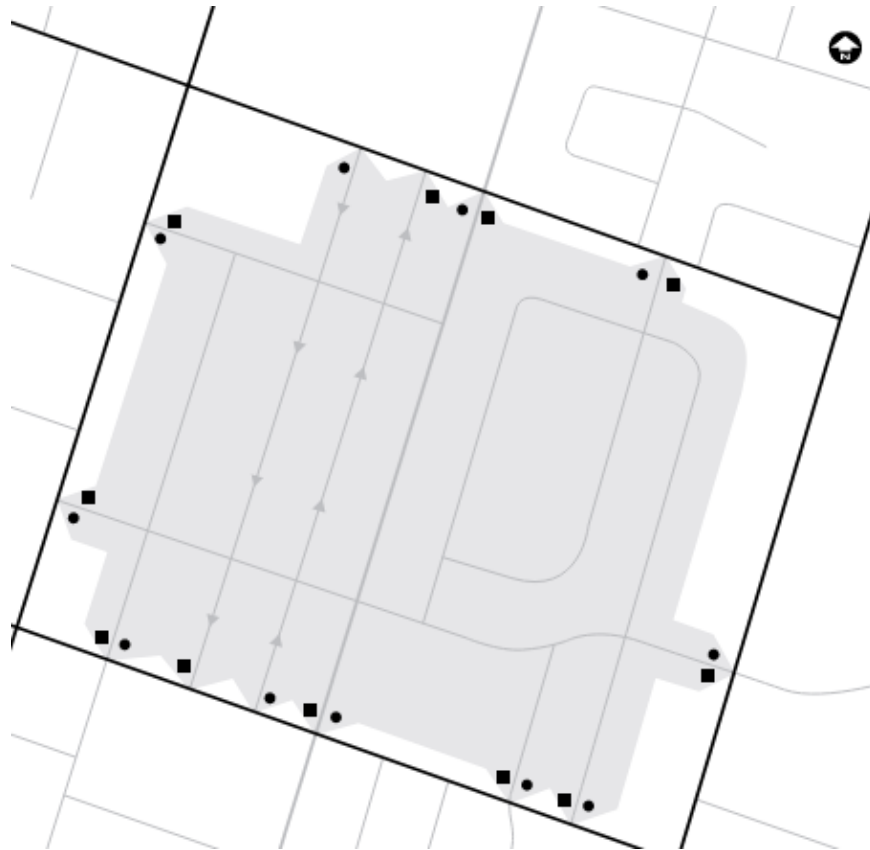


Figure 1: Typical Neighbourhood Locations for the Maximum Speed Signs with Area Tab Signs (Source OTM Book 5 Figure 8, December 2021)

There are several benefits to lowering vehicle speeds. At lower speeds, drivers have a wider field of vision and are more likely to notice other road users. Driving at lower speeds enables drivers to stop within a shorter distance and if a collision does occur, the consequences will likely be less severe, especially if it involves pedestrians, cyclists, e-bikes, or motorcyclists. Improving street safety provides the more desired environment needed to reach a greater spectrum of people that is achieved through multi-modal transportation options. Without recognizing the need for an easier and safer transportation experience that is supportive of all modes of transportation, driver behaviour will remain exclusively dominated by passenger cars and trucks.

**Analysis:**

Speed Data:

Staff have conducted approximately 100 speed and volume studies throughout the City since 2017. Table 1 summarizes the average and 85<sup>th</sup> percentile speeds measure for each street classification and posted speed limit. The 85<sup>th</sup> percentile speed is commonly used as the predominate indication of the appropriate speed limit based on the reasoning that drivers travel at a speed at which they are comfortable with given the geometric roadway design.

Street Classification	Posted Speed Limit	Average Speed	85% Speed	Number of Speed Studies Conducted
Arterial	50 km/h	56.5	64.2	8.0
	40 km/h	50.3	58.0	3.0
Collector	50 km/h	43.2	51.1	32.0
	40 km/h	44.3	51.8	21.0
Local	50 km/h	36.5	44.7	36.0
	40 km/h	38.5	47.2	2.0
School Zone	40 km/h	36.2	45.4	5.0

Table 1 – Speed and Volume Study Summary

In general, this dataset illustrates that motorists are largely adhering to the posted speed limit on collector and local streets, except when the posted limit is set at 40km/h. This shows that driver behaviour mindset exclusively dominates street use today. Implementing a lower designated speed limit would enable enforcement of a lower threshold of vehicle speed. For example, if the desired 85% speed is 40 km/h, enforcement may target vehicles going greater than 50 km/h, as opposed to 60 km/h in areas intended to achieve lower safe speeds.

Collision Data:

Staff reviewed all Motor Vehicle Collisions (MVC) noted in City of Stratford Police Service data for the years 2019-2022 and summarized those involving one or more pedestrian or cyclist in Table 2. MVCs involving pedestrians at private driveways are not included.

Pedestrian and Motor Vehicle Collision Data									
Street Classification	2014	2015	2016	2017	2018	2019	2020	2021	2022
Arterial	6	3	6	6	9	6	4	1	2
Collector	0	3	4	0	0	0	0	0	1
Local	0	1	0	0	0	2	0	0	0
<b>Total</b>	<b>6</b>	<b>7</b>	<b>10</b>	<b>6</b>	<b>9</b>	<b>8</b>	<b>4</b>	<b>1</b>	<b>3</b>

Table 2: Collision Data Involving Pedestrians by Street Classification 2014-2022

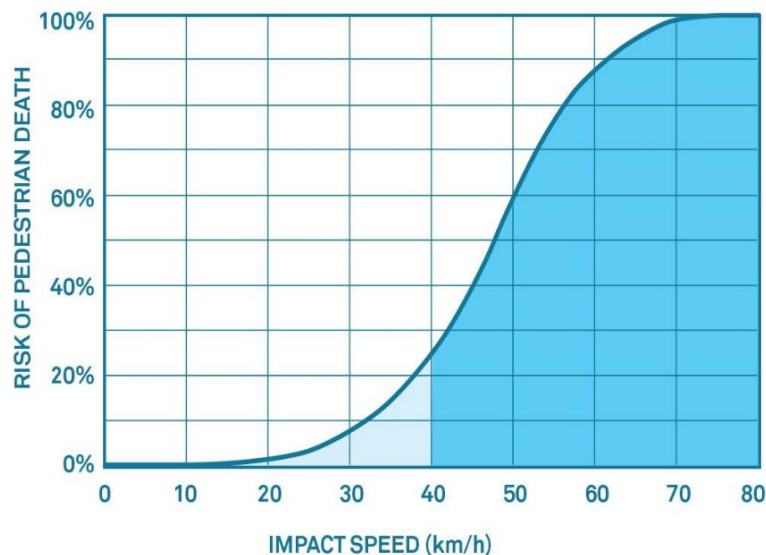
As shown in Table 2, there have been 54 reported MVC involving pedestrians since 2014. Of those, 40 were intersection related with 25 of these occurring at a signalized intersection. There have been 14 non-intersection related collisions between pedestrians and vehicles, of which 3 occurred on local streets.

Records show that since 2015 that there have been two pedestrian fatalities. The pedestrian fatalities did not occur on a local street.

Transportation Master Plan Recommendation

The 2023 Transportation Master Plan (TMP) Final draft report recommends that the city consider a reduction in default speed limits on local streets to 40 km/h, stating:

*There is a significant improvement in the outcomes of collisions between vehicles and vulnerable road users when travelled speed is lower. The relationship between speed and risk of pedestrian death in vehicle-pedestrian collisions is presented in Figure 2 to illustrate this phenomenon. The risk drops from 60% at 50 km/h to 25% at 40 km/h.*



Source: Global Street Design Guide (NACTO, Global Designing Cities Initiative, 2013)

Figure 2: Relationship between Impact Speed and Risk of Pedestrian Death

Improving street user safety, with a focus on the comfort and safety of vulnerable street users, is a key objective of the draft TMP. Reducing the posted speed limit unlocks a variety of engineering and design tools that can further increase safety on a street and support other policy goals. City policies around safety, economic sustainability, equity, carbon emissions reductions, and increased transit, bike, and walk mode share are interconnected. Rethinking speed limits unlocks the door for better design and safer streets, which increases opportunities for all requiring various forms of transport.

In addition to the recommendation that the City consider a reduction in default speed limits on local streets, the draft 2023 TMP Final Report encourages the following related to speed management measures:

- *Formally adopting the traffic calming process.* The Traffic Calming Policy is to be updated to standardize traffic calming process to allow for transparent responses to traffic calming request. The draft TMP Final Report outlines a traffic calming process that provides the framework for a warrant assessment, implementation strategy and evaluation criteria. Staff will report back with an amended Traffic Calming Policy upon Council approval of the 2023 Transportation Master Plan.
- *Consider the implementation of an Automated Speed Enforcement (ASE) Program in designated Community Safety Zones.* Operating cost for such programs within smaller municipalities remain high despite revenue offset opportunities. Staff are monitoring the development of an ASE service between the Association of Municipalities of Ontario and a safety solution provider that is intended to deliver an ASE program with no upfront cost and the potential for revenue. Staff will report back with an update once the service details are finalized and available for Ontario Municipalities.

#### Other Municipal Experience with Lowering Speed Limit

Staff have completed a jurisdictional review of peer municipalities throughout Ontario to better understand policy approaches and practical applications. Most larger municipalities have completed pilot programs and advanced to full implementation. Pilot program results generally showed a reduction of 0 – 5km/h in residential areas. The findings of the jurisdictional review can be found in Attachment 2. The underlying reason to support full-time adoption is the public safety, equitable support to all by providing various transportation mode options, and one tool of a suite proposed to drive behavioural change.

#### Public Engagement

City Staff conducted a public engagement using the city's online engagement platform, Engage Stratford from May 19<sup>th</sup> to May 31<sup>st</sup>, 2023. Feedback was solicited by an online survey or by contacting City Staff directly. The online survey received 713 responses and an additional 9 paper copies were submitted.

Respondents were asked to provide feedback on two options for speed limit reduction. Option 1 is to implement a City wide speed limit reduction in all neighbourhood areas and option 2 is to conduct a speed limit reduction pilot program in one neighbourhood. The response to the main survey question is shown in Figure 3.

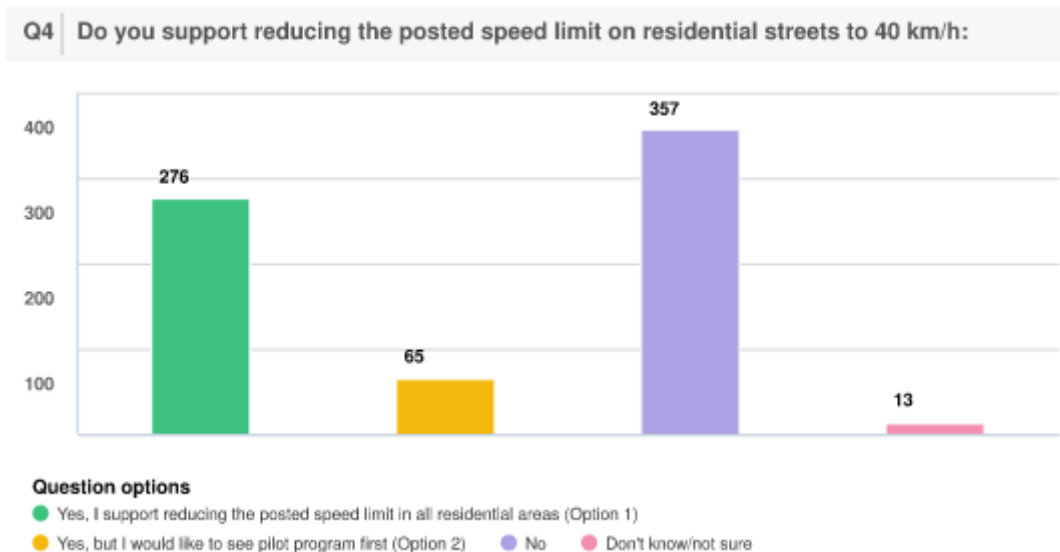


Figure 3: Online Speed Limit Reduction Survey Response

The survey results show that 38.8% support a speed limit reduction in all neighbourhood areas, 9.1% support a pilot program and 50.2% do not support reducing the speed limit in neighbourhood areas.

Within the survey, respondents also had the opportunity to provide additional comments. In total, 334 written comments were received, and one-third of the comments supported a speed limit reduction. A common theme amongst the feedback was related to police enforcement, with many stating that the current posted speed limits should be enforced and others questioning the effectiveness of a reduced speed limit based on the current enforcement levels. Many of the respondents also recognize that changing driver behaviour through signage alone may be challenging and that traffic calming measures are needed regardless of the posted speed limit.

Internal/External Consultation

Stratford Police Services, Stratford Transit, and representatives of the Active Transportation Advisory Committee have indicated that they support a speed limit reduction in all neighbourhood areas.

The City’s Director of Building and Planning supports the recommendation, noting that reduced speed limits encourage alternatives to private car use, such as public transit, cycling, and walking, which provides a number of benefits previously identified in this report, but also including: promoting a more inclusive urban environment (such as making streets more accessible to people with disabilities); reducing the City’s carbon

footprint; and in general, contributing to a safer, more livable, and more sustainable City.

### Implementation

It is anticipated that implementation of city-wide neighbourhood 40km/h areas would require 220 signs and cost approximately \$235,000. This estimate is based on Capital Project benchmark pricing for small sign installation quantities and more favourable pricing would be expected with larger quantities. Attachment No. 3 illustrates the locations of the signs for a full City-wide rollout concept.

The *Traffic and Parking By-law 159-2008, Schedule 14 – Higher/Lower Speed Limits*, identifies the rate of speed for all City streets with a speed other than 50 km/h and would need to be amended to reflect a neighbourhood area speed limit change.

With the support of Council, it is anticipated that city-wide neighbourhood 40km/h areas would be implemented in 2024.

### Recommendation

Reducing the posted speed limit is the first step in establishing safer streets within the City of Stratford. Staff recommend implementing neighbourhood 40 km/h speed limits throughout the City on local and collector streets. Lower posted speed limits should assist in reducing vehicle operating speeds, enable enforcement to target a lower threshold of elevated speed and increase comfort and general safety for all street users and their modes of transportation.

### **Financial Implications:**

#### **Financial impact to current year operating budget:**

The implementation of 40 km/h neighbourhood areas is anticipated to be funded in 2024 and is not expected to have an impact on the 2023 budget.

#### **Financial impact on future year operating budget:**

This project costs will be included in the 2024 draft budget presentation, if the recommendations are approved. Implementation will consist of staff time, purchasing signs, and public education and is currently estimated at \$235,000.00.

Upon project completion, there would be an increased annual operating and maintenance costs in future years to maintain the regulator speed limit signs. These additional costs would be included in the operating budget, similarly to current practice.

#### **Link to asset management plan and strategy:**

The new signage will be specifically added to the asset management plan. The new assets' replacements will be planned for based on estimated useful life.

**Alignment with Strategic Priorities:**

**Mobility, Accessibility and Design Excellence**

Improving ways to get around, to and from Stratford by public transit, active transportation and private vehicle.

**Alignment with One Planet Principles:**

**Health and Happiness**

Encouraging active, social, meaningful lives to promote good health and wellbeing.

**Travel and Transport**

Reducing the need to travel, encouraging walking, cycling and low carbon transport.

**Staff Recommendation: THAT staff be directed to implement neighbourhood area 40 km/h speed limits throughout the City on local and collector streets;**

**AND THAT staff be directed to bring a subsequent report to Council with the appropriate recommended Traffic and Parking By-law amendments to reduce the speed limit in neighbourhood areas to 40km/h.**

**Prepared by:** Nathan Bottema, Project Engineer

**Recommended by:** Taylor Crinklaw, Director of Infrastructure Services  
Joan Thomson, Chief Administrative Officer