

To: COUNCIL
Meeting Date: 3/28/2023
Subject: Neighbourhood Area Speed Limit Pilot Evaluation
Submitted By: Kevin De Leebeeck, Director of Engineering
Prepared By: Sian Younan, Transportation Engineering Technologist
Report No.: 23-165-CD
File No.: N/A
Wards Affected: All Wards

RECOMMENDATION(S):

THAT Report 23-165-CD, Neighbourhood Area Speed Limit Pilot Evaluation be received;

AND THAT Council approve the implementation of Neighbourhood Area 40km/h speed limits across the City along with reducing School Zone speed limits to 30km/h as outlined in Report 23-165-CD;

AND THAT Staff be directed to report back on the approach for implementation including associated Traffic and Parking Bylaw amendments;

AND THAT the Speed Limit Policy included as Appendix C to Report 23-165-CD be endorsed by Council;

AND THAT the By-law to amend the Traffic and Parking Bylaw, included as Appendix D to Report 23-165-CD, be passed.

EXECUTIVE SUMMARY:

Purpose

- To provide Council with an overview of the Neighbourhood Area 40km/h Speed Limit Pilot program results
- To seek Council endorsement to expand Neighbourhood Area 40km/h speed limits city-wide and reduce school zone speed limits to 30km/h.
- To seek Council approval of a new Speed Limit policy and as a result reduce the posted speed limit on four (4) road segments.

Key Findings

- The primary focus of the pilot study was to assess the effectiveness of reduced speed limits within residential neighbourhoods.
- 35 road segments in four (4) residential pilot areas were assessed before and after the implementation of 40km/h neighbourhood areas.
- Analysis of the before and after studies indicate that the posted speed limit changes resulted in a 1.1% to 5.1% reduction in vehicular operating speeds
- A Speed Limit Policy has been developed to ensure a repeatable consistent approach in the application of speed limits throughout the City.
- Based on the proposed Speed Limit policy, a re-evaluation of posted speed limits was completed for roads with a speed limit greater than 50 km/h, not located within proposed neighbourhood 40km/h areas or school zones, resulting in reduced speed limits along four (4) collector roadways.

Financial Implications

- The estimated cost for implementing Neighbourhood Area speed limits throughout the City is \$535,000 for speed limit signage installation and public communications to help inform and educate residents of the speed limit changes.
- The estimated costs to implement the speed limit reductions on Allendale Road, Boxwood Drive, Cherry Blossom Road and Royal Oak Road is approximately \$1,400 to be funded from the 2023 Transportation Engineering Operating Budget.

STRATEGIC ALIGNMENT:

- Strategic Action; or
 Core Service

Objective(s): VIBRANT NEIGHBOURHOOD - Promote, facilitate and participate in the development of safe and healthy neighbourhoods with a range of housing options

Strategic Action: Encourage safe and healthy neighbourhoods

Program: Transportation Management

Core Service: Not Applicable

The recommendations of this report represent continued support for road safety initiatives to improve the safety and livability of our residential neighbourhoods.

BACKGROUND:

Changes to the Highway Traffic Act (HTA) were enacted in May 2017 providing municipalities the authority to establish speed limits lower than 50 km/h within a designated area of the municipality through the use of specialized gateway speed limit signage, eliminating the need to add signage along each roadway within the designated area.

Speeding in residential neighbourhoods is one of the most common concerns raised by Cambridge residents to member of Council and Transportation Engineering staff. In July 2020 Council directed staff to review opportunities of implementing reduced speed limits in residential neighbourhood areas. Through Report 21-034 (CD) a framework for conducting a Neighbourhood Area 40km/h Speed Limit Pilot project was supported by Council to assess the viability of implementing reduced speed limits throughout other residential neighbourhoods within the City. During the summer of 2021 staff initiated the pilot program in four (4) test areas.

The current uniform unposted speed limit in the City of Cambridge is 50km/h, with the following exceptions:

- **40km/h Speed Limit:** 75 road segments (not including the pilot areas) in a mixture of school zones, park/playground zones and random neighbourhood streets related to speeding concerns.
- **60km/h Speed Limit:** 6 road segments on collector/arterial roadways
- **70km/h Speed Limit:** 3 road segments on collector/arterial roadways

ANALYSIS:

A number of municipalities throughout Ontario have already lowered speed limits throughout selected neighbourhoods. **Table 1** summarizes the experience of other municipalities on the effectiveness of reduced speed limits without implementing any other physical measures or road geometry changes.

Table 1: Other Municipal Experience with Lowering Speed Limits

Location	Details
Toronto, ON	<ul style="list-style-type: none">• Speed limits were reduced from 40 km/h to 30 km/h in some residential areas in 2015 and 2016.• There was a 28% reduction in the collisions involving pedestrians and a 67% reduction in serious and fatal injuries because of the speed reduction.
Hamilton, ON	<ul style="list-style-type: none">• Neighbourhood speed limit implementation was approved in 2019. Over 227 neighbourhoods across Hamilton have reduced speed limits implemented.• The implementation was estimated to take place over a three-year period (2019-2022)• Speed limits were reduced to 40km/h in residential neighbourhoods. Within the neighbourhoods, speed limits in school zones were further reduced to 30km/h.
London, ON	<ul style="list-style-type: none">• Speed limits were reduced to 40km/h in residential neighbourhoods in 2019• 40km/h implementation also included some major transit corridors including arterial roadways.• School zones on local streets were further reduced to 30km/h
Kitchener, ON	<ul style="list-style-type: none">• Speed limits were reduced from 50km/h to 40km/h (school zones reduced to 30km/h) in 2019.• The study observed a 3% to 8% reduction in 85th percentile vehicular speeds within the pilot areas.• Speed limits were reduced to 40km/h in residential neighbourhoods. Within the neighbourhoods, speed limits in school zones were further reduced to 30km/h.

Effectiveness of Reduced Speed Limits

To assess the effectiveness of reducing speed limits from 50km/h to 40km/h within residential neighbourhoods a pilot project was conducted in four (4) Cambridge neighbourhood areas. Each neighbourhood area was signed with 40km/h Area signs at only its boundaries as illustrated in **Figure 1**.



Figure 1: Gateway Signs

The four (4) residential neighbourhood areas included in the pilot project are described below and are further illustrated in **Appendix A**:

1. **Central Cambridge** – This area is located in Wards 4 and 8. The pilot area is bounded by Hespeler Road, Franklin Boulevard, Avenue Road, Brooklyn Road and Can-Amara Parkway
2. **Lower Preston** - This area is primarily located in Ward 3. The pilot area is bounded by King Street East and the Grand River.
3. **Hespeler North** – This area is located in Ward 1. The pilot area is bounded by Hespeler Road, Black Bridge Road and segments of Clemens Ave, Fisher Mills Road and Guelph Avenue
4. **Southwest Galt** – This area is located in Ward 6, bounded by St. Andrews Street, Tait St and West River Road.

Data was collected within each pilot area in the spring of 2021, prior to the installation of 40km/h area signage, and collected again in the spring of 2022. A total of 35 road segments within the pilot areas were analyzed. The results of the before and after study of all roadways within the respective pilot areas is summarized in **Table 2**. The 85th percentile operating speed represents the speed at which 85% of drivers are travelling at or below. Based on the before and after studies, reducing the posted speed limit with area signage alone decreased the 85th percentile vehicle operating speeds by 1.1% to 5.1%.

Table 2: Pilot Study Before and After Speed Results

Pilot Area	Before	After	Difference	Difference
	85 th Percentile Operating Speed (km/h)	85 th Percentile Operating Speed (km/h)	85 th Percentile Operating Speed (km/h)	85 th Percentile Operating Speed (%)
Central Cambridge	53.0	50.3	-2.7	-5.1%
Lower Preston	47.3	46.8	-0.5	-1.1%
North Hespeler	52.5	50.0	-2.5	-4.8%
Southwest Galt	57.8	56.6	-1.2	-2.1%

Based on the pilot study and experience of other municipalities, it is recommended that Cambridge implement neighbourhood area 40 km/h speed limits throughout the City and further implement 30km/h speed limits in all school zones. Reduced neighbourhood and school zone speed limits are intended to set an expectation of more conscious driving in residential neighbourhoods and in school zones. Lower posted speed limits should not only assist in reducing vehicle operating speeds, but would also yield a higher penalty for drivers that may disobey the posted speed limit in these areas.

Implementation

With the support of Council, it is anticipated that implementation of city-wide neighbourhood 40km/h areas would be phased over two years (2024 -2025) with prioritization based on the following:

- All existing school zones,
- Areas with a large number of speed related concerns and/or speed management locations,
- All remaining neighbourhood areas.

The proposed 16 neighbourhood 40km/h areas, as illustrated in **Appendix B**, are mostly bounded by major collector roads and Regional roads. Similar to the pilot project, and in accordance with the Highway Traffic Act, gateway signage (as shown in **Figure 1**) would be required at all neighbourhood area boundaries, however supplementary signage may be necessary within some neighbourhood areas to help remind motorists

of the reduced 40km/h speed limit. In addition, collaboration with Waterloo Regional Police Services to enforce the posted speed limit within 40km/h neighbourhood areas and communication and education with the community will be beneficial to help inform residents of the changes related to implementing 40km/h neighbourhood areas.

Speed Limit Policy

The proposed Speed Limit policy, attached as **Appendix C**, is intended to provide a systematic, consistent and repeatable process for establishing speed limits on City owned roads through an objective based assessment. The main elements of the proposed policy are:

- Neighbourhood Areas would have a speed limit of 40km/h with signs posted at neighbourhood boundaries.
- All School zones would have a speed limit of 30km/h that would extend 150 metres in either direction beyond the limits of the school frontage.
- Playground Zones would have a speed limit of 40km/h and would be established based on the Transportation Association of Canada (TAC) “School and Playground Areas and Zones: Guidelines for Application and Implementation”
- Speed limits on all other roadways within the City of Cambridge would be established based on the methodology contained in the Transportation Association of Canada (TAC) “Canadian Guidelines for Establishing Posted Speed Limits”.

An evaluation of the proposed Speed Limit policy was completed for roads with an existing speed limit greater than 50km/h located outside of School Zones or the proposed Neighbourhood Areas.

Based on the results of the proposed Speed Limit policy evaluation the following speed limits should be reduced and are included as part of the Traffic and Parking by-law amendment contained in **Appendix D**:

- Allendale Road from Riverbank Drive to Fountain Street be reduced to 60 km/h from 70 km/h;
- Boxwood Drive from Maple Grove Road to Royal Oak Road be reduced to 50 km/h from 70 km/h;
- Cherry Blossom Road from Maple Grove Road to Royal Oak Road be reduced to 50 km/h from 60 km/h;
- Royal Oak Road from Cherry Blossom Road to Speedsville Road be reduced to 50 km/h from 60 km/h;

EXISTING POLICY / BY-LAW(S):

Traffic and Parking By-law 22-044, Schedule 18 – Rates of Speed, identifies the rate of speed for all City roadways with a speed limit other than 50 km/h. The proposed Speed Limit policy would provide a systematic, consistent and repeatable process for establishing speed limits on City owned roads. Council support of the proposed Speed Limit policy and recommendations of this Report require a by-law amendment (See **Appendix D**).

On May 1, 2017, the Highway Traffic Act (HTA) was amended to include subsection 128 (2.2), which allows municipalities to “designate an area in the municipality and prescribe a rate of speed, which must be less than 50 kilometres per hour, that applies to all highways within the designated area”. This HTA amendment provides the legal mechanism for municipalities to implement 40km/h Neighbourhood Areas.

The Ontario Traffic Manual (OTM), published by the Ministry of Transportation, provides a series of Books that contain policy and guidance on a wide range of traffic related topics, including traffic control signage. Neighbourhood Area 40km/h signage and School Zone 30km/h signage would be installed in accordance with the OTM.

FINANCIAL IMPACT:

The cost for implementing 40km/h Neighbourhood Areas throughout the City is estimated at \$535,000 for speed limit signage installation and for public communications to help inform and educate residents of the proposed speed limit changes. The implementation of 40km/h Neighbourhood Areas is anticipated to be funded over 2 years (2024-2025) and is not expected to have an immediate impact on the Operating budget. However, it should be noted that regulatory signs are measured for reflectivity on a regular basis and must be replaced once reflectivity reduces beyond a certain threshold, which will impact future operating budgets.

The estimated costs to implement speed limit reductions on Allendale Road, Boxwood Drive, Cherry Blossom Road and Royal Oak Road as a result of the proposed Speed Limit policy is approximately \$1,400 to be funded from the 2023 Transportation Engineering Operating Budget.

PUBLIC VALUE:

Collaboration:

Contributes to the City’s continuous renewal of its approach to speed management within the City to encourage safe and healthy neighbourhoods while also laying the foundation for future community building.

ADVISORY COMMITTEE INPUT:

Not Applicable

PUBLIC INPUT:

Public consultation was completed through various channels to inform residents of the pilot project. The following is a list of all communications used for the 40km/h neighbourhood area speed limit pilot:

- Two mailouts were completed and sent to property owners within the pilot areas
- Social media advertisements
- Media releases

Public feedback was also obtained through Engage Cambridge, which included a poll to gauge the public's desire for neighbourhood area speed limits and their observation of efficacy. The poll contained two (2) questions with a total of 123 responses received for question 1 and 95 responses received for question 2. A summary the question responses is provided below:

1. Do you support reduced speed limit neighbourhoods?

- Yes (67%)
- No (28%)
- Unsure (5%)

2. Have you noticed a reduction in vehicle speeding?

- Yes (19%)
- No (67%)
- Unsure (14%)

INTERNAL / EXTERNAL CONSULTATION:

The Waterloo Regional Police Service (WRPS) was consulted as part of the Pilot program evaluation. While targeted police presence was not requested, WRPS has indicated that a total of 469 traffic stops were undertaken within the pilot areas during the pilot period for a variety of traffic infractions. WRPS is committed to working collaboratively with the City upon implementation of city-wide 40km/h neighbourhood areas to identify areas of concern or areas with a high propensity for offences and address them on case by case basis.

Grand River Transit (GRT) has indicated they are supportive of 40km/h neighbourhood areas with 30km/h school zones, as this provides a safe environment for all road users while maintaining efficient provision of transit services within neighbourhoods. GRT also recognizes that posted speed limit reductions and enforcement are only part of the

solution to speed management. If physical traffic calming measures are considered in the future on any street travelled by current or future GRT bus routes, GRT has requested that staff be consulted prior to implementation to ensure transit vehicles and services are adequately accommodated.

CONCLUSION:

To encourage safe and healthy neighbourhoods, it is recommended that the City implement neighbourhood area 40km/h speed limits and to further implement 30km/h speed limits in all school zones. These reduced speed limits are intended to set an expectation of more conscious driving behaviours, reduce collisions, and create a more welcoming environment for pedestrians and active modes of transportation.

It is further recommended that the proposed Speed Limit policy be approved to provide a repeatable consistent process for the determination of speed limits within the City of Cambridge. As part of the Speed Limit policy evaluation, it is recommended that speed limits along four (4) collector roadways be reduced to comply with the new policy.

In accordance with Council direction, Staff will report back on the approach for implementation including associated Traffic and Parking Bylaw amendments.

REPORT IMPACTS:

Agreement: **No**

By-law: **Yes**

Budget Amendment: **No**

Policy: **Yes**

APPROVALS:

This report has gone through the appropriate workflow and has been reviewed and or approved by the following as required:

Director

Deputy City Manager

Chief Financial Officer

City Solicitor

City Manager

ATTACHMENTS:

1. 23-165-CD – Appendix A – Residential Pilot Area Maps
3. 23-165-CD – Appendix B – Preliminary Neighbourhood 40km/h Areas
4. 23-165-CD – Appendix C – Speed Limit Policy
5. 23-165-CD – Appendix D – Traffic and Parking By-law Amendment