



Subject:	40 km/h Neighbourhood Area Speed Limit Implementation - Pilot Project
To:	Committee of the Whole – Community Services & Infrastructure
From:	Public Works Department

Report Number:	PW-13-22
Wards Affected:	All
Date to Committee:	May 24, 2022
Date to Council:	May 30, 2022

Recommendation:

Receive and file Report PW-13-22, 40 km/h Neighbourhood Area Speed Limit Implementation- Pilot Project;

Approve the proposed 40 km/h Neighbourhood speed limit implementation areas as outlined in this report; and

Amend the Traffic By-law 89-2000 (89-28) to establish Schedule S – Designated Area Speed Limits.

Purpose:

The purpose of this report is to propose a 40km/h Neighbourhood Area Speed Limit Reduction Pilot Project for Council approval that would be implemented across all wards of the Town.

Alignment to Council Priorities

This proposed pilot project aligns to key Council Priorities in promoting a healthy and safe community including addressing road safety issues across Lincoln and developing and implementing road safety initiatives such as speed reduction.

Background:

At the October 25, 2021 regular Council meeting, Council endorsed a motion from the Niagara Region, regarding supporting a request to the province (Ministry of Transportation Ontario) to review and amend Section 128 (Rate of Speed) of the Highway

Traffic Act to reduce the statutory speed limit on a highway in a local municipality within a built-up area from 50 km/h per hour to 40 km/h per hour.

In addition, Council also requested that staff report back on the feasibility of implementing more 40km/h speed limit reductions in Lincoln.

Existing Conditions

Currently the Town has a 40km/h speed reduction policy focusing on a targeted approach based on roadside environments that require a higher degree of safety and caution for motorists. For example, the Town has previously reduced speed limits from 50km/h to 40km/h on local residential streets adjacent to schools, parks, community centers/areas, etc. This targeted 40km/h speed limit reduction policy has been applied to number of key street across the Town and with the remainder of the Town's local residential streets remaining with a 50km/h speed limit as per the HTA.

Recent Changes to Highway Traffic Act

Recent amendments to the Highway Traffic Act (HTA) following the passage of Bill 65 – Safer School Zones Act allow municipalities to reduce speed limits to a rate of speed less than 50 km/h that applies to all highways (streets) within a designated area. This means that the Town can sign the speed limit for designated area using “gateway” signage at the entry/exit points to the designated area from the bordering roadways (i.e., busier collector type streets), in contrast to having a sign placed on each road along its entire length, as would have been required prior to the HTA amendments. As such, this will result in a significant reduction in the number of required signs and the associated costs that a municipality would be required to install.

Proposed 40km/h Neighbourhood Area Pilot Project

Staff recommends using the Bill 65 legislation under the HTA to implement 40km/h speed limit reductions through the identification of “designated areas” and the use of “gateway” signage at the entry and exits of those designated areas as part of this Pilot project.

Based on collaboration with other municipalities undertaking similar speed reduction programs local residential streets are the focus, not collector type roadways. For the purposes of the Town's Pilot Program a local residential street is defined as a lower volume street located within an urban boundary area that provides access to residential neighbourhoods and subdivisions.

A plan showing the proposed designated areas within all wards across the Town for the Pilot project as well as an example of the required “gateway” signage is included in the appendices.

Report:

Vehicle Speed and Speed Limits

Concerns about vehicular speeds on local residential streets are one of the most common issues brought forward by residents. Oftentimes residents express that, in their view, the vehicle speeds that they are experiencing on their street reduces safety by increasing the likelihood and severity of collisions.

Staff undertook a collision review of all the local residential streets in the Town from 2017 to present within the proposed Pilot areas. A review of the collision history indicated that there were only 2 reported collisions that involved pedestrians. Of these 2 collisions, there were:

- 0 collisions where speed was identified as a factor (i.e speed to fast).
- 1 with minimal injuries and 1 with major injuries; and
- 2 collisions were at intersections related to turning movements/conflicts at intersection

In terms of vehicles speeds, it is accurate to state that most drivers choose speeds that they deem both reasonable and prudent given the characteristics of the street that they are travelling on. Engineering and human factors research have shown, that on local residential streets, the primary determiner of the speed at which drivers elect to travel is governed by their comfort level driving on the respective street. This is influenced by a number of factors including:

- driver's familiarity with the road,
- the roadway lane width and presence of curbs,
- the presence of vertical and horizontal curves,
- the presence of on-street parking,
- the presence of pedestrians or children playing,
- the proximity of boulevard features (trees, utility poles, etc.,) to the road,
- the cross section (i.e curbs versus shoulders), etc.

The more comfortable a driver feels on the road, the more likely they are to travel at a higher rate of speed. As such, industry research has found that the statutory speed limit has very little influence in the speeds drivers elect to travel on local residential streets. The challenge becomes balancing the drivers' chosen speeds with that of what observers believe to be safe. This is not an easy task and is not often achieved solely by a statutory speed limit fully relying on police enforcement. Where speeding conditions have been confirmed based on collected evidenced based speed data, the best approach to reduce speed is through traffic calming strategies. For example: speed humps, chicanes, road narrowing, permeant digital speeds signs, line painting/pavement markings, etc.

The standard metric used in the traffic engineering industry when setting the regulatory speed limits on a given street is the measured 85th percentile speed. The 85th percentile

is defined as the speed at or below which 85 percent of vehicles are travelling. The 85th percentile is considered the prevailing operating speed at which most of the drivers feel safe and comfortable travelling at. Industry common practice recommends that the speed limit should therefore be set at or within 8 to 10 km of the measured 85th percentile speed to be effective. Otherwise, if speed limit reductions are set outside of these industry standard guidelines, or artificially too low, it can be expected that most drivers will not comply, resulting in inconsistent operating speeds creating unsafe conditions, all requiring significant police enforcement.

Town of Lincoln Speed Data Summary

The Town has developed a comprehensive Traffic Safety Program and as part of that work completed a significant amount of speed data collection in response to resident speeding concerns.

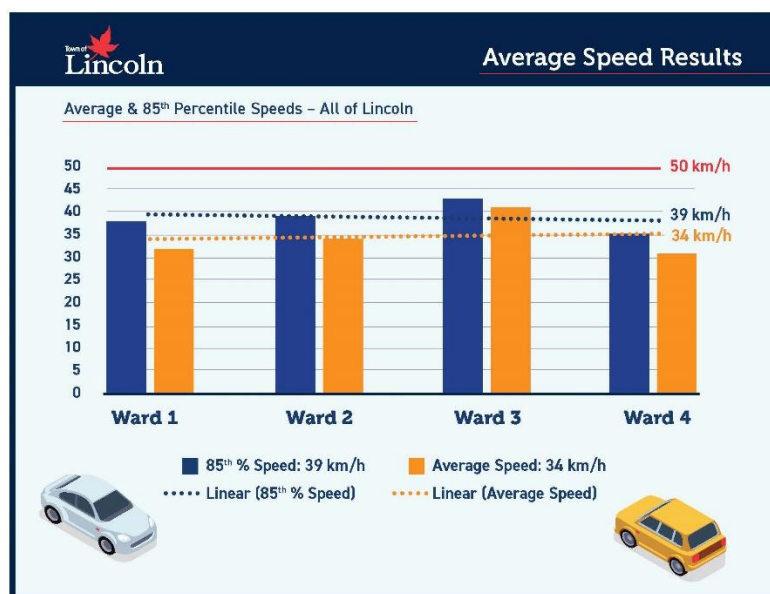
Over the past 5 years, staff have collected speed data on:

- **83 local residential streets** (representing approximately fifty percent of the local residential streets within the Town)
- **1,219,858 vehicles**

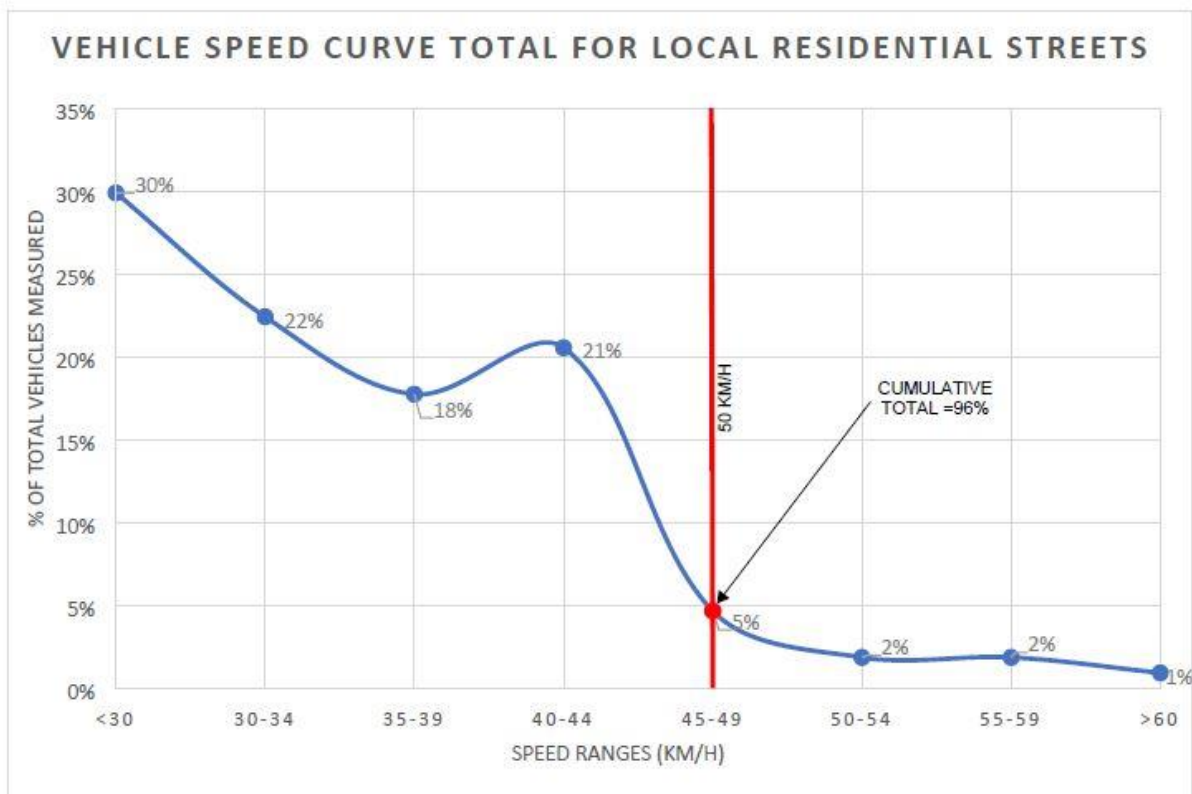
An analysis of all this data reveals that:

- **The average speed is 34 km/h**
- **The average 85th percentile speed is 39 km/h**

The following graph visually depicts the average results of the speed data from all local residential streets within the Town.



In addition, the graph below is further evidence that shows the cumulative total of 96% of vehicles are driving 50km/h or below on local residential streets. Therefore, based on the Town's speed data results even though drivers can legally travel at 50 km/h on most local residential streets, the majority of the drivers are currently opting to travel below the legal speed limit. As such these results support staff's recommended speed reduction as discussed in the next section.



*Graph created using 85th percentile data for all local residential streets.

Recommended Reduced Speed Limit – 40km/h Neighborhood Area Pilot Program

Staff are supportive of a reduction in the posted speed limit to 40 km/h on the local residential streets and recommend proceeding with a Pilot project. The purpose of a pilot approach is to allow the Town to try the 40km/h speed limit reduction in a number of focused residential neighborhood areas across all wards within the Town to better evaluate its effectiveness, engage and receive feedback from the public and to control signage implementation costs. Staff intend to report back to council on the results of the pilot project along with any refinements for consideration for further implementation and phasing.

Based on the speed data collected from 2017 to present a reduced speed limit using the industry standard 85th percentile methodology would align well with the Town's proposed

40km/h Neighborhood Area Pilot Program. Staff advise that the average measured 85th percentile speed data results for the Town's local residential streets is 39km/h. As such this indicates that a 40 km/h speed limit reduction would be both viewed as reasonable and would be expected to be adhered to by majority of motorists, thus being effective.

Consultation with Niagara Regional Police Service

Staff consulted with the Traffic Services branch of the Niagara Regional Police Service (NRP) regarding the Town's proposed 40km/h Neighborhood Area Pilot Program. The NRP are a major stakeholder given they are responsible for enforcing traffic laws, including undertaking speed enforcement throughout the Region. In general, the discussion with the NRP focused on the reduction in the posted speed on local residential streets, as well as providing commentary on either a 30 km/h or 40 km/h speed limit.

The results of the discussion indicated that the NRP are supportive of the reduction in the posted speed limit on local residential streets from 50 km/h to 40 km/h.; however, the NRP Traffic Services do not support a reduction to a 30 km/h. The NRP were not supportive of a "blanket" 40km/h speed reduction on all urban roads and recommended the focus be on "local" neighborhood areas and not on the more "main" collector type roads where motorists are likely not to adhere to a 40km/h speed limit.

Consultation with the Niagara Region

The Town has three elementary schools on regional roads within the urban boundaries. Staff reached out to the Niagara Region to see if they would consider reducing school zones on regional roads down from 40 km/h to 30 km/h. The Niagara Region has advised that a further speed limit reduction on these roads is not being entertained at this time.

Staff feel that speed limits fronting schools should remain consistent across Lincoln regardless of the road's jurisdiction (Town or Regional) and therefore do not support a posted speed limit of 30 km/h in school zones at this time.

Consultation with Other Municipalities

Staff have reached out to various municipalities such as, City of Hamilton, City of St. Catharines, City of Cambridge, and City of Burlington. All municipalities that were contacted have completed some type of speed limit reduction areas through the HTA legislation.

City of St. Catharines have reduced some school zones to 40 km/h and piloted the 40 km/h area in Port Dalhousie. They received positive feedback on the pilot program and plan to expand the program on local residential streets every year.

The other municipalities that staff contacted have implemented 40 km/h speed reductions areas within their municipality, however due to the extensive signage requirements and cost the 40 km/h areas will be phased over many years. In addition, some of these municipalities are also implementing 30km/h school zones on local residential streets and 40km/hr on urban collector streets.

Pilot Project Implementation Workplan

The following table summarizes the proposed implementation plan for the proposed 40km/h Neighborhood Area Pilot Program.

Approval of Pilot Program	May 30 th , 2022
Notification (Public Notices, Social Media, Speak Up Lincoln)	July to August 2022
Installation of Gateway Signage	September to October 2022
Undertake Post Speed Studies in Pilot Program Areas	2023 Black Cat Speed Study Program
Resident Engagement to Get Feedback on the Pilot Program (Survey Monkey)	Q3 2023
Report back to Council on Pilot Project	Q4 2023

Financial, Legal, Staff Considerations:

Financial:

To implement the “gateway” signage in the Pilot project areas, it is estimated that staff will be required to install and remove approximately 147 signs for a total cost of \$35,250. Staff advise that the estimated costs to implement the proposed Pilot Program can be accommodate by the 2022 budget.

Staff advise that should Council decide to expand the Pilot Project in the future to include all local residential streets Town wide the estimated cost would be approximately \$94,500.00

Staffing:

Public Works staff will lead and implement the pilot project.

Legal: N/A

Public Engagement Matters:

Public notices will be distributed to residences within the proposed 40km/h Neighborhood Areas within each Ward. In addition, staff will also promote the speed reduction pilot project

through the Town's website Traffic Safety Speak Up Lincoln (SUP) page, social media and the NRP have also offered to support the Town in launching this new pilot program

Conclusion:

Concerns about vehicular speeds on local residential streets are one of the most common issues brought forward by residents to transportation staff.

This proposed pilot project aligns with Council's Priorities in terms implementing road safety initiatives such as speed reduction. Therefore, staff support and recommend a reduction in the posted speed limit to 40 km/h on the local residential streets within the designated areas of the Pilot project using "gateway" signage.

Respectfully submitted,

Diane Maceira
Manager of Technical Services
905-563-2799 Ext.226

Appendices:

Appendix A – Gateway Signage
Appendix B – Schedule S – Designated Area Speed Limits
Appendix C – Neighbourhood Boundary Location Map (Ward 1)
Appendix D – Neighbourhood Boundary Location Map (Ward 2)
Appendix E – Neighbourhood Boundary Location Map (Ward 3)
Appendix F – Neighbourhood Boundary Location Map (Ward 4)

Report Approval:

Report has been reviewed by Director of Public Works. Final approval is by the Chief Administrative Officer.