



Administration and Operations Committee Report

To: The Chair and Members of the Administration and Operations Committee
From: Rick Knap, CET, Roads Technologist
Date: October 15, 2024
Report #: RPT-0344-24
Subject: 40 km/hr Neighborhood Zones
Purpose: For Approval

Recommendation

Whereas, in 2021, staff had reviewed several concerns with motorist speeds on various roads near schools, within the County of Brant (the County);

And whereas, further to our adopted Transportation Master Plan (TMP) which identifies the requirement for a review of the speed limit on neighborhood/local roads;

And whereas, further to the Brant Committee Report dated July 20, 2021, RPT-21-199 Proposal for Speed Limit Reductions and RPT-21-223 Proposal Community Safety Zones in school areas, a review of the speed limit reduction on all neighbourhood/local roadways to 40 km/hr;

And whereas staff follows the guidelines of the May 23, 2019 approved Council report “CD-19-63 - Brant Safe Streets Speed Control and Road Safety Strategy” for an enhanced level of pedestrian safety;

Be it hereby resolved that Traffic By-Law Number 182-05, Schedule J, be amended by reducing the speed limit to a maximum 40 km/hr speed limit area to the following neighborhood/local areas, over a three (3) year period;

Paris Neighborhoods (15 Areas)

- Balmoral Street Area
- Bradbury Crescent Area
- Broadway Street Area
- Capron Street Area
- Cedar Street Area
- Cobblestone Drive Area
- Daugaard Avenue Area
- Dundas Street West area
- Market Street – southeast area
- Market Street – southwest area

- Mile Hill Road area
- Oak Avenue Area
- Paris District Highschool Area
- Walnut Street Area

Scotland Neighborhoods (four (4) areas)

- Augustus Court Area
- Queen Street South Area
- Queen Street Area
- Royal Troon Drive Area

Oakland Neighborhoods (two (2) Areas)

- Oakland Road area
- Walter Street area

Mount Pleasant Neighborhoods (two (2) Areas)

- Bernice Street area
- Russell Street area

Burford Neighborhoods (eight (8) Areas)

- Alexander Street Area
- Elizabeth Avenue Area
- Highland Drive Area
- John Street Area
- Melissa Avenue Area
- Minshall Drive Area
- Park Avenue Area
- Smith Street Area
- Saint William Street Area

Oakhill Neighborhood (one (1) Area)

- Oakhill Drive Area

Glen Morris Neighborhoods (five (5) Areas)

- Deer Run Court Area
- Glen Morris West Area
- Glen Morris Area
- Meadowood Drive Area
- Scenic Drive Area

St George Neighborhoods (five (5) Areas)

- Harrisburg Drive Area
- High Street Area

- Highgate Drive Area
- Sunnyside Drive Area
- Victor Boulevard Area

Onondaga Neighborhood (one (1) Area)

- Painter Road Area

Middleport Neighborhood (one (1) Area)

- Middleport Road Area

Cainsville Area (not on map)

- Blossom Ave – Brant County Road 18 to Colborne Street East, (denotes already existing 40 km/hr. speed limit.

And that the Brant County Ontario Provincial Police Department be advised of these proposed revisions and to monitor as their resources permit them to.

Executive Summary

Various speed limit concerns have been raised on a number of roads within the County of Brant. All County roads adjacent to schools now have a 40 km/h, 24-hours a day, year-round speed limit. Roads Staff have investigated and mapped out the speed changes as presented in the Transportation Master plan update 2022 for consideration.

Strategic Plan Priority

Strategic Priority 5 - Healthy, Safe, and Engaged Citizens

Impacts and Mitigation

Social Impacts

These By-law updates and speed revisions will improve safety, traffic movement and road maintenance in the respected areas.

Environmental Impacts

As 40 km/hr speed limit areas are implemented over a three (3) year period, staff will continue to collect additional data in years one (1) and two (2), as this may result in emissions decrease.

Economic Impacts

Sufficient funds are available between 2025 to 2027 in the sign operating budgets to install the various regulatory traffic signage recommendations at an estimated cost of a total \$180,000

- 2025 approximately \$25,000
- 2026 approximately \$55,000
- 2027 approximately \$90,000

Report

Background

Staff consistently receive various concerns related to motorists' speeds on various roads, within the County.

The next phase of staff's review of motorists' speeds involves a review of neighborhood and local roads within the County. This is in conjunction with the guidelines/requirements of our adopted TMP, and also relates to the Brant Committee Reports submitted in 2021, RPT-21-199 Proposal for Speed Limit Reductions and RPT-21-223 Proposal Community Safety Zones in school areas regarding speed limits.

Our review is to conduct neighborhood assessments regarding motorists' speeds and if certain local urbanized roads should be reduced to 40 km/h from the standard 50 km/hr speed limit.

Information is collected and reviewed via such platforms as the World Health Organization (WHO), which released the Pedestrian Safety Manual in 2013. This document identified the relationship between stopping distance, vehicle speed and pedestrian injuries. Their report determined that driver behaviour and speed are a major contributing factor in collisions involving pedestrians.

On May 30th, 2017, the Province of Ontario passed *Bill 65, the Safer School Zone Act* which permits municipalities to enact neighbourhood speed limit reductions. Currently, the default speed limit is 50 km/h, unless posted otherwise. *Section 128 (2.1) of the Ontario Highway Traffic Act* now allows municipalities to pass a by-law to set a speed limit less than 50 km/h for all roads within a designated area.

Analysis

Brant Safe Streets (BSS) Review

Since our BSS program began in 2019, staff have received approximately 600 requests/concerns associated with speeding and aggressive driving within the County. Prior to this program, the County of Brant continuously received concerns regarding motorists' speeds and driver behaviors.

When receiving a BSS concern regarding motorists' speeds pertaining to a particular road, staff follows the guidelines as established within the Ontario Traffic Manual, utilizing roadside environment, road design, collision factors and pedestrian and vehicular volumes. These factors are used and our review of the following data on a particular section of road, (but not limited to), are as follows:

- Motorists' actual speeds on this road – obtained by deploying speed spy units;
- The physical geometrics of the road and its surroundings, sidewalks, convenience stores, schools in the area, etc.;
- Review of existing regulatory signage – speed signs, stop signs, stop ahead signs, parking signs etc.;

- Review of existing advisory signage – curve signs, hidden entrance signs, pedestrian area signs, etc.;
- Proposed reconstruction of the road – to improve the physical geometrics and the asphalt condition of the road;
- Traffic Calming Measures – Knockdown speed signs, speed humps, speed cushions, over size signs, flashers etc.

These factors are entered into a chart for the section of road in question and a priority ranking is obtained for staff to determine if any additional traffic improvements are required such as additional signage or traffic calming measures.

In addition to implementing a 40 km/hr speed limit area to all County roads adjacent to schools, The County have also implemented certain 40 km/h zones on local residential roadways when approved individually, along with other speed limits as deemed necessary, as well as the implementation of other traffic calming measures.

Pedestrian Safety Manual

In 2013, the WHO released the Pedestrian Safety Manual. This document identified the relationship between stopping distance, vehicle speed and pedestrian injuries. The report determined that driver behaviour and speed are a major contributing factor in collisions involving pedestrians. The report concluded that the perception and reaction stopping distance required for a motorist to stop in an emergency increased with the speed of the vehicle. A vehicle travelling at 50 km/h will typically need 36.0 meters to stop, while a vehicle travelling at 40 km/h will typically stop in 27.0 meters, that equates to a 9.0-meter difference between the two (2) speeds.

This is further illustrated in Chart 1.

Required Reaction Stopping Distance	
Vehicle Speed km/hr.	Required Distance To Stop (meters)
50 km/hr.	36 meters
40 km/hr.	27 meters

The impact speed and pedestrian injury severity changes drastically based on vehicle speeds. The WHO reported that an adult pedestrian has a 20 percent risk of dying if struck by a vehicle travelling at 60 km/h The report states that most speed is lost in the last few meters of braking. Therefore, when a vehicle that was travelling at 40 km/h has stopped, comparing this to a car that is travelling at 50 km/hr., this car is still travelling at 41 km/hr. during the same distance. Thus, a difference of 10 km/hr in initial travelling speed can result in a difference of 41 km/hr in impact speed.

This is further illustrated in Chart 2.

Initial Traveling Speed vs. Impact Speed	
Initial Travelling Speed (km/hr.)	Impact Speed (km/hr.)
50 km/hr.	41 km/hr.
40 km/hr.	0 km/hr.

This report that the WHO prepared in 2013, recommended that speed management is important for addressing pedestrian safety. Key measures for managing speed include setting speed limits lower than 50 km/h in residential and high pedestrian traffic areas, enforcing traffic rules on speed limits and implementing various traffic-calming measures.

Speeding and aggressive driving are major contributing factors to most of the injury and fatal collisions. Regarding collisions involving pedestrians, it has been determined that injuries occur in 90 percent of the incidents. Reducing speed limits in designated neighbourhoods to 40 km/hr is considered a significant measure to reduce collision severity and injuries. Chart 3 further emphasises that there is approximately 41 percent increase in the risk of fatal pedestrian injury between the 50 km/hr and 40 km/hr speed limits.

Chart 3

Risk Of Fatal Pedestrian Injury vs. Impact Speed	
Impact Travelling Speed (km/hr.)	Risk of Fatal Pedestrian Injury (%)
50 km/hr.	70 %
40 km/hr.	29 %

Neighborhood area signs - Begin and End Gateway Signage

As previously mentioned, the County has implemented certain 40 km/hr speed limits on individual local residential roadways, however this practice of scheduling by-laws and installing signage on each local roadway can be costly and inefficient and doesn't adequately address the problem within the entire municipality. Bill 65 provides an opportunity to reduce the speed limits on local residential and collector roadways within designated neighborhoods by passing a by-law and installing perimeter signing for each neighborhood within the County. This program will require that by-laws be passed for each reduced speed neighbourhood and that signs be installed at the intersection of each neighbourhood roadway where it intersects with the arterial road network surrounding the neighbourhood.

This legislation, Bill 65, removes the current requirements of signing and creating a by-law for every single individual street within a neighbourhood, reducing the overall number of speed limit signs and by-law entries needed. Signs will be posted on both the right-hand and left-

hand side of the roadway creating a 'gateway' feature as drivers enter and exit residential neighbourhoods. An example of how the new signs will be applied to residential neighbourhoods is attached (Attachment 2).

Should Council wish to proceed with this legislation and sign neighborhood areas, (approximately 45 zones to implement), staff recommends that due to the scope of work, the number of signs to be installed, and to further monitor the affects of these perimeter (gateway to neighborhood), signage, staff are recommending that the implementation will take place over a three (3) year period, with approximately 15 percent of the neighbourhoods proposed to be implemented in 2025. The areas that have been chosen for the 2025 season installation, shall consist of areas where prominent senior/student pedestrian activity occurs, (schools, stores, retirement homes, disability locations, as a few examples), and shall be monitored through the collection of data and various observations by several departments and will be reported back to Council should the need arise.

Proposed areas/zones for the first signs to be installed in 2025 are as follows:

Paris Neighborhoods (three (3) Proposed Areas for 2025)

- Broadway Street Area
- Cobblestone Drive Area
- Paris District Highschool Area

Scotland Neighborhoods (one (1) Proposed Area for 2025)

- Augustus Court Area

Mount Pleasant Neighborhoods (one (1) Proposed Area for 2025)

- Russell Street area

Burford Neighborhoods (two (2) Proposed Areas)

- Alexander Street Area
- Park Avenue Area

Oakhill Neighborhood (one (1) Proposed Area for 2025)

- Oakhill Drive Area

Glen Morris Neighborhoods (one (1) Proposed Area for 2025)

- Glen Morris West Area
- Glen Morris Area

St George Neighborhoods (one (1) Proposed area for 2025)

- Victor Boulevard Area

If favorable results have been acquired in 2025, staff will proceed with the proposed 2026 conversions, completing approximately 35 percent of the proposed area and will continue to monitor. Then the final 50 percent shall be completed in 2027 (year three (3)). This will allow all material to be ordered and work to be completed in-house. This approach will allow

monitoring of completed work each year of implementation and reporting back to Council should the need arise.

During the implementation stage of the 40km/hr neighborhood gateway signage, staff will once again review additional traffic calming measures to ensure the safety of all users are enhanced and the regulations and various calming measures that have been implemented, are consistently applied in these areas.

Please be aware, in consultation with County departments and partnering agencies there has been reservations regarding the implementation of all neighborhood/local roads to be reduced to 40 km/hr, particularly where our data does not warrant a speed limit reduction as this may result in unrealistic expectations with the residents living on those streets. Speed enforcement will be a challenge and traffic calming a large financial commitment if road users do not voluntarily reduce their speed.

Although not required as documented in Bill 65, staff have further identified all sections of road that the 40 km/hr speed limits will be eventually enacted at the end of this three (3) year program. Please note, sections of road highlighted in blue denotes that the speed limit of 40 km/hr on these roads already exist. The roads to be converted to 40 km/hr are listed in Attachment 3.

It is recommended that staff be directed to implement neighborhood speed-limit reductions on local and minor collector roads on a portion of neighborhoods in 2025, (approximately 15 percent), and monitor the results. Further to this, a communication blitz will take place advising the residents of these proposed implementations. If the results are favorable, staff will continue with this program in 2026 and in 2027 respectfully, resulting in this program being completed over a three (3) year period.

Summary and Recommendations

Based on the above, staff recommends that the speed limit be reduced on a limited number of neighborhood/local roadways to 40 km/hr in 2025, and offers the following summation:

- All County roads adjacent to schools have a 40 km/hr speed limit regulation;
- This review identifies the guidelines/requirements of our adopted TMP;
- *The Safer School Zone Act, Bill 65*, permits municipalities to enact neighbourhood / area speed limit reductions;
- County of Brant currently has approximately 45 neighborhood areas that would fall under the Bill 65 legislation;
- Our review of 40 km/hr speed limit on neighborhood/local roads will provide additional safety measures to pedestrians and residents in their respected neighbourhoods;
- The first year of our 40 km/hr implementation neighborhood program will include areas where senior and student pedestrian activity consistently occurs and shall be monitored prior to implementing the next phase the following year;

- County departments and partnering agencies have expressed reservations regarding the implementation of all neighborhood/local roads to be reduced to 40 km/hr due to increased demand for enforcement and traffic calming.
- Staff recommends the implementation take place over a three (3) year period, with approximately 15 percent of the neighbourhoods proposed to be implemented in 2025 and shall report back to Council should the need arise;
- If favorable results have been acquired in 2025, staff will proceed with further installations in year two (2), 2026, with estimated completion of approximately 35 percent of neighborhood areas and shall be monitored as well;
- Then the final 50 percent shall be completed in 2027. This will allow all material to be ordered and work to be completed in-house and will also allow these locations/areas to be monitored each year of implementation and report back to Council should the need arise.

All new signs shall be erected, and old signs removed where applicable in accordance with Regulation 615 of *the Highway Traffic Act*, as well as the Ontario Traffic Manual. Once the necessary By-laws have been approved by County Council, and County sign regulations have been amended, the above noted work will begin in 2025 and will expand into 2026 and 2027 respectively over a three (3) year project period.

The recommendations in this report follow the guidelines of the May 23, 2019, approved Council report “CD-19-63 - Brant Safe Streets Speed Control and Road Safety Strategy”.

These revisions shall be monitored by the County’s Operational and By-law Enforcement Departments, as well the Brant County Ontario Provincial Police Department (OPP) and staff shall report back if any additional concerns arise.

It is recommended that the necessary By-laws be considered so that the process of changing the signs can start in 2025.

Attachments

1. Maps of proposed 40km/h local Roads (57 maps)
2. Example of new “gateway” sign installation
3. List of Roads to be Converted

Reviewed By

G. Demers, Director of Roads
 R. Walton, General Manager of Operations

Copied To

1. J. DeMunck, Road Operations Manager
2. J. Roswell, Road Superintendent
3. K. McAllister, Road Superintendent
4. S. McDonald, Acting Road Operations Manager

5. B. McDonald, Road Superintendent
6. M. Huggins, Road Superintendent
7. G. Bergeron, Director of Enforcement and Regulatory Services
8. Sgt. Darren Vandertuin, Brant County OPP

By-law and/or Agreement

By-law Required	Yes
Agreement(s) or other documents to be signed by Mayor and /or Clerk	No