



Presented To:	Operations Committee
Presented:	Monday, Jan 20, 2014
Report Date	Monday, Jan 13, 2014
Type:	Managers' Reports

Request for Decision

Residential 40 km/h Speed Limits

Recommendation

THAT the City of Greater Sudbury maintain the statutory 50 km/h speed limits on residential roads, all in accordance with the report from the General Manager of Infrastructure Services dated January 13, 2014.

Background

At the Operations Committee meeting held on September 16, 2013, the following recommendation was approved:

OP2013-43 Caldarelli/Berthiaume: WHEREAS at its May 23, 2007 meeting, Greater Sudbury City Council unanimously passed the following resolution: "AND BE IT FURTHER RESOLVED that the City of Greater Sudbury accept the challenge to become the most pedestrian friendly City in Ontario by 2015";

AND WHEREAS the City of Greater Sudbury cannot afford to provide the pedestrian and cycling infrastructure necessary to encourage more people to use active transportation to get safely to their destinations;

AND WHEREAS there is clear evidence that physical activity from active transportation generates important health benefits;

AND WHEREAS at page 37 of the Ontario Chief Coroner's Report into Pedestrian Deaths, it is recommended that the Ministry of Transportation amend the "Highway Traffic Act, to allow local municipalities to set the unsigned default speed limit at 40 kilometres an hour on residential streets, a decrease from the current 50 kilometres an hour;

AND WHEREAS slower streets make for more livable and safer neighbourhoods;

AND WHEREAS an increase in speed is directly related both to the likelihood of a crash occurring and to the severity of the crash consequences;

Signed By

Report Prepared By

Dave Kivi
Co-ordinator of Transportation & Traffic
Engineering Services
Digitally Signed Jan 13, 14

Division Review

David Shelsted
Director of Roads & Transportation
Services
Digitally Signed Jan 13, 14

Recommended by the Department

Tony Cecutti
General Manager of Infrastructure
Services
Digitally Signed Jan 13, 14

Recommended by the C.A.O.

Doug Nadorozny
Chief Administrative Officer
Digitally Signed Jan 13, 14

AND WHEREAS the Sustainable Mobility Panel recommended that the City of Greater Sudbury be bold and modify its Traffic and Parking By-Law 2010-1 to reduce speed limits on all residential streets to 40 kilometres per hour unless otherwise posted, rather than the current 50 kilometres per hour;

AND WHEREAS the City of North Bay has instituted a by-law establishing 40 kilometre per hour speed limits on residential streets and the City of Ottawa has established a method where by means of petition, residents can request a reduction in the speed limit to 40 kilometres per hour on local residential streets provided there is a consensus of 66 percent of the residents on the entire street;

THEREFORE BE RESOLVED that the City of Greater Sudbury direct staff to investigate options to amend the Traffic and Parking By-Law 2010-1 to reduce speed limits on residential streets to 40 kilometres per hour unless otherwise posted, rather than the current 50 kilometres per hour and that those options be presented to the Operations Committee at its January 2014 meeting.

Statutory Speed Limit

Section 128 (1) of the Ontario Highway Traffic Act states that “no person shall drive a motor vehicle at a rate of speed greater than 50 kilometres per hour (km/h) on a highway within a local municipality or within a built-up area”. This speed limit is commonly referred to the Statutory Speed Limit. The City of Greater Sudbury has signs posted at the provincial highway entry points into the City indicating that the speed limit is “50 km/h unless otherwise posted”. The Ontario Traffic Manual (OTM) indicates that “maximum speed” signs are required when the speed limit is different than the statutory speeds. They may also be used to supplement the statutory speed limit. Based on the Highway Traffic Act and OTM requirements, it is the City’s practice to install 50 km/h maximum speed limit signs only when there is a change from a higher or lower maximum speed limit.

Speed and Driver Behavior

A report prepared for the British Columbia Ministry of Transportation titled Review and Analysis of Posted Speed Limits and Speed Limit Setting Practices in British Columbia states the following:

“Based on years of experience and observation, the following fundamental concepts have been used to establish realistic speed zones.

The majority of motorists drive at a speed they consider reasonable, and safe for road, traffic, and environmental conditions. Posted limits which are set higher or lower than dictated by roadway and traffic conditions are ignored by the majority of motorists.

The normally careful and competent actions of a reasonable person should be considered legal.

A speed limit should be set so that the majority of motorists observe it voluntarily and enforcement can be directed to the minority of offenders.

A driver’s choice of speed can impose risks on other road users. Crash severity increases with increasing speeds because in a collision, the amount of kinetic energy dissipated is proportional to the square of the velocity. Crashes, however, appear to depend less on speed and more on the variation in speeds. The likelihood of a crash occurring is significantly greater for motorists traveling at speed slower and faster than the mean speed of traffic.

Maximum speed limits are set for ideal road, traffic, and environmental conditions.

The Coroner's report recognized this and stated "although supportive of changes to lower the speed limit for local municipalities, there was a strong view that in the absence of enforcement, drivers will drive the speed at which they are comfortable, irrespective of the posted speed, unless speed reduction is accompanied by engineering changes to the road to encourage adoption of slower speeds."

Effectiveness of 40 km/h Speed Limits

It is the City's current policy to reduce the speed limit to 40 km/h on local and collector roadways adjacent to elementary schools. However, there are some streets with 40 km/h limits that are not adjacent to elementary schools.

As part of the Traffic Calming Program, City staff has undertaken many spot speed studies on residential roads with both 40 and 50 km/h speed limits. The following table provides a summary of the speed study results from 2009 to 2012 inclusive.

Speed Study Summary

Speed Limit (km/h)	Number of Studies	Weighted Average Speed (km/h)
40	33	46.3
50	292	48.8

While the studies do not represent actual before versus after data, they do provide some insight into the effectiveness and acceptance of 40 km/h speed zones. As indicated, a 10 km/h reduction in the speed limit has yielded a 2.5 km/h reduction in average operating speed. Also, while the majority of drivers obey 50 km/h speed limits, only a small minority are currently obeying 40 km/h speed limits.

The Coroner's report also recognized this, stating "when the City of Ottawa reduced speed from 50 km/h to 40 km/h, studies which followed indicated that there was no substantial change in speed which motorists travelled the roads."

40 km/h Speed Limit on All Residential Roadways

In order for a 40 km/h speed limit to be enforced under the Highway Traffic Act, maximum speed limit signs will be required on every roadway affected. It is difficult to determine the exact number of speed limit signs that would be required to lower the speed limit on all residential roadways. However, the OTM recommends that the signs be spaced at 300 metres, and/or after each major intersection. There are more than 1,800 local and collector roads in the city totaling more than 2,900 lane kilometres. Installing speed limit signs every 300 metres will result in the need for more than 9,600 signs at a total cost of approximately \$2.5 million.

In order to maintain such a large inventory of new signs, the sign maintenance budget would need to be increased by \$125,000 annually based on a 20 year life expectancy.

The Coroner's recommendation to the Ministry of Transportation (MTO) is to amend the *Highway Traffic Act* to allow local municipalities to lower the unsigned default speed limit to 40 km/h. This amendment would

significantly reduce the costs associated in reducing the speed limit on residential roadways.

Many studies have shown that majority of pedestrian fatalities have been on arterial streets, which are wide roads (multiple lanes) and higher volumes. During the review period of the Coroner's report, 75 % of pedestrian fatalities occurred on arterial roads. The City has similar distribution of pedestrian collisions between arterial and local roads. Therefore, the proposed change in speed limit will affect a minority of pedestrian collisions.

40 km/h Speed Limits On All New Residential Roadways

It is possible to implement 40km/h speed limits on all newly assumed residential roadways without significantly impacting current sign maintenance budgets. As part of the subdivision approval process, the developer is responsible for the cost of any traffic control signs that are required. Therefore, the cost of installing 40 km/h signs on newly assumed roads can be passed on to the developer.

Implementing 40km/h speed limits on new roads, and maintaining 50km/h on existing roads will create a double standard, which is not recommended by staff. Also, often times newer streets are built to a higher standard than older streets with respect to the provision of curbs, sidewalks and illumination.

40 km/h Speed Limits Adjacent To Public Playgrounds

It is currently the City's policy to bring forward requests to lower the speed limit to 40 km/h on local and collector roads adjacent to elementary schools. In the last six years, the City has implemented school zone speed limits at many locations. However, there are still twenty schools that qualify for a reduced limit, but have not yet been completed. Based on the current budget, it will take approximately four years to have the speed limit reduced at all the elementary schools that qualify.

School zone speed limits have been implemented by Council due to the high concentration of young children in these areas. Once the elementary school areas are completed, Council may consider implementing 40 km/h speed limits adjacent to public playgrounds on local and collector roadways. Playgrounds represent another area where high numbers of young children can be found near to the road.

There are nearly 200 playgrounds in the city. Should Council decide to reduce the speed limit near playgrounds, it would cost approximately \$300,000 to supply and install the required signs. Council may consider a budget option of \$30,000 per year as part of the 2015 budget process to complete the school zone speed limits in 2015 and all playgrounds by 2025.