



Backgrounder on Speed Limits

The setting of speed limits on streets and highways is a technical science backed by many years of research and experience on what works and doesn't work for the safety and benefit of drivers. The Township of Essa is often approached by citizens who feel that a change in the posted speed limit is the answer to a safety problem on a specific roadway. Safety is of the highest concern in any project we undertake, however changing the posted speed limit is not always the answer.

What is the purpose of having speed limits?

Safety is always a factor. However, the setting of speed limits is for completely practical reasons. When setting speed limits, traffic engineers base standards on several fundamental concepts, which have been proven to be true over the years proven over the years; including:

- The majority of motorists drive in a safe and reasonable manner.
- The normal careful and competent actions of a reasonable person should be considered legal.
- Laws are established for the protection of the public and the regulation of unreasonable behaviour of a few individuals.
- Laws cannot be effectively enforced without the consent and voluntary compliance of the majority.

Research and experience have shown that effective speed limits are those the majority of motorist naturally drive, and that raising and lowering speed limits does not substantially influence that speed.

Highway Traffic Act

The **Highway Traffic Act of Ontario** (the "HTA") Section 128.1 provides that roads within a city, town, village, police village or built up area have a statutory speed limit of 50 km/h, unless otherwise designated. Outside of these areas, the statutory speed limit is 80 km/h, unless otherwise designated. The HTA requires that signage be placed where the speed limit varies from the statutory requirement.

If you lower the speed limit, people drive slower right?

The answer is no, just as people don't automatically drive faster when the speed limit is raised. One primary reason for setting speed limits lower than speed considered safe and reasonable by the majority of motorists is based on the belief that lower speed limits reduced speeds and collisions. Also it has been frequently suggested that most

motorists drive 10 to 20 km/h over the posted speed limits, so lower limits should be established for this condition.

Studies have indicated that lowering posted speed limits by as much as 30km/h, or raising speed limits by as much as 20 km/h had little effect on motorist speed. The majority of motorists did not drive 10 km/h above the posted speed limits when the limit was raised, nor did they reduce their speed by 10km/h when speed limits are lowered. Arbitrary, unrealistic and non-uniform limits have created a socially acceptable disregard for speed limits. Unrealistic limits increase collision risk for persons who attempt to comply with the speed limit by driving faster or slower than the majority of road users.

Unreasonably low limits significantly decrease driver compliance and give road users such as people not familiar with the roadway as well as pedestrians a false indication of actual traffic speeds.

Do motorists influence the speed limit?

Yes, because speed limits reflect the behaviour of the majority - keeping in mind the majority drive in a safe and reasonable manner.

Speed limits that reflect the behaviour of the majority are determined by what engineers call the "85th percentile speed" or the speed at which 85 out of 100 cars travel at or below. This method is based on the principle that reasonable drivers select a speed to reach their destination in the shortest time possible and to avoid endangering themselves, others and their property. In considering their speed, motorists consider roadway, traffic, weather and other conditions.

Studies have consistently demonstrated that there are no significant changes in the 85th percentile speed following the posting of lower or higher speed limits.

[Parker, M.R. Jr. Effects of Raising and Lowering Speed Limits on Selected Roadway Sections. FHWA-RD-97-084, Final Report. Federal Highway Administration, June 1996]

What if the majority is driving too fast?

What's actually more dangerous is when motorists are travelling at varying speeds. With speed limits set at the 85th percentile speed, the speed differential - or range of travel speeds - is reduced so that more vehicles are travelling at near the same speed, with fewer vehicles travelling at extremely high or low speeds.

Statistics show that roadways with speed limits set at the 85th percentile speed have fewer collisions than roads where the posted limit is above or below what the majority naturally travels.

If people don't obey the posted speed, they get a speeding ticket, right?

The local police force cannot be in all places at all times. They rely on realistic speed laws to control the unreasonable speeder whose driving behaviour is clearly out of line from the majority of the traffic flow. A reasonable speed limit offers an effective enforcement tool to the police by clearly separating the occasional violator from the reasonable majority.

The solution is not to post a speed zone to an unjustifiably low speed and then expect law enforcement to control the violators by constant monitoring. Police agencies do not, and indeed cannot afford to lie in wait constantly for speeders in a multitude of locations.

Moving Forward

The Township of Essa has created a new Traffic Advisory Committee. If you have any questions or concerns for this Committee relating to speeding, please feel free to contact Krista Pascoe at kpascoe@essatownship.on.ca or 705-424-9770 ext. 116.