

## **COMMITTEE OF THE WHOLE - MARCH 22, 2004**

### **ESTABLISHING SPEED LIMITS PROPOSED REGIONAL POLICY**

(Referred from the Council meeting of March 8, 2004)

#### **Recommendation**

The Commissioner of Engineering and Public Works recommends:

1. That the Region of York be advised that the City of Vaughan concurs with the Regional Municipality of York's Speed Limit Policy as set out in Clause No. 3 in Report No. 2 of the Regional Transportation and Works Committee report considered by Regional Council at its meeting on February 19, 2004 in order to establish speed limits on the Regional Road system; and
2. That the Engineering Department undertake a review and establish a City policy to provide consistent guidelines for determining appropriate speed limits for the public highway network within the City of Vaughan.

#### **Purpose**

At its meeting on March 8, 2004 Council referred this matter to the Committee of the Whole meeting of March 22, 2004. (Refer to Attachment No. 2)

The Council of the Regional Municipality of York, at its meeting held on February 19, 2004 referred the attached Regional Transportation and Works Committee Report regarding a proposed Regional policy to establish speed limits along the Regional road system back to their Committee for consideration at its April 7, 2004 meeting. Regional Council requested that it be forwarded to the local municipalities for their comments prior to consideration by their Committee.

#### **Background - Analysis and Options**

The Region of York undertook a review, through an independent Consultant, of their current process for establishing speed limits along their Regional road network. As a result, a Regional Policy Establishing Speed Limits on Regional Roads was created in order to provide a warrant criteria and process for the establishment of posted speed limits on their road systems. The policy addresses the criteria used on Regional facilities which are typically arterial roadways in both urban and rural settings with various adjacent land use, traffic and physical features.

The highlights of the report and policy discusses the following basic elements:

1. The base traffic conditions for establishing a speed limit;
2. The criterion used for establishing the speed limit on a multi-purpose road;
3. The criteria used for establishing the minimum length of a speed zone within both urban and rural areas; and
4. The requirements used for changing a speed limit in a school area.

#### **Base conditions**

As a base condition, speed limits on York Regional roads are between 50km/h and 80km/h. The Region's proposed speed limit warrant considers the 85<sup>th</sup> percentile speed of free flowing traffic

along the roadway. This method of setting the speed limit is the most popular method adopted by North American road authorities.

### Multi Purpose Roads

The speed limit criteria on multi-purpose roads having a high combination of vehicular and pedestrian volumes are proposed to be established using an 8-hour vehicular and pedestrian volume nomograph. As well, urban roadways with a driveway density of thirteen driveways or more, on one side of the roadway, will be considered for a speed limit lower than the 85<sup>th</sup> percentile speed.

### Length of Speed Zones

Consideration for the minimum length of speed zones is given to both rural and urban areas. The policy establishes the minimum length of a speed zone to be as follows:

- In rural areas, preferably 2 kilometres with a minimum of 1 kilometre.
- In urban areas, preferably 1 kilometre with a minimum of 500 metres.

### School Areas

Of particular concern that needed to be addressed by the Region's Speed Limit Policy is the reduction of speed limits in school areas. In order to establish a reduced speed limit within a school area on a Regional Road the following criteria need to be met:

- Requests for a change in a school area shall be made by the school Principal or the School Board.
- To be eligible, the road must be contiguous to a school and have a minimum of 200 students.
- If the collision record indicates that the safety performance of the road is worse than expected/predicted and alternative counter-measures have not been effective in improving the safety performance, a reduced school zone speed limit shall be considered.
- Qualifying schools shall be ranked/prioritized based upon potential conflicts and safety of pedestrians using peak hour pedestrian and volume information.
- If a school zone speed limit is warranted, it shall only be in effect during the times of the day that students are walking to and from school, as prescribed by Municipal Bylaw.
- A school zone speed limit may be up to 20km/h lower than the speed limit on the adjacent road sections.

Engineering staff have reviewed the Region's new Policy on Establishing Speed Limits on Regional Roads and concur with their proposed criteria and procedures. The City of Vaughan also routinely undertakes investigations into the need for revised speed limits on the City road network. These requests are often generated through the general public, ratepayer associations or school board officials. The need for a City policy in establishing a safe, consistent and technically sound method of determining an appropriate speed limit is required. Therefore, the Commissioner of Engineering and Public Works is recommending that the City undertake a review and develop a policy for establishing speed limits within its public highway system.

### **Relationship to Vaughan Vision 2007**

This review of the Region's Policy on Establishing Speed Limits is consistent with Vaughan Vision 2007 as to identify and implement innovative traffic management methodologies in order to improve general traffic safety (1.1.3).

This report is consistent with the priorities previously set by Council and the necessary resources have been allocated and approved.

### **Conclusion**

Upon review of the Regional Municipality of York's Policy for Establishing Speed Limits on Regional Roads staff concur with the criteria and procedure for setting speed limits on Regional roads as outlined in the attached Regional Transportation and Works Committee report. As the City often receives requests for revising speed limits on City roads, there is a need for a credible, technically sound and consistent method of determining an appropriate speed limit on City roads. It would be appropriate for the City to establish its own set of criteria and procedures through a policy for setting speed limits on its own road network.

### **Attachments**

1. Regional Report No. 2 of the Transportation and Works Committee
2. Extract from Council meeting of March 8, 2004, Report No. 25, Item No. 26

### **Report prepared by:**

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Respectfully submitted,

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**ESTABLISHING SPEED LIMITS  
PROPOSED REGIONAL POLICY**

*(Regional Council at its meeting on February 19, 2004, referred the foregoing Clause back to the Committee for consideration at its April 7, 2004 meeting and be forwarded to the local municipalities for their comments prior to consideration by the Committee.)*

The Transportation and Works Committee recommends the adoption of the recommendations contained in the following report, January 21, 2004, from the Commissioner of Transportation and Works, subject to amending Recommendation 2 to read as follows:

*"2. A copy of this report be forwarded by the Regional Clerk to the Clerks of each of the local municipalities, the York Region District School Board and York Catholic District School Board."*

**1. RECOMMENDATIONS**

It is recommended that:

1. The Speed Limit Policy attached to this report as *Attachment 1* be adopted by Regional Council as the policy for establishing speed limits on the Regional road network.
2. A copy of this report be forwarded by the Regional Clerk to the Clerks of each of the local municipalities.

**2. PURPOSE**

The Regional Municipality of York routinely undertakes reviews of speed limits. These reviews are generally initiated by requests from the public or elected representatives and the ongoing monitoring of the road network. Regardless of the reason for the investigation, there is a need for a credible, technically sound and consistent method of determining an appropriate speed limit.

This report discusses the results of an assignment undertaken by an independent consultant to review the current process for establishing speed limits and makes recommendations for changes to the process and establishes a warrant. The proposed new warrant will, if adopted, consider the 85<sup>th</sup> percentile speed of the roadway, vehicle-pedestrian collision risk, school areas and speed-related collision information.

### 3. BACKGROUND

The Region attempts to set speed limits that maximize safety, decrease delay, lower the burden of enforcement and meet public expectations. The task is complex as safety and delays are often competing objectives, and public opinion is polarized. Residents and vulnerable road users seek lower speed limits that promote quality of life for the community and increased security for pedestrians and cyclists. Motorists seek higher speeds that minimize travel time, and seemingly have no significant negative impacts on them.

Regional staff's existing practice in establishing posted speed limits was initiated in December of 1999. This practice involved relating the physical characteristics/attributes of the roadway to a speed limit. This method was developed to provide consistency and uniformity of posted speed limits on similar type roadway cross-sections. However, based upon the on-going discussions with the public and elected representatives, Regional staff determined that there was a need to review the process in establishing speed limits and make recommendations for changes to the process and establish a warrant. Of particular concern that needed to be addressed was the reduction of speed limits in school areas.

An independent consultant was retained to develop a procedure for setting speed limits on Regional roads. Regional facilities are typically arterial roadways in both urban and rural settings with various adjacent land use, traffic and physical features. The recommended procedure needed to be technically sound, consistent with the broader objectives of the transportation system, credible to the public and defensible in any forum of debate.

### 4. ANALYSIS AND OPTIONS

Maximum speed limits are laws, and as with most laws, speed limits are established for the protection of the public and the regulation of unreasonable behaviour on the part of individuals. Over the years, speed limits have been enacted for essentially three reasons:

- Safety
- Energy conservation
- Environmental protection

It is clear that energy conservation and environmental protection will only impact on speed limit setting in very extreme circumstances. By far, the prominent reason for speed limits is safety. Of late, urban speed limits have also been revised in response to public concerns about the impacts that fast-moving vehicles have on cycling and walking comfort and safety, school areas, and on the "sense of place" on shopping and residential streets. The last reason is an emerging social issue in York Region and elsewhere.

Many municipalities and agencies have started to look at the development of warrant criteria to more appropriately address today's issues around speed limits. The following summarizes the findings of the consultant's study.

#### **4.1 Goals and Objectives**

The goal of a surface transportation system is to provide safe, convenient, affordable, efficient and energy-conserving transportation while minimizing the impact on the environment. Setting speed limits is a strategy employed by municipalities in achieving this goal. Therefore, the setting of speed limits on Regional roads should be in conformance with this overarching goal.

The difficulty is that many of the desired features of the transportation system are essentially competing objectives. For example, efficiency might be promoted through high speed limits that permit motor vehicle travel times to be minimized. However, higher speeds negatively impact safety by increasing collision severity. The speed limit should be selected so as to balance the objectives.

The objectives of setting speed limits are as follows:

- Reduce the number of speed related collisions.
- Reduce collision severity.
- Minimize travel times for vehicular traffic.
- Provide roadways that protects vulnerable road users by minimizing the barrier effect of vehicular traffic.
- Reduce vehicular emissions.

While safety is always of primary importance on all roads, the emphasis placed on the objectives of mobility and emission has been determined when the road is classified and it is designed into the road.

Further objectives that promote the goals of safety and sustainability are:

- To give residents a realistic expectation of actual travel speeds by providing a speed limit that is an accurate reflection of travel speeds.
- To minimize the burden of enforcement on York Regional Police by providing speed limits which are respected by the majority of drivers.

#### **4.2 Technical Information**

Speed limits, like any element of the transportation system, are inextricably woven into the community fabric. Adjustments to the speed limit may have impacts and repercussions on many valued features of the community. The impacts of speed limits on travel speed and safety are provided below.

#### 4.2.1 Travel Speed

Drivers receive up to 90% of their information visually. The visual clues conveyed by the road, and the roadside (including signs) are the primary determinants of travel speed. The strongest influence on a driver's selection of travel speed is the appearance of the road. Straight and flat alignments with wide lanes and few driveways and intersections are a visual invitation to travel at a high speed. As a driver turns onto a roadway, the information conveyed to the driver by the roadway design is subconsciously compared to similar roads that have been traversed, and a travel speed is selected based on the individual driver's past driving experience relating travel speed to safety and comfort.

Attempts have been made to counteract high travel speeds by posting speed limit signs that restrict legal travel to much lower speeds. These attempts are consistently unsuccessful because the visual clues provided by the roadway features (alignment, lane widths, etc.) are more powerful to the drivers perceptions than a sign posted at the side of the road.

In the end, it can be concluded that the most important influence on travel speed are the design features of the road itself. The dimensions and these features, and in some instances, the presence of the features, are determined during design using the design speed concept. Essentially, this means that each element of the road is selected so that a certain speed can be safely attained and maintained.

Changes in the posted speed limit affect a change in the average travel speed of traffic, although the change in the travel speed is much smaller than the change in the posted speed limit. For instance, a 10 km/h reduction in the posted speed limit will usually result in a 2 to 3 km/h reduction in the average travel speed. The most successful speed limit reductions have been established in conjunction with large public information campaigns and/or intense enforcement efforts. In general, the posted speed limit has no significant effect on travel speed, and drivers will travel at a speed that they feel comfortable.

The ineffectiveness of speed limits to significantly change travel speeds has also been documented with local data. The data contained in Table 1 illustrates the effect that a speed limit change has on the 85<sup>th</sup> percentile speed of the traffic stream. The 85<sup>th</sup> percentile speed is the speed at which 85% of motorists drive at or below. When speed limits are altered by 10 km/h and 20 km/h, the corresponding maximum absolute change in 85<sup>th</sup> percentile speed is 2 km/h and 5 km/h, respectively. This data supports the perception that speed limit changes absent from any other significant changes to the road or level of enforcement, have limited impacts on actual travel speeds.

**Table 1**  
Effects of Speed Limit Change on Travel Speeds

Location	Before		After		Change	
	Posted Speed (km/h)	85 <sup>th</sup> Percentile Speed (km/h)	Posted Speed (km/h)	8 <sup>th</sup> Percentile Speed (km/h)	Posted Speed (km/h)	85 <sup>th</sup> Percentile Speed (km/h)
Mulock Drive	70	80	60	80	-10	0
Victoria Road	60	78	50	80	-10	2
Langstaff Road	70	83	50	78	-20	-5
Leslie Street	80	80	60	78	-20	-2
Rutherford Road	70	86	60	87	-10	1

#### 4.2.2 Safety

The link between collisions, travel speeds and speed limits has been extensively researched. Most of the research to date has examined the effects of modifying speed limits on safety, but has failed to establish a definitive causal chain. For a speed limit change to affect safety (i.e., collisions), it is necessary for the speed limit change to also cause a change in driver behaviour (typically a change in the travel speed).

The following is what we know about travel speeds, speed limits and safety:

- Collision occurrence is reduced when the motorist travels approximately at the 85th percentile speed.
- Collision severity is reduced by reducing travel speeds.

The link between absolute travel speed and collision occurrence is not well established. Intuitively, one might expect that faster travel would result in a greater number of collisions. While this may seem to be the case, a recent comprehensive review of numerous speed-safety studies report that "the evidence is not conclusive".

#### 4.3 Existing Methods for Setting Speed Limits

A considerable amount of effort has gone into developing a single method that can be used universally to set an "appropriate" speed limit. The transportation profession has developed many different methods and techniques ranging from the simple to the complex. The most well-known techniques are described briefly below.

##### 4.3.1 85<sup>th</sup> Percentile Method

The research that concluded motorists traveling at the 85<sup>th</sup> percentile speed have the lowest involvement in collisions has resulted in a majority of North American road authorities adopting a policy of setting speed limits at the 85<sup>th</sup> percentile speed. The



theory is that a speed limit set at the 85<sup>th</sup> percentile speed maximizes safety. This is the easiest and by far the most popular means of setting speed limits in North America.

#### **4.3.2 The Institute of Transportation Engineers**

The Institute of Transportation Engineers (ITE) published Speed Zone Guidelines, which outline a procedure for setting a speed limit other than the statutory speed limit. In brief, the recommended practice is that speed limits be established on the basis of an engineering study that should include an analysis of the current speed profile. The speed limit should be set at or near the 85<sup>th</sup> percentile speed, or the upper limit of the 16 km/h (10 mph) pace. The 16 km/h (10 mph) pace, is the 16 km/h (10 mph) range encompassing the greatest percentage of all the measured speeds in the speed study. The guidelines go on to indicate that the engineering study may also include consideration of roadway geometry, roadside development, surface condition, vulnerable road users, collision experience, and the speed limits of adjoining road sections.

#### **4.3.3 Northwestern Speed Zoning Technique**

A slight modification on the 85<sup>th</sup> percentile method is the Northwestern (NW) Speed Zoning Technique. The NW technique starts by using the measured/observed 85<sup>th</sup> percentile speed (gathered from speed studies conducted in accordance with ITE Guidelines) as a base speed limit, and then modifies it based on environmental, geometric, and traffic conditions. The conditions considered are driveway density and type, length of the proposed speed zone, lane and shoulder width, street classification, median presence and type, pedestrian and parking activity, horizontal and vertical alignment, and collision history.

There is little information available on its origin, and less documentation on its effectiveness. It is more complex than using the 85<sup>th</sup> percentile speed, but there is no evidence that it is any better than the latter method.

#### **4.4 Current Ontario Practice**

A survey was conducted of selected Ontario road authorities. The survey purpose was to ascertain the methods being used to set speed limits in other municipalities, and to assess their technical staffs' degree of satisfaction with their current method.

A total of twenty-six surveys were sent to municipalities in southern Ontario. Fourteen of the surveys were completed for a response rate of 54%. Eleven of the fourteen responding municipalities do not have a written method or process of setting speed limits in their jurisdiction. Of the municipalities that have written policies, most use the Northwestern Speed Zoning Technique or some modification of it. Only the Cities of Burlington and Kingston indicated that they have evaluated their speed limit setting method. The degree of satisfaction with the current Ontario methods (including case-by-case assessment) stands at 50% (seven of the fourteen responding municipalities).

The two most mentioned reasons for setting speed limits are safety and speed control. It is interesting to note that eleven of the fourteen respondents indicate that speed control is one of the purposes for setting speed limits. This, despite the overwhelming scientific

evidence that indicates speed limits have a negligible effect on actual travel speeds. The factors that are most often considered by municipalities in selecting an appropriate speed limit are the prevailing speed of traffic, the design speed, roadway geometry, and the setting (i.e. urban, rural).

#### **4.5 Proposed Policy Highlights**

Regulations are in place for the extremes of society, not for the norms. Speed limits should not make reasonable people acting in a reasonable manner into law-breakers. Using this principle, it is equitable to set speed limits for those recurring conditions and situations that encourage faster, yet safe travel. This means that maximum speed limits should be set assuming daylight, dry roads with good pavement, clear visibility, and light traffic volumes.

In reviewing the various methods that are used to establish speed limits and the results of the survey of other municipalities it became evident that no one method was preferred and for the most part, warrants or policies were not in place. In addition, from the results of the study, not one of the well-known techniques described above had been acknowledged as the single best method to set an "appropriate" speed limit. Therefore, based upon the results of the review undertaken and the most recent available research information, the recommendation was to combine the more effective components of some of the existing techniques to establish the policy for setting speed limits on Regional Roads.

##### **4.5.1 Regional Roads**

The following conditions are the basic elements proposed to establish speed limits on Regional Roads.

- As a base condition, speed limits on York Region roads shall be between 50 km/h and 80 km/h and set at the 85th percentile speed of free-flow traffic.
- The minimum length of a speed zone to be as follows:
  - In rural areas, preferably two kilometres with a minimum of one kilometre.
  - In urban areas, preferably one kilometre with a minimum of 500 metres.
- Urban roadways with a driveway density of 13 driveways or more, on one side of the roadway, be considered for a speed limit lower than the 85th percentile speed.
- When the product of the eight-hour vehicular volume and the eight-hour pedestrian volume is greater than 1,000,000, then consideration be given to reducing the speed limit from the 85th percentile speed. The reduced speed limit to be within 20 km/h of the upstream speed limit to maximize the chance of compliance.

##### **4.5.2 School Areas**

The following conditions are the basic elements proposed to establish a reduced speed limit within a school area on a Regional Road.

- Requests for a change to a speed limit in a school area shall be made by the school Principal or the School Board.
- To be eligible, the road must be contiguous to a school and have a minimum of 200 students.
- If the collision record indicates that the safety performance of the road is worse than expected/predicted and alternative countermeasures have not been effective in improving the safety performance, a reduced school zone speed limit shall be considered.
- Qualifying schools shall be ranked/prioritized based upon potential conflicts and safety of pedestrians using peak hour pedestrian and volume information.
- If a school zone speed limit is warranted, it shall only be in effect during the times of the day that students are walking to and from school, as prescribed by municipal by-law.
- A school zone speed limit may be up to 20 km/h lower than the speed limit on the adjacent road sections.

#### **5. FINANCIAL IMPLICATIONS**

The costs associated with the manufacture and installation of signage for posted speed limits and school zones speed limits will be incurred within the proposed 2004 Business Plan and Budget for the Roads Transportation Branch.

#### **6. LOCAL MUNICIPAL IMPACT**

This report provides the Region with a proposed policy that addresses the establishment of speed limits along the Regional road network that is credible, technically sound and consistent.

#### **7. CONCLUSION**

The Region routinely undertakes investigations into the need for revised speed limits on the Regional road network. These investigations are generally initiated by requests from the public or elected representatives and the ongoing monitoring of the road network. Regardless of the reason for the investigation, there is a need for a credible, technically sound and consistent method of determining an appropriate speed limit.

This report presents the results of a review undertaken by an independent consultant, to review the process in establishing speed limits and make recommendations for any

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changes to the process and establish a warrant. Regional staff concurs with the findings and recommendations in the consultant's report and recommends that the attached policy (*see Attachment I*) be adopted by Regional Council for establishing speed limits along the Regional road network.

The Senior Management Group has reviewed this report.

*(A copy of the attachment referred to in the foregoing is included with this report and is also on file in the Office of the Regional Clerk.)*



STATUS		
Council Approved	N	N
CAO Approved:	N	N

<b>TITLE: ESTABLISHING SPEED LIMITS ON REGIONAL ROADS</b>	<b>NO.:</b> <b>Effective Date:</b> <b>Latest Revision Date:</b>
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**POLICY STATEMENT:**

This policy provides a warrant process for the establishment speed limits along The Regional Municipality of York road system.

**APPLICATION:**

The speed limit warrant criteria provides a consistent approach to determine posted speed limits on along the Regional Road network.

**DESCRIPTION:**

Speed limits are set on Regional roads in order to:

- Provide a benchmark for enforcement.
- Respond to community security concerns.
- Provide safety equity among road users.

**POLICY:**

The speed limit is intended to be the *maximum* speed that one can safely travel along a section of road. As speed limits should not make reasonable drivers into "law breakers", the maximum speed limit should be set in accordance with the most favourable environmental and traffic conditions.

<b><u>APPROVAL INFORMATION</u></b>	
<b>Council Minutes:</b>	
Clause No.:	of Report No.:
Of the:	Date:
	OR
CAO Approval Date:	

### Base Conditions

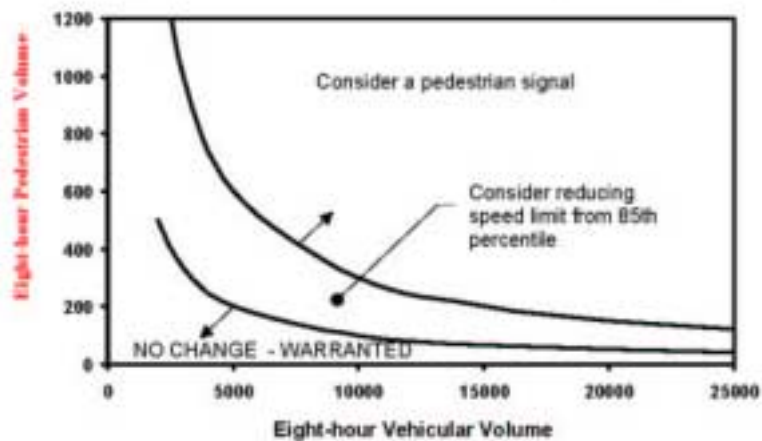
As a base consideration, the speed limit should be set at the 85<sup>th</sup> percentile speed of free flowing traffic. In addition, the speed limit shall not exceed the design speed of the roadway except in the event of isolated elements of the road that are posted with advisory speed signing (see section on "Other Considerations").

### Multipurpose Roads

On Regional roads, the speed limit may be less than the 85<sup>th</sup> percentile speed if the driveway density is greater than 13 driveways per kilometre (driveway density is to be calculated using driveways on one side of the road).

In addition, reducing the speed limit from the 85<sup>th</sup> percentile speed by up to 20 km/h may be considered if the combination of the vehicular and pedestrian volumes meet the criterion of Figure 1.

**Figure 1**  
Pedestrian Criterion for a Reduced Speed Limit



Pedestrian volumes should include pedestrians crossing the road, and in the instance of roads with no sidewalks, include pedestrians walking along the traveled edge of the road. The pedestrian count total should be adjusted by counting elderly pedestrians and unassisted children as two pedestrians each.

### Other Considerations

The minimum length of a speed zones in urban and rural areas are preferably one kilometre, and an absolute minimum of 500 metres, and preferably two kilometres and an absolute minimum of one kilometre, respectively. A time-limited, reduced speed limit for a school area may be shorter than the above minimums, but must comply with the lengths prescribed in the "School Areas" section of this policy.

Conditions, situations, and events that are local or temporary should generally not have the speed limit adjusted to reflect the condition, but should be addressed through advisory warning signs along with an advisory "safe" speed tab, as determined by an engineering study.

In the event that the pavement surface condition is such that the speed limit set by this policy is considered inappropriate, then a lower speed limit should be posted until the road surface condition can be reinstated to an acceptable level.

#### School Areas

The requirements of this section supercede the "Base Conditions" above. Requests for a change to a speed limit in a school area shall be made by the school Principal or the School Board. Individuals and groups that would like to have a lower speed limit at or near a school must approach the school.

To be eligible for a school zone speed limit, the road must be contiguous to a school with a minimum of 200 registered students. A school zone speed limit *may be* up to 20 km/h lower than the speed limit on the adjacent road sections. The lowest maximum speed limit that is permitted under the Highway Traffic Act of Ontario (RSO 1990) is 40 km/h. The lower speed limit will be applicable to the section of road that is contiguous to the school and for 150 metres along the road on either side of the school property. The lowered speed limit may be extended if it results in an adjacent speed limit that is too short to adequately enforce.

A school zone speed limit should be implemented if the collision record of the road section contiguous to the school indicates that the safety performance of the road is worse than expected/predicted. A reduced school zone speed limit should be implemented after trying all other alternative countermeasures, including a Community Safety Zone.

Other than the above criterion, the need for a school zone speed limit will be determined by the Roads Transportation, Traffic Operations staff by considering the individual situation. However, qualifying schools should be ranked based on the potential conflicts and safety of pedestrians using the following method:

1. Measure the peak hour pedestrian volume on the road in front of the school and calculate the pedestrian factor as:

$$PF = W * X + 2.9 C$$

Where:

PF =	Pedestrian Factor
W =	Number of pedestrians walking along the road
X =	1.08 if walking on a sidewalk or separate path 1.00 if walking on the shoulder
C =	Number of pedestrians crossing the road

Each pedestrian that is less than 10 years old should be counted as 1.38 pedestrians. Also, if a pedestrian walks along the road and then crosses the road, or crosses the road and then walks along the road, that pedestrian should be included only in the crossing volume

2. Measure the vehicular volume during the same hour as the peak pedestrian volume and calculate the vehicular factor as:

$$VF = V * X$$

Where: VF = Vehicle factor  
 V = Number of vehicles  
 X = 1.00 if the existing speed limit is 50 km/h  
 1.73 if the existing speed limit is 60 km/h  
 2.20 if the existing speed limit is 80 km/h

3. Calculate the total priority points by:

$$\text{Total Priority Points} = PF * VF$$

4. Rank the schools by total priority points from highest to lowest.

If a school zone speed limit is warranted, the school zone speed limit shall be in effect during the times of the day that students are walking to and from school, as prescribed by municipal bylaw. The school zone speed limit will be delineated using the apparatus shown in Figure 2. The maximum speed limit at times of the day when the 40 km/h is not in effect, will be determined using the remainder of this policy.

**Figure 2**  
School Zone Speed Limit Sign





**CONTACT:**

Director of Roads Transportation, Transportation and Works Department.

**CITY OF VAUGHAN**

**EXTRACT FROM COUNCIL MEETING MINUTES OF MARCH 8, 2004**

Item 26, Report No. 25, of the Committee of the Whole, which was considered by the Council of the City of Vaughan on March 8, 2004, was dealt with as follows:

***That this matter be referred to the Committee of the Whole meeting of March 22, 2004.***

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**26**

**ESTABLISHING SPEED LIMITS  
PROPOSED REGIONAL POLICY**

**The Committee of the Whole recommends that this matter be referred to the Council meeting of March 8, 2004.**

Verbal report of the Commissioner of Engineering and Public Works with respect to the above.  
(Requested by Regional Councillor Frustaglio.)