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**Item No. 12.1.3**  
**Transportation Standing Committee**  
**March 23, 2017**

**TO:** Chair and Members of the Transportation Standing Committee

**SUBMITTED BY:** ORIGINAL SIGNED

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Bruce Zvaniga, P.Eng., Director, Transportation & Public Works

**DATE:** 10 March, 2017

**SUBJECT:** Speed Limits in Residential Areas

**ORIGIN**

Item 15.1 raised at the December 8, 2016 session of the Transportation Standing Committee:

MOVED by Councillor Nicoll, seconded by Councillor Cleary THAT the Transportation Standing Committee request a staff report with a recommendation on how to reduce speed limits in residential areas.

MOTION PUT AND PASSED.

**LEGISLATIVE AUTHORITY**

*Halifax Regional Municipality Charter*, subsection 321(8), "The traffic authority for the Municipality has, with respect to highways in the Municipality, excluding those for which the Provincial Traffic Authority has authority, the powers conferred upon a traffic authority by or pursuant to the Motor Vehicle Act ."

*Nova Scotia Motor Vehicle Act*, subsections 101(1),(2):

- (1) Subject to Sections 101 and 104, and except where a lower rate of speed is specified in this Act or the regulations made thereunder it shall be *prima facie* lawful for the driver of a vehicle to drive the same at a rate of speed not exceeding the rate in subsection (2), and it shall be *prima facie* unlawful to exceed such rate of speed.
- (2) The rate of speed referred to in subsection (1) is fifty kilometres per hour...
  - (g) in a residence district as defined herein.

*Nova Scotia Motor Vehicle Act*, section 104(1):

- (1) Notwithstanding Sections 101 and 102, but subject to Section 103, the Minister or a traffic authority with the approval of the Provincial Traffic Authority may fix such maximum rates of speed as he may see fit to approve for motor vehicles traversing any part or portion of a highway and may erect and maintain signs containing notification of such rate of speed so fixed

- (2) and approved by him, and thereafter while such signs remain so erected and displayed the operator or driver of any vehicle exceeding the rate of speed so fixed and approved shall be guilty of an offence.

## **RECOMMENDATION**

That the Transportation Standing Committee recommend that Halifax Regional Council submit a request to the Province of Nova Scotia to reduce the speed limit in residential districts identified in section 101(2) of the *Motor Vehicle Act* to forty kilometres per hour (40 km/h).

## **BACKGROUND**

The Nova Scotia Motor Vehicle Act (MVA) legislates speed limits on public roadways within the Province of Nova Scotia. The MVA provides for a default speed limit, applied to roadways within residential areas, of fifty kilometres per hour (50 km/h). This would represent the minimum speed limit allowed to be posted on streets under the jurisdiction of the HRM Traffic Authority. In order to post a speed limit below 50 km/h, approval would need to be granted, on a case by case basis, by the Provincial Traffic Authority or the Minister of Transportation and Infrastructure Renewal (NSTIR).

Recommendations from a 2003 study which found that posting speed limits lower than 50 km/h did not result in a reduction in vehicle operating speeds, supported NSTIR's long standing practice not to post or allow municipalities to post speed limits below 50 km/h.

## **DISCUSSION**

Through the existing Traffic Calming Policy, HRM staff have a means to assess and address vehicle operating speed within residential areas. This policy is applied to existing roadways, considers many aspects related to the physical roadway environment, includes analysis of vehicle operating and collision information and makes use of various physical measures that can be put in place, where appropriate, to impact driver speed choice.

Staff has consulted with our counterparts at the Province and although it has been indicated that the Provincial Traffic Authority will consider requests to post speed limits below 50 km/h, such requests must be accompanied by an engineering study/assessment that supports the request and includes identification of supporting physical measures that will effect the required change in driver operating speed. Approval to post regulatory speed limits below 50 km/h without any changes to the roadway environment are not likely to be supported as evidence from past and recent studies shows this approach to be ineffective in reducing vehicle operating speeds.

### *Low Posted Speed Limit Study (2013)*

As a result of continued requests to have speed limits lower than 50 km/h posted in residential areas, NSTIR, in conjunction with the Provincial Road Safety Advisory Committee (RSAC) and a representative from HRM, engaged a consultant to determine if speed limits below 50 km/h should be considered. The study was also to include an appropriate implementation practice for posting speed limits below 50 km/h if deemed appropriate.

The study considered several factors surrounding the posting of speed limits, including: the physical environment around a street, the idea of safety vs. security, whether the posting of a lower speed limit would result in lower travel speeds and a review of current literature, research and guidelines. In addition, the study also included a survey of Canadian municipalities and their approach to setting speed limits as well as a detailed analysis of five Canadian municipalities (Montreal, Edmonton, Stratford (PE), Ottawa and Winnipeg) to understand their experience as it related to setting speed limits below 50 km/h.

Based on the jurisdictional review and detailed analysis of those jurisdictions who had implemented speed limits below 50 km/h contained in the study report, it was found that there was no conclusive evidence that posting speed limits below 50 km/h would result in a reduction in vehicle travel speeds. The report presented the following four key findings:

1. The operating speeds on a road can be controlled via modification of the physical environment. Modification of the physical environment can induce vehicle operating speeds lower than 50 km/h. Posting of speed limit signs alone will not reduce vehicle operating speeds.
2. Improperly set speed limits, particularly those that are set too low, produce an environment where users feel more secure, when they, in actuality, are no safer than previous. Therefore, education of elected officials and the general public on the differences between safety and security and the need for reasoned application of speed controls guided by engineering analysis is critical to increasing the safety of all road users.
3. Consistency in application of posted speed limits is critical in maintaining the validity of and compliance with posted speed limits by road users. Consistent use of engineering standards backed by national and international research, such as TAC's Canadian Guidelines for Establishing Posted Speed Limits, in combination with reasoned engineering judgement, will result in a safer roadway environment.
4. The dangers of excessive speeds and the responsibilities of all road users needs to be communicated clearly and explicitly through public education and enforcement programs. It is the road authority's responsibility to provide a safe and consistent environment for travel, but there is also equal responsibility on the part of road users to be mindful of the rules and other users.

Overall, the report recommended that the Province allow the posting of speed limits below 50 km/h, but only if sound engineering, education and enforcement are adhered to. The report itself provided minimal evidence to support the recommendation to allow lower posted speed limits as a means to reduce vehicle travel speeds and collisions. This led the RSAC to the following conclusions:

1. Physical characteristics and road design are key factors which influence travel speed.
2. Signage alone does not lead to compliance or behavior change.
3. Education and enforcement are required to support and promote compliance.

Because of the lack of supporting evidence, the RSAC did not fully endorse the recommendation from the report and instead recommended undertaking a pilot project be undertaken to evaluate several locations posted at 40 km/h.

#### *Pilot Testing of 40 km/h Speed Limits (2014 – 2016)*

The intent of the pilot study was to further assess the effectiveness of lower speed limits on reducing the 85<sup>th</sup> percentile travel speed as well as evaluate the warrant system developed as part of the 2013 report to determine its effectiveness in identifying road segments suitable for the posting of a reduced speed limit.

The study began in late 2014 with 20 locations being identified from a larger list of potential sites in order to test the proposed warrant system developed as part of the 2013 study. Locations were identified across two road authorities and several municipalities and had varied road characteristics (urban/rural, sidewalk/no sidewalk, etc.).

The more substantial portion of the study involved the testing of 10 sites where 40 km/h speed limits were posted to determine the effectiveness in reducing vehicle travel speeds. Data was collected prior to posting

of the lower speed limit and then collected again at 1-2 weeks, 3 months, 6 months and 12 months after the speed limit was reduced.

Two key parameters were chosen for analysis:

- *85<sup>th</sup> Percentile Operating Speed* – this is an indicator of the maximum operating speed chosen by the majority of drivers. This is a typical value used by road agencies when establishing posted speed limits and road safety literature suggests that as this value decreases, so does the severity of collisions.
- *Speed Variability* – this is an indication of the difference in speed between vehicles. The study focused on the 15 km/h pace as the indicator. This parameter identified the largest percentage of speed readings within the data set that were within 15 km/h of each other. The higher the percentage of speed readings in the pace range, the more uniform vehicle operating speeds are. Research has shown that the more uniform vehicle operating speeds are, the lower the likelihood of collisions occurring.

Although the pilot study was completed in 2016, the results have not yet been released to the public. It is anticipated that the Provincial Road Safety Advisory Committee (RSAC) will be making a recommendation to NSTIR related to provincial approvals of posting speed limits below 50 km/h. This recommendation will be based on the results from both the Low Posted Speed Limit Study (2013) and the Pilot Testing of 40 km/h Speed Limits. Once the RSAC recommendation has been provided to NSTIR, the results of the pilot study will be released, with the RSAC recommendation being released shortly thereafter.

### **FINANCIAL IMPLICATIONS**

There are no financial implications associated with the recommendations outlined in this report.

### **RISK CONSIDERATION**

There are no significant risks associated with the recommendations in this report.

### **COMMUNITY ENGAGEMENT**

Community engagement was not deemed necessary as this report deals with matters related to internal policy and Provincial legislation.

### **ENVIRONMENTAL IMPLICATIONS**

No environmental implications have been identified at this time.

### **ALTERNATIVES**

That Transportation Standing Committee recommend that Halifax Regional Council direct staff to submit a request to the Province to provide blanket approval that would allow the HRM Traffic Authority to post 40 km/h speed limits on roads under HRM jurisdiction. Staff does not recommend this alternative because there are instances outside the Core Service Boundary where there is a mix of roads under HRM and Provincial jurisdiction which would result in an inconsistent approach to the posting of speed limits within an area. Also, it has been indicated through discussion with Provincial staff that requests to post speed limits below 50 km/h would only be considered if the request was accompanied by an engineering assessment that supported the request and identified appropriate physical measures that would result in a reduction in vehicle operating speed.

### **ATTACHMENTS**

None.

A copy of this report can be obtained online at <http://www.halifax.ca/boardscom/SCtransp/index.php> then choose the meeting date, or by contacting the Office of the Municipal Clerk at 902.490.4210, or Fax 902.490.4208.

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