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Item No. 10.1 (ii)
Halifax Regional Council
June 14, 2022

TO: Mayor Savage and Members of Halifax Regional Council

SUBMITTED BY: Original Signed by 

Jacques Dubé, Chief Administrative Officer

DATE: May 8, 2022

SUBJECT: Proposed AO 2021-005-OP Respecting Traffic Calming

SUPPLEMENTARY INFORMATION REPORT

ORIGIN

December 14, 2021 Halifax Regional Council (Item 15.3.1):

MOVED by Councillor Mason, seconded by Councillor Stoddard

THAT Halifax Regional Council adopt Administrative Order #2021-005-OP Respecting Traffic Calming, including repealing Administrative Order 2015-004-OP Respecting Traffic Calming, as set out at Attachment 1 of the staff report dated November 17, 2021.

MOVED by Councillor Cleary, seconded by Councillor Austin

THAT Administrative Order 2021-005-OP Respecting Traffic Calming be amended by replacing 45 km/h with 40 km/hr in subsections 11(2), 11(3), 12(3), 12(4) and 15(1) Table 1

MOTION TO AMEND PUT AND PASSED

MOVED by Councillor Austin, seconded by Councillor Kent

THAT Halifax Regional Council defer item 15.3.1 for a supplemental report on adding a clause to the administrative order limiting traffic calming integration opportunities to streets 45 km/hr.

MOTION TO DEFER PUT AND PASSED

LEGISLATIVE AUTHORITY

Halifax Regional Municipality Charter, Part XII, subsection 321(8) provides:
Traffic authority

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.

Halifax Regional Municipality Charter, Part XII, subsection 322(1) provides:

Street related powers

322 (1) The Council may design, lay out, open, expand, construct, maintain, improve, alter, repair, light, water, clean and clear streets in the Municipality.

BACKGROUND

A key deliverable within TPW's 2021/22 Budget and Business Plan was to complete a review of the Traffic Calming Administrative Order and recommend amendments to better align with the strategic Road Safety Plan.

Staff presented a new Administrative Order to Regional Council on December 14, 2021. Discussion followed regarding the minimum speed threshold to qualify for traffic calming measures. The current AO sets the minimum speed threshold to qualify for traffic calming measures at 40km/h. The proposed new AO increased that minimum speed threshold to 45 km/h.

Council's motion on December 14, 2021 has maintained the speed threshold at 40km/h. This supplementary report considers the implications of incorporating a 45km/h speed threshold for integration projects while maintaining a 40km/h speed threshold for stand-alone traffic calming projects.

Stand-alone traffic calming projects are selected from the top of the ranking list (referred to as "the list" herein) each year for implementation. To date top ranked streets have had 85th percentile speeds ranging from 55km/h to 69 km/h. A speed threshold change will have no impact on the stand-alone traffic calming project list in the near term.

The list is also fluid in nature. As new requests are received, and new assessments are completed, the list is updated. As a result, low speed streets are bumped further down the list as new assessments are completed on streets with higher operating speeds.

Considering the number of higher speed streets on the list awaiting projects and the fluid nature of the list itself, it is not possible to provide residents on low-speed streets with reliable or reasonable timelines for installation of traffic calming measures on their streets.

Streets with speeds from 40-45km/h could theoretically remain "on the list" for future implementation for decades.

If low speed streets remain on the list it is anticipated that a realistic timeline for implementing measures on those streets is 20-35 years as a stand-alone project. This timeline considers our increased pace of installation in recent years.

The greatest opportunity for low-speed streets to receive traffic calming measures is through the Capital Works integration program. All streets on the integrated street recapitalization list are evaluated for traffic calming measures, regardless of ranking within the Traffic Calming Program. Each year a number of low-speed streets do receive traffic calming measures through the integrated street recapitalization program.

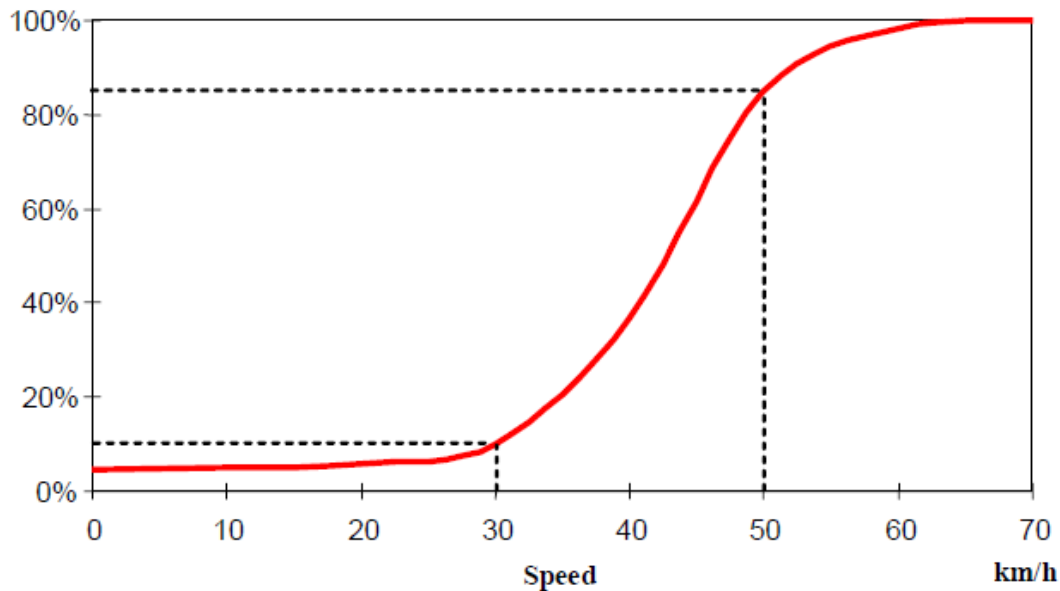
DISCUSSION

Maintaining separate lists for stand alone traffic calming projects and integration opportunities, each with a separate and differing speed threshold will be very challenging and difficult to explain to residents. Whether Council wishes to proceed with a speed threshold of 40 km/hr or 45 km/hr, staff recommends that a consistent speed threshold should be applied to all traffic calming projects regardless of the method of implementation.

In the proposed Traffic Calming Administrative Order before Council, staff recommended adjusting the minimum speed threshold to qualify for traffic calming measures from 40 km/h (in the previous Traffic Calming Administrative Order, 2015-004-OP) to 45 km/h. The change was recommended to allow staff to better focus efforts where they will have the most impact. The change was also recommended to better manage resident expectations with respect to implementation timelines and to bring HRM closer to aligning with practices followed by other jurisdictions in Canada, which set speed thresholds for traffic calming assessments at or above the posted speed limit. At its meeting on December 14, 2021, Council adopted an amendment to the main motion which amends the speed threshold in the proposed Traffic Calming Administrative Order 2021-005-OP from 45km/h to 40km/h.

It has been shown that the risk to vulnerable road users increases significantly as vehicle speed increases. The risk of fatality for a pedestrian when vehicle operating speeds are greater than 50 km/h is near 80%. The current ranking list continues to have a significant number of streets with operating speeds above 50 km/h, thus the suggested change to the speed threshold has been brought forward to better focus efforts on the areas with the highest potential for fatal collisions first given current financial constraints.

Figure 1: Probability of Fatal Injury for Vehicle-Pedestrian Collision



Source: OECD 2006 <http://www.internationaltransportforum.org/Pub/pdf/06Speed.pdf>

As noted above, a speed threshold change will have no impact on stand-alone traffic calming projects in the near term. To date the top ranked streets have had 85th percentile speeds ranging from 55km/h to 69 km/h and it is anticipated that the top ranked streets will continue to have operating speeds near or above 50km/h for some time.

The adjusted speed threshold will have an impact on integration projects. All streets on the integrated street recapitalization list are evaluated for traffic calming measures, regardless of ranking within the Traffic

Calming Program. As a result, some low-speed streets have received traffic calming measures in recent years. Minimal impact has been observed on the operating speeds on those streets following the implementation of traffic calming measures. The limited impact to operating speed on these streets is not unexpected as the initial operating speeds were already low.

The number of streets receiving traffic calming measures will vary depending on the annual street recapitalization program. Early in the traffic calming program, measures were only integrated if a request for traffic calming had been received. Under the latest version, all eligible streets in the street recapitalization program are assessed.

Staff would prefer to maintain the speed threshold at 45 km/h because it allows better allocation of finite resources, however it is acknowledged that the cost savings are not significant at this time.

To date the measures installed on low-speed streets have consisted of vertical deflections. Costs will increase significantly for low-speed streets where vertical deflections are not appropriate for site conditions, particularly if changes to drainage are required to accommodate horizontal deflections. Curb extensions can range in cost from \$5,000 - \$30,000 depending on grade and drainage requirements. These costs represent each curb extension, and intersections typically receive curb extensions at 2-4 corners so the cost to install curb extensions at multiple intersections along a corridor is significant. For reference, in 2021 curb extensions were installed on Portland Hills Drive at 13 locations and the cost for construction was \$395,000. Similarly, in 2020 curb extensions were installed on Joffre Street at ten locations and the cost for construction was \$200,000.

In 2022/23 one street that is scheduled for a recapitalization project has an 85th percentile speed between 40-45 km/h and will have traffic calming measures integrated. Dublin Street street will receive four curb extensions and five speed tables. The estimated cost increase to the recapitalization budget for this work is \$85,000 which represents a 22% increase to the overall project cost. While there is only one street in the 2022/23 capital plan with a low speed, that number can substantially increase in any given year with costs ranging in excess of \$500K depending on the number of streets and type of traffic calming measures.

It is worth noting that while the total number of integration streets with speeds between 40-45 km/h has been low to date, the staff effort is not captured within these costs. For each integration street it is estimated that a total of 25 staff hours from various departments are dedicated to incorporating traffic calming measures into the paving project. This results in drawing staff resources away from other initiatives/programs (i.e. Neighbourhood Speed Reduction Program, RRFB Crosswalk Upgrade Program, etc.) and potentially adding delay to implementation.

The estimated 25 hours represents a single project that proceeds through to construction; however, the street recapitalization list is also fluid so often significant staff resources are spent collecting data, scoping and undertaking preliminary design for streets that ultimately get dropped from the list. Depending on when the project actually does move forward, some of the work (i.e. data collection) may become "stale" so additional effort is needed to once again assess for integration.

Increasing the minimum speed threshold to integrate traffic calming measures within street recapitalization projects will allow staff to better focus resources on the higher speed streets where efforts will have the most impact. However, it will not alleviate the lengthy wait list for stand-alone traffic calming projects on low-speed streets and could cause further confusion with respect to resident expectations.

Although not staff's recommended option, if Council decides to proceed with a provision limiting traffic calming integration opportunities to streets with an 85th percentile speed threshold of 45 km/hr while keeping the threshold for other streets at 40km/h, further amendments to the as amended motion would be required (see Attachment A).

FINANCIAL IMPLICATIONS

There are no financial implications associated with this report. All activities are anticipated to be carried out as part of existing capital and operating budgets. Although there are cost savings associated with adjusting the speed threshold to qualify for projects, the magnitude of the savings will vary depending on the scope of the annual paving program. These cost savings would allow for additional work to be completed within the Capital Works plan and would also reduce installation and maintenance requirements for traffic signage and pavement markings.

COMMUNITY ENGAGEMENT

Community engagement was not undertaken following the direction of Council to remove the requirement for resident polling from the original Administrative Order.

ATTACHMENTS

Attachment A: Amendment wording (if required)

A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

Report Prepared by: Jody DeBaie, Program Engineer, Road Safety & Transportation, Public Works, 902.237.3851

Amendment wording (if required)

Amendment to Section 17 of AO 2021-005-OP (Attachment 1 to the Staff Report dated December 14, 2021)

Section 17 showing proposed changes:

17. (1) Where there is an integration opportunity with another scheduled street recapitalization project with a design component under the Capital Works Program, that project will take priority, regardless of its position on the prioritized list.

(2) **Subject to subsection (3),** All scheduled street recapitalization projects with a design component under the Capital Works Program will be evaluated in accordance with section 15, and if they achieve a ranking score of 10 points or more, traffic calming measures will be installed during the street recapitalization project.

(3) Notwithstanding the 85th percentile speed for “all streets” as set out in Table 1 of section 15, for the purposes of evaluating scheduled street recapitalization projects with a design component under the Capital Works Program in accordance with subsection (2) of this section, the point allocation for the 85th percentile speed for the category “all streets” shall be 1 point for each km/h that the 85th percentile speed exceeds 45km/h.

Amending Motion

The as amended motion is further amended by:

1. Amending subsection 17(2) by decapitalizing “All” at the beginning of the subsection and adding the phrase “Subject to subsection (3),” at the beginning of the subsection; and
2. Adding subsection 17(3) immediately following subsection 17(2) as follows:

(3) Notwithstanding the 85th percentile speed for “all streets” as set out in Table 1 of section 15, for the purposes of evaluating scheduled street recapitalization projects with a design component under the Capital Works Program in accordance with subsection (2) of this section, the point allocation for the 85th percentile speed for the category “all streets” shall be 1 point for each km/h that the 85th percentile speed exceeds 45km/h.