

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF OCTOBER 19, 2016

Item 6, Report No. 34, of the Committee of the Whole, which was adopted without amendment by the Council of the City of Vaughan on October 19, 2016.

6 THE USE OF RADAR MESSAGE BOARDS IN THE CITY OF VAUGHAN CITY-WIDE

The Committee of the Whole recommends approval of the recommendation contained in the following report of the Deputy City Manager of Public Works and the Director of Transportation Services, Parks and Forestry Operations, dated October 5, 2016:

Recommendation

The Deputy City Manager of Public Works and the Director of Transportation Services, Parks and Forestry Operations in consultation with the Director of By-Law & Compliance, Licensing & Permit Services and the Director of Financial Planning and Development Finance and Deputy City Treasurer recommend:

1. That the Speed Compliance Program (the Program) be continued, and expanded to for a two week period for each School Zone location;
2. That locations where speed is a concern be identified as pilot projects for longer term installation of Radar Message Boards (RMBs); and
3. That a capital project be included in the 2017-2020 Draft Budget for the addition of Radar Message Boards for the proposed expansion of the Program.

Contribution to Sustainability

This report contributes to the goals and objectives within Green Directions Vaughan, the City's Community Sustainability and Environmental Master Plan, specifically:

Goal 3: To ensure that Vaughan is a city that is easy to get around with a low environmental impact.

Objective 3.2: To develop and sustain a network of roads that supports efficient and accessible public and private transit.

Economic Impact

The activities associated with the Program are fully funded through the approved 2016 Operating Budget.

The cost to administer the planned 2016 Program is estimated to be \$67,000 which includes, but is not limited to; program development, equipment set up and dismantling, compilation and analysis of data, and maintenance costs.

The useful life of RMBs varies from five to eight years. The City currently owns ten RMBs, which boards have been in use for over nine years. A new investment for RMBs will be required in 2017 and beyond to continue the Program, including planned program expansion to meet new demands.

Approximately 22 new RMBs will be required to expand the Program to include School Zones (12 RMBs) and pilot projects (10 RMBs) over a longer term period. The average cost of a RMB is approximately \$6,500. The total estimated capital cost for the proposed expansion is approximately \$150,000 for 2017.

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF OCTOBER 19, 2016

Item 6, CW Report No. 34 – Page 2

A capital project for the proposed expansion of the Program will be submitted for consideration as part of the 2017 budget process. Funding for the ongoing operating costs to administer the Program will be allocated within the department's operating budget in the respective budget year.

Communications Plan

Staff will inform York Regional Police, the York Region District School Board, and the York Catholic District School Board on the outcome of this report.

Purpose

The purpose of this report is to assess the effectiveness and costs regarding the use of RMBs, and the feasibility of additional pilot projects and permanent locations for these RMBs, as per Council direction at its December 9, 2014 meeting, as outlined in Attachment 1.

Background - Analysis and Options

Radar Message Boards are effective as a community tool to raise awareness of motorist's travel speeds.

The Program is an initiative to raise awareness of motorist travel speeds by using RMBs. The Program is based on the principle that many motorists are somewhat unaware that they are travelling at an excessive rate of speed, since most motorists generally drive at a speed deemed comfortable, depending on road geometry and roadside development. The operating speed electronically displayed on the RMBs is a strong visual reminder to the motorist to comply with the posted speed limit.

Preliminary data indicates that the Program has realized some improvements to compliance of posted speed limit, however, more data and analysis is required.

The Program proactively addresses two types of areas: School Zones and higher capacity roadways with speeding concerns and/or in locations where consistent speeding issues are noted.

School Zones

The Program for School Zones was initially launched in 2005 with the primary focus of using RMBs as an education tool to raise awareness of motorist travel speeds through School Zones. The Program was well received by school administrators, who welcomed raising awareness on safety within school communities.

The 2015 and 2016 School Zones schedule included 48 locations in elementary schools with both the Public and Catholic school boards. The 2016 program schedule is outlined in Attachments 2 and 3. RMBs were placed in a school location for one week in the spring and fall, to align with increased pedestrian activity.

To measure the effectiveness of the Program for School Zones, speed data was collected using Automatic Traffic Recorders (ATRs) on a 24 hour basis at various school locations. The details of the data and analysis are shown in Attachment 4. In general, the data showed compliance of posted speed limit when the RMBs were present.

Higher Capacity Roadways

The higher capacity roadways were considered in two components in the Program:

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF OCTOBER 19, 2016

Item 6, CW Report No. 34 – Page 3

- Speed monitoring on a reactive basis in response to concerns raised by residents, and as received by staff. The RMBs were installed for a two (2) week period at each location.
- Focus on collector and feeder roads with consistent speeding issues noted. The RMBs were installed for an eight week period at each location.

Measuring the effectiveness of the Two (2) Week Program

To measure the effectiveness of the Program for the Higher Capacity Roadways, Speed data was collected using ATRs on a 24 hour basis at selected 13 locations for the two (2) week program, as shown in Attachment 4. The results showed that there are some improvements to speeds during the RMBs installation.

Measuring the effectiveness of the eight (8) Weeks Program

Speed data was collected using ATRs on a 24 hour basis for the eight (8) week Program at five (5) locations, as shown in Attachment 4. While the RMBs were installed, the average speed was found to be lowered by seven (7) km/h and the 85th percentile speed was lowered by eight (8) km/h.

Further, a pilot project launched in 2013 to have RMBs installed on Melville Avenue for more than twelve (12) months (excluding winter months), recorded significantly reduced operating speeds for the southbound direction in spring 2015 when the RMBs were installed. The average and 85th percentile speeds for the southbound traffic were reduced by 11 km/h and 17 km/h, respectively.

An environmental scan of other Municipalities found that RMBs were an effective tool to raise awareness of operating speed.

Staff consulted with other municipalities on the use of RMBs, including Town of Richmond Hill, City of Markham, City of Hamilton, City of Brampton, and Calgary.

Similar to the City of Vaughan, other municipalities in the GTHA used RMBs as part of their speed monitoring program, to educate and inform the drivers about their travel speeds and to increase motorists' road and safety awareness. The Town of Richmond Hill currently has 26 RMBs, City of Markham has 16 RMBs, and the City of Hamilton has 10 RMBs, but is in the process of purchasing an additional 8 RMBs per ward (Hamilton has 15 wards). The duration of the programs varied from two weeks, to one (1) month, two (2) months or twelve (12) months in each municipality. In general, locations were based on community requests, validated through traffic data and assessment. Studies suggested that the use of RMBs in these municipalities is effective at reducing the operating speed and increasing compliance to posted speed when present.

A research conducted by the City of Calgary suggested that RMBs appear to be effective in reducing speeds during installation as well as after removal.

The 2017 Program will be a partnership with York Regional Police and expand into School Zones as well as include one long term pilot location within each ward.

The RMBs have been well-received as a community education tool to raise awareness of motorist travel speed. The preliminary data assessment, together with best practices from other municipalities pointed to having the RMBs possible rotation for a two week period and/or longer period of time. Staff recommend expanding the installation of RMBs in School Zones (elementary schools) to a two (2) week period at each location for 67 schools and in higher capacity roadways

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF OCTOBER 19, 2016

Item 6 CW Report No. 34 – Page 4

for an eight (8) week period for each location (about 18 locations), and to select (5) five locations where speeding has been identified as a prevalent issue to pilot for an extended period of time. The locations are to be selected based on community requests, validated through traffic data and assessment. A monitoring plan will be developed to further assess the effectiveness of the overall program.

The 2017 Program will be coordinated with the Regional Police in joint efforts to address speeding. Regional Police will arrange direct enforcement at locations with RMBs to create a Halo effect. By aligning the interest and resources of the police and City, the Program will improve effectiveness in efforts towards enhancing road safety.

Relationship to Vaughan Vision 2020/Strategic Plan

In consideration of the strategic priorities related to the Term of Council Service Excellence Strategy Map (2014-2018), the Speed Compliance Program will improve traffic operations and safety for all road users, thus promoting community safety, health and wellness.

Regional Implications

Staff consulted with the York Regional Police regarding the Program and received support. Staff will coordinate with the Regional Police to develop the 2017 Program.

Staff will inform York Regional Police, the York Region District School board, and the York Catholic District School Board on the outcome of this report.

Conclusion

RMBs have been well-received as a community tool to raise awareness of motorist travel speeds. Preliminary data analysis indicates the Program has realized some improvements to compliance of posted speed limits. It is recommended to continue and expand the 2017 Program. The 2017 Program will expand into School Zones (elementary schools) for a two week period at each location and include one pilot project location in each ward with a Police partnership to continue to measure the effectiveness of the Program. A monitoring plan will be developed to further assess the overall effectiveness of the Program.

Attachments

1. Extract from Council Meeting Minutes of December 9, 2014
2. 2016 Speed Compliance Program Schedule – School Zone
3. 2016 Speed Compliance Program Schedule – Higher Capacity Roadway
4. Summaries for 2015 Radar Message Board Effectiveness Analyses

Report prepared by:

Wai Lam Tang, Senior Traffic Technologist, Ext. 6125
Margie Chung, Manager of Traffic Engineering, Ext. 6173

(A copy of the attachments referred to in the foregoing have been forwarded to each Member of Council and a copy thereof is also on file in the office of the City Clerk.)