



Subject: Speed Cushion Pilot Project Performance Evaluation

Prepared by: Michael Bat, Traffic/Transportation Analyst

Department: Planning and Development Services

Date: March 20, 2018

In accordance with the Procedure By-law, any Member of Council may request that this Information Report be placed on an upcoming General Committee or Council meeting agenda for discussion.

Executive Summary

This report presents to Council the one-year follow-up performance evaluation of the Speed Cushion Pilot Project.

A total of three locations were selected as part of the Speed Cushion Pilot Project:

- Kennedy Street West from Murray Drive to McGee Crescent/Corner Ridge Road;
- McMaster Avenue from Hollidge Boulevard to Hollandview Trail; and,
- Mavrillac Boulevard from Borealis Avenue to Spring Farm Road.

The installed Speed Cushions are generally accepted by the local neighbourhoods as the Town has not received any concerns or complaints expressed by the local residents. In addition, there are no operating and road maintenance issues as confirmed by Operations Services.

Background

The Speed Cushion installation pilot project was initiated by a Council motion passed on December 16, 2014.

In Report No. IES16-009 – Speed Cushion Pilot Project Follow-Up, staff was directed to undertake performance evaluations to review the effectiveness of the speed cushions in reducing the overall vehicle speed.

Subsequently, Council, at its meeting on July 12, 2017, adopted the following recommendations regarding the Speed Cushion pilot project:

THAT Report IES16-062 be received; and

THAT staff be directed to establish capital project#31154 with the maximum budget of \$100,000.00 for the construction of speed cushions on Kennedy Street West (Murray Drive to McGee Crescent/Corner Ridge Road), McMaster Avenue (Hollidge Boulevard to Hollandview Trail), and Mavrillac Boulevard (Borealis Avenue to Spring Farm Road), to be funded from the Roads Development Charge Reserve Fund.

Analysis

The traffic engineering industry standard utilized in setting the regulatory speed limit for a street facility uses the “85th percentile speed”. The “85th percentile speed” is also defined as the “Operating Speed” in accordance with the Ontario Traffic Manual.

The “85th percentile speed” is defined as “the speed at or below which 85 percent of all vehicles are observed to travel under free-flowing conditions past a monitored point”. Another way to consider this is the speed at which only 15% of traffic violates on average. Traffic Engineers use the 85th percentile speed as a standard to set the speed limit at a safe speed, minimizing crashes and promoting uniform traffic flow along a corridor.

The 85th percentile speed data was collected at all 3 locations mentioned above prior to the installation of the speed cushions in June 2015 and after the installation in October 2017 and is summarized below:

- 2015 Traffic Data (85th percentile speed): ranges from 52 km/h to 59 km/h
- 2017 Traffic Data (85th percentile speed): ranges from 44 km/h to 49 km/h
- Difference in the 85th percentile speed prior and post speed cushion installation is 8km/h to -10 km/h

As summarized above, the 85th percentile speed has decreased by 8 km/h to 10 km/h, or the speed which 15% of traffic exceeds is reduced by 15% to 17%.

The key objective of traffic calming measure is to improve safety for non-motorized road users including pedestrian and cyclists by reducing vehicle travel speed.

As part of the continuous effort to enhance road safety, the Town has initiated the Speed Cushion Pilot Project and installed speed cushions at three selected locations. Speed cushions are raised sections of the roadway designed to discourage vehicle from travelling at excessive speeds, while the wheel cutouts allow large vehicles, in particular emergency vehicles like fire trucks and ambulances to pass through unaffected.

As data shows, the installed speed cushions have demonstrated the effectiveness in reducing the overall vehicle travel speed. Therefore, staff recommends future speed cushion installation at other locations that satisfy the warrant criteria outlined in the Town's Traffic Calming Policy.

In addition, the installed speed cushions are generally accepted by the local neighbourhoods as the Town has not received any concerns or complaints expressed by the local residents.

Advisory Committee Review

Not applicable.

Legal Considerations

Not applicable.

Financial Implications

None.

Communications Considerations

The results of the speed cushion pilot program will be posted to the Traffic Safety consultation on PlaceSpeak. Locations being considered for future speed cushion installation will also be shared on the platform to help inform residents. The Town will also communicate the findings via Council Highlights and share information regarding the consideration of future speed cushions via the Notice Board in the Aurooran, the Town website, social media, and letters to area residents (where appropriate).

Link to Strategic Plan

This report supports the Strategic Plan goal of Support an Exceptional Quality of Life for All by examining traffic patterns and identify potential solutions to improve movement and safety at key intersections in the community.

Alternative to the Recommendation

None.

Conclusions

Speed cushions installation has reduced the speed of traffic at the three selected locations as part of the pilot project – Kennedy Street West, McMaster Avenue and Mavrillac Boulevard.

Staff recommends the installation of speed cushions at other locations that satisfy the warrant criteria outlined in the Town's Traffic Calming Policy. The following are possible future locations for speed cushions installation: Pedersen Drive (from Kirkvalley Crescent to Gateway Drive) and Golf Links Drive (from Murray Drive to 34 Golf Links Drive).

Pedersen Drive – all data have been gathered and Staff is currently in the process to confirm that all warrants outlined in the Town's Traffic Calming Policy are met.

Golf Links Drive – the existing speed humps were installed years ago and Staff is currently in the process of reviewing the need to upgrade these speed controls. Speed data will be collected in the spring in accordance to the Town's Traffic Calming Policy.

Attachments

Attachment # 1: Key Map – Speed Cushion Locations – Pilot Project

Attachment # 2: Key Map – Speed Cushion Locations – Proposed for 2018

Previous Reports

Report Number IES15-027, dated April 7, 2015;

Report Number IES15-054, dated September 22, 2015;

Report Number IES16-009, dated February 2, 2016;

Report Number IES16-051, dated May 17, 2016; and,
Report Number IES16-062, dated July 12, 2016.

Pre-submission Review

Agenda Management Team review on March 1, 2018

Departmental Approval



Marco Ramunno
Director
Planning and Development Services

Approved for Agenda



Doug Nadorozny
Chief Administrative Officer

ATTACHMENT #1

ST. JOHN'S SIDEROAD WEST

ST. JOHN'S SIDEROAD EAST

TOWNSHIP OF KING

BATHURST STREET

YONGE STREET

Railway / GO Transit Line

BAYVIEW AVENUE

MCMASTER AVENUE

MAVRINAC BOULEVARD

Hydro Corridor

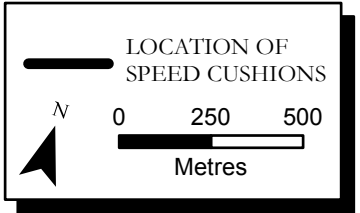
WELLINGTON STREET WEST

WELLINGTON STREET EAST

KENNEDY STREET WEST

YONGE STREET

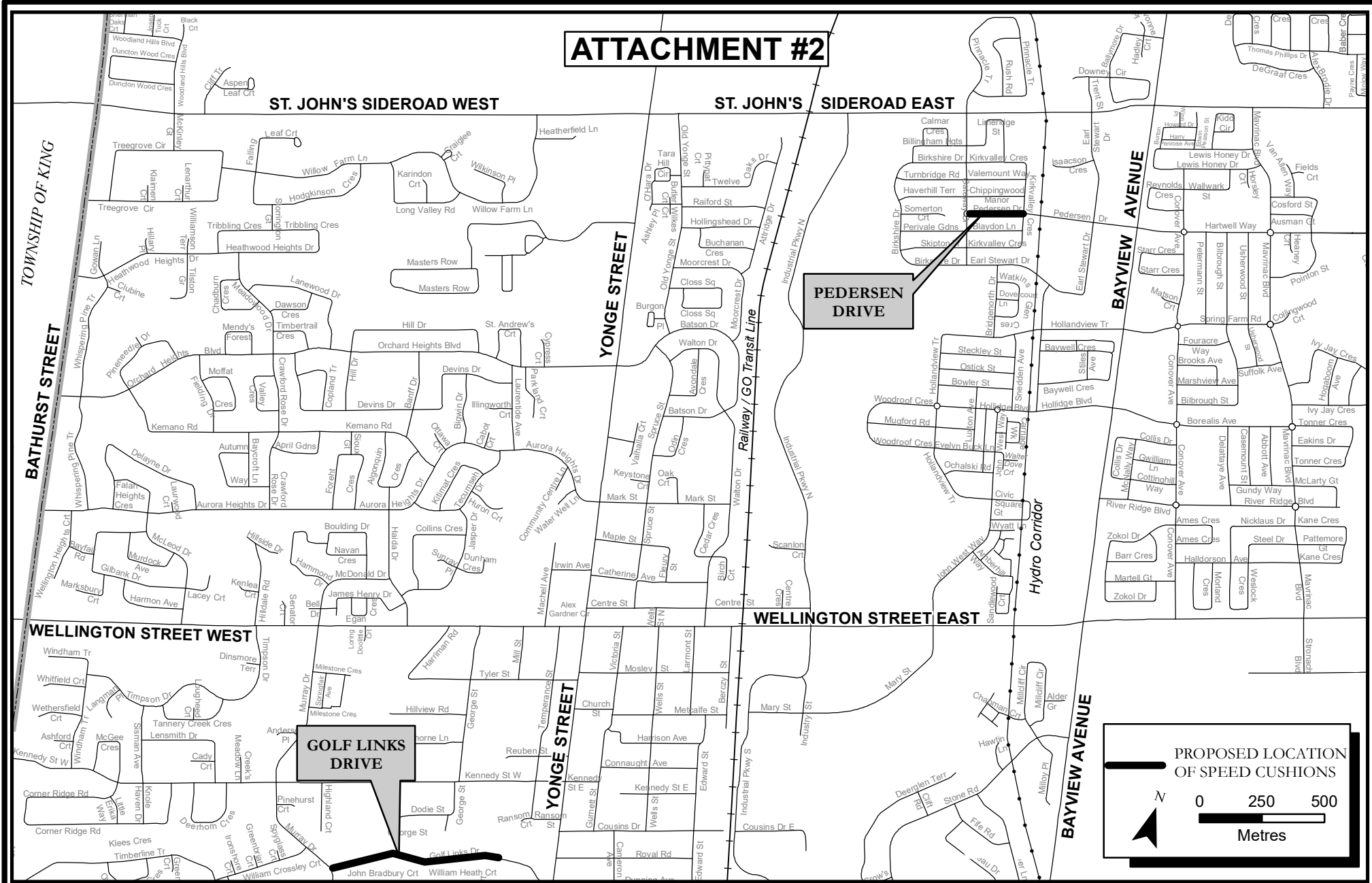
BAYVIEW AVENUE



KEY PLAN SPEED CUSHION LOCATIONS

Map created by the Town of Aurora Planning and Development Services Department, February 5th, 2018. Base data provided by Aurora - GIS and York Region. This is not a legal survey.

ATTACHMENT #2



KEY PLAN SPEED CUSHION LOCATIONS – PROPOSED FOR 2018

PLANNING AND DEVELOPMENT SERVICES DEPARTMENT



PDS18-016

Map created by the Town of Aurora Planning and Development Services Department, February 15th, 2018. Base data provided by Aurora - GIS and York Region. This is not a legal survey.