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Traffic Calming: 2019 and 2020 Flexible Bollard Programs Information Report to Council

Report Number: INFO-2020-08

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In accordance with the Procedure By-law, any member of Council may make a request to the Town Clerk that this Report be placed on an upcoming Committee of the Whole agenda for discussion.

Purpose

The purpose of this report is to provide a summary of the 2019 Flexible Bollard traffic calming program and its effectiveness, and to identify the next steps.

Background

In the spring of 2016, Transportation Services invited a company that manufactures innovative flexible bollards (patented by the company) to come to Newmarket to provide a demonstration of its product on one of our local roads. During the demonstration, it was immediately evident that vehicle speeds were significantly reduced using this technology. Since speeding on local roads has always been of great concern to Newmarket residents, as it is in all municipalities throughout North America and beyond, staff considered initiating an innovative pilot project for traffic calming using these flexible bollards.

Discussion

Following a successful demonstration by the manufacturer of the flexible bollards, Newmarket's traffic calming pilot project was initiated in August, 2016. During the first year of the pilot program, a standard installation method was established, wherein one single set of flexible bollards (one in the centre and one adjacent to each curb) was installed at two separate locations on Savage Road.

Traffic studies were undertaken during the 2016, 2017 and 2018 bollard trial period. In 2016, staff confirmed that vehicle operating speeds at bollard sites were reduced by a minimum of 2 km/h. It was concluded that the bollard trial program was effective at reducing speeds near the bollard locations, but operating speeds were not reduced at locations further away from the bollards.

In 2017, staff confirmed that two sets of bollards at each site would be more effective at speed reduction than a single set. In addition, during the flexible bollard program in 2018, staff confirmed that sets of 3 bollards (placed on Sawmill Valley Drive) were quite effective at reducing speeds for a longer length of roadway.

In 2019, 3 sets of bollards were installed at most of the bollard trial sites, and since it was anticipated that traffic speeds could be reduced over a much longer portion of roadway, 3 sites were selected for multiple bollard installations. Therefore, 4 double sets of bollards were installed on Clearmeadow Boulevard, 5 triple sets were installed on Bayview Parkway, and 6 triple sets were installed on Stonehaven Avenue (as per Attachment 1). Vehicle speeds recorded before and after the bollard installations confirmed that an average reduction of 4.7 km/h was observed.

Conclusion

As described in Attachment 1, speed studies performed at all bollard locations in 2019 confirmed that vehicle operating speeds were significantly reduced. Specifically, at the Bristol Road and the Lorne Avenue sites, speeds were reduced by 7.8 km/h and 6.8 km/h respectively. The average speed at all locations was 4.7 km/h less than the operating speeds measured before the bollards were deployed. Staff confirmed that locations with 4 or more sets of bollards were effective at calming traffic along the full segment of road between bollards, and not only at each single bollard site.

The proposed locations for the Traffic Calming Flexible Bollards in 2020 are presented in Attachment 2.

Business Plan and Strategic Plan Linkages

This report links to Newmarket's Strategic Plan direction, Well Planned & Connected, by protecting vulnerable road users and improving travel within Newmarket.

This report also aligns with Council's 2014-2018 Strategic Priority - Traffic Safety & Mitigation, by ensuring safe streets, improving traffic congestion, and supporting major transit service enhancements.

Consultation

Staff will continue to ensure that households that will be impacted by the traffic calming bollards will be notified, by mail, prior to the installation of bollards.

Human Resource Considerations

Not applicable to this report.

Budget Impact

Operating budget: The spring reinstallation and autumn removal of all traffic calming bollards is estimated at less than \$8,000.00 in 2020. There are sufficient funds in the Transportation Services Operating Budget to cover the cost.

Capital budget: not applicable to this report.

Attachments

1. Summary of Pilot Project Speed Reduction Results, 2019
2. Proposed locations of Traffic Calming Flexible Bollard installations for 2020

Contact

For more information of this report, please contact Bill Gould, Senior Transportation Coordinator, Transportation Services, at 905-953-5300, press “2”, then extension 2512 or bgould@newmarket.ca

Approval

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Director, Engineering Services

Peter Noehammer, P.Eng.
Commissioner, Development and Infrastructure Services

ATTACHMENT 1

Summary of Pilot Project Speed Reduction Results

Flexible Bollard Traffic Calming Pilot Project	
Stonehaven Avenue Site (6 sets):	Operating Speed
Operating speed, average, before bollards	52.0
Operating speed, average, with bollards, 2019	50.3
Queen Street Site (3 sets):	
Operating speed, average, before bollards	54.4
Operating speed, average, with bollards, 2018	48.5
Bayview Parkway Site (5 sets):	
Operating speed, average, before bollards	53.5
Operating speed, average, with bollards, 2019	51.9
Bristol Road Site (3 sets):	
Operating speed, average, before bollards	53.5
Operating speed, average, with bollards, 2019	45.7
Lorne Avenue Site (3 sets):	
Operating speed, average, before bollards	56.9
Operating speed, average, with bollards, 2019	50.1
Clearmeadow Boulevard Site (4 sets):	
Operating speed, average, before bollards	52.3
Operating speed, average, with bollards, 2019	48.6
Bonshaw Avenue Site (3 sets):	
Operating speed, average, before bollards	53.4
Operating speed, average, with bollards, 2019	48.1
TOTAL AVERAGE SPEED REDUCTION	4.7 km/h

ATTACHMENT 2

Proposed 2020 Flexible Bollard Locations

Flexible Bollard	Pilot Project	2020 Locations	No. of Bollard sets, each Location
Ward 1	Kingsmere Avenue, Lockwood Circle	150m each side of Stonehaven Ave.	4 triple sets
	Foxcroft Boulevard	Far North Circle (S) to Bob Scott Cresc.	3 triple sets
Ward 2	Carlson Drive	Sparrow Rd. to Srigley St.	3 triple sets
	Queen Street	Pleasantview Ave. to Prospect St.	3 triple sets
Ward 3	Leslie Valley Drive	Grover Ln. to Traviss Dr.	3 triple sets
	Elgin Street	Waratah Ave. to Magnolia Ave.	6 double sets
Ward 4	Penn Avenue	Vincent St. to Hillview Dr.	4 double sets
	Bristol Road	Jack Rettie Ct. to Vanden Bergh Blvd.	4 double sets
Ward 5	Wilstead Avenue	Queen St. to Monkswood Cresc. (N)	4 triple sets
	Queen Street	Lorne Ave. to Forest Glen Rd.	2 triple sets
Ward 6	Doubletree Lane	Jordanray Blvd. to Clearmeadow Blvd.	3 double sets
	Joe Persechini Drive	Colter St. to Sawmill Valley Dr.	3 double sets
Ward 7	McCaffery Road	Between Brimson Dr. and Petheram Pl.	3 double sets
	Woodspring Avenue	Between Aspenwood and Bonshaw	3 triple sets