



STAFF REPORT ACTION REQUIRED

Birdstone Crescent – Legal Speed Limit Reduction

Date:	April 29, 2010
To:	Etobicoke York Community Council
From:	Director, Transportation Services - Etobicoke York District
Wards:	Ward 11 – York South-Weston
Reference Number:	p:\2010\Cluster B\TRA\EtobicokeYork\eycc100073-to

SUMMARY

This staff report is about a matter that Community Council has delegated authority from City Council to make a final decision.

The purpose of this report is to obtain approval to reduce the speed limit on the entire length of Birdstone Crescent.

We have determined that the existing road conditions on Birdstone Crescent justify reducing the legal speed limit from 50 km/h to 40 km/h.

RECOMMENDATIONS

Transportation Services recommends that Etobicoke York Community Council approve:

1. Enacting a 40 km/h maximum speed limit on Birdstone Crescent, from Weston Road (north) to Weston Road (south).

Financial Impact

Type of Funding	Source of Funds	Amount
Available within current budget	Transportation Services Operating Budget	\$800.00

ISSUE BACKGROUND

We received a request from the office of Councillor Frances Nunziata to

- consider all-way STOP controls at the two Birdstone Crescent intersections with Brickworks Lane; and,
- to reduce the legal speed limit from 50 km/h to 40 km/h on Birdstone Crescent.

To quantify concerns, studies were conducted by Transportation Services staff. The results were applied to the City's All-Way STOP Sign Controls Warrant and 40 km/h Speed Limit Warrant. Maps of the area are Attachments 1 and 2.

COMMENTS

Birdstone Crescent is an 8.5 metre, two-lane local road constructed to urban standards (curb and gutter) with sidewalks on both sides. The existing legal speed limit is 50 km/h for the entire length of the road.

The justification for installing all-way STOP controls is based on a technical warrant adopted by Toronto City Council based on crash history and traffic volume. Our study results conclude that all-way STOP controls are not justified at either of the two Birdstone Crescent intersections with Brickworks Lane as vehicle volumes entering the intersections are too low to satisfy the minimum warrant requirements. Study results are summarized in Appendix A.

According to the City's 40 km/h Speed Limit Warrant, forty km/h speed limits may be implemented on roads where the criteria of 'Road Width' (Section 'A') and either Pedestrian Environment (Section 'B') or 'Road and Traffic Environment' (Section 'C') are satisfied.

Birdstone Crescent satisfies the 'Road Width' and 'Road and Traffic Environment' criteria as shown in the attached appendix. There are two curves on Birdstone Crescent where the safe operating speed is less than 50 km/h.

We also conducted automatic speed and volume studies on Birdstone Crescent and the results of those studies are as follows.

Location	Speed Limit	Vehicle Speeds (km/h)			Traffic Volume		
		85 th percentile	Average	10 km/h Pace	AM (1-hour)	PM (1-hour)	24-Hour
Birdstone Crescent between Brickworks Lane (south) and Brickworks Lane (north)	50 km/h	39	29	26-35	15	21	248

The 85th percentile and 10 km/h pace speed are statistical measures of free-flow vehicle operating speeds. The 85th percentile speed is the vehicle operating speed at or below which 85 percent of all traffic is moving. Studies show that crash rates are lowest at or around the 85th percentile speed. The 10km/h pace speed represents the speed range containing the highest number of speed observations.

Implementing a reduced legal speed limit on Birdstone Crescent does not penalize the vast majority of motorists since they already travel at or below the proposed 40 km/h. speed limit.

CONTACT

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SIGNATURE

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ATTACHMENTS

Appendix A:	All-Way STOP Table
Appendix B:	40 km/h Warrant Table
Attachment 1:	Context Map & Aerial Photograph
Attachment 2:	Detailed Map

APPENDIX A

Warrants for All-way “Stop” Sign Control

Study location: Birdstone Crescent (North Leg)

Four-Hour Study Period	Total Approach Vehicle Volume	Vehicle/Pedestrian Volume Crossing Major Road	Unit Volume Split Major/Minor Roads
Study Period Average	41	12	72/28
Warrant Requirements for Study Period Average	≥ 250	≥ 100	$\geq 30/70$ or $\leq 70/30$

Study location: Birdstone Crescent (South Leg)

Four-Hour Study Period	Total Approach Vehicle Volume	Vehicle/Pedestrian Volume Crossing Major Road	Unit Volume Split Major/Minor Roads
Study Period Average	26	19	53/47
Warrant Requirements for Study Period Average	≥ 250	≥ 100	$\geq 30/70$ or $\leq 70/30$

To warrant the installation of an all-way STOP control, the traffic volume requirements for the “Study Period Average” must be completely satisfied in either of the following two combinations:

1. “Total Approach Vehicle Volume” & “Unit Volume Split – Major/Minor Roads”
or
2. “Vehicle/Pedestrian Volume Crossing Major Road” & “Unit Volume Split-Major/Minor Roads”

APPENDIX B

40 Km/h Speed Limit Warrant – Birdstone Crescent

A. ROAD WIDTH	
(i) Pavement width equal to or greater than 10.5 metres and the 85 th percentile speed is equal to or less than 50 km/h Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
OR	
(ii) Pavement width less than 10.5 metres Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
PAVEMENT WIDTH: 8.5 metres 85TH PERCENTILE SPEED: 39 km/h	

AND

B. PEDESTRIAN ENVIRONMENT	
(i) Elementary or junior high school abuts the road Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
OR	
(ii) Parkland abuts the road which is contiguous to and used to gain access to an elementary or junior high school Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
OR	
(iii) Absence of sidewalk on both sides of the road or a major portion of the road Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

OR

C. ROAD AND TRAFFIC ENVIRONMENT	
(i) Two or more locations where grades are greater than 5%; and/or safe speed on curves is less than 50 km/h Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
OR	
(ii) 2 or more locations where there is lack of sufficient distance to stop safely traveling at 50 km/h Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
OR	
(iii) Pattern of collisions where vehicle speed was identified as a factor Local streets – 3 or more over 3 years Other streets – 5 or more over 3 years Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Warrant Satisfied? Yes