



**STAFF REPORT
ACTION REQUIRED**

Chartwell Road – Traffic Calming and All-Way Stop Control

Date:	January 13, 2010
To:	Etobicoke York Community Council
From:	Director, Transportation Services - Etobicoke York District
Wards:	Ward 5 – Etobicoke-Lakeshore
Reference Number:	p:\2010\Cluster B\TRA\EtobicokeYork\eycc100026-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 describe the results of an investigation into a request for speed humps on Chartwell Road and an all-way STOP control at the intersection of Chartwell Road/Ambleside Avenue. A staff assessment concludes that the criteria for installing speed humps are met on Chartwell Road, between Norseman Street and The Queensway, and the warrants for all-way STOP controls are achieved at the intersection of Chartwell Road/Ambleside Avenue.

RECOMMENDATIONS

Transportation Services recommends that Etobicoke York Community Council approve:

1. Installing an all-way STOP control at the intersection of Chartwell Road and Ambleside Avenue;
2. Authorizing the City Clerk to conduct a poll of eligible residents, on Chartwell Road, between Norseman Street and The Queensway, to determine public support for the proposed speed hump plan; and,

3. Subject to favourable results of the poll;
 - a. The City Solicitor prepare a by-law to alter sections of the roadway on Chartwell Road, between Norseman Street and The Queensway, for traffic calming purposes, generally as shown on the attached Drawing EY10-011, dated January 2010, and circulated to residents through the polling process; and,
 - b. Transportation Services take the necessary actions to reduce the speed limit from 40 km/h to 30 km/h on Chartwell Road, between Norseman Street and The Queensway, when the speed humps are installed.

Financial Impact

Type of Funding	Source of Funds	Amount
Available within current budget – Signs and markings related to proposed All-Way STOP Control	Transportation Services Capital Budget	\$800.00
Available within current budget – proposed speed hump installation (12 humps) and related signage/markings	Transportation Services Capital Budget	\$36,000.00
Total		\$36,800.00

ISSUE BACKGROUND

As a result of a community meeting and a petition from residents on Chartwell Road, submitted to Councillor Peter Milzcyn , Transportation Services staff investigated the need for traffic calming (speed humps) on Chartwell Road, between Norseman Street and The Queensway, to address concerns with speeding. In addition, staff investigated the need for all-way STOP controls at the intersection of Chartwell Road/Ambleside Drive, to address a perception that the traffic volumes at this intersection are too heavy to permit traffic to cross safely.

A map of the area is Attachment 1.

COMMENTS

Chartwell Road is classified as a two-way local road located in the residential community east of Islington Avenue, south of Norseman Street. Norseman Junior Middle School is located in the immediate area at 105 Norseman Street, on the south side of Norseman Street, just west of Chartwell Road. Sidewalks are located on both sides of the road.

The posted speed limit on Chartwell Road is 40 km/h. An all-way STOP control is currently located at the intersection of Chartwell Road/Athol Avenue.

To evaluate the need for an all-way STOP control at the intersection of Chartwell Road and Ambleside Drive, an intersection count was conducted on Tuesday, April 28, 2009.

Installing all-way STOP controls is subject to a technical warrant adopted by Toronto City Council that is based on crash history and traffic volume. Our study results are summarized in Appendix A. While the intersection of Chartwell Road/Ambleside Drive meets the necessary criteria for all-way STOP controls, we would like to point out that the volume of traffic entering this intersection is not particularly heavy and we observed no significant delays to vehicles entering Ambleside Avenue. If approved, installing speed bumps is expected to achieve a 7 to 10 km/hr reduction in vehicle operating speeds on Chartwell Road.

Despite the fact that at the all-way STOP control warrant is met at the Ambleside Avenue/Chartwell Drive intersection, and given the excellent operating level-of-service at this location and the recommended installation of physical traffic calming, we cannot help but question what practical benefit a multi-way STOP control installation will have. In our view, this installation, while warranted, is made redundant by installing speed bumps, and Community Council should consider not enacting Recommendation No. 1. We also suggest that if speed bumps are approved on Chartwell Road, that Community Council also consider removing the all-way STOP control at the Chartwell Road/Athol Avenue intersection, and replace with STOP controls on the Athol Avenue approaches only.

To address the petition for traffic calming, speed and volume studies were conducted on Chartwell Road, south of Inverness Avenue, and south of Badger Drive. The results of these studies are summarized in the following table:

Count Date: April 23, 2009						
Location	Chartwell Road, south of Inverness Avenue, Both ways			Chartwell Road, south of Badger Drive, Both ways		
Time Period	Traffic Volume (Veh/Hour)	85 th %-tile Speed (km/h)	10 km/h Pace (km/h)	Traffic Volume (Veh/Hour)	85 th %-tile Speed (km/h)	10 km/h Pace (km/h)
a.m. Peak Hour	90	53	37-46	212	50	36-45
p.m. Peak Hour	117	48	31-40	209	51	41-50
Total 24 Hour	1180	50	36-45	2094	51	36-45

The following table summarizes historical traffic volumes for both directions on Chartwell Road, in the area of Badger Drive.

Date	May 11, 1999	March 19, 2001
a.m. Peak Volume	264	276
p.m. Peak Volume	219	203
24 Hour Volume	2285	2249

Traffic volumes on Chartwell Road have remained stable over the last ten years

The 85th percentile speed and 10 km/h pace speed are statistical measures of free-flow vehicular operating speed. 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 10 km/h pace speed represents the speed range containing the highest number of speed observations.

We applied these road conditions to the City of Toronto's Traffic Calming Policy, adopted by City Council at its meeting of April 16, 17 and 18, 2002. According to the policy, the principle criteria for installing speed humps are vehicle speed and volume. Other environmental factors are also considered, such as road width, pedestrian facilities and grade. The proposal was evaluated under these technical criteria, with the results summarized in Appendix B. Applying the study data to the Traffic Calming Warrant shows that Chartwell Road, between Norseman Street and The Queensway, satisfies the criteria for speed humps.

We emphasise that installing speed humps results in slower operating speeds for all vehicles, including emergency service vehicles, and can result in increased response times in the event of an emergency.

The City of Toronto Traffic Calming Policy requires that the City Clerk must formally survey residents directly affected by installing speed humps on Chartwell Road. Under the policy, we must receive a minimum response rate of 51 per cent, of which at least 60 per cent of respondents must respond in favour installing speed humps.

Subject to approval by Community Council of the recommendations outlined above, the City Clerk will survey residents on Chartwell Road, between Norseman Street and The Queensway. If the survey supports installing speed humps on this portion of street, Transportation Services staff will schedule installation according to relative need and competing priorities.

No alterations to parking regulations are required. The number of existing on-street parking spaces is not affected by the installation, with no significant negative impact on winter services, street cleaning or garbage collection.

Consultation with emergency services (Police, Fire and Emergency Medical Services) is required to ensure that the design and layout of traffic calming proposals do not negatively affect their operations. Although we generally advise emergency services of our intentions, we do not always receive a formal response; however, in the past Toronto Fire Services has provided the following general statement regarding speed hump installation.

“...Toronto Fire Service is supportive of initiatives that improve the life safety of our citizens. Our concern is that the physical calming measures being proposed may negatively impact emergency response to the area.

The vertical restrictions imposed by speed humps have a much greater affect on large fire vehicles than smaller passenger vehicles. Response time increases with every obstacle a fire vehicle encounters en route from the fire station to the incident. Although the increase at each hump may only be seconds, the cumulative effect can be a significant amount of time that could result in increased property damage, unnecessary injury or loss of life.

Speed humps are generally hard on large, heavy vehicles (fire vehicles) and increase the potential to suffer mechanical damage. This in turn can lead to a vehicle being placed out of service for considerable periods of time. Aside from the costs associated with repairs, there is a decrease in the resources available to respond to other emergency situations.”

CONTACT

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SIGNATURE

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ATTACHMENTS

Appendix “A”: Warrants for All-way “Stop” Sign Control
Appendix “B”: Traffic Calming Warrant Criteria Table – Chartwell Road
Attachment 1: Map - Proposed Speed Hump Location Plan

APPENDIX A

Warrants for All-way “Stop” Sign Control

Study location: Chartwell Road and Ambleside Avenue (minor or stop street)

Date: Tuesday, April 28, 2009

Four-Hour Study Period 8:00 a.m. to 9:00 a.m. 3:00 p.m. to 6:00 p.m.	Total Approach Vehicle Volume	Vehicle/Pedestrian Volume Crossing Major Road	Unit Volume Split Major/Minor Roads
Study Period Average	259	95*	65/35
Warrant Requirements for Study Period Average	≥ 250	≥ 100	$\geq 30/70$ or $\leq 70/30$

*An average of 10 pedestrians per hour crossed the major road.

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

Traffic Calming Warrant Criteria

Chartwell Road, between Norseman Street and The Queensway

Warrant	Criterion	Requirement	Met/Not Met
Warrant 1 Petition	1.1 Petition	A petition requesting traffic calming must be signed by at least 25% of households on the street. OR A direct request from the Ward Councillor. Warrants #2 and #3 will not be considered until Warrant #1 is satisfied.	Met – Petition and request from Ward Councillor
Impacts to Adjacent Streets		No significant traffic impacts on adjacent streets	Met –there should be no traffic spill-over to other streets given the configuration of streets in the area
Warrant 2 Safety Requirements (all three criteria must be fulfilled to satisfy this Warrant)	2.1 sidewalks	Continuous sidewalks on at least one side of the street (both sides for collector streets or higher classification). OR Where there are no sidewalks, the installation of sidewalk on at least one side of the street must have first been considered	Met – continuous sidewalks on both sides
	2.2 Road Grade	Road grade 5% or less OR Between 5% and 8% road grade may be considered. Investigation must determine installation to be safe.	Met – Road grade is less than 8%
	2.3 Emergency Response	No significant Impacts on Emergency Services (as determined in consultation with Emergency Services (Fire, Ambulance and Police) staff.	General objections from Toronto Fire, Ambulance and Police
Warrant 3 Technical Requirements (all four criteria must be fulfilled to satisfy this warrant)	3.1 Minimum Speed	85 th percentile speed is a minimum of 10 km/h (but less than 15 km/h) over a warranted 40 km/h speed limit, and the traffic volume requirements of Warrant 3.2 must be fulfilled. OR On streets where the 85 th percentile speed exceeds a warranted 40 km/h speed limit by a minimum of 15 km/h, there is no minimum volume required in warrant 3.2.	Met – Speed studies show max. 85 th (24 hr total) percentile as 51 km/h
	3.2 Min. and Max. Traffic Volume	Local Roads Traffic volume between 1,000 Veh/day and 8,000 Veh/day	Collector Roads Traffic volume between 2,500 Veh/day and 8,000 Veh/day
	3.3 Minimum Street Segment Length between stop controls	Street segment length must exceed 120 meters between stop controls (signals or stop signs)	Met – Street segments exceeds 120 metres
	3.4 Transit Service	Impacts on regularly scheduled Toronto Transit Commission (TTC) services will not be significant (as determined in consultation with TTC staff)	Met – No TTC service