

All Way Stop Control(s): William Cragg Drive, Epsom Downs Drive to Smallwood Drive

Date:	May 25, 2009
To:	North York Community Council
From:	Director, Transportation Services Division, North York District
Wards:	Ward 9 – York West
Reference Number:	<i>ny09040</i>

SUMMARY

This staff report is about a matter that the Community Council has delegated authority to make a final decision, provided that it is not amended so that it varies with City policy or by-laws.

To deny the request for the installation of all way stop controls at the following intersections:

- William Cragg Drive at Epsom Downs Drive;
- William Cragg Drive at Redfern Avenue;
- William Cragg Drive at Palamar Road;
- William Cragg Drive at Smallwood Drive;and
- William Cragg Drive at Epic Lane Road

The existing traffic and roadway conditions do not warrant the introduction of all way stop controls at any of the above noted intersections.

RECOMMENDATIONS

Transportation Services Division recommends to North York Community Council that:

1. the installation of all way stop controls at the intersections of William Cragg Drive at Epsom Downs Drive not be implemented;

2. the installation of all way stop controls at the intersections of William Cragg Drive at Redfern Avenue not be implemented;
3. the installation of all way stop controls at the intersections of William Cragg Drive at Palamar Road not be implemented;
4. the installation of all way stop controls at the intersections of William Cragg Drive at Smallwood Drive not be implemented; and
5. the installation of all way stop controls at the intersections of William Cragg Drive at Epic Lane Road not be implemented.

FINANCIAL IMPACT

There is no financial impact associated with the adoption of this report.

ISSUE BACKGROUND

The Transportation Services Division was requested by Councillor Maria Augimeri on behalf of the residents to attend a public meeting on May 6, 2009 to discuss the existing traffic operations on William Cragg Drive. The residents in attendance at the meeting requested that Councillor Augimeri request that staff bring forth a report to North York Community Council to report on the feasibility of installing all way stop controls at the above noted intersections.

It should be noted that the William Cragg Drive traffic operations assessment was initially initiated in September of 2007 at the request of the residents of William Cragg Drive (petition). They specifically requested that a review of the following issues be undertaken:

- Installation of all-way stop controls between Jane Street and Wilson Avenue;
- Vehicle speeds on William Cragg Drive; and
- Pedestrian Safety (sidewalks)

COMMENTS

William Cragg Drive is designated as a local road with a posted speed limit of 40 km/h and is comprised of single family homes. There are no municipal sidewalks on either sides of the roadway. William Cragg Drive serves as one of the main connections to the community from either Jane Street on the west or Wilson Avenue on the east/south.

Currently, eastbound and westbound traffic operates as free flow and is only required to stop at Tumpane Street and Jane Street. The roadway geometry/characteristics of this roadway are less than typical given the intersections configuration of William Cragg Drive with Epsom Downs Drive/Tumpane Street and the roadway alignment of William Cragg Drive between Epic Lane Road and Smallwood Drive. The intersection of William Cragg Drive with Epsom Downs Drive/Tumpane Street forms a five-legged intersection with four of the approaches required to stop and the northbound approach being free flow, thus having right-of-way through the intersection.

The intersection of William Cragg Drive with Epic Lane Road/Smallwood Drive forms a four-legged intersection with the south approach (Epic Lane Road) and the north approach (Smallwood Drive) required to stop. This intersection configuration is unconventional in that Smallwood Drive intersects with William Cragg Drive diagonally and is off-set from Epic Lane Road. In addition to the unconventional alignment, the pavement width at both of these locations is excessively wide and results in driver and pedestrian confusion.

In regards to the intersections of William Cragg Drive and Redfern Avenue and Palamar Road and Dana Avenue, they all form standard T-type intersections, requiring minor street traffic to stop.

All-Way Stop Controls

To assess existing traffic conditions, this Division conducted all way stop studies at each of the intersections. During the study, staff recorded the total volume of traffic which utilized the intersections, observed the operational characteristics, collision statistics and the intersection geometry. The following tables illustrate the results of the studies, where the major road is classified as a local road:

William Cragg Drive at Epsom Downs Drive/Tumpane Street

William Cragg drive at Epsom downs Drive		Actual	Required	Satisfied (YES/NO)
A	Collision History	5/3 yrs	6/3 yrs	NO
B1	Total Vehicle Volumes	206	250/avg hr	NO
B2	Combined Vehicle & Pedestrian Volumes Crossing Major Road	81	100/avg hr	NO
B3	Percentage of Traffic on Major Road	62	=70	YES
Overall Warrant				NO

In order for the all way stop “Overall Warrant” to be warranted either Warrant A must be met or Warrant B1 or B2 combined with Warrant B3 must be achieved.

In view of the above results, this division is unable to support the installation of an all way stop control at this intersection at this present time, given the existing geometry and the Warrant analysis having not been achieved.

However, given the current configuration of the intersection and the collision data (5 collisions), a Safety Operational Improvement Review (SOIP) of this intersection was completed. The review has concluded that the most appropriate action to improve both pedestrian and motorist movements at the intersection of William Cragg Drive/Epsom Downs/Tumpane Street, would be to remove the fifth leg and create a traditional all way stop control, as per Attachment 2.

This option was presented to the residents and they have agreed that the reconfiguration of this intersection would be appropriate and have provided their support. As such this division will be submitting a request to the Infrastructure and Asset Management Section to give consideration to including this proposal as part of the Safety Operational Improvement Program for 2010. Once confirmation has been received that the intersection will be reconfigured, this Division will be submitting a subsequent report for the implementation of the proposed operational improvement, consisting of the installation of the all way stop control and intersection modifications. It should be noted that the reconfiguration of the intersection will result in an increase in vehicle volumes at the intersection, thus resulting in the installation of an all way stop control being warranted.

William Cragg Drive at Redfern Avenue and Palamar Road

	William Cragg drive at Redfern Avenue	Actual	Required	Satisfied (YES/NO)
A	Collision History	0/3 yrs	6/3 yrs	NO
B1	Total Vehicle Volumes	72	250/avg h	NO
B2	Combined Vehicle & Pedestrian Volumes Crossing Major Road	6	100/avg h	NO
B3	Percentage of Traffic on Major Road	92	=70	NO
	Overall Warrant			NO

	William Cragg drive at Palamar Road	Actual	Required	Satisfied (YES/NO)
A	Collision History	0/3 yrs	6/3 yrs	NO
B1	Total Vehicle Volumes	111	250/avg h	NO
B2	Combined Vehicle & Pedestrian Volumes Crossing Major Road	3	100/avg h	NO
B3	Percentage of Traffic on Major Road	98	=70	NO
	Overall Warrant			NO

In order for the all way stop “Overall Warrant” to be warranted either Warrant A must be met or Warrant B1 or B2 combined with Warrant B3 must be achieved.

In reviewing the three-year collision history, there have been no collisions of a type susceptible to correction by the installation of an all way stop control at the above intersections. Motorist and pedestrian sight lines were found to be clear and unobstructed for all approaches to the intersections. Also, no pedestrian or vehicular conflicts were observed during the study period.

In view of the above study results, the installation of an all way stop controls are not warranted at these two intersections.

William Cragg Drive, Epic Lane Road to Smallwood Drive

	William Cragg drive at Smallwood Drive	Actual	Required	Satisfied (YES/NO)
<i>A</i>	Collision History	2/3 yrs	6/3 yrs	NO
<i>B1</i>	Total Vehicle Volumes	152	250/avg hr	NO
<i>B2</i>	Combined Vehicle & Pedestrian Volumes Crossing Major Road	31	100/avg hr	NO
<i>B3</i>	Percentage of Traffic on Major Road	80	=70	YES
	Overall Warrant			NO

	William Cragg drive at Epic Lane	Actual	Required	Satisfied (YES/NO)
<i>A</i>	Collision History	1/3 yrs	6/3 yrs	NO
<i>B1</i>	Total Vehicle Volumes	183	250/avg hr	NO
<i>B2</i>	Combined Vehicle & Pedestrian Volumes Crossing Major Road	62	100/avg hr	NO
<i>B3</i>	Percentage of Traffic on Major Road	67	=70	YES
	Overall Warrant			NO

In order for the all way stop “Overall Warrant” to be warranted either Warrant A must be met or Warrant B1 or B2 combined with Warrant B3 must be achieved.

It should be noted that all though, both of the above noted intersections have experienced minimal collisions (see above), neither of the collisions would be have been susceptible to correction by the installation of an all way stop given the present roadway alignment.

The results of our review determined that all way stop controls are not justified at either of these two intersections along this section of William Cragg Drive. Also, given the current roadway alignment and intersection alignments this division can not support the installation of an all way stop control at either of the two intersections.

To address operational concerns, a proposal to modify the alignment of the roadway as per the attached plan NY-1293 has been developed. The realignment of the intersection would allow southbound traffic on Smallwood Drive to be perpendicular to William Cragg Drive, thereby improving motorist sight lines. The realignment would also decrease the road width, thus reducing the pedestrian crossing length and would also prevent motorists from overtaking/by-passing, an action which has been observed.

Residents of the roadway are not in favour of the proposed realignment of the section of roadway between Epic Lane Road and Smallwood Drive as per plan NY-1293. However, it remains the position of this division that the most appropriate means of addressing the traffic operational concerns is to undertake the proposed realignment.

Vehicle Speeds

To assess existing traffic conditions, 24-hour vehicle speed and volume studies were conducted on William Cragg Drive. The following table identifies the results of those studies:

William Cragg Drive	Dir	Speed Limit	Vehicle Speeds		Traffic Volume		
			Operating	Average	AM	PM	24 Hr
Jane St to Epic Lane Rd	WB	40	49	42	62	82	829
	EB		50	41	87	102	1146
Smallwood Dr to Palamar Rd	WB		55	46	40	51	507
	EB		54	45	56	63	686
Redfern Ave to Tumpane St	WB		49	41	31	52	451
	EB		48	41	59	51	631
Epsom Downs Dr to Wilson Ave	NB		41	35	80	48	755
	SB		42	36	75	107	928

Results of the vehicle speed studies confirm that operating speeds, the speed at which 85% of the traffic travels at or below, are less than 55 km/h and average speeds are less than 46 km/h within the section of roadway between Smallwood Drive and Palamar Road. The operating speed on the remaining sections of roadway is less than 50 km/h.

Given that operating speeds on William Cragg Drive, between Smallwood Drive and Palamar Road are in excess of 10 km/h over the posted speed limit, the results of the vehicle speed studies have been forwarded to the Toronto Police Service for the appropriate level of enforcement.

Pedestrian Safety

During our review it was observed that pedestrians traveling along William Cragg Drive were required to walk around numerous parked vehicles on the roadway. This practice results in pedestrians either walking on the boulevard or in the middle of the roadway, which further impacts pedestrian safety and heightens the perception of excessive vehicle speeds.

To improve pedestrian safety, this division has requested the Pedestrian and Cycling Infrastructure Section to consider the installation of a sidewalk on William Cragg Drive, from Jane Street to Tumpene Street.

Councillor Maria Augimeri has been advised of the recommendations in this staff report.

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SIGNATURE

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Director

ATTACHMENTS

- Attachment 1: Map – All-Way Stop Control; William Cragg Dr (*ny09040_map1*)
- Attachment 2: Map – Proposed Minor Road Improvements; William Cragg Drive/Epsom Downs Dr (*ny09040_map2*)
- Attachment 3: Map – Proposed Minor Road Improvements; William Cragg Drive, Epic Lane Road to Smallwood Drive (*ny09040_map3*)