



Report to: General Committee

Date Report Authored: April 10, 2012

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**SUBJECT:** Proposed All-way Stop Control and Speed Limit Reduction at  
Cornell Centre Boulevard & White's Hill Avenue

**PREPARED BY:** Musa Deo, Traffic Operations Technologist, ext. 2736  
David Porretta, Traffic Operations Supervisor, ext. 2040

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**RECOMMENDATION:**

1. That the report entitled "Proposed All-way Stop Control and Speed Limit Reduction at Cornell Centre Boulevard & White's Hill Avenue", be received;
2. And that Schedule "B"(60 km/h) of Speed By-law No. 105-71 be amended by removing Markham Road By-pass, between 9<sup>th</sup> Line to a point 100 metres north of Highway 7;
3. And that Schedule "D"(70 km/h) of Speed By-law No. 105-71 be amended by removing Markham Road By-pass, between 9<sup>th</sup> Line to a point 100 metres north of Highway 7;
4. And that Schedule "F" (50 km/h) of Speed By-law No. 105-71 be amended to include Cornell Centre Boulevard, between Highway 7 and 16<sup>th</sup> Avenue;
5. And that Schedule 12 (Compulsory Stops) of Traffic By-law 106-71 be amended to include the intersection of Cornell Centre Boulevard & White's Hill Boulevard;
6. And that the Operations Department be directed to install the appropriate signs and pavement markings at the subject locations, funded through the Operations Department account # 083-5399-8402-005;
7. And that the Operations Department be directed to maintain the signs at the subject locations;
8. And that York Region Police be requested to enforce the posted speed limit and all-way stop control upon installation of these signs and passing of the By-law;
9. And that staff be authorized and directed to do all things necessary to give effect to this resolution.

**PURPOSE:**

This report recommends implementing an all-way stop at the intersection of Cornell Centre Boulevard & White's Hill Avenue and establishing a posted speed limit of 50 km/h on Cornell Centre Boulevard.

**BACKGROUND:**

Through Ward 5 Councillor Campbell's office, local residents and York Region District School Board administrative staff are requesting an all-way stop control at the intersection of Cornell Centre Boulevard and White's Hill Boulevard to help improve safety at the intersection. Also, a

new school will be opening near the intersection this Fall and due to this, an increase in vehicular and pedestrian traffic is expected.

Cornell Centre Boulevard, formerly known as Markham By-pass, is a 4-lane major collector road, with a posted speed limit of 70 km/h. Originally classified as a major collector road, Markham By-pass provided an alternative route to Main Street Markham and 9<sup>th</sup> Line. Ongoing development of the Cornell community and the opening of Donald Cousens Parkway have since diminished the importance of Markham By-pass as an alternate route.

#### **DISCUSSION:**

Stop control is currently assigned to White's Hill Avenue, with right-of-way given to Cornell Centre Boulevard. This intersection currently provides the only link between residential communities to the east and west of Cornell Centre Boulevard. Also, Black Walnut Public School, located one block to the south of the intersection, is scheduled to open September, 2012 and will generate additional pedestrian and vehicular volume that will impact operations at this intersection (see Attachment "A").

#### **All-way stop control is recommended at Cornell Centre Blvd. & White's Hill Avenue**

An all-way stop control may be considered where provincial warrant guidelines are met as outlined in Ontario Traffic Manual. The warrants consider total vehicular volume and volume distribution between the major and minor approaches of the intersection during the busiest hour of the day. In October 2011, Operations Department conducted an all-way stop control warrant on a weekday between the hours of 8:00am – 9:00am. The warrant analysis results are as follows:

<b>WARRANT 1</b> <b>Total Traffic Volume</b> <i>(All Approaches)</i>			<b>WARRANT 2</b> <b>Volume Assigned to "Minor" Street</b> <i>(White's Hill Blvd.)</i>		
<b>Minimum Criteria</b>	<b>Recorded Value</b>	<b>Criteria Met?</b>	<b>Minimum Criteria</b>	<b>Recorded Value</b>	<b>Criteria Met?</b>
<b>&gt; 350</b>	<b>309</b>	<b>NO</b>	<b>35%</b>	<b>39%</b>	<b>YES</b>

Both Warrants 1 and 2 must meet minimum criteria for an all-way stop to be justified. While Warrant 2 was met, Warrant 1 did not. However, the 2010 Mattamy Cornell Traffic Study (see Attachment "B"), identifies the intersection as requiring an all-way stop control as part of the forthcoming Mattamy Cornell development. Further, ongoing residential development east of Cornell Centre Boulevard and the opening of the school this September will increase vehicular and pedestrian volumes on White's Hill Avenue over the next several years.

Therefore, staff is recommending that the all-way stop control be installed prior to the school opening to help improve operational safety at the intersection. Once the school has been opened, Traffic Operations staff will consider implementing a school crossing guard at this location, if warranted.

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**A posted speed limit of 50 km/h is recommended on Cornell Centre Boulevard**

The Mattamy Cornell Traffic Study has identified Cornell Centre Boulevard as being reconstructed into 2-lane residential collector road, with a posted speed limit of 40 km/h. However, this will not occur for at least two years. In the interim, Cornell Centre Boulevard will continue to operate as a 4-lane collector road. With the ongoing residential development activity, construction traffic and the school opening this September, the existing 70 km/h speed limit is no longer suitable.

Therefore, staff is recommending that the speed limit be reduced to 50 km/h (see Attachment "C"). This will ensure a safer driving environment while maintaining the efficient flow of traffic that is expected of a 4-lane collector road. Once Cornell Centre Boulevard is reconstructed into a 2-lane residential collector, the speed limit will be further reduced to 40 km/h.

**FINANCIAL CONSIDERATIONS:**

The cost of materials and installation of the proposed parking prohibition signs has been included in the Operations Department account # 83-5399-8402-005. On-going maintenance costs for this installation will be included in future Operations Department operating budgets.

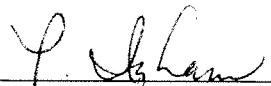
**ALIGNMENT WITH STRATEGIC PRIORITIES:**


This report aligns with the community safety component of the transportation/transit strategic priority.

**DEPARTMENTS CONSULTED AND AFFECTED:**

Information pertaining to the Mattamy Cornell Traffic Study was provided by the Engineering Department (Transportation).

**RECOMMENDED BY:**

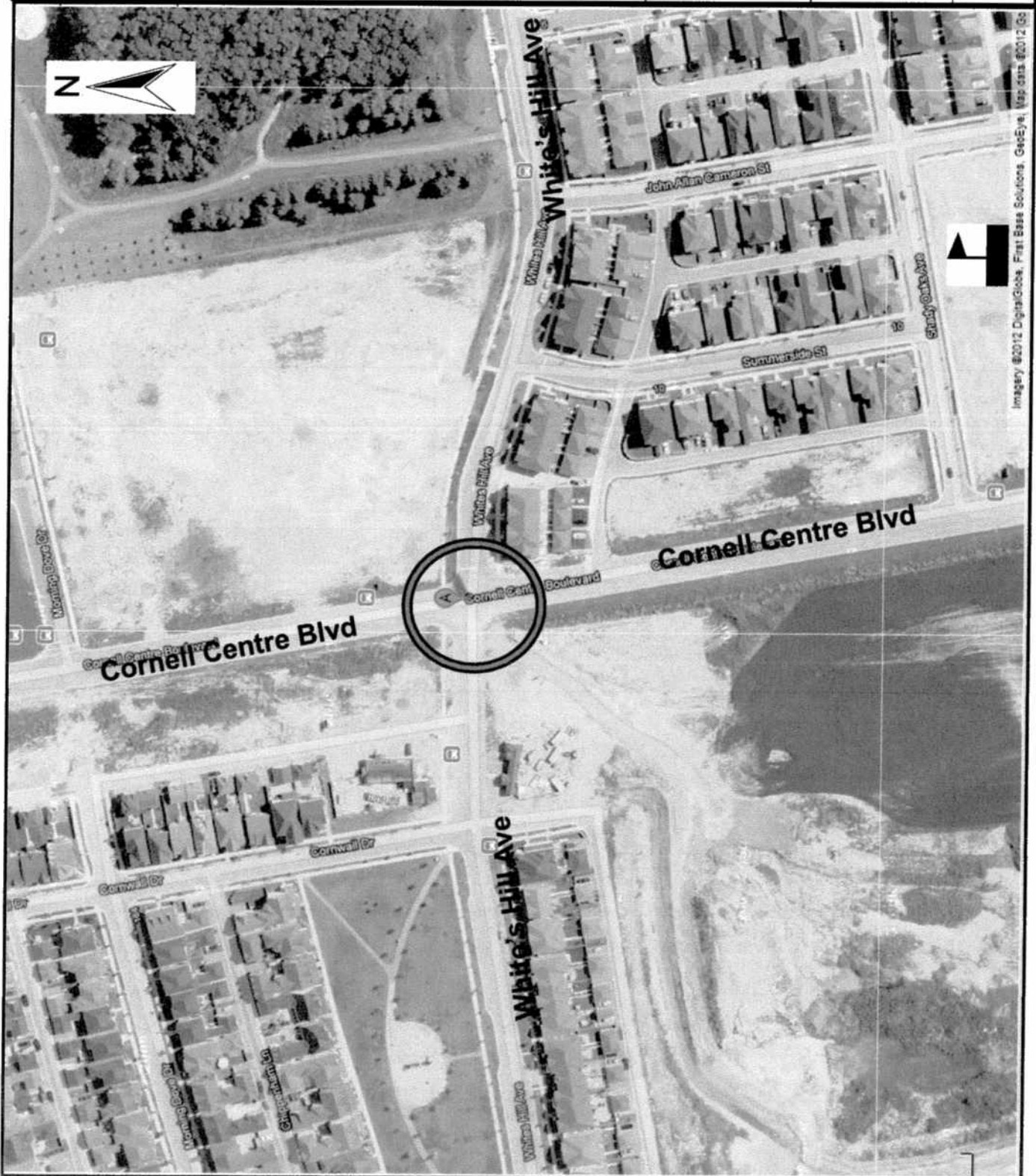
  
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Paul Ingham,  
Director, Operations

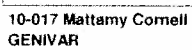
  
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Brenda Librecz,  
Commissioner, Community & Fire Services

**ATTACHMENTS:**

Attachment "A" – Proposed All-Way Stop Control Location Map  
Attachment "B" – Mattamy Cornell Traffic Study (2010)  
Attachment "C" – Proposed Speed Limit Reduction Location Map  
Attachment "D" – All-way Stop Control By-Law Amendment  
Attachment "E" – Speed Limit Reduction By-law Amendment

16 <sup>th</sup> Ave	Donald Cousens Pkwy	Hwy 7
9 <sup>th</sup> Line		
KEY MAP		
LEGEND		
Proposed All-way Stop Control		
New Elementary School (Opening Fall, 2012)		
<p><b>PROPOSED ALL-WAY STOP CONTROL</b></p> <p>Cornell Centre Blvd and White's Hill Ave</p>		
<p><b>MARKHAM</b></p> <p>Traffic Operations</p> <p>April, 2012</p>		
Attachment A		





16th Ave	Donald Cousens Pkwy	Hwy 7	
9th Line			

**LEGEND**

Proposed  
50 km/h Speed Limit

New Elementary  
School  
(Opening Fall, 2012)

**KEY MAP**

**Cornell Centre Blvd:  
Speed Limit Reduction  
Between Hwy 7 and  
16th Ave**

**MARKHAM**  
Traffic Operations  
April, 2012

**Attachment C**





BY-LAW NUMBER \_\_\_\_\_

TO AMEND BY-LAW 106-71

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BE IT ENACTED BY THE COUNCIL OF THE CORPORATION OF THE TOWN OF MARKHAM THAT PARKING BY-LAW 106-71 BE AND THE SAME IS HEREBY AMENDED AS FOLLOWS:

1. By adding to Schedule 12 - Compulsory Stops - at the following named intersection

COLUMN 1	COLUMN 2	COLUMN 3
<u>INTERSECTION</u>	<u>FACING TRAFFIC</u>	<u>LOCATION OF STOP SIGN</u>
Cornell Centre Boulevard and White's Hill Avenue	Northbound on Cornell Centre Boulevard	South-east corner of the intersection
Cornell Centre Boulevard and White's Hill Avenue	Southbound on Cornell Centre Boulevard	North-west corner of the intersection

2. The By-Law shall come into force and effect upon receiving the third reading by the Council of the Town of Markham and also when authorized signs have been erected

READ A FIRST, SECOND AND THIRD TIME AND PASSED THIS \_\_\_\_\_

DAY OF \_\_\_\_\_, 2012.

\_\_\_\_\_  
KIMBERLY KITTERINGHAM  
TOWN CLERK

\_\_\_\_\_  
FRANK SCARPITTI  
MAYOR

ATTACHMENT "D"



BY-LAW NUMBER \_\_\_\_\_

TO AMEND BY-LAW 105-71

BE IT ENACTED BY THE COUNCIL OF THE CORPORATION OF THE TOWN OF MARKHAM THAT PARKING BY-LAW 105-71 BE AND THE SAME IS HEREBY AMENDED AS FOLLOWS:

1. By removing the following street from Schedule "B" defining a maximum speed of 60 kilometres per hour:

COLUMN 1	COLUMN 2	COLUMN 3
<u>HIGHWAY</u>	<u>FROM</u>	<u>TO</u>
Cornell Centre Boulevard	Highway 7	16 <sup>th</sup> Avenue

2. By removing the following street from Schedule "D" defining a maximum speed of 70 kilometres per hour:

COLUMN 1	COLUMN 2	COLUMN 3
<u>HIGHWAY</u>	<u>FROM</u>	<u>TO</u>
Markham By-pass	9 <sup>th</sup> Line	A point 100 metres north of Highway 7

3. By adding the following street to Schedule "F" defining a maximum speed of 50 kilometres per hour:

COLUMN 1	COLUMN 2	COLUMN 3
<u>HIGHWAY</u>	<u>FROM</u>	<u>TO</u>
Cornell Centre Boulevard	Highway 7	16 <sup>th</sup> Avenue

4. The By-Law shall come into force and effect upon receiving the third reading by the Council of the Town of Markham and also when authorized signs have been erected

READ A FIRST, SECOND AND THIRD TIME AND PASSED THIS \_\_\_\_\_

DAY OF \_\_\_\_\_, 2012.

\_\_\_\_\_  
KIMBERLY KITTERINGHAM  
TOWN CLERK

\_\_\_\_\_  
FRANK SCARPITTI  
MAYOR

ATTACHMENT "E"