



Report to: General Committee

Date Report Authored: January 8, 2015

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**SUBJECT:** Proposed All-way Stop Controls – Cox Boulevard & Circa Drive;  
South Park Road & Times Avenue

**PREPARED BY:** Audrey Basham, Traffic Operations Technologist, ext. 4020  
Ravali Kosaraju, Traffic Operations Supervisor (Acting), ext. 2608

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**RECOMMENDATION:**

- 1) That the report entitled “Proposed All-way Stop Controls – Cox Boulevard & Circa Drive; South Park Road & Times Avenue”, be received;
- 2) And that Schedule 12 of Traffic By-law 106-71, pertaining to compulsory stops, be amended to include all approaches to the intersection of Cox Boulevard & Circa Drive;
- 3) And that Schedule 12 of Traffic By-law 106-71, pertaining to compulsory stops, be amended to include all approaches to the intersection of South Park Road & Times Avenue;
- 4) And that the Operations Department be directed to install the appropriate signs and pavement markings at the subject locations;
- 5) And that the cost of materials and installation for the traffic signs and pavement markings be funded from capital project #14228 (Traffic Operational Improvements) in the amount of \$1,000;
- 6) And that York Regional Police be requested to enforce the all-way stop control upon installation of these stop signs and passing of the By-law;
- 7) 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 intersections of Cox Boulevard & Circa Drive and South Park Road & Times Avenue to improve intersection operations and safety.

**BACKGROUND:**

Operations staff received concerns from several constituents regarding operational safety at the intersections of Cox Boulevard & Circa Drive and South Park Road & Times Avenue.

The intersection of Cox Boulevard & Circa Drive is located north of Highway 7 and west of Warden Avenue (see Attachment “A”). Cox Boulevard is a residential collector road with an average daily traffic (ADT) volume of 4,000 vehicles. Circa Drive is a residential collector road, providing restricted access to Highway 7 to the south. Stop control at the intersection is currently assigned to Circa Drive only, giving traffic on Cox Boulevard the right-of-way.

The intersection of South Park Road and Times Avenue is located in the Leitchcroft community near Highway 7 and Leslie Street (see Attachment “B”). South Park Road is a residential collector road with an ADT volume of 3,000 vehicles. Times Avenue is also a minor collector road with an

ADT volume of 5,000 vehicles, providing direct access to Highway 7 in the north. Currently, stop control at the intersection is assigned to Times Avenue, giving traffic on South Park Road the right-of-way.

### **OPTIONS/DISCUSSION:**

In response to the operational concerns, Operations staff conducted an all-way stop warrant analysis at the subject intersections. An all-way stop control may be considered where provincial warrant guidelines are met, as outlined in the Ontario Traffic Manual. The warrant considers total vehicular volume and volume distribution between the “major” and “minor” approaches of the intersection during the busiest hour of the day.

### **All-way stop control is recommended at Cox Boulevard & Circa Drive.**

In November 2014, the Operations Department conducted an all-way stop warrant analysis during the busiest one-hour period of a typical weekday at the intersection. The warrant analysis results are as follows:

**Figure 1: Cox Boulevard & Circa Drive - All-way Stop Warrant Results**

<b>CRITERIA #1</b> Total Traffic Volume (All Approaches)			<b>CRITERIA #2</b> Volume Assigned to “Minor” Street (Circa Dr.)		
Minimum Criteria	Recorded Value	Criteria Met?	Minimum Criteria	Recorded Value	Criteria Met?
350	473	YES	35%	37%	YES

All-way stop control is warranted when both Criteria #1 and Criteria #2 are satisfied. As shown above, the intersection meets Provincial guidelines for all-way stop control. Therefore, Operations Department recommends that an all-way stop control be provided. Once implemented, it is expected that the all-way stop control will improve intersection operations and pedestrian safety.

### **All-way stop control at South Park Road & Times Avenue is not warranted, but recommended due to ongoing residential growth in the area.**

Since 2011, Operations staff has been monitoring traffic operations at the subject intersection on an ongoing basis. Multiple traffic studies have been conducted at the intersection over the past three years. Although each assessment did not identify any particular deficiencies at the intersection, it was apparent that traffic volumes on South Park Road and Times Avenue were steadily increasing. Results of the most recent all-way stop warrant, conducted in November 2014, are shown below:

**Figure 2: South Park Road & Times Avenue - All-way Stop Warrant Results**

<b>CRITERIA #1</b> <b>Total Traffic Volume</b> <i>(All Approaches)</i>			<b>CRITERIA #2</b> <b>Volume Assigned to "Minor" Street</b> <i>(Times Ave.)</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>
350	605	YES	25%	24%	NO

While Criteria #1 exceeds the minimum criteria, Criteria #2 does not.

Although provincial warrant guidelines were not met, high density residential development in the immediate vicinity of the intersection is ongoing, contributing to steady traffic growth. Also, it was observed that the steady flow of east-west traffic was posing a challenge for pedestrians attempting to safely cross South Park Road.

With the provision of an all-way stop, all vehicles will be required to come to a complete stop and also give right-of-way to pedestrians that are crossing. It will also address future traffic growth and associated impacts as a result of ongoing residential development in the community. Based on existing traffic data collected and existing growth trends, the intersection will likely meet all-way stop warrant criteria within the next one to two years.

#### **FINANCIAL CONSIDERATIONS:**

The cost of materials and installation for the traffic signs and pavement markings in the amount of \$1,000 has been included in the capital project #14228 (Traffic Operational Improvements). On-going maintenance costs for this installation will be considered in future Operations Department operating budgets.

#### **HUMAN RESOURCES CONSIDERATIONS:**

Not Applicable.

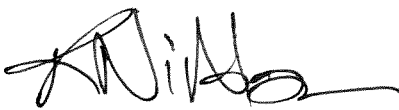
#### **ALIGNMENT WITH STRATEGIC PRIORITIES:**

This report aligns with the community safety component of Markham's transportation strategic priority.

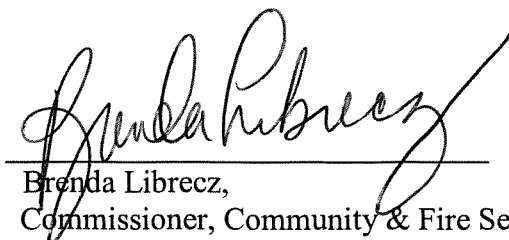
#### **BUSINESS UNITS CONSULTED AND AFFECTED:**

Not applicable.

#### **RECOMMENDED BY:**



Bob Nicholson,  
Acting Director, Operations



Brenda Librecz,  
Commissioner, Community & Fire Services

**ATTACHMENTS:**

Attachment "A" – Location Map, Cox Blvd. & Circa Dr.

Attachment "B" – Location Map, South Park Rd. & Times Ave.

Attachment "C" – All-way Stop Control By-Law Amendment