



# The Corporation of the Town of Milton

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| Report To: | Council   |
| From:      | M. Paul Cripps, P. Eng., Commissioner, Engineering Services                     |
| Date:      | January 21, 2018  |
| Report No: | ENG-003-19  |
| Subject:   | Intersection Safety Review - Livingston Road and Weller Crossing/Ellis Crescent |

## Recommendation:

**THAT a by-law be enacted to amend By-law 1984-1, as amended, to implement a temporary all-way stop at the intersection of Livingston Road and Weller Crossing/Ellis Crescent effective until June 20, 2019;**

**AND THAT Schedule 12 and Schedule 13 of the Uniform Traffic Control By-law be amended accordingly (see Appendix I);**

**AND FURTHER THAT the appropriate by-laws be presented to Council for approval.**

## REPORT

### Background

The Engineering Services department has received several inquiries requesting the implementation of an all-way stop at the intersection of Livingston Road and Weller Crossing/Ellis Crescent. This intersection has been counted on numerous occasions and the counts have recently been updated to determine if the warrants for an all-way stop have been fulfilled.

### Discussion

The Engineering Services department has received numerous requests from local residents over the past 14 years to review the intersection of Livingston Road and Weller Crossing/Ellis Crescent for the installation of an all-way stop.

Livingston Road is a local road with a posted speed limit of 50 km/h, which runs north/south between Hampshire Way and Cartmer Way. Ellis Crescent/Weller Crossing is also a local roadway with a posted speed limit of 50 km/h and it runs east/west between Alexander Crescent and Livingston Road (south intersection). Presently, traffic on Ellis Crescent/Weller Crossing is required to stop as Livingston Road is designated as a through highway.



The latest manual turning movement count was completed at this intersection on October 16, 2018 during the a.m. and p.m. peak periods (which included entrance and dismissal times of Bishop Reding Catholic Secondary School) and the results are as follows:

## **All-Way Stop Warrant – Ellis Crescent/Weller Crossing and Livingston Road**

Part "A" volume from all approaches 66%  
Part "B" minor street volume split 100%

The warrants consider the overall volume of traffic entering the intersection during the peak traffic times as well as the ratio of main street to minor street traffic and pedestrian volumes. In order for an all-way stop to be warranted by volume, both Parts "A" and "B" must equal 100%. Since both Part "A" and Part "B" of the warrant did not equal 100%, an all-way stop is not warranted at this location.

A review of the three year collision history at this intersection has revealed that two reportable collisions have occurred. One of the collisions was classified as a single motor vehicle collision and the other as a right angle collision.

## **Stop Sign Reversal**

After further review of the traffic volumes at this intersection, it was determined that the volume on Ellis Crescent/Weller Crossing is more than double the volume on Livingston Road. Therefore, 355 vehicles are stopping east/west during the a.m. and p.m. peak hours for 143 vehicles travelling north/south during the same time period. The overall level of service at this intersection will be improved considerably if the stop controls are reversed.

It is therefore recommended that the stop controls at this intersection be reversed making Ellis Crescent/Weller Crossing the designated through highway. In accordance to Ontario Traffic Manual (OTM) Book 5 - Regulatory Signs, the following procedure should be followed when reversing stop controls:

- Install new stop signs on Livingston Road for northbound and southbound traffic along with the required pavement markings, making this intersection a temporary all-way stop
- Install "New" and "Stop Ahead" signs for northbound and southbound traffic on Livingston Road
- Install advisory signage for northbound and southbound traffic indicating "Cross Traffic Does Not Stop Effective June 20, 2019"
- Install advisory signage below existing stop signs on Ellis Crescent/Weller Crossing indicating "This Stop Sign Will Be Removed Effective June 20, 2019"



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OTM Book 5 recommends that this all-way stop remain in place for a period of at least 15 days. Engineering Services plans on having the all-way stop installed on May 30, 2019 and on June 20, 2019 the existing stop signs will be removed from Ellis Crescent/Weller Crossing making this intersection a two-way stop again for northbound and southbound traffic.

## **Pedestrian Crossover (PXO)**

In addition to the above, pedestrian volumes have been reviewed at this intersection and a PXO is warranted on the west leg of this intersection. In order for a PXO to be warranted by volume, it requires 65 pedestrians in a four hour period to be crossing the roadway. A study conducted on May 31, 2017 concluded that 93 pedestrians crossed north/south at this intersection during a five hour period. The installation of the PXO will occur on June 20, 2019 in order to coincide with the reversal of the right-of-way at this intersection.

The reversal of the right-of-way, and the implementation of a PXO on the west leg of Ellis Crescent/Weller Crossing and Livingston Road will improve the operation of this intersection as well as increase the level of safety for both motorists and pedestrians.

## **Financial Impact**

The cost of installing all appropriate signage and pavement markings is approximately \$4,000.00, which will be funded from the 2019 operating and capital budgets pending Council approval.

Respectfully submitted,

M. Paul Cripps, P. Eng.  
Commissioner, Engineering Services

For questions, please  
contact:

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Traffic Technician

## **Attachments**

Appendix I – Location Map Ellis Crescent/Weller Crossing and Livingston Road  
Appendix II – By-law Amendments

CAO Approval  
William Mann, MCIP, RPP, OALA, CSLA, MCIF, RPF  
Chief Administrative Officer

### Ellis Crescent/Weller Crossing and Livingston Road



Existing



Proposed



#### LEGEND



Stop Sign



Pedestrian Crossover

Appendix I

## Appendix II

### Schedule 12 Through Highways - Stop To Be Deleted

| <b><u>By-law No.</u></b> | <b>Column 1<br/>Highway(s)</b> | <b>Column 2<br/>Location From</b> | <b>Column 3<br/>Location To</b> |
|--------------------------|--------------------------------|-----------------------------------|---------------------------------|
| By-law No. 003-2006      | Livingston Road                | South limit of Hampshire Way      | South limit of Livingston Road  |

### Schedule 12 Through Highways – Stop To Be Added

| <b>Column 1<br/>Highway(s)</b> | <b>Column 2<br/>Location From</b>             | <b>Column 3<br/>Location To</b>               |
|--------------------------------|---|---|
| Livingston Road                | South limit of Hampshire Way                  | North limit of Weller Crossing/Ellis Crescent |
| Livingston Road                | South limit of Weller Crossing/Ellis Crescent | South limit of Livingston Road                |

### Schedule 13 Intersection - Stop Signs To Be Added

| <b>Column 1<br/>Intersection</b>  | <b>Column 2<br/>Direction of Travel</b>            | <b>Column 3<br/>Stop On</b>   |
|---|--|---|
| Livingston Road and Weller Crossing/Ellis Crescent<br>(Effective until June 20, 2019) | Northbound<br>Southbound<br>Eastbound<br>Westbound | Livingston Road<br>Livingston Road<br>Ellis Crescent<br>Weller Crossing |