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**TO:** GENERAL COMMITTEE

**SUBJECT:** HURST DRIVE PEDESTRIAN TRAFFIC CONTROL SIGNAL REVIEW

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**CHIEF ADMINISTRATIVE OFFICER APPROVAL:** C. LADD  
CHIEF ADMINISTRATIVE OFFICER 

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**RECOMMENDED MOTION**

1. That the existing pedestrian traffic control signal on Hurst Drive between Grand Forest Drive and Bloxham Place/Kell Place be de-energized at a future date and the existing pedestrian traffic control signal equipment be relocated in conjunction with a future pedestrian traffic control signal installation approved under a future budget.

**PURPOSE & BACKGROUND**

2. The purpose of this staff report is to advise of the conclusions of the review of the pedestrian traffic control signal on Hurst Drive between Grand Forest Drive and Bloxham Place/Kell Place as per Motion 08-G-218 to determine if the pedestrian traffic control signal is warranted based on the Ontario Traffic Manual Book 12 – Traffic Signal Warrant criteria, and to make a recommendation based on the outcome of the review.
3. Hurst Drive is classified as an arterial roadway which has a current traffic volume of 7,500 vehicles per day, a pavement width of 14.0 metres and sidewalks located on the north and south sides of the roadway. Please refer to Appendix "A" for a map of the area.
4. In September 2008 City Staff investigated the merits of implementing a pedestrian traffic control signal on Hurst Drive between Grand Forest Drive and Bloxham Place/Kell Place to provide connectivity to Hurst Park.
5. As a result of the investigation, City Council adopted Motion 08-G-218 regarding the installation of a pedestrian traffic control signal on Hurst Drive between Grand Forest Drive and Bloxham Place/Kell Place.
  1. "That the installation of an Intersection Pedestrian Signal on Hurst Drive in the area of Grand Forest Drive, be included in the 2009 Business Plan and Budget for consideration.
  2. That staff in the Engineering Department review the merits of the installation of the Intersection Pedestrian Control Signal on Hurst Drive (should it be installed) and report back to General Committee in 2012."
6. Council approved the installation of a pedestrian traffic control signal on Hurst Drive between Bloxham Place/Kell Place in 2009. As pedestrian traffic control signal warrants were not met Council requested that the installation of the pedestrian signal be re-evaluated in 2012.

## ANALYSIS

7. Staff investigated the pedestrian traffic control signal on Hurst Drive between Grand Forest Drive and Bloxham Place/Kell Place to review if a pedestrian signal was warranted based on Ontario Traffic Manual (OTM) Book 12 – Traffic Signals. The Ontario Traffic Manual (OTM) sets criteria for pedestrian signal warrants which are composed of two (2) areas of justification that must be satisfied to be warranted:
- a) Pedestrian Volume Justification – Addresses the minimum pedestrian volume based on traffic volumes on the crossing roadway and conditions under which pedestrian signalization can be installed. Pedestrian studies are conducted in the highest eight hours of pedestrian traffic.
  - b) Pedestrian Delay Justification – Addresses pedestrian delay prior to crossing the roadway during the highest eight hours of pedestrian traffic.

Note: Both the pedestrian volume justification and pedestrian delay justification warrants must be satisfied to fulfil the warrant justification for the installation of a pedestrian signal.

8. A pedestrian study was completed on June 6, 2012 for the purpose of reviewing the usage of the existing pedestrian traffic control signal. The study identified pedestrian volumes of 28 equivalent pedestrians (26 actual pedestrians), and a vehicle volume of 4,197 vehicles in the eight-hour survey. These results are indicated (circled) in the specific categories in the below table. The warrant values for Hurst Drive between Grand Forest Drive and Bloxham Place/Kell Place are as follows:

### Pedestrian Volume Justification

Eight-Hour Vehicular Volume	Net Eight-Hour Pedestrian Volume				
	<200	200 – 275	276 – 475	476 – 1000	>1000
< 1440	Not Justified	Not Justified	Not Justified	Not Justified	Not Justified
1440 – 2600	Not Justified	Not Justified	Not Justified	See Equation	Justified
2601 – 7000	<b>Not Justified</b>	Not Justified	See Equation	Justified	Justified
>7000	Not Justified	See Equation	Justified	Justified	Justified

### Pedestrian Volume Justification

Net Total Eight-Hour Volume of Total Pedestrians	Net Total Eight-Hour Volume of Delayed Pedestrians		
	<75	75 - 130	>130
< 200	<b>Not Justified</b>	Not Justified	Not Justified
200 - 300	Not Justified	Justified if volume of delayed peds > (240 – (.55 x vol. of total peds))	Justified
>300	Not Justified	Justified	Justified

### Note:

- I. 3 equivalent pedestrians were delayed greater than 10 seconds. Equivalent pedestrians are pedestrians 12 years of age or younger and/or 65 years or older and count as two (2) pedestrians.
- II. Count conducted on a typical weekday during the school year in clear weather.
- III. Count consistent with industry standards, and results are similar to previous counts undertaken in 2008.

9. Based on the results of the review and staff observations during a site visit the pedestrian traffic control signal on Hurst Drive between Grand Forest Drive and Bloxham Place/Kell Place is recommended to be de-energized as pedestrian volumes are low and do not satisfy the minimum warrants at this time.
10. Staff recommend the removal of the existing pedestrian traffic control signal equipment as minimum warrants are not satisfied at this time. The salvaged materials can be reused for the pedestrian traffic control signal proposed on The Queensway for the opening of the new elementary school in September 2013.
11. In accordance with the Ontario Traffic Manual Traffic Signals - Book 12, staff will cover the traffic signal heads for 90 days and inform the public of the pending removal by installing informational signs indicating "TRAFFIC SIGNAL UNDER STUDY FOR REMOVAL" at the signalized location in a position where it is visible to all road users.
12. Barrie Police Service receives complaints regarding vehicle speeds on Hurst Drive and feel that the removal of this pedestrian signal may increase speeds.
13. The recommended removal of the pedestrian traffic control signal will not significantly affect vehicle speeds as the pedestrian signal display rests in a green signal indication for vehicles on Hurst Drive. As there is minimal pedestrian activity crossing Hurst Drive the pedestrian signal remains green for long periods of time and the removal is not likely to change the operating characteristics of the roadway.
14. Barrie Fire and Emergency Services do not oppose the recommended motion.

#### **ENVIRONMENTAL MATTERS**

15. There are no environmental matters related to the recommendation.

#### **ALTERNATIVES**

16. The following Alternative is available for consideration by General Committee:

##### **Alternative #1**

General Committee could decide to leave the pedestrian traffic control signal in place on Hurst Drive between Grand Forest Drive and Bloxham Place/Kell Place.

This Alternative is not recommended as the pedestrian traffic control signal was reviewed and it was determined that this pedestrian traffic control signal does not satisfy the warrants based on Ontario Traffic Manual (OTM) Book 12 – Traffic Signals.

#### **FINANCIAL**

17. The annual operating cost for a typical pedestrian traffic control signal is approximately \$2,000, this includes the general maintenance and utility costs. Therefore, de-energizing the pedestrian traffic control signal will result in a cost avoidance of approximately \$2,000 annually.
18. The approximate cost to remove the existing pedestrian traffic control signal would be \$5,000. However, no funds are available in the 2012 Business Plan for the removal. To address this issue staff recommend that the pedestrian traffic control signal removal be undertaken in conjunction with the installation of new pedestrian traffic signals at another location as approved under a future budget.

19. The salvaged material from this pedestrian signal could be reused for the pedestrian traffic control signal at another location thereby reducing the cost of a future new installation. The expected net savings would be approximately \$10,000.

**LINKAGE TO COUNCIL STRATEGIC PRIORITIES**

20. The recommendations included in this Staff Report are not specifically related to the goals identified in the 2010-2014 City Council Strategic Plan.

APPENDIX "A"

