

**TO:** GENERAL COMMITTEE

**SUBJECT:** COMMUNITY SAFETY ZONE AND 40 KILOMETRES PER HOUR SPEED LIMIT – ADAM STREET

**WARD:** WARD 1

**PREPARED BY AND KEY CONTACT:** J. MACDONALD, C.E.T.  
TRANSPORTATION TECHNOLOGIST (EXT. 5178)

**SUBMITTED BY:** D. FRIARY  
DIRECTOR OF ROADS, PARKS AND FLEET

**GENERAL MANAGER APPROVAL:** R.J. FORWARD, M.B.A., M.Sc., P.ENG.  
GENERAL MANAGER OF INFRASTRUCTURE AND GROWTH MANAGEMENT

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

**RECOMMENDED MOTION**

1. That Community Safety Zone (CSZ) By-law 2003-160, Schedule “A”, be amended to add the following:

Street	From	To	In Effect
Adam Street	Johnson Street	Puget Street	Anytime

2. That Rates of Speed By-law 2002-19, Schedule “A” Authorized Rates of Maximum Speed - 40 Kilometres Per Hour, be amended to add the following:

Street	From	To
Adam Street	Johnson Street	Puget Street

**PURPOSE & BACKGROUND**

3. On November 3, 2014, City Council adopted motion 14-G-265 regarding the intersections of Adam Street and Downsview Street and Adam Street and Varden Avenue as follows:  
  
“That staff in the Roads, Parks and Fleet Department review the intersections at Adam Street and Downsview Street and Adam Street and Varden Avenue for potential traffic safety measures such as the installation of stop signs, and report back to General Committee.”
4. Johnson Street Public School is located at 105 Johnson Street which is adjacent to Johnson Street and Blake Street. Both Blake Street and Johnson Street have a Community Safety Zone and a 40 km/h posted speed limit.
5. Adam Street is a two (2) lane roadway and is classified as a local roadway with a sidewalk on the south side and a daily traffic volume less than 500 vehicles. The current speed limit on Adam Street is 50 km/h with stop controls at the intersections of Puget Street, Varden Avenue, Downsview Drive and Johnson Street. There is an intersection pedestrian Signal for crossing Johnson Street from Adam Street.

6. Downsvie Drive is a two (2) lane roadway and is classified as a local roadway with a sidewalk on the east side from Adam Street south to Blake Street and a daily traffic volume of approximately 1,000 vehicles. There is no sidewalk on Downsvie Drive between Adam Street and Steel Street. The current speed limit on Downsvie Drive is 50 km/h with stop controls at the intersections of Steel Street and Blake Street.
7. Varden Avenue is a two (2) lane roadway and is classified as a local roadway with a sidewalk on the east side and a daily traffic volume of less than 500 vehicles. The current speed limit on Varden Avenue is 50 km/h with stop controls at the intersection of Steel Street and Napier Street.
8. Community Safety Zones are to be installed, as per Council adopted Policy, on all roadways which are adjacent to school properties. The policy requires that Community Safety Zones adjacent to elementary schools have a reduced posted speed limit of 40km/h. Community Safety Zones adjacent to secondary schools do not have a reduced speed limit.

**ANALYSIS**

9. As Adam Street connects to the pedestrian signal in front of Johnson Street Public School staff recommends the installation of a Community Safety Zone and 40 km/h posted speed limit on Adam Street, in accordance with the Council adopted Community Safety Zone Policy. Please refer to Appendix "A" for the proposed limits of the Community Safety Zone and 40 km/h speed zone.
10. Staff recommend that Community Safety Zone (CSZ) By-law 2003-160, Schedule "A", be amended by adding the following:

Street	From	To	In Effect
Adam Street	Johnson Street	Puget Street	Anytime

11. Staff recommend that the Rates of Speed By-Law 2002-19, Schedule "A" Authorized Rates of Maximum Speed - 40 Kilometres Per Hour, be amended by adding the following:

Street	From	To
Adam Street	Johnson Street	Puget Street

12. The Community Safety Zone and 40 km/h posted speed limit is to be installed at a distance of approximately 250 metres beyond the school property. Appendix "A" identifies the proposed limits of the Community Safety Zone and 40 km/h posted speed limit.
13. The Engineering Department has identified the need for a sidewalk on Downsvie Drive between Adam Street and Steel Street as part of the Sidewalk Infill Policy. All potential infill sidewalk projects are prioritized in order that the highest ranked projects be considered in development of future business plans and compared to other corporate needs.
14. Staff have investigated the intersection of Adam Street and Varden Avenue and Adam Street and Downsvie Drive to determine if an All-Way Stop is warranted based on criteria within the Ontario Traffic Manual (OTM) Book 5 – Regulatory Signs.

15. The OTM warrant is based on volume, collision history, and stopping sight distance of the intersection.
- **Volume** - the total number of vehicles entering an intersection during the peak hour as well as the percentage of vehicles on the minor street during the peak hour.
  - **Collision History** - reviews collisions over a three-year period, which are only correctable through All-Way Stop control (i.e. right angle and turning type collisions) and which are reported to the Barrie Police Service.
  - **Stopping Sight Distance** - the distance required for a driver to see ahead in order to stop if necessary. Each component of the All-Way Stop warrant has the ability to satisfy the warrant independently.
16. A traffic count was completed at the intersection of Adam Street and Varden Avenue for the purpose of completing an All-Way Stop warrant. The results of the investigation are summarized below:

Description	All-Way Warrant	Recorded Data	Satisfied All-Way Warrant	
			Yes	No
<b>Part 1a – Total Volume</b> Peak Hour Traffic Volume <sup>(1)</sup>	Greater than 350 vehicles in peak hour	28 vehicles in the peak hour		X
<b>Part 1b – Volume Split</b> Percentage of Traffic on Adam Street (Minor Street)	Greater than 25%	11 vehicles (39%)		X
<b>Part 2a – Collisions</b> Intersection Collision History	Average 4 per year over 3 years	0 collisions over a 3 year period		X
<b>Part 2b – Visibility</b> Stopping Sight Distance from Adam Street	Less than 65m	No restrictions		X

(1) *Peak Hour Volume is the maximum number of vehicles that pass through the intersection during a one hour period.*

17. An All-Way Stop survey was prepared and mailed to 53 property owners on Adam Street and Varden Avenue and the results of the All-Way Stop Survey are as follows:

Adam Street and Varden Avenue All-Way Stop Survey	Response Received	Percentage of Responses
<b>Option A</b> - If minimum warrants are <b>NOT SATISFIED</b> using the All-Way stop criteria in the Ontario Traffic Manual leave as is (traffic along Adam Street stops at Varden Avenue).	10	83%
<b>Option B</b> – If minimum warrants are <b>SATISFIED</b> using the All-Way stop criteria in the Ontario Traffic Manual install an All-Way Stop at Adam Street and Varden Avenue.	2	17%
<b>TOTAL</b> (Out of 53)	<b>12</b>	<b>22%</b>

18. Staff have reviewed the intersection of Adam Street and Varden Avenue for the installation of an All-Way Stop. Based on the results of the investigation an All-Way Stop is not recommended for installation as minimum warrants are not satisfied.

19. A traffic count was completed at the intersection of Adam Street and Downsview Drive for the purpose of completing an All-Way Stop warrant. The results of the investigation are summarized below:

Description	All-Way Warrant	Recorded Data	Satisfied All-Way Warrant	
			Yes	No
<b>Part 1a – Total Volume</b> Peak Hour Traffic Volume <sup>(1)</sup>	Greater than 350 vehicles in peak hour	118 vehicles in the peak hour		X
<b>Part 1b – Volume Split</b> Percentage of Traffic on Adam Street (Minor Street)	Greater than 25%	21 vehicles (18%)		X
<b>Part 2a – Collisions</b> Intersection Collision History	Average 4 per year over 3 years	0 collisions over a 3 year period		X
<b>Part 2b – Visibility</b> Stopping Sight Distance from Adam Street	Less than 65m	No restrictions		X

(2) *Peak Hour Volume is the maximum number of vehicles that pass through the intersection during a one hour period.*

20. An All-Way Stop Survey was prepared and mailed to 49 property owners on Adam Street and Downsview Drive and the results of the All-Way Stop Survey are as follows:

Adam Street and Downsview Drive All-Way Stop Survey	Response Received	Percentage of Responses
<b>Option A</b> - If minimum warrants are <b>NOT SATISFIED</b> using the All-Way stop criteria in the Ontario Traffic Manual leave as is (traffic along Adam Street stops at Downsview Drive).	5	45%
<b>Option B</b> – If minimum warrants are <b>SATISFIED</b> using the All-Way stop criteria in the Ontario Traffic Manual install an All-Way Stop at Adam Street and Downsview Drive.	6	55%
<b>TOTAL</b> (Out of 49)	<b>11</b>	<b>22%</b>

21. Staff have reviewed the intersection of Adam Street and Downsview Drive for the installation of an All-Way Stop. Based on the results of the investigation an All-Way Stop is not recommended for installation as minimum warrants are not satisfied.

22. Residents expressed concerns regarding the speed of vehicles along Downsview Drive. As a result of the concern staff installed a radar speed board to collect speed data. The results of the speed data are as follows:

Date/Time (Weekly)	Total Vehicles Count	Average Speed (km/h)	*85th Percentile Speed (km/h)
2017-02-05	5919	25	42
2017-02-12	6182	24	41
2017-02-19	5772	27	45
2017-02-26	5735	28	45
2017-03-05	5737	28	45
<b>Summary</b>	<b>Sum:29345</b>	<b>Avg:27 km/h</b>	<b>Avg:44 km/h</b>

23. Based on the results from the radar speed board the 85th percentile which is the speed at which 85% of the vehicles travel at or below is 44 km/h, which means the majority of the vehicles are in compliance with the 50 km/h posted speed limit.
24. Barrie Police Service, Barrie Fire and Emergency Service and Enforcement Services do not oppose the recommended motion.

### **ENVIRONMENTAL MATTERS**

25. There are no environmental matters related to the recommendations.

### **ALTERNATIVES**

26. There are two (2) alternatives available for consideration by General Committee:

**Alternative #1** General Committee could decide to not implement a Community Safety Zone on Adam Street.

This alternative is not recommended as this would go against the Council adopted Community Safety Zone Policy.

**Alternative #2** General Committee could decide to not implement a 40 km/h posted speed limit on Adam Street.

This alternative is not recommended as this would go against the Council adopted Community Safety Zone Policy because speed reductions are recommended on roads adjacent to elementary schools.

**FINANCIAL**

27. The cost to implement the proposed Community Safety Zone and 40 km/h posted speed limit is approximately \$1,000 which can be accommodated in the 2017 Operating Budget.

**LINKAGE TO COUNCIL STRATEGIC PRIORITIES**

28. The recommendations included in this Staff Report are related to well-planned transportation to improve roadway safety as identified in the 2014-2018 Strategic Plan.

APPENDIX "A"

