
TO: GENERAL COMMITTEE

SUBJECT: ALL-WAY STOP – GALLIE COURT AND QUARRY RIDGE

WARD: WARD 1

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SUBMITTED BY: D. FRIARY
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GENERAL MANAGER APPROVAL: R. J. FORWARD, MBA, M.Sc., P. Eng.
GENERAL MANAGER OF INFRASTRUCTURE & GROWTH MANAGEMENT

CHIEF ADMINISTRATIVE OFFICER APPROVAL: C. LADD
CHIEF ADMINISTRATIVE OFFICER

RECOMMENDED MOTION

1. That Traffic By-law 80-138 Schedule “S” “Providing for the Erection of Stop Signs at Intersections” be amended by adding the following:

Column 1

“Gallie Court and Quarry Ridge

Column 2

Northbound and Southbound on Gallie Court
and Westbound on Quarry Ridge Road.”

PURPOSE & BACKGROUND

2. Staff have received concerns from both the ward councillor and Royal Victoria Regional Health Centre patrons and administration regarding operational concerns at the intersection of Gallie Court and Quarry Ridge for both motorists and pedestrians.
3. Gallie Court is a two (2) lane local roadway with a traffic volume of approximately 9,000 vehicles per day and a pavement width of 14.0 metres. Sidewalks are provided on the west side and only a portion of the east side between Quarry Ridge and the south limit of the roadway. On-street metered parking is provided on the east side of the roadway. Please refer to Appendix “A”.
4. Quarry Ridge is a two (2) lane local roadway with a sidewalk and on-street parking stalls on the south side, with a daily volume of approximately 6,000 vehicles per day and a pavement width of 12.0 metres.

ANALYSIS

5. The OTM warrant is based on volume, collision history, and stopping sight distance of the intersection. There are two (2) variations of Minimum Volume Warrants identified in the OTM based on the classification of the roadway. The variations are Minor Roadways (Local Roadways) and Major Roadways (Collector and Arterial Roadways). Gallie Court is classified as a local roadway and therefore the Minor Roadway Minimum Volume Warrant was used. Each component of the All-Way Stop Warrant has the ability to satisfy the warrant independently.

- **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 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.

A traffic count was completed on January 27, 2016, 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
Part 1a – Total Volume Peak Hour Traffic Volume ⁽¹⁾	Greater than 350 vehicles in peak hour ⁽²⁾	759 vehicles in the peak hour	X	
Part 1b – Volume Split Percentage of Traffic on Quarry Ridge (Minor Street)	Greater than 25% ⁽²⁾	265 vehicles (35%)		
Part 2 – Collisions Intersection Collision History	Average four per year over three years	3 collisions over a 3-year period		X
Part 3 – Visibility Stopping Sight Distance from Quarry Ridge	Less than 65m	No restrictions		X

6. Based on the results of the All-Way Stop warrant analysis staff recommend that an All-Way Stop be installed at the intersection of Gallie Court and Quarry Ridge.
7. The recommended All-Way Stop will improve the operation and safety for vehicle movements at the intersection of Gallie Court and Quarry Ridge.
8. The pavement markings on Gallie Court between Quarry Ridge and Georgian Drive were reviewed by staff to increase lane capacity to enhance the level of service. The recommended changes are as follows (please refer to Appendix “A”):
 - a) Southbound straight through/right at the intersection of Gallie Court and Quarry Ridge;
 - b) Southbound left turn at the intersection of Gallie Court and Quarry Ridge;
 - c) Dual northbound left turn at the intersection of Gallie Court and Georgian Drive; and
 - d) Northbound right turn at the intersection of Gallie Court and Georgian Drive.
9. Staff recommend that Traffic By-law 80-138 Schedule “S” “Providing for the Erection of Stop Signs at Intersections” be amended by adding the following:

<u>“Gallie Court and Quarry Ridge</u>	Northbound and Southbound on Gallie Court and Westbound on Quarry Ridge Road.”
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10. The intersection of Gallie Court and Quarry Ridge currently does not meet the Accessibility for Ontarians with Disabilities (AODA) complaint crossing facilities to accommodate pedestrian traffic.
11. There is a Tim Hortons, medical building, and on-street parking on Quarry Ridge which generates significant pedestrian volumes crossing Gallie Court. This creates both operational and safety concerns at the intersection of Gallie Court and Quarry Ridge with turning vehicles.
12. As a result of the high pedestrian volume, staff recommend cross walks be painted on all four legs of the intersection of Gallie Court and Quarry Ridge. This will allow pedestrians to have a designated crossing on Gallie Court with a sidewalk connection on Quarry Ridge.
13. Sidewalk curb work would be required on all four (4) legs of the intersection to provide a safe and accessible area for pedestrians to get off the travel portion of the roadway.
14. The proposed pavement marking changes on Gallie Court will also improve the operation of the proposed transit stop as there would be sufficient room for the bus to pull out of the travel portion of the lane and maintain sufficient lane width for through movement traffic.
15. Barrie Fire and Emergency Services, Royal Victoria Regional Health Centre, Municipal Law Enforcement, Barrie Transit and County of Simcoe Paramedic Services do not oppose the recommended motion.

ENVIRONMENTAL MATTERS

16. At a typical All-Way Stop location, the following vehicle emissions are released each year:
 - 657 kg (1,448 lbs) of hydrocarbons (HC);
 - 8,760 kg (19,312 lbs) of carbon monoxide (CO);
 - 675 kg (1,448 lbs) of nitrogen oxides (NOx); and
 - 65,700 kg (144,842 lbs) of carbon dioxide (CO2).

ALTERNATIVES

17. There is one alternative available for consideration by General Committee:

Alternative #1

General Committee could decide not to install the All-Way stop at Gallie Court and Quarry Ridge.

This alternative is not recommended as the minimum warrant analysis was met for traffic volumes. The implementation of the All-Way Stop in conjunction with the proposed pavement marking improvements will increase the level of service of both the intersections of:

- Gallie Court and Quarry Ridge; and
- Gallie Court and Georgian Drive.

FINANCIAL

18. The cost associated with implementing the painted cross walk and pavement markings would be approximately \$3,500 and can be accommodated in the 2016 Operating budget.

19. The cost associated with implementing the curb work would be approximately \$14,800 and can be accommodated in the 2016 Operating budget.

LINKAGE TO COUNCIL STRATEGIC PRIORITIES

20. The recommendation included in this Staff Report is related to well-planned transportation to improve roadway safety as identified in the 2014-2018 Strategic Plan. The All-way stop and improved pavement markings will improve the flow of pedestrian and vehicular traffic in the vicinity of the hospital.

APPENDIX "A"

