

All-Way Stop Control - Barkdene Hills and Gradwell Drive

Date: April 29, 2021

To: Scarborough Community Council

From: Acting Director, Traffic Management, Transportation Services

Wards: Ward 20, Scarborough Southwest

SUMMARY

As the Toronto Transit Commission (TTC) operates a transit service on Barkdene Hills and Gradwell Drive, City Council approval of this report is required.

Transportation Services has reviewed the need for all-way stop control at the intersection of Barkdene Hills and Gradwell Drive. Based on the assessment undertaken, Transportation Services does not recommend the installation of all-way stop control at this intersection as the warrant criteria was not met.

RECOMMENDATIONS

The Acting Director, Traffic Management, Transportation Services recommends that:

1. City Council not authorize all-way compulsory stop control at the intersection of Barkdene Hills and Gradwell Drive.

FINANCIAL IMPACT

There is no financial impact resulting from the adoption of the recommendation in this report.

If Scarborough Community Council amends the recommendation in this report and authorizes the installation of all-way stop control, the estimated cost associated with the amendment is \$800.00. Funding would be subject to availability and competing priorities within the Transportation Services interim 2021 Operating Budget.

DECISION HISTORY

This report addresses a new initiative.

COMMENTS

At the request of the Ward Councillor following a community meeting, Transportation Services investigated the feasibility of installing all-way stop control at the intersection of Barkdene Hills and Gradwell Drive.

Existing Conditions

Barkdene Hills is characterized by the following conditions:

- It is a two-lane, east-west, collector roadway
- It operates two-way traffic on a pavement width of approximately 8.5 metres
- The daily two way traffic volume is approximately 1,507 vehicles
- The regulatory speed limit is 50 km/h
- Heavy trucks are prohibited at all times
- There is TTC service provided by the 12C bus
- There are sidewalks located on one side of the street

Gradwell Drive is characterized by the following conditions:

- It is a two-lane, north-south, local roadway
- It operates two-way traffic on a pavement width of approximately 8.4 metres
- The daily two-way traffic volume is approximately 649 vehicles
- The posted speed limit is 40 km/h
- Heavy trucks are prohibited at all times
- There is no TTC service provided
- There are no sidewalks located on either sides of the street

These two streets intersect to form a right-angled four-leg intersection, with right-of-way controlled by stop signs for northbound and southbound traffic on Gradwell Drive.

The surrounding land use mostly consists of single family residential homes, Bluffers Park is located approximately 400 metres to the south, and St. John Henry Newman Catholic High School is located approximately 400 metres to the west.

A map of the area is included in Attachment 1.

Study Results

In order for all-way stop control to be warranted at an intersection, established criteria must be satisfied. The warrants consist of four components, including: collision history, total vehicle volume, combined vehicle and pedestrian volumes crossing the major road and the percentage of traffic on the major road.

Collision history provided by the Toronto Police Service for the three-year period ending December 31, 2020, disclosed that three reported collisions occurred at this intersection and none of these collisions involved pedestrians. One of these collisions was considered potentially preventable by the installation of all-way stop control.

Transportation Services conducted an all-way stop control study on Tuesday, October 15, 2019 at the subject intersection. The results of the study were evaluated against the warrant criteria for all-way stop control as adopted by City Council. The evaluation is summarized in Table 1.

Table 1: All-Way Stop Control Study at Barkdene Hills and Gradwell Drive

No.	Warrant Type	Actual	Required	Satisfied (Yes/No)
A	Number of Potentially Preventable Collisions (2018 to 2020)	1	9	No
B1	Average Vehicle Volumes	142 /hour	375/hour	No
B2	Combined Vehicle & Pedestrian Volumes Crossing Major Road (Average)*	69 /hour	150/hour	No
B3	Percentage of Traffic on Major Street*	59%	≤70%	Yes

*New pedestrian warrants applied as adopted by City Council on July 16, 2019 in the Vision Zero 2.0 report.

In order for all-way stop control to be technically warranted, either Warrant A must be met or Warrant B1 and B2, or B1 and B3 must be met. Based on the study results, the technical warrants for the installation of all-way stop control are not satisfied. Therefore, it is not recommended that all-way stop control be installed at the intersection of Barkdene Hills and Gradwell Drive.

The Ward Councillor has been advised of the recommendation of this staff report.

CONTACT

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SIGNATURE

Roger Browne, M.A.Sc., P. Eng.
Acting Director, Traffic Management, Transportation Services

ATTACHMENTS

Attachment 1: Map - Proposed All-Way Stop Control - Barkdene Hills and Gradwell Drive

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