

Committee of the Whole (2) Report

DATE: Tuesday, April 12, 2022

WARD(S): 3

TITLE: ALL WAY STOP CONTROL – VELLORE PARK AVENUE AND HIGHMARK DRIVE/STARK CRESCENT AND LAWFORD ROAD AND FAROOQ BOULEVARD

FROM:

Zoran Postic, Deputy City Manager, Public Works

ACTION: DECISION

Purpose

This report seeks Council approval to implement an all-way stop control at the intersection of Vellore Park Avenue and Highmark Drive/Stark Crescent and Lawford Road and Farooq Boulevard to improve traffic operations.

Report Highlights

- Intersections are assessed for traffic review to determine the feasibility of installing new all-way stop controls.
- Traffic studies were undertaken at the intersection of Vellore Park Avenue and Highmark Drive/Stark Crescent and at the intersection of Lawford Road and Farooq Boulevard on October 13th and October 20th, 2021, respectively. The existing traffic volumes at these intersections met the Provincial Warrant for all-way stop controls.
- It is recommended that two all-way stop controls be implemented at the subject intersections to benefit vehicular and pedestrian movements.

Recommendations

1. That the implementation of an all-way stop control at the intersection of Vellore Park Avenue and Highmark Drive/Stark Crescent be approved;
2. That the implementation of an all-way stop control at the intersection of Lawford Road and Farooq Boulevard be approved;

3. That a By-law be enacted to amend By-law 284-94, the Consolidated Traffic By-law, to add an all-way stop control at the intersection of Vellore Park Avenue and Highmark Drive/Stark Crescent;
4. That a By-law be enacted to amend By-law 284-94, the Consolidated Traffic By-law, to add an all-way stop control at the intersection of Lawford Road and Farooq Boulevard; and
5. That the City Clerk forward a copy of this report to York Regional Police.

Background

Traffic reviews were conducted at the subject intersections to assess the need for additional traffic control measures.

Traffic operations reviews were conducted at the subject intersections with the following findings:

1. Vellore Park Avenue and Highmark Drive/Stark Crescent

Vellore Park Avenue and Highmark Drive/Stark Crescent form a four-legged intersection, with two travel lanes (one lane per direction). Vellore Park Avenue is designated as a minor collector roadway with a pavement width of 11.5 metres, and a right-of-way width of 23.0 metres. Highmark Drive and Stark Crescent are local roads with a pavement width of 8.0 metres and a right-of-way width of 17.5 metres.

Vellore Park Avenue is oriented north-south and does not require vehicles to stop at the intersection with Highmark Drive/Stark Crescent. Vehicles travelling on Highmark Drive and Stark Crescent, which are oriented east-west, are required to stop at Vellore Park Avenue. There are sidewalks along both sides of Vellore Park Avenue, and on the north side of Highmark Drive and Stark Crescent.

Pedestrian generators/destinations include Glenn Gould Public School (on the northwest corner of Vellore Park Avenue and Highmark Drive/Keystar Court), St. Mary of the Angels Catholic Elementary School (on the southeast corner of Vellore Park Avenue and Venice Gate Drive) and Hillside Park (on the east side of Vellore Park Avenue, north of Highmark Drive).

2. Lawford Road and Farooq Boulevard

Lawford Road and Farooq Boulevard/school driveway form a four-legged intersection (two northbound travel lanes and one southbound travel lane with a left-turn lane on Lawford Road, and two travel lanes on Farooq Boulevard connecting to the school driveway on the east side). Lawford Road is designated as a minor collector roadway with

a pavement width of 14.5 metres, and a right-of-way width of 27.0 metres. Farooq Boulevard is a minor collector road with a pavement width of 11.5 metres and a right-of-way width of 23.0 metres.

Lawford Road is oriented north-south and does not require vehicles to stop at Farooq Boulevard. Vehicles travelling on Farooq Boulevard, which is oriented east-west, are required to stop at Lawford Road. Sidewalks are located along both sides of Lawford Road and Farooq Boulevard. Textured crosswalks are provided on the north, south and east sides of the intersection. Driveway access to Tommy Douglas Secondary School forms the west leg of this intersection.

Tommy Douglas Secondary School, Tommy Douglas Skatepark, and Chatfield District Park are located in the vicinity of the intersection. Guardian Angels Catholic Elementary School and Johnny Lombardi Public School are located approximately 500 metres from the intersection.

Previous Reports/Authority

Traffic By-law 284-94:

[Consolidated Traffic By-Law 284-94](#)

Analysis and Options

An all-way stop control is recommended at the subject intersections to improve traffic operations and vehicular and pedestrian movements.

The City's all-way stop control warrant analysis considers the minimum vehicular volumes required, accident hazards, and sight restrictions at the intersection. This warrant analysis is generally based on the thresholds established in Book 5 of the Ontario Traffic Manual.

1. Vellore Park Avenue and Highmark Drive/Stark Crescent

Observed traffic volumes at Vellore Park Avenue and Highmark Drive/Stark are 99% of the minimum required to meet the Provincial Warrant for all-way stop controls. Traffic volume data is based on turning movement counts collected on October 13, 2021. The study was conducted during the peak traffic periods of 7:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m. The study results are summarized in Table 1.

Table 1: All Way Stop Warrant Analysis at Vellore Park Avenue and Highmark Drive/Stark Crescent

Warrant #	Warrant Description	Study Results
Warrant 1	Minimum Vehicular Volumes	99%
Warrant 2	Accident Hazards	0%
Warrant 3	Sight Restrictions	0%

All-way stop controls are recommended when one of the above warrants meets or exceeds 100%. Traffic volumes can typically vary by up to 10% on any given day, with this, Warrant 1, as shown in Table 1, meets the requirement. Furthermore, due to the proximity of this intersection to Glenn Gould Public School, St. Mary of the Angels Catholic Elementary School and Hillside Park, it is recommended that an all-way stop control be installed at this location to improve vehicular and pedestrian movements.

2. Lawford Road and Farooq Boulevard/school driveway

Observed traffic volumes at Lawford Road and Farooq Boulevard are 185% of the minimum required to meet the Provincial Warrant for all-way stop controls. Traffic volume data is based on turning movement counts collected on October 20, 2021. The study was conducted during the peak traffic periods of 7:00 a.m. to 9:00 a.m. and 3:00 p.m. to 6:00 p.m. The study results are summarized in Table 2.

Table 2: All-Way Stop Warrant Analysis at Lawford Road and Farooq Boulevard

Warrant #	Warrant Description	Study Results
Warrant 1	Minimum Vehicular Volumes	185%
Warrant 2	Accident Hazards	0%
Warrant 3	Sight Restrictions	0%

All-way stop controls are recommended when one of the above warrants meets or exceeds 100%. Based on study findings, Warrant 1 exceeds this threshold, and as such, it is recommended that an all-way stop control be installed at this location to improve vehicular and pedestrian movements.

Warrant 2 was not met based on accident hazards for both intersections. Specifically, collision data from York Regional Police indicates that there have been no reported collisions at these intersections during a three-year period from July 2018 to July 2021.

Warrant 3, based on sight restrictions, was not met for both intersections. The sightline assessment found that pedestrian and motorist sightlines are unobstructed at both

intersections. Moreover, the intersection geometry does not pose any issues, with both streets at level grade and intersecting at 90 degrees.

The Ontario Ministry of Transportation (MTO) has recently released the Regulatory Signs Guide (December 2021) in January 2022. The updated Guide includes new criteria for All Way Stop controls. Staff are currently assessing the applicability of applying this guideline to the City of Vaughan.

Financial Impact

The capital cost associated with the installation of the all-way stop signs is estimated to be \$1,400 and supported in the approved 2022 Operating Budget. The on-going costs to maintain the signs and pavement markings (stop bars) are estimated to be \$600 per annum and will be incorporated into future year Operating Budgets.

Broader Regional Impacts/Considerations

York Regional Police will be responsible for enforcing compliance with the recommended all-way stop controls at the subject intersections. A copy of this report will be forwarded to them upon approval of the recommendations by Council.

Conclusion

All-way stop control is recommended at the intersection of Vellore Park Avenue and Highmark Drive/Stark Crescent and at the intersection of Lawford Road and Farooq Boulevard to improve traffic operations.

For more information, please contact:

Peter Pilateris, Director of Transportation and Fleet Management Services, ext. 6141
Margie Chung, Manager of Traffic Engineering, ext. 6173.

Attachments

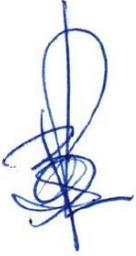
1. Location Map

Prepared by

David Fan, Traffic Analyst, ext. 6148

Mark Ranstoller, Senior Traffic Technologist, ext. 6117

Approved by



Zoran Postic, Deputy City Manager
Public Works

Reviewed by



Nick Spensieri, City Manager