



Staff Report for Committee of the Whole Meeting

Date of Meeting: December 4, 2019

Report Number: SRPRS.19.171

Department: Planning and Regulatory Services
Division: Development Engineering & Transportation

Subject: SRPRS.19.171 - Pedestrian Crossing Improvements on Clarissa Drive between Yonge Street and Weldrick Road East

Purpose:

The purpose of this report is to address concerns from residents of the Gibraltar Condo Complex regarding pedestrian safety crossing at Clarissa Drive and seek Council endorsement of staff's recommended remedial measures.

Recommendation(s):

- a) That the pavement markings, signage and crossing improvements recommended in staff report SRPRS.19.171 for Clarissa Drive (between Yonge Street and Weldrick Road East), be approved;
- b) That an budget amount of \$90,000 be approved to implement the work identified in a); and
- c) That the Federal Gas Tax Reserve Fund be used as the funding source for this work.

Contact Person:

Rob Cowie, Senior Traffic Analyst, Development Engineering, 905-771-6455 and/or
Hubert Ng, Acting Manager of Transportation, Development Engineering, 905-771-6501

Report Approval:

Submitted by: Kelvin Kwan, Commissioner of Planning and Regulatory Services

Approved by: Neil Garbe, Chief Administrative Officer

All reports are electronically reviewed and/or approved by the Division Director, Treasurer (as required), Town Solicitor (as required), Commissioner, and Chief Administrative Officer. Details of the reports approval are attached.

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Background:

Transportation staff have received concerns from the residents of the Gibraltar Condo Complex regarding pedestrian safety when crossing Clarissa Drive, particularly for senior citizens. Staff have noted that the key area of concern is midblock on Clarissa, between Yonge Street and Weldrick Road East, where there is a clear pedestrian desire line between the Gibraltar Condo Complex (on the north side of Clarissa Drive) and the east commercial plaza access (on the south side of Clarissa Drive).

Clarissa Drive is an east-west local road that extend from Yonge Street to Weldrick Road East. The local road has a two-lane cross section with an 18.0 m right-of-way and 8.5 m pavement width. There is a sidewalk located on the north side of Clarissa Drive. The posted speed limit for this road is 40 km/h. The average daily traffic volume on Clarissa Drive is approximately 3,000 vehicles. Traffic on Clarissa Drive is controlled by stop signs at both Yonge Street and at Weldrick Road East. The length of this segment of Clarissa Drive is approximately 300m.

Data Collection and Field Observations

A pedestrian crossing and volume count was conducted from 11:00 am to 1:00 pm and from 3:00 pm to 7:00 pm on Clarissa Drive, between Yonge Street and Weldrick Road East. Turning movement counts were conducted during this time at the Gibraltar Condo Complex driveway and the east driveway of the commercial plaza to determine the vehicular interaction with the pedestrian activity.

Motorist and pedestrian sightlines, motorist/pedestrian interactions, pedestrian activities and types of users were also assessed for this location.

The collected data reveals that a significant number of pedestrians cross Clarissa Drive between gaps in traffic throughout the day. The majority of north-south pedestrian crossings occurred around the east access of the plaza confirming a clear desire line of pedestrian activity.

Pedestrian Crossover Warrant Assessment

Using the data collected, a pedestrian crossover warrant assessment was conducted for this location of Clarissa Drive, in accordance with Ontario Traffic Manual (OTM) Book 15 – Pedestrian Crossing Treatments.

The assessment is a tool that takes into account the highest four-hours of pedestrian volumes and traffic volumes, distance from other traffic control devices, and system connectivity. The technical criteria for the installation of a pedestrian crossover is shown below, along with the assessment results.

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Four-hour Pedestrian Volume

Threshold Value: 65
Observed Value on Clarissa Drive: 283
Criteria Met: 435%

Four-hour Traffic Volume

Threshold Value: 395
Observed Value on Clarissa Drive: 811
Criteria Met: 205%

Distance from nearest Traffic Control Device

Threshold Value: 200 m
Measured Value on Clarissa Drive: 175m
Criteria Met: 88%

Based on the warrant assessment, the subject midblock location on Clarissa Drive exceeds the minimum criteria for pedestrian crossing and vehicular traffic volumes, but is slightly below the minimum distance criteria at 88%. Although the distance criteria is not fully satisfied, it is the distance between the locations of the proposed pedestrian crossover and the stop-controlled Yonge Street at Clarissa Drive intersection that prevents this. Furthermore, a large portion of the crossing activity is related to seniors which are considered more vulnerable road users, and at higher risk for pedestrian-vehicle conflicts.

As such, based on the pedestrian and vehicle volumes and the context specific factors noted above, staff recommend that a midblock pedestrian crossover be implemented on Clarissa Drive, between Yonge Street and Weldrick Road East.

Selection of the Type of Pedestrian Crossover

The appropriate type of pedestrian crossover treatment is selected based on four specific criteria:

1. Four-hour two-way vehicular volumes of the roadway at the location of the crosswalk;
2. Posted speed limit of the roadway;
3. Total number of lanes for the roadway cross section; and
4. Presence of a raised pedestrian refuge.

The four-hour vehicular volume for Clarissa Drive was 811 vehicles. The posted speed limit is 50 km/h for the two-lane road. There is no raised pedestrian refuge in the area. Based on the matrix of facility types in OTM Book 15, a Level 2 Type C pedestrian crossing treatment is warranted for this location. This Pedestrian Crossover Level 2

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Type C will consist of zebra pavement markings, flashing beacon lights, and appropriate regulatory signage.

Minor sidewalk extensions and driveway curb modification will also be required to properly facilitate the Pedestrian Crossover.

A clear area of 65m is required on each approach to the crosswalk in order to improve visibility and safety for the users of the pedestrian crosswalk. Attachment 1 provides an illustration of the recommended crosswalk, its configuration, required signage, and sidewalk extensions.

Financial/Staffing/Other Implications:

The implementation of the pedestrian crossover and the sidewalk extensions/curb modifications at the midblock of Clarissa Drive are estimated to cost approximately \$90,000.

It is recommended that the Federal Gas Tax Reserve Fund be used as the source of funding for this project.

Relationship to the Strategic Plan:

The recommendations of this report are consistent with the City's Strategic Plan to enhance community safety. The recommendations meet Goal One and Goal Two of the City's Strategic Plan of providing "stronger connections" in Richmond Hill by improving the function of buildings, streets, and neighborhoods and by "providing better choices" of mobility for residents with respect to active transportation.

Conclusion:

Staff recommend the implementation of a north-south pedestrian crossover at the midblock of Clarissa Drive between Yonge Street and Weldrick Road East in order to provide better access between the condo complex and the commercial plaza. Based on the criteria established in the Ontario Traffic Manual Book 15, a Level 2 Type C pedestrian crossover, consisting of zebra crossing pavement markings, rapid rectangular flashing beacons, and appropriate signage is recommended as a remedial measure at this location. Staff further recommend that minor sidewalk extensions and curb modifications be completed at the same time to properly facilitate this crossing.

Attachments:

The following attached documents may include scanned images of appendixes, maps and photographs. If you require an alternative format please call contact person listed in this document.

Attachment 1: Pedestrian Crossing Improvements at Clarissa Drive

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Report Approval Details

Document Title:	SRPRS.19.171 - Clarissa Drive Pedestrian Crossover .docx
Attachments:	- SRPRS.19.171 Attachment 1.pdf
Final Approval Date:	Nov 25, 2019

This report and all of its attachments were approved and signed as outlined below:

Dan Terzievski - Nov 22, 2019 - 1:27 PM

Kelvin Kwan - Nov 22, 2019 - 2:36 PM

David Dexter - Nov 25, 2019 - 11:18 AM

Neil Garbe - Nov 25, 2019 - 3:03 PM