



The Corporation of the City of Cornwall
Regular Meeting of Council
Report

Department: Infrastructure and Municipal Works
Division: Infrastructure Planning
Report Number: 2021-09-Infrastructure and Municipal Works
Prepared By: Enrique Kamm, Transportation Engineer
Meeting Date: February 22, 2021
Subject: Riverdale Avenue Petition- Traffic and Safety Concerns

Purpose

To address a petition submitted by residents of the Riverdale Avenue area, requesting that the City address a number of traffic related matters in the area.

Recommendation

That Council approve the following:

- a. That the installation of all-way stop signs at the intersection of Riverdale Avenue and Grant Avenue not be considered due to Provincial 'ALL-WAY STOP' Warrants not being met;
- b. That the results of this report be forwarded to the Cornwall Police Services for consideration of regular enforcement of the speed limit and other rules of the road in the area;
- c. That the City continue to install speed board radars along Riverdale Avenue from time to time to raise motorists awareness and to support police enforcement;
- d. That the existing 'Community Safety Zone' along Riverdale Avenue be extended north to Dorney Avenue; and
- e. That the City continue to monitor the area in order to identify potential issues and to assess the need for future traffic calming measures or pedestrian and cyclists infrastructure.

Background / Discussion

At the January 11, 2021, regular meeting, Council referred to Administration a petition that was submitted by residents of the Riverdale Avenue area, requesting the City of the following:

1. Enforce existing heavy vehicle restrictions on Grant Avenue and Riverdale Avenue;
2. Adopt traffic-calming strategies including, but not limited to, a four-way stop at the intersection of Grant Avenue and Riverdale Avenue, and infrastructure such as raised crosswalks, center-islands, to protect pedestrians and drivers; and
3. Develop alternate access routes to Power Dam Drive from the north end of Riverdale.

Transportation Review of the Area

In order to assess the issues and thereby recommend further studies or an action plan, recent traffic counts and speed studies conducted on Riverdale Avenue were reviewed and analyzed.

Speed and volume surveys were conducted at several locations along Riverdale Avenue between Queen Street and Grant Avenue.

Traffic volumes and speeds were recorded 24 hours a day for at least a one week period in the past few years in order to monitor speeds and volumes.

Intersection traffic movement counts were also undertaken along Riverdale Avenue from Queen Street to Grant Avenue.

Collision statistical data along Riverdale Avenue intersections was also analyzed.

Traffic volumes

Typical traffic volumes expected on collector streets are in the range of 1,000 to 8,000 Vehicles Per Day (VPD). Current traffic volumes on Riverdale Avenue are well within that range, with an Annual Average Daily Traffic (AADT) of 1,500 VPD near Queen Street, to 1,400 VPD near Grant Avenue. North of Grant Avenue those volumes are significantly lower, in the 700 VPD range. Traffic volumes are quite steady and have not changed much for the past 10 years within this area.

Historic collision occurrences along Riverdale Avenue, south of Grant Avenue, were reviewed for a 5-year period. For the said period, there were no collisions reported on Riverdale at any intersections, except one at Dover Road and two at Queen Street. In general, the safety record of all the intersections is very good and in particular, the intersection of Grant Street has an excellent safety record with no collisions for the past 10 years.

Speed Study

The 85th percentile represents the speed below which 85% of vehicles travel. For all the surveyed locations the 85th percentile was in the 50 km/h range for several years.

In particular, between January 11 to January 26, 2021, flashing speed boards were installed on Riverdale Avenue, south of Grant Avenue. At the beginning, the speed boards were on 'stealth' mode for a number of days, when although it still records speeds during that time, motorists do not notice that the speed boards are active. This avoids bias on motorists behavior. When the flashers are turned on, they flash indicating actual speeds, when they are over the limit. Results for both periods were the same, recording speeds in the 50 km/h range. A similar speed survey was undertaken on Riverdale Avenue, south of Blakely Street, between April 30 and May 7, 2020. Results of the study were the same as the one undertaken in January 2021, with operating speeds in the 50 km/h range.

The 85th percentile is widely used as an indicator of compliance with the speed limits. From the above speed analysis it can be concluded that speeds on Riverdale Avenue are within the range of 50 km/h, which is the statutory speed limit within urban areas as established by the Highway Traffic Act.

Traffic Control Justification (all-way Stop)

For the traffic analysis, Provincial guidelines were followed in order to determine the justification for an all-way stop control at the intersection of Riverdale Avenue and Grant Avenue.

The analysis has concluded that installation of all-way stop control signage is not warranted at this time under current conditions. Given the traffic patterns, and forecast, amongst other criteria, it seems unlikely that an all-way stop control would be warranted in the near future.

The Provincial guidelines take into account factors such as approaching peak traffic volumes, traffic split per approach, and historical collision analysis, in order to determine whether installation of all-way stop controls are warranted. Other factors such as visibility, lines of sight, etc., are also taken into account. Stop control signs are devices to clearly assign the right-of-way between vehicles approaching an intersection from different directions. The Provincial guidelines also indicates as inappropriate the use of all-way stop control under the following conditions:

- as speed control devices;
- where protection of pedestrian is of concern; and
- as a means of deterring through traffic in residential areas.

Where warrants and specific site conditions have not been met, installation of stop signs often only create a false sense of security for residents and potentially promote disregard of traffic signs by motorists. In this sense, unjustified stop signs may cause frustration and more aggressive driving once having passed the signs in order to make up lost time, perceived as wasted time. The intersection of Riverdale Avenue and Grant Avenue has an excellent safety record, adding an unwarranted all-way stop control may negatively impact that record.

It is common belief that stop signs may reduce motorists speed. A study undertaken by the Transportation Section a few years ago, compared traffic speeds at two parallel streets, Leonia Street and Anthony Street, with similar traffic conditions and configurations. The only difference was that one of them had stop signs between intersections and the other did not. Speeds were recorded mid-block, beyond the stop sign. Results revealed the same 85th percentile speed for both streets, thus evidence of the failure of stop signs in slowing traffic except at the very intersection where being installed. Several similar studies throughout North America have arrived at similar conclusions. The guidelines for effective use of all-way stops are based on widely recognized studies and their arbitrary installation may result in a great disservice and potential liability.

The heavy truck traffic complaints in the north end of the Riverdale Avenue area were due to the construction of Phase 3 of the Parkwood Estates Subdivision which was completed in 2020. Final Acceptance of the subdivision by the City will occur in 2021 once all final deficiencies have been rectified and final inspections have been completed. Any current transient truck traffic through the area would mostly be related to the construction of new homes in the subdivision; however, truck traffic resulting from the construction of new homes would be considered low.

The Traffic By-Law states that the 'No-Truck' restriction shall not apply to any vehicle actually engaged in making a delivery or a collection from the premises which cannot be reached by the way of a highway. As the property/phase of the development does not have a legal roadway to the site from Power Dam Drive, the Traffic By-Law allows for construction traffic to access the subdivision using Grant Avenue to Riverdale Avenue. Similar to City capital works projects, if the site cannot be reached by way of a 'truck route', construction vehicles can use 'No-Truck' routes to access the site provided that the route taken is the shortest possible to and from the site. This is also similar to several other subdivision developments in the City. Additionally, the language used in the City's Traffic By-Law is similar to that of other municipalities.

The next phase of the subdivision will include the extension of Riverdale Avenue to Power Dam Drive which will connect the collector roadway to the arterial roadway. Since the next phase of the subdivision will have direct access to Power Dam Drive, heavy truck traffic related to the construction of the next phase of the subdivision will not be permitted to use Grant Avenue and/or Riverdale Avenue to access the site. The construction of the next phase of the subdivision is dependent upon lot sales, market demands and economic conditions. Based on preliminary discussions with the developer, the next phase of the subdivision could occur as early as 2022; however, that is largely dependent on market conditions. The extension of Riverdale Avenue to Power Dam Drive will provide an additional access for the area north of Grant Avenue. Providing an additional access point for the north end of Riverdale will likely decrease existing traffic volumes along Grant Avenue which is classified as a local roadway as well as Riverdale Avenue near Grant Avenue.

Further information on this matter will be provided in the presentation by Administration.



Pedestrian Safety and Traffic Calming

The best way to protect pedestrians is to segregate pedestrian traffic from vehicular traffic with sidewalks.

In the past few years, the City has implemented a number of sidewalks in the Riverdale area to provide safe routes to schools and parks in the area. Amongst the most recent are new sidewalks along Grant Avenue, Surgenor Street, Charles Street and the City will continue to do so in accordance with the Bicycle and Pedestrian Master Plan.

Additionally, the City implemented Community Safety Zones on Riverdale Avenue, from Dover Road to Grant Avenue where fines are increased, in order to deter motorists bad driving habits.

It is recommended that the existing 'Community Safety Zone', be extended to Dorney Avenue as it is still within the corridor to school catchment area along a collector roadway.

Given the speed survey results, the excellent safety record within the study area, no additional traffic calming measures are warranted at this time. Regular police enforcement would help maintain and improve the traffic compliance and safety in this area.

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

Michael Fawthrop - Feb 18, 2021 - 1:29 PM

Bill de Wit - Feb 18, 2021 - 1:44 PM

Maureen Adams - Feb 18, 2021 - 2:01 PM