

Date: 2021-02-23

Subject: **Traffic Calming Plan – Vodden Street West (Williams Parkway to Isabella Street), Royal Orchard Drive (Bovaird Drive West to Williams Parkway) and Centre Street North (Queen Street East to Williams Parkway - Wards 1 and 5**

Contact: Radoslaw Moryc, Traffic Operations Technologist, Road Maintenance, Operations and Fleet, Public Works and Engineering Department, 905-874-2583

Report Number: Public Works & Engineering-2021-132

Recommendations:

1. That the report titled: **Traffic Calming Plan – Vodden Street West (Williams Parkway to Isabella Street), Royal Orchard Drive (Bovaird Drive West to Williams Parkway) and Centre Street North (Queen Street East to Williams Parkway - Wards 1 and 5 (R132/2021 - File I.AC TRAF)** to the Committee of Council Meeting of March 31, 2021 be received; and,
2. That staff implement the recommended traffic calming measures on Vodden Street West, Royal Orchard Drive and Centre Street North as outlined in this report.

Overview:

- **Vodden Street West between Williams Parkway and Isabella Street, Royal Orchard Drive between Bovaird Drive West and Williams Parkway, and Centre Street North between Queen Street East and Williams Parkway had been identified as priority locations to be studied in accordance with the Neighbourhood Traffic Management Guide.**
- **The proposed traffic calming plans for Vodden Street West, Royal Orchard Drive, and Centre Street North consist of pavement markings (centerlines, bicycle lanes, urban shoulders) and speed cushions.**
- **Various points of public contact were made following the process defined in the Neighbourhood Traffic Management Guide.**

- **Based upon the public input, the proposed traffic calming plans for Vodden Street West between Williams Parkway and Isabella Street, Royal Orchard Drive between Bovaird Drive West and Williams Parkway, and Centre Street North between Queen Street East and Williams Parkway are recommended for approval.**

Background:

Brampton City Council adopted the Neighbourhood Traffic Management Guide (NTMG) as a means for staff to address traffic problems on residential streets. The NTMG was developed to improve the safety and the liveability of neighbourhoods by minimizing negative impacts of traffic, such as noise, pollution, and visual intrusion. It also seeks to improve safety for pedestrians, cyclists, motorists, and all other road users by implementing a wide range of traffic calming countermeasures.

The process of Neighbourhood Traffic Management includes the development and ongoing maintenance of the Traffic Calming Priority List. This is a tool to quantify traffic-related issues and rank locations based on the current conditions. The ranking of any particular roadway is determined by consideration many factors. These factors include traffic volume, speed, cut-through traffic, the average number of collisions over three years, presence or absence of school frontage, parks, sidewalks, and other pedestrian generators.

In October 2019, City Council approved Vodden Street West between Williams Parkway and Isabella Street, Royal Orchard Drive between Bovaird Drive West and Williams Parkway, and Centre Street North between Queen Street East and Williams Parkway as priority locations to be studied following the NTMG guidelines.

Current Situation:

The development of a neighbourhood traffic-calming plan involves a comprehensive review of the existing right of way conditions. This review provides staff with an understanding of current traffic conditions and verifies/addresses identified traffic-related issues. The review also includes an overview of the road network, pedestrian facilities, and existing traffic control devices.

Vodden Street West

Vodden Street West is a north-south/east-west two-lane collector road with a posted speed limit of 50 km/hour. The roadway is 9.3 metres wide and provides a direct connection between Williams Parkway and Main Street. The convenience and comfort provided by the alignment and width of the roadway have resulted in a higher than normal percentage of cut-through traffic and prevailing speed. This section of Vodden Street West has several community parks and recreational areas including Mains Creek Park West, Mains Creek Park East, Talbot Park, Vodden Park, Nancy McCredie Park, and Lowes Avenue Parkette North that are located adjacent to it. These pedestrian

generators are located throughout the entire stretch of Vodden Street West. With excessive speeding and higher collision rates within the area, safety for pedestrians within the surrounding neighbourhood is of concern.

Royal Orchard Drive

Royal Orchard Drive is a north-south two-lane collector road with posted speed limits of 50 km/hour and 40 km/hour (through a school zone). The roadway is 9.3 metres wide and provides a direct connection between Bovaird Drive West and Williams Parkway. The convenience and comfort provided by the alignment and width of the roadway have resulted in a higher than normal percentage of cut-through traffic and prevailing speed. There are two existing schools adjacent to Royal Orchard Drive, an elementary school (St. Maria Goretti Elementary School) and a middle school (Royal Orchard Middle School). There are also several community parks and recreational areas including W.A. Russell Parkette, Fred Kee Park, and Donn Reynolds Parkette, which are adjacent to Royal Orchard Drive. These pedestrian generators are located throughout the entire stretch of Royal Orchard Drive. With excessive speeding and higher collision rates within the area, safety for pedestrians within the surrounding neighbourhood is of concern.

Centre Street North

Centre Street North is a north-south two-lane collector road with posted speed limits of 50 km/hour and 40 km/hour (through a school zone). The roadway is 11.0 metres wide and provides a direct connection between Williams Parkway and Queen Street East. The convenience and comfort provided by the alignment and width of the roadway have resulted in a higher than normal percentage of cut-through traffic and prevailing speed. Sir John A. Macdonald Sr. Public School fronts onto Centre Street North and two community parks and recreational areas (Willow Parkette and Duggan Park) are located adjacent to Centre Street North. These pedestrian generators are located throughout the entire stretch of Centre Street North. With excessive speeding and higher collision rates within the area, pedestrian safety within the surrounding neighbourhood is of concern.

Traffic Calming Measures

The proposed traffic calming plans for Vodden Street West, Royal Orchard Drive, and Centre Street North were selected based on their effectiveness at addressing the traffic-related issues within the neighbourhood while considering site-specific challenges and opportunities, which include:

Speed Cushions are raised areas on a road, similar to a speed hump, but it does not cover the entire width of the road. Speed cushions are usually configured two or three across, depending on the width of the road. The width of each cushion is designed intentionally so that the wider axle of emergency vehicles and buses can pass unaffected, but that smaller passenger vehicles must ride over the raised area. This

configuration addresses one of the main concerns with speed humps: the fact that emergency vehicles are also forced to slow down.

Bicycle Lanes are the portions of the roadway, which have been designated by pavement markings and signage for the exclusive use of cyclists.

Pavement Markings including Centerline and Edge line (Urban Shoulder) involve the use of pavement markings to visually narrow the travelled portion of a roadway, thereby encouraging lower travel speeds. Similar to the bump-outs, the narrowing effect of the centre lines and edge lines addresses the excessive speeds and discourage traffic infiltration into the neighbourhood.

Illustrations of the above measures and their proposed locations are provided in Appendix A1/A2/A3/A4, Appendix B1/B2/B3/B4, and Appendix C1/C2/C3/C4/C5/C6/C7.

Agency Review and Public Consultation

An objective in the development of the subject traffic calming plans is to involve stakeholders, service providers, and the public in the development of the plans.

Staff provided the details of the preferred plan to service providers such as Brampton Transit and the Accessibility Advisory Committee. No concerns or objections were received regarding the proposed plans.

Various points of public contact were made in accordance with the process defined in the NTMG. Residents of the subject roadways were notified of the study commencement, invited to a virtual public information center, and surveyed to measure support for the proposed plans.

The intent of the traffic calming survey is to determine the level of support for traffic calming measures and to provide residents with a way to voice any opposition to the proposed plans. Surveys were delivered to the residents of Vodden Street West, Royal Orchard Drive, and Centre Street North. The survey described the proposed traffic calming plans and asked whether the residents support the implementation.

The surveys were sent out to residents in September 2020. The following table summarizes the results of the survey.

Location	Vodden Street West	Royal Orchard Drive	Centre Street North
Total Number of Surveys Sent Out	147	80	182
Total Number of Surveys Returned	14 (10%)	8 (10%)	10 (5%)
Option 1 – Urban Shoulders	9 (64% of returned)	3 (38% of returned)	3 (30% of returned)
Option 2 – Bicycle Lanes	5 (36% of returned)	4 (50% of returned)	5 (50% of returned)
Option 3 – Do Nothing	0 (0% of returned)	1 (12% of returned)	2 (20% of returned)

Royal Orchard Drive, Vodden Street West and Centre Street North have been identified in the City's Active Transportation Master Plan (ATMP) as candidate streets for implementing bicycle infrastructure. The implementation of bicycle lanes on these streets aligns not only with the ATMP but also with Brampton's 2040 Vision and more specifically with Term of Council Priorities "Brampton is Green City" (Equalize All Forms of Transportation) and "Brampton is Healthy and Safe City" (Streets for People). Implementation of bicycle infrastructure on Royal Orchard Drive and Vodden Street West also provides a seamless connection to the partially completed East-West Cycling Corridor on Vodden Street East and Howden Boulevard. It should also be noted that the introduction of cycling lanes and urban shoulders also act as a traffic calming measure through the reduction of vehicle lane-widths. Narrower lane-widths reduce the risk of collision through the reduction of vehicle speeds and non-local traffic.

In addition, those residents who responded to the survey, through the public consultation process, support the implementation of urban shoulders on Vodden Street West and bicycle lanes on Royal Orchard Drive and Centre Street North Drive. With the above in mind, the proposed traffic calming plans for the subject roadways are recommended for approval.

Next Steps

Detailed Construction Drawings

Once approved by Council, detailed construction drawings will be developed for the concept plans with the intent of commencing construction in 2021.

Implementation, Monitoring, and Evaluation

The final stage of the study involves the implementation, monitoring and evaluation of the recommended plan. The monitoring/evaluation program will be developed consistent with the data collection activities that occurred in the problem identification stage of the process. This will facilitate the comparison of “before and after” data.

The monitoring and evaluation of the relevant traffic characteristics of Voddan Street West, Royal Orchard Drive, and Centre Street North after implementation should occur after a sufficient time period has elapsed in order to allow for the desired effect to be achieved (i.e. 1-2 years post-installation). The suggested timeframe also allows staff to monitor and evaluate the installation in all four seasons of the year.

Corporate Implications:

Financial Implications:

The estimated cost associated with the implementation of the traffic calming measures for Voddan Street West, Royal Orchard Drive, and Centre Street North is \$162,400. There are sufficient funds available to proceed with this initiative.

Other Implications:

Traffic calming measures by design restrict the flow of traffic along a subject roadway with the intent of minimizing traffic infiltration in a residential neighbourhood. Physical measures chosen for these particular plans will impact residents adjacent to the subject roadways. Bicycle lanes will restrict parking on both sides of Royal Orchard Drive and Centre Street North. In order to minimize the impact of these measures on the residents, a public consultative process was completed including a virtual public meeting and resident feedback questionnaire that was sent to the affected residents providing them the opportunity to voice their opinion on the proposed design alternatives, which helps in completing the design of the traffic calming plans.

Strategic Plan:

This report achieves the “Move & Connect” Priority of the Strategic Plan by supporting the “active transportation and cycling strategy” initiative of the plan.

Council Priority – Streets for People

This report incorporates the Vision Zero framework into transportation planning, design and operations to prevent fatal and serious injury from motor vehicle collisions within the City right-of-way.

Conclusion:

Driver behaviour is influenced by the geometric characteristics of the subject roadway and when combined with neighbourhood features such as frequent driveways,

pedestrian traffic, and adjacent parkland/schools, which results in a reduction in safety and liveability of the neighbourhood.

The traffic calming plans recommended for Vodden Street West, Royal Orchard Drive, and Centre Street North are expected to lower vehicle speeds, reduce cut-through traffic, improve safety, and improve pedestrian accessibility within the adjacent neighbourhoods.

In accordance with the Neighbourhood Traffic Management Guide, staff recommends that the proposed traffic calming plans for the subject roadways be approved as outlined within this report.

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Attachments:

Appendix A: Vodden Street West - Traffic Calming Concept Plan

Figure A1: Vodden Street West Traffic Calming (Williams Parkway to a point 47 meters south of Brookview Road)

Figure A2: Vodden Street West Traffic Calming (A point 47 metres south of Brookview Road to a point 19 metres south of Pleasantview Avenue/English Street)

Figure A3: Vodden Street West Traffic Calming (A point 19 metres south of Pleasantview Avenue/English Street to a point 35 metres east of Rosebud Avenue/Mill Street North)

Figure A4: Vodden Street West Traffic Calming (A point 35 metres east of Rosebud Avenue/Mill Street North to Isabella Street)

Appendix B: Royal Orchard Drive - Traffic Calming Concept Plan

Figure B1: Royal Orchard Drive Traffic Calming (Bovaird Drive and a point 35 metres south of Springview Crescent/ Richwood Crescent)

Figure B2: Royal Orchard Drive Traffic Calming (Springview Drive/ Richwood Crescent and Beaverhall Road)

Figure B3: Royal Orchard Drive Traffic Calming (Beaverhall Road and Saddletree Trail)

Figure B4: Royal Orchard Drive Traffic Calming (Saddletree Trail and Williams Parkway)

Appendix C: Centre Street North - Traffic Calming Concept Plan

Figure C1: Centre Street North Traffic Calming (Williams Parkway and a point 42 metres south of Linkdale Road)

Figure C2: Centre Street North Traffic Calming (A point 42 metres south of Linkdale Road and a point 350 metres south of Linkdale Road)

Figure C3: Centre Street North Traffic Calming (A point 350 metres south of Linkdale Road and Vodden Street East)

Figure C4: Centre Street North Traffic Calming (Vodden Street East and a point 140 metres south of Beech Street)

Figure C5: Centre Street North Traffic Calming (A point 140 metres south of Beech Street and McCaul Street)

Figure C6: Centre Street North Traffic Calming (McCaul Street and a point 166 metres south of Church Street East)

Figure C7: Centre Street North Traffic Calming (A point 166 metres south of Church Street East and Queen Street East)