

To: Community and Operations Services Committee

From: Kevin Alexander, Commissioner,  
Community and Operations Services Department

Report Number: CO-24-47

Date of Report: September 11, 2024

Date of Meeting: September 16, 2024

Subject: Follow up Report for Investigating the Options for Traffic Calming Measures on Verdun Road between Olive Avenue and Eulalie Avenue Using The Neighbourhood Traffic Management Guide

Ward: Ward 4

File: 03-05

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## **1.0 Purpose**

The purpose of this report is to respond to Council's direction of November 20, 2023 regarding Report CO-23-58 which was referred to staff to investigate options for traffic calming measures on Verdun Road, between Olive Avenue and Eulalie Avenue, using the Neighbourhood Traffic Management Guide and report back to Community and Operations Services Committee.

Attachment 1 is a key plan showing the road network, location of Radar Message Board ("R.M.B.") units, and potential location of traffic calming devices.

## **2.0 Recommendation**

That the Community and Operations Services Committee recommend to City Council:

That Report CO-24-47 providing options for traffic calming measures on Verdun Road between Olive Avenue and Eulalie Avenue using the Neighbourhood Traffic Management Guide be received for information.

## **3.0 Input From Other Sources**

- Legislative Services
- Legal Services

## **4.0 Analysis**

### **4.1 Background**

At its meeting of April 25, 2022, Council considered [Report CS-22-38- Petition for a 3-Way Stop Control at the Intersection of Verdun Road and Vimy Avenue](#) and adopted the following recommendation:

1. That a 40km/h zone be implemented on Verdun Road between Eulalie Avenue and Olive Avenue; and,
2. That radar message boards be deployed along the same part of Verdun Road shortly after the implementation of 40km/h and vehicle speeds be tracked; and,
3. That radar message boards be again deployed after 6 months along with vehicle speed tracking; and,
4. That communication be sent to residents in the same area that thanks them for bringing their neighbourhood safety concerns to the City's attention, explains the current approach being taken to manage and monitor the concerns and its rationale, and that the process will include a future assessment of the results to determine if it is having the desired impact; and,
5. That results be reported back to Community Services Committee at a date after the six month check-in that compares the data sets from the initial report and the two periods measured after the implementation of a 40km/h limit, and that the same be communicated to residents at that time.

As per this direction, staff implemented a 40 km/h speed limit on Verdun Road between Olive Avenue and Eulalie Avenue, and deployed two R.M.B. units on the above stated section of Verdun Road to collect updated traffic data and to provide motorists feedback on their operating speeds and driving behavior.

At its meeting of November 20, 2023, Council considered [Report CO-23-58 - Follow up Report Regarding the Petition for a 3-Way Stop Control at the Intersection of Verdun Road and Vimy Avenue](#).

Both of these previous reports discussed the outcomes of traffic speed and volume data analysis on Verdun Road between Olive Avenue and Eulalie Avenue and feasibility of a 3-way stop at the intersection of Verdun Road and Vimy Avenue. The data analysis revealed no speeding and traffic infiltration issues on that section of Verdun Road. All-way stop control studies indicated that an all-way stop control is not warranted at the intersection of Verdun Road and Vimy Avenue.

In response to Report CO-23-58, at its meeting of November 20, 2023 Council directed staff to investigate options using the Neighbourhood Traffic Management Guide and report back to Community and Operations Services Committee.

#### **4.2 Verdun Road – Road Characteristics**

Verdun Road is a local residential street with a pavement width of 8.5 meters and a speed limit of 40 km/h. It connects with Gliddon Avenue at the north limit, and becomes a dead end south of Olive Avenue. There are sidewalks along both sides of Verdun Road between Olive Avenue and Eulalie Avenue.

#### **4.3 Vimy Avenue – Road Characteristics**

Vimy Avenue is a local residential street with a pavement width of 8.5 meters and a speed limit of 50 km/h. It connects with Ritson Road South at the west limit and Verdun Road at the east limit. There are sidewalks on the north side of Vimy Avenue between Oshawa Boulevard South and Verdun Road. A key plan showing the road network, location of the R.M.B. units and potential location of traffic calming devices is appended as Attachment 1.

#### **4.4 Collision History**

In the past five years, there have been no reported collisions at the intersection of Verdun Road and Vimy Avenue. There has been one (1) midblock collision on Verdun Road between Olive Avenue and Vimy Avenue, and two (2) midblock collisions between Vimy Avenue and Eulalie Avenue reported during the past five years. These collisions were property damage only with no reported injuries.

#### **4.5 Traffic Data Collection**

Staff collected traffic speed and volume data along Verdun Road between Olive Avenue and Eulalie Avenue using pneumatic road tube counters and R.M.B. units. It can be noted that pneumatic road tube counters can collect data in both directions, while R.M.B. units can only collect data in one direction. The traffic data collected is summarized below in Tables 1-3.

**Table 1: Verdun Road Traffic Data Summary - Pneumatic Road Tube Counters (July 22-23, 2024)**

Road	Location	Direction	Speed Limit	85 <sup>th</sup> Percentile Speed	Traffic Volume – 24 Hrs
Verdun Road	Between Olive Avenue and Vimy Avenue	Northbound	40 km/h	41 km/h	168
Verdun Road	Between Olive Avenue and Vimy Avenue	Southbound	40 km/h	41 km/h	177
Verdun Road	Between Vimy Avenue and Eulalie Avenue	Northbound	40 km/h	41 km/h	142
Verdun Road	Between Vimy Avenue and Eulalie Avenue	Southbound	40 km/h	53 km/h	138

**Table 2: Verdun Road Traffic Data Summary - Pneumatic Road Tube Counters (May 7-8, 2024)**

Road	Location	Direction	Speed Limit	85 <sup>th</sup> Percentile Speed	Traffic Volume – 24 Hrs
Verdun Road	Between Vimy Avenue and Eulalie Avenue	Northbound	40 km/h	42 km/h	167
Verdun Road	Between Vimy Avenue and Eulalie Avenue	Southbound	40 km/h	44 km/h	152

**Table 3: Verdun Road Traffic Data Summary – Radar Message Boards (May 1- August 15, 2024)**

Road	Location	Direction	Speed Limit	85 <sup>th</sup> Percentile Speed	Traffic Volume (3.5 Months)
Verdun Road	Between Olive Avenue and Vimy Avenue	Northbound	40 km/h	32 km/h	10,922
Verdun Road	Between Vimy Avenue and Eulalie Avenue	Southbound	40 km/h	33 km/h	17,878

#### **4.5.1 Traffic Data Review**

The analysis of traffic data collected between May and July 2024 did not identify speeding issues on Verdun Road between Olive Avenue and Eulalie Avenue. In most of the counts the 85<sup>th</sup> percentile speeds were measured between 41 km/h and 44 km/h which are acceptable and do not indicate a speeding issue as per the criteria in the City of Oshawa Neighbourhood Traffic Management Guide (“N.T.M.G.”).

Only in one count (Pneumatic Road Tube Count July 22-23, 2024) the 85<sup>th</sup> percentile speed between Vimy Avenue and Eulalie Avenue was measured 53 km/h in the southbound direction. The data analysis revealed that 26 vehicles out of 138 were travelling at a speed more than 50 km/h and one vehicle was recorded above 70 km/h. In the count from May 2024, the 85<sup>th</sup> percentile speed in the southbound direction at the same location was measured at 44 km/h.

The traffic volumes collected on Verdun Road are acceptable and do not indicate a traffic infiltration or ‘short cutting’ issue as per the criteria in the City of Oshawa N.T.M.G.

#### **4.6 Feasibility of Potential Traffic Calming Measures**

Traffic calming measures are a means to address traffic and safety issues such as speeding and traffic infiltration or ‘short cutting.’ It must be noted that not every traffic calming measure is suitable for every street. Along with sound engineering judgement, Oshawa’s N.T.M.G. provides guidance for where each type of traffic calming device should be implemented.

The traffic calming measures identified in Oshawa’s N.T.M.G. have been summarized below in Table 4. Staff have reviewed each traffic calming measure in the N.T.M.G. and noted suitability on Verdun Road based on road geometrics, road classification and existing conditions.

**Table 4: Traffic Calming Measures in Oshawa’s Neighbourhood Traffic Management Guide**

Traffic Calming Measure	Description	Primary Purpose	Approx. Cost	Suitability for use on Verdun Road
<b>Vertical Measures</b>				
<b>Raised Intersection</b>	A raised intersection is an intersection at a higher elevation than the road to reduce vehicle speed and better define pedestrian crosswalk areas.	Speed reduction and pedestrian safety	\$50,000-\$100,000	<b>Not Applicable:</b> Construction of a raised intersection at Verdun Road and Vimy Avenue is not recommended, as access to a residential driveway falls at the midpoint of this intersection.
<b>Speed Hump</b>	It is a raised area of road designated to cause discomfort for drivers travelling at higher speed.	Speed reduction	\$1,000-\$5,000	<b>Potential Option:</b> As per design standards and specifications, and due to existing driveway spacing, there is only one suitable location on Verdun Road (south of Vimy Ave) where construction of a standard size speed hump may be considered.
<b>Speed Cushion</b>	Similar to a speed hump, a speed cushion is a raised area of road but does not cover the entire road width requiring passenger vehicles to limit speeds while larger vehicles can straddle and pass with no difficulty.	Speed reduction	\$4,000-\$6,000	<b>Potential Option:</b> As per design standards and specifications, and due to existing driveway spacing, there is only one suitable location on Verdun Road (south of Vimy Ave) where construction of a standard size speed cushion may be considered.

Traffic Calming Measure	Description	Primary Purpose	Approx. Cost	Suitability for use on Verdun Road
<b>Horizontal Measures</b>				
<b>Chicane</b>	A chicane is a series of curb extensions on alternate sides of a road which narrow the road and require drivers to steer in an S-shape, therefore reducing the vehicles speed and through traffic.	Speeding reduction and traffic infiltration	\$15,000-\$50,000	<b>Not Applicable:</b> This option is not feasible due to the spacing of the existing driveways.
<b>Curb Extension</b>	A curb extension is a horizontal intrusion of the curb into the roadway resulting in a narrower section of roadway.	Speed reduction	\$50,000-\$100,000	<b>Not Applicable:</b> This option is not feasible, it may impact existing on-street parking and any future active transportation initiative.
<b>Curb Radius Reduction</b>	A curb radius reduction is an intersection corner with a reduced radius, which slow down right-turning vehicles	Speed reduction	\$50,000-\$100,000	<b>Not Applicable:</b> This measure would not be appropriate as no issues with right-turning vehicles were reported on Verdun Road.

Traffic Calming Measure	Description	Primary Purpose	Approx. Cost	Suitability for use on Verdun Road
<b>On-Street Parking</b>	On-street parking allows vehicles to park parallel to curb, effectively reducing the width of the road. This reduces vehicle speed and through traffic.	Speed reduction	\$1,000-\$5,000	<b>Existing Measure:</b> General 3 hours on-street parking is allowed on both sides of the stated section of the street.
<b>Raised Median Island</b>	A raised median island is a raised median in the centreline of a two-way road. This reduces the travel lane width, causing a reduction in vehicle speeds.	Speed reduction	\$15,000-\$50,000	<b>Not Applicable:</b> This option is not feasible. A Raised Median Island may reduce parking and driveway access and may cause motor vehicle conflicts with bicycles. There is not sufficient roadway width to implement.
<b>Traffic Circle</b>	Traffic circles are installed inside existing intersections and require motorists to slow down to navigate around them.	Speed reduction	\$15,000-\$50,000	<b>Not Applicable:</b> Not suitable with existing road geometry and parameters.



Traffic Calming Measure	Description	Primary Purpose	Approx. Cost	Suitability for use on Verdun Road
<b>Flexible Bollards</b>	A flexible bollard is a rubber post placed in the center of a road in order to make drivers uncomfortable travelling at high speed. Flexible bollards are removed during winter months.	Speed reduction	Approx. \$2,000 per set	<b>Potential Option:</b> The installation of flexible bollards may be considered. As per installation guidelines, there is only one suitable location on Verdun Road (south of Vimy Ave) where a set of flexible bollards could be safely installed without impacting access to residents' driveways. Flexible bollards may also require supplemental 'No Parking' restrictions to maintain traffic access.
<b>Obstruction Measures</b>				
<b>Directional Closure</b>	A directional closure is a curb extension or barrier which extends to the centerline of the road in order to prohibit traffic in one direction of travel.	Volume reduction (traffic infiltration/short cutting)	\$15,000-\$50,000	<b>Not Applicable:</b> Not practicable as per existing road geometrics. A Directional Closure would also shift traffic onto nearby local streets.
<b>Diverter</b>	A diverter is a raised barrier placed diagonally across an intersection and used to restrict traffic flow.	Volume reduction (traffic infiltration/short cutting)	\$50,000-\$100,000	<b>Not Applicable:</b> Not practicable as per existing road geometry

Traffic Calming Measure	Description	Primary Purpose	Approx. Cost	Suitability for use on Verdun Road
<b>Full Closure</b>	Full closure is a barrier extending across the entire widths of a roadway that restricts all motor vehicle traffic movement from continuing along the roadway.	Volume reduction (traffic infiltration/short cutting)	\$50,000-\$100,000	<b>Not Applicable:</b> It restricts access to local vehicles and may impact or delay emergency access. It may cause an increase in trip times for the area residents, and shift traffic to nearby local streets.
<b>Regulatory Measures</b>				
<b>Community Safety Zones (C.S.Z.)</b>	C.S.Z. is a marked and designated portion of road, where community and municipality have determined that road safety is a concern.	Speed reduction	\$75-\$200 per sign	<b>Not Applicable:</b> As per N.T.M.G., a C.S.Z. is not warranted on Verdun Road.
<b>40 km/h Speed Limit Area (S.L.A.)</b>	A 40 km/h S.L.A. is a policy tool aimed at lowering speed limits across a neighbourhood or specific areas of a road network.	Speed reduction	\$75-\$200 per sign	<b>Existing Measure:</b> Reduced speed limit (40 km/h) has already been implemented on Verdun Road.

Traffic Calming Measure	Description	Primary Purpose	Approx. Cost	Suitability for use on Verdun Road
<b>Others</b>				
<b>Pavement Markings</b>	Pavement markings can be used to draw attention to a specific area or information.	Speed reduction	\$1,000-\$5,000	<b>Potential Option:</b> Pavement Markings could be implemented on Verdun Road, however these pavement markings are generally best suited to be used to bring attention to a specific area or information, such as a school area, stop ahead or speed limit change.
<b>Radar Message Board (RMB)</b>	Radar Message Boards record and display vehicle speeds back to motorists. It is an education tool designed to increase motorist awareness and safety.	Speed reduction	\$3,000-\$8,000 per unit	<b>Existing Measure:</b> Two Radar Message Boards are currently installed on Verdun Road, facing southbound and northbound traffic.

## 5.0 Financial Implications

There are no financial implications related to the recommendation contained in this Report.

## 6.0 Relationship to the Oshawa Strategic Plan

This report responds to the Oshawa Strategic Plan Priority Area “Care: Safe and Sustainable Environment” with the goal to collaborate and advocate for effective services, programs, and community safety and well-being support.

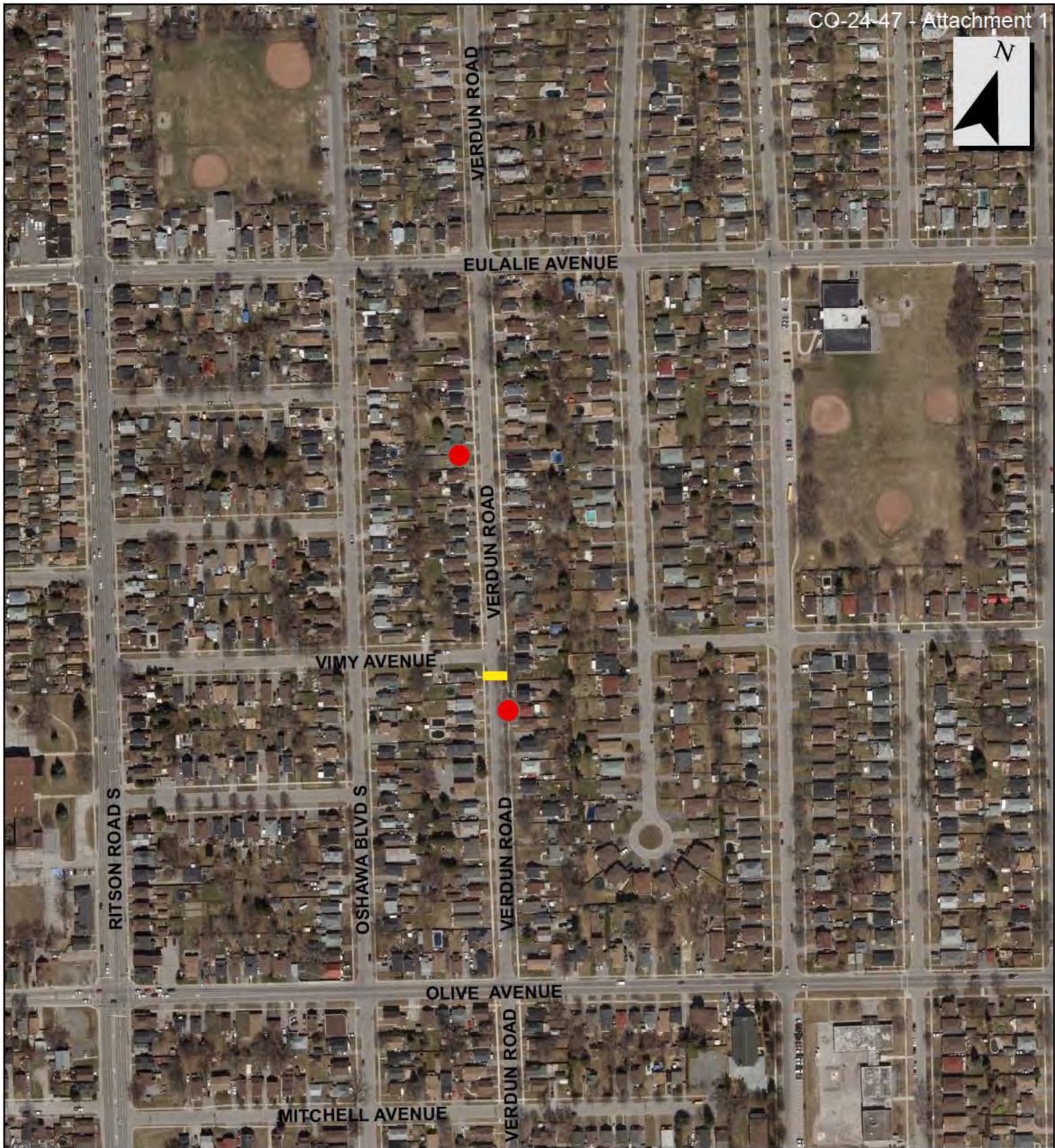
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Mike Harrington, P.Eng., PMP, Director - Interim,  
Parks and Roads Operations Services

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Kevin Alexander, Commissioner,  
Community and Operations Services Department





<b>LEGEND:</b>
Current location of installed Radar Message Boards: ●
Potential location of Speed Hump, Speed Cushion, or Flexible Bollards : ■

CITY OF OSHAWA COMMUNITY & OPERATIONS SERVICES DEPARTMENT	
KEY PLAN OF VERDUN ROAD STUDY AREA	
DATE: 11:09:2024	SCALE: NTS