



# City of Richmond

## Report to Committee

---

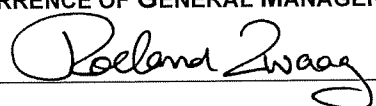

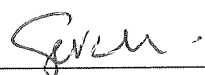
**To:** Public Works and Transportation Committee      **Date:** October 30, 2025  
**From:** Lloyd Bie, P.Eng.  
Director, Transportation      **File:** 10-6500-01/2025-Vol  
01  
**Re:** **Westminster Highway and River Road: Intersection Enhancements**

---

### Staff Recommendation

That the report titled "Westminster Highway and River Road: Intersection Enhancements", dated October 30, 2025, from the Director, Transportation, be received for information.

Lloyd Bie, P.Eng.  
Director, Transportation  
(604-276-4131)

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER 	
SENIOR STAFF REPORT REVIEW	INITIALS: 
APPROVED BY CAO 	

## **Staff Report**

### **Origin**

At the July 23, 2025 Public Works and Transportation Committee, the potential for intersection improvements at the Westminster Highway and River Road intersection was discussed and the following motion was endorsed:

*That staff review options for further traffic calming at the intersection of Westminster Highway and River Road.*

This report addresses this referral.

This report supports Council's Strategic Plan 2022-2026 Focus Area #3 A Safe and Prepared Community:

*Community safety and preparedness through effective planning, strategic partnerships and proactive programs.*

### **Analysis**

#### **Site Context**

Westminster Highway within Hamilton is classified as a Major Arterial Road, serving approximately 10,000 vehicles per day. The road forms part of the region's Major Road Network (MRN), connecting Richmond and New Westminster, and services transit and emergency vehicles.

River Road is classified as a Minor Arterial Road, serving approximately 2,500 vehicles per day. While River Road west of No. 7 Road is used by large trucks to service industrial and agricultural properties, River Road between No. 7 Road and Westminster Highway has a commercial vehicle load limit and primarily services local traffic along River Road and in Hamilton. As one of three roadways connecting east and west Richmond, it is used as an alternate route for Hamilton's residents when there is traffic disruption or congestion on Highway 91 and Westminster Highway.

River Road currently connects to Westminster Highway at a three-legged intersection. The intersection is located on a curve along Westminster Highway near a ninety-degree turn on River Road. The intersection has a stop sign on River Road and is free flowing on Westminster Highway.

The Hamilton Area Plan envisions a future re-alignment of River Road to connect to Westminster Highway at Willet Avenue for a standard four-legged intersection. However, there is currently no estimated timeline for when this re-alignment may occur.

## Intersection Assessment – Westminster Highway and River Road

### *Speed Study*

Speed studies were conducted around the Westminster Highway and River Road intersection. 85<sup>th</sup> percentile speeds along various legs of the intersection are presented in Table 1.

**Table 1: Speed Study Results - River Road and Westminster Highway**

<b>Roadway</b>	<b>85<sup>th</sup> Percentile Speed</b>
River Road	65 km/h
Westminster Highway (eastbound)	56 km/h
Westminster Highway (westbound)	51 km/h

### *Collision History*

Between 2017 and 2024, a total of 38 collisions were documented at the River Road and Westminster Highway intersection, with an average of under five collisions per year. This collision rate does not exceed industry accepted thresholds and is significantly lower than the City's most collision-prone intersections.

Most collisions were low severity with no fatalities recorded. Of these collisions, the most common were rear-end incidents where vehicles could not stop in time behind a vehicle waiting to turn and turning conflicts at the bend of River Road.

### *Intersection Performance*

Traffic at the intersection is currently controlled by a stop sign on River Road. Traffic volumes on River Road are high during the afternoon peak hours between 4:00 p.m. and 6:00 p.m., while traffic volumes on Westminster Highway remain high throughout the day. During afternoon peak hours, there is queueing for traffic on River Road waiting to turn onto Westminster Highway.

## Existing Traffic Calming and Enhancements on Westminster Highway and River Road

A number of traffic calming measures have been implemented along Westminster Highway in Hamilton and on River Road in recent years. These include:

- Installation of six speed humps on local roads within Hamilton and six speed humps within the 18,000 block of River Road;
- Installation of speed reader boards on Westminster Highway and local roads in Hamilton;
- Installation of shoulder delineators along Westminster Highway; and
- Installation of concrete barriers and hazard markers to improve visibility and protection of BC Hydro poles along the road edge on River Road.

Installation of solar powered light-up chevron markers at the bend of River Road north of Westminster Highway, installation of median delineators along Westminster Highway near the Cranberry Children's Centre, and vegetation pruning to improve visibility at the bend of River Road are underway and are anticipated to be complete before the end of the year.

### Potential Intersection Modifications

Potential modifications to the Westminster Highway and River Road intersection have been reviewed and are discussed below.

#### *Three-Way Stop Control*

Converting the intersection to a three-way stop will require all vehicles to stop before proceeding through the intersection. Traffic volumes on River Road are significantly lower than on Westminster Highway, and while conversion to a three-way stop may improve service for traffic on River Road during peak hours, it would cause notable delays for all traffic along Westminster Highway throughout the day. Based on the intersection's collision history, a significant number of collisions are caused by rear-ends to stopped vehicles. Conversion to a three-way stop would not address these collisions and would compromise traffic flow through the intersection.

#### *Northbound Left-turn Bay on Westminster Highway*

A left-turn bay can be introduced for northbound traffic on Westminster Highway turning onto River Road, allowing through traffic to bypass vehicles stopped for turning. This involves pavement widening, shifting of the existing northbound bike lane and potential impact to trees south of Westminster Highway.

As traffic is free-flowing on Westminster Highway, a left-turn bay is not required to support traffic flow; however, it may reduce rear-end collisions on Westminster Highway (average one rear-end collision per year).

#### *Signalize Intersection*

A traffic signal warrant study had been conducted to determine if a traffic signal is warranted based on Transportation Association of Canada guidelines. The study considers current and future traffic performances and includes an assessment of collisions that may have been prevented through the installation of a traffic signal. The study concluded that a traffic signal is not warranted at this time.

While there is queueing on River Road during the afternoon peak hours, the intersection has little or no queueing for the remainder of the day. Installation of a traffic signal would introduce delays for users on Westminster Highway throughout the day. If installation of a traffic signal is pursued, additional construction of the previously mentioned northbound left-turn bay is recommended to reduce delays for Westminster Highway traffic. In addition, signalization may encourage more drivers to utilize River Road to shortcut traffic on Highway 91 and increase traffic volumes on River Road.

### *Warning Signage and Road Markings on River Road*

Installing additional warning signage and road markings on River Road reminds traffic to slow down in advance of the curve and stop sign. This would include a “Stop Ahead” sign (Figure 1) and a painted “SLOW” marking on the roadway reminding drivers to reduce their speed.



Figure 1: Stop Ahead Signage

This reminds drivers to slow down in advance of the curve and notifies them that a stop sign is ahead and may help mitigate rear-end collisions on River Road and collisions caused by vehicles turning at too high of a speed.

### *Improve Visibility of River Road Stop Sign*

River Road is currently controlled by a stop sign at River Road. Measures can be implemented to enhance the visibility of the stop sign, which may mitigate some rear-end collisions where drivers are unaware of the need to stop. These include:

- Adding reflective tape to the stop sign post;
- Installing a solar-powered red flashing beacon above the existing stop sign; or
- Installing an overhead red flasher mounted on a traffic signal pole on the south side of Westminster Highway facing River Road.

Potential additional intersection modifications are summarized for information in Table 2.

**Table 2: Summary of Potential Intersection Modifications**

<b>Intersection Modification</b>	<b>Impact and Considerations</b>	<b>Approximate Cost</b>
Three-Way Stop	<ul style="list-style-type: none"> <li>• Introduce traffic delays on Westminster Highway</li> <li>• May not address nature of collisions observed historically</li> </ul>	\$2,000
Northbound Left-turn Bay on Westminster Highway	<ul style="list-style-type: none"> <li>• May reduce rear-end collisions on Westminster Highway</li> <li>• Will impact trees and boulevard for fronting properties</li> </ul>	\$450,000
Signalize Intersection (with Northbound Left-turn Bay on Westminster Highway)	<ul style="list-style-type: none"> <li>• Improves traffic performance for River Road during peak afternoon hours</li> <li>• Introduce traffic delays on Westminster Highway throughout the day</li> <li>• May increase traffic volumes on River Road</li> </ul>	\$900,000
Warning Signage and Road Marking on River Road	<ul style="list-style-type: none"> <li>• Provides advance warning of the stop sign ahead</li> <li>• Reminds drivers on River Road to slow down for the upcoming turn and stop</li> </ul>	\$3,000
Reflective Tape on River Road Stop Sign Post	<ul style="list-style-type: none"> <li>• Improves visibility of existing stop sign may mitigate rear-end collisions</li> </ul>	\$50
Red Flashing Beacon on Stop Sign	<ul style="list-style-type: none"> <li>• Improves visibility of existing stop sign may mitigate rear-end collisions. Would be solar powered.</li> </ul>	\$10,000
Overhead Red Flasher for River Road	<ul style="list-style-type: none"> <li>• Improves visibility of existing stop sign may mitigate rear-end collisions</li> </ul>	\$100,000

### Assessment of Additional Intersection Modifications

Based on the review of traffic performance and collision history at the intersection, staff will be implementing the following measures by the end of November:

- Additional warning signage and road markings on River Road (\$3,000);
- Reflective tape on River Road stop sign post (\$50); and
- Red flashing beacon on River Road stop sign (\$10,000).

These measures will increase driver awareness and improve safety of the intersection.

### **Financial Impact**

The measures are estimated to cost approximately \$13,050. This can be funded through the Council-approved 2025 Traffic Calming program.

### **Conclusion**

A number of intersection enhancements and traffic calming measures have been installed or are underway on Westminster Highway, River Road and in the Hamilton neighbourhood. Staff received direction to review potential traffic calming measures and safety enhancements for the Westminster Highway and River Road intersection. Based on the review of traffic performance and collision history at the intersection, additional intersection improvements are scheduled for implementation. Staff will continue to monitor intersection operations and opportunities for further improvements.



Beata Ng, P.Eng.  
Manager, Transportation Development and Design  
(604-247-4627)

BN:bn