

Right Turn Lane on Municipal Road 80 onto Alexandre Street

Background:

At the April 9, 2019 City Council Meeting, resolution CC2019-118 was passed, directing staff to review whether a right turn lane is warranted for northbound traffic on Municipal Road 80 (M.R. 80) at the intersection of Alexandre Street in Val Caron. In this area, M.R. 80 is a five lane cross section, with two lanes in each direction and a two way centre left turn lane. The posted speed limit is 70 km/h and there are approximately 14,500 vehicles which travel through this area each day (Figure 1).

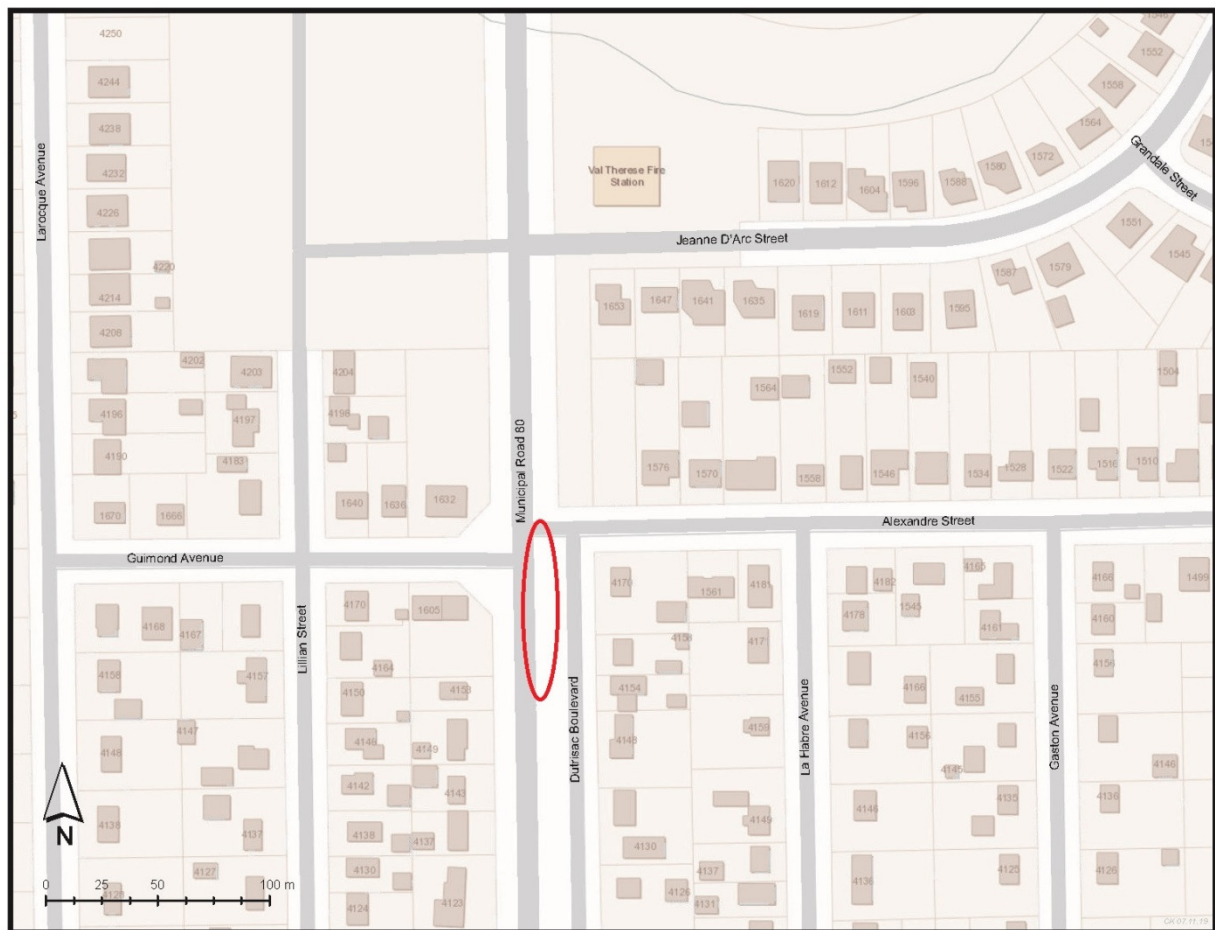


Figure 1: Overview of Location

Dedicated right turn lanes are typically provided at intersections where the volume of decelerating vehicles compared to the through traffic volume causes undue hazard. Although no formal right turn lane warrant exists, the general approach taken by most jurisdictions is to install a right turn lane when the volume of right-turning traffic is 10% to 20% of the total

approaching volume during the peak hour of vehicle volume or when there is an identified pattern of collisions related to right turning vehicles. Analysis of both the volume and collisions at the intersection of Alexandre Street is presented here for the Committee's consideration.

Volume Analysis:

To determine the volume of right turning vehicles at this intersection, a turning movement count was conducted on Thursday, May 2, 2019. From this count, it was determined that the peak hour of traffic was between 4 PM and 5 PM. During this time, there were a total of 26 vehicles which turned right onto Alexandre Street and 1,175 vehicles which continued past this intersection on M.R. 80. The 26 right-turning vehicles represents just over 2% of the total approaching volume during the peak hour and is significantly less than the lowest end of the threshold (10-20%) that is typically used by other jurisdictions to warrant the installation of a right turn lane.

Collision Analysis:

When reviewing collisions history at intersections, staff typically examine the most recent five years of collision reports for any trends. In line with this approach, the collision history at this intersection from 2015 to 2019 year to date was reviewed. During this time period, a total of two collisions were reported at this intersection and neither involved a right turning vehicle.

Cost Estimate for Installation/Timeline for Completion:

Staff completed a preliminary design and construction cost estimate to install a right turn lane at this intersection, as directed by Council. In order to install a right turn lane on M.R. 80 at Alexandre Street, the road would need to be urbanized on the east side, by filling in the adjacent ditch and constructing curb and gutter and a storm sewer system. Also, due to the proximity of M.R. 80 to Dutrisac Boulevard, Dutrisac Boulevard would also need to be urbanized on the west side of the road including curb and gutter and a storm sewer system. The estimated cost to complete this work is \$900,000. If directed by City Council, funding for the project could be added to the Roads capital budget as part of the 2020 budget process. It is estimated the work could be completed within a single construction season.

Conclusion:

Based on the low volume of right turning traffic, minimal collision history and estimated cost of installation, staff do not recommend the installation of a right turn lane at the intersection of M.R. 80 and Alexandre Street.