

Traffic Circle Update - May 2017**Report Purpose**

To provide Council with an update on the traffic management and safety improvements at the Sherwood Drive and Broadmoor Boulevard traffic circle.

Recommendation

THAT Administration provide a report with recommendations to Council by the end of the third quarter of 2019; the report to include a full three year safety evaluation of the interim traffic safety improvements to the Sherwood Drive and Broadmoor Boulevard traffic circle.

Council History

March 14, 2017 (2017/ P8) - THAT the March 14, 2017 Transportation and Agriculture Services report titled Traffic Circle Update be referred to the May 9, 2017 Council meeting for debate and decision.

July 14, 2015 – The Priorities Committee was provided with information related to the improvement of the Sherwood Drive and Broadmoor Boulevard Traffic Circle.

Strategic Plan Priority Areas

Economy: Interim safety measures improve safety and maintain efficient municipal infrastructure prior to a reconstruction being required due to capacity limitations.

Governance: n/a

Social: Improved traffic safety for all road users.

Culture: n/a

Environment: n/a

Other Impacts

Policy: SER-009-017 Traffic Control Devices

Legislative/Legal: n/a

Interdepartmental: Transportation Planning and Engineering

Summary

The attached report (Enclosure 1) reviews the impact of the short-term traffic safety initiatives that were implemented between September 2015 and May 2016. Based upon a thorough engineering analysis completed by Al-terra Engineering and significant public engagement, the traffic circle was evaluated for potential safety improvements. Through this evaluation, several improvement options were developed that ranged from short-term to long-term to address both safety and future growth and capacity. Based upon the study's capacity evaluation, long-term reconstruction is not required and an interim measure would be more effective to address the issues raised in the study.

In addition to the collision analysis presented in March, additional up-to-date traffic volumes were gathered in April 2017 and comparisons with four similar traffic circle intersections in the City of Edmonton were conducted on a number of crashes per one million vehicles entering the intersection. When evaluated based upon a rate of collisions per million vehicles entering, it becomes clear that the Sherwood Drive and Broadmoor Boulevard traffic circle intersection has a relatively acceptable level of collisions when compared to the City of Edmonton intersections, however did have an increasing rate of collisions when the study was initiated.

Interim safety improvement measures were recommended due to the increasing and uncharacteristic rate of collisions that had been shown in the past number of years. The traffic volumes collected in April 2017 show a similar volume of traffic entering the intersection when compared to years prior and the crash rates are trending back toward the more expected rates within Strathcona County's transportation network. Since the improvements and alterations to the intersection were finalized in May 2016, both the number of crashes and concerns raised by residents has reduced significantly, with only four calls requesting clarification and expressing concern. A measurable reduction in the crash rate is observed in the later part of the year since the interim measures were implemented.

In transportation engineering, a minimum three-year crash comparison is recommended due to annual fluctuations and the known learning curve in the months following any traffic alteration. This one-year crash evaluation is not statistically relevant. It is recommended that the interim safety improvements remain in place and to continue to monitor and evaluate the trend in collisions until such time that the traffic circle requires rehabilitation construction or improvements, due to capacity and level of service deficiencies. In the interim, safety reviews including annual collision evaluations are to be performed and published to the website and provided to Council for information.

NB: An update on the traffic circle was provided to Priorities Committee on March 14, 2017 (see Enclosure 2). This report was referred to Council for debate and decision. In addition to including the original March 14, 2017 report, this report has been updated with additional information.

Communication Plan

The website will be updated to include any changes and continue to provide drivers with educational tools on the proper use of this and other traffic circles. Annual traffic crash reviews are to be conducted and published to the website and provided to Council for information.

Enclosure

- 1 Supplemental Research Report
- 2 Original March 14, 2017 Report: *Traffic Circle Update*