

Best Practices for the Implementation of Centreline and Shoulder Rumble Strips

Geni Bahar
Jennifer Wales

ABSTRACT

Road and traffic professionals have used rumble strips for many years. More recently, highway authorities have adopted a more systematic application of rumble strips along shoulders. Shoulder rumble strips are warning devices intended to alert drivers that they are leaving (or have left) the travelled way and that a steering correction is needed to return to the travelled way.

Even more recent in the use of rumble strips is the implementation of rumble strips along the centreline of undivided roads. Few jurisdictions in North America have implemented centreline rumble strips in test situations to date. Like shoulder rumble strips, centreline rumble strips are warning devices intended to alert drivers that they are leaving the travelled way and that a steering correction is required to return to the travelled way. However, centreline rumble strips are intended to alert drivers that they have crossed the centre of the road and are travelling in the opposing traffic lanes.

In Canada, a number of Provinces have developed guidelines and policies for the implementation of shoulder rumble strips. Other Provinces wish to commence to apply shoulder and centreline rumble strips, however, they lack experience and require guidance based on other jurisdictions' results of such applications.

Currently, there are some inconsistencies in the terminology used by Canadian highway agencies in describing the dimensions and design parameters for shoulder rumble strips. There are also discrepancies in the dimensions adopted. There is a need to harmonize the practice and identify the most effective design, taking into consideration all vehicles including trucks, bicycles and motorcycles. There is also a need to identify solutions for noise impact.

This paper will describe the best practices for the implementation of shoulder and centreline rumble strips based on in-depth information search, including the review of the results of an extensive practice survey and experimental testing completed by others throughout North America. This includes traffic noise measurements along rumble strips, and bicycle and truck safety and effectiveness when traversing rumble strips.