Technical Circular T-03/21
Date: October 22, 2021

To: All HQ Directors: Operations, Planning and Major Projects
All Regional Executive Directors
All Directors, Engineering
All Directors, Construction & Maintenance
All Traffic Engineers
All District Managers Transportation
All Project Managers
All Regional Paving Managers

Subject: Centreline Rumble Strips in Passing Zone

Purpose:

The purpose of this Technical Circular is to expand the policy on the installation of Centreline Rumble Strips (CRS) to include passing zones on two-lane and three-lane highways.

Background:

CRS reduce the frequency of centreline crossover crashes due to poor visibility related to weather, driver fatigue, inattention, error and/or impairment. As such, CRS have been considered on undivided rural two-lane, three-lane, or four-lane highways in no-passing zones since 2004. In passing zone, it is speculated that driver unfamiliarity with CRS may cause some drivers including motorcyclists to react adversely. As such, the current design guidelines do not mandate the installation of rumble strips in passing zones.

However, studies have shown that a large proportion of head-on and off-road left departure crashes can be mitigated by installing centreline rumble strips. In 2010, the safety benefit of implementing CRS on British Columbia highways with no-passing was evaluated using a before and after study. The study determined that

CRS on two-lane rural arterial highways resulted in a significant reduction of 29.3% in off-road left and head-on collisions. Furthermore, studies investigated on the impact of CRS in passing zones on driver behavior concluded that CRS do not negatively impact passing maneuvers. In addition, studies in Alberta and Minnesota on the effect on motorcycle riders found that motorcycle riders did not experience adverse handling conditions.

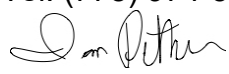
Policy:

CRS shall be considered in passing zones on undivided rural two-lane and three-lane highways in accordance with the centreline rumble strips guidelines in BC Supplement to TAC.

This policy applies to all new road construction, major road rehabilitation, and pavement rehabilitation projects effective immediately.

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