

Install Edgeline Rumble Strips



Edgeline rumble strips are a series of milled or raised patterns placed just inside or along the painted edge line of a roadway.

Implementation Strategy

How and Where to Apply

- Edgeline rumble strips are typically applied on two-lane rural highways, curves, and other road segments with narrow shoulders and a high incidence of roadway departure crashes.
- They are especially effective where lane departure is a common crash type and where traditional shoulder rumble strips may not be feasible due to space or structural limitations
- Application should follow guidance on spacing, depth, and pattern design to avoid excessive noise or damage to bicycles or vehicles.

Use in a Safe System Approach

This treatment supports Safe System principles of human error tolerance and crash prevention by providing a physical and sensory cue to correct drifting. It also helps in crash severity management, as early correction can prevent a complete departure from the roadway.

Key Stakeholders

State DOTs, local law enforcement agencies

Proactive Implementation

Edgeline rumble strips can be proactively installed during resurfacing or pavement rehabilitation projects, or identified through systemic safety analysis of corridors with frequent roadway departure incidents. They may also be prioritized in locations with night-driving risks, fatigue-related crashes, or low shoulder visibility.

Countermeasure Overview

Objective: Keep vehicles from encroaching on the roadside

Strategy: Install edgeline profile marking, edgeline rumble strips or modified shoulder rumble strips on section with narrow or no paved shoulders

Targeted Solution



CONTRIBUTING FACTORS

- Reduced visibility
- Driver inattention



TARGET CRASH TYPE

- Run-off-road



ROAD FACILITY TYPE

- Freeways
- Multilane divided / undivided



AREA TYPE

- Rural

Safety Linkage



NCHRP 500 Series

Run-off Road



SAFE SYSTEM APPROACH

Safe Roads



AASHTO'S TOWARD ZERO DEATHS

Safer Infrastructure

SAFE SYSTEM ROADWAY DESIGN

TIER 1

TIER 2

TIER 3

TIER 4

Tier 4

Selected Related Countermeasures

- CM1** Roadway edge rumble strips
- CM2** High-contrast roadway markings
- CM3** Improved curve guidance treatments

Cost: \$ (low)

Service Life: 10 years

Benefit-Cost Ratio: 58.6:1

Install Edgeline Rumble Strips Source: [asphalt magazine](#).

Safety Benefits

39%

Reduce in single vehicle, run-off-road fatal and injury crashes

33%

Reduce run-off road crashes on rural undivided roads

¹CMF ID: 3396

²CMF ID: 3394

Resources

- FHWA Rumble Strips & Rumble Strips Technical Advisory
- NCHRP Report 641: Guidance for the Design and Application of Shoulder and Centerline Rumble Strips
- FHWA Roadway Departure Safety Implementation Plan

