

Install Football Shaped Centerline Rumble Strips



Centerline rumble strips reduce the likelihood of a vehicle leaving its lane and either crossing the roadway centerline or leaving the roadway at a horizontal curve.

Implementation Strategy

How and Where to Apply

- Install football shaped centerline rumble strips (CLRS) on rural two-lane highways with documented or potential risks for head-on and opposite direction sideswipe crashes.
- These specifically shaped CLRS are typically milled during resurfacing or as a retrofit and are designed with a reduced sound profile while maintaining effective driver alertness through tactile vibration.
- They reduce exterior noise while still producing enough interior noise and vibration to alert distracted or drowsy drivers.

Use in a Safe System Approach

Football shaped CLRS support the SSA by enhancing lane discipline and reducing the likelihood of severe lane departure crashes. Their design maintains safety performance while addressing community concerns about roadway noise.

Key Stakeholders

State DOTs, Highway Engineers, Road Maintenance Crews, Rural Community Residents

Proactive Implementation

These rumble strips should be proactively deployed in corridors with crash history or potential for centerline encroachment, especially near residential or noise-sensitive areas. Pilot studies show that they are effective and well-received alternatives to traditional CLRS where noise mitigation is necessary.

Countermeasure Overview

Objective: A Reduce the likelihood of a vehicle leaving its lane and either crossing the roadway centerline or leaving the roadway at a horizontal curve

Strategy: Install centerline rumble strips

Selected Related Countermeasures

- CM1** Centerline buffer space or painted medians
- CM2** Enhanced pavement markings
- CM3** Shoulder rumble strips

Cost: \$ (low)

Service Life: 10 years

Benefit-Cost Ratio: 21.3:1

Targeted Solution



CONTRIBUTING FACTORS

- Reduced visibility
- Driver inattention



TARGET CRASH TYPE

- Single Vehicle
- Head-on
- Opposite Direction Sideswipe



ROAD FACILITY TYPE

- All



AREA TYPE

- Rural

Safety Linkage



NCHRP 500 Series

Head-On Collisions



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

Safety Benefits

90%

Helps prevent cross median crashes of all severity types¹

67%

Reduces crash severities on undivided roadways²

¹ CMF ID: 5391

² CMF ID: 5390

Resources

- [Comparison of Football Shaped Rumble Strips versus Rectangular Rumble Strips](#)
- [Quantification of the Effectiveness and External Noise of Rumble Strip Designs](#)

Install Centerline Rumble Strips Source: [Iohud.](#)

