

Install Safety Edge Treatment



Safety Edge treatment involves shaping the edge of the pavement at a 30-degree angle during resurfacing or construction.

Implementation Strategy

How and Where to Apply

- This countermeasure is applied on rural and two-lane highways, particularly in areas with narrow or unpaved shoulders, high-speed travel, and frequent roadway departure crashes.
- It is most effective on roads with a history of run-off-road crashes, drop-offs greater than 2 inches, or where resurfacing is planned.
- Not recommended on low-volume roads with minimal pavement drop-off risk or where resurfacing projects are not planned soon.

Use in a Safe System Approach

Safety Edge improves safe roads and users by reducing roadway departure severity, addressing human mistakes, supporting shared responsibility, and providing proactive, redundant protection against pavement-edge drop-off crashes.

Key Stakeholders

Sate DOTs, MPOs, engineering consultants, advocacy groups, construction contractors.

Proactive Implementation

This treatment is best implemented proactively as a standard practice during all resurfacing and pavement rehabilitation projects, regardless of crash history. Its low cost and ease of integration make it a highly cost-effective safety improvement.

Countermeasure Overview

Objective: Keep vehicles from encroaching on the roadside.

Strategy: Apply shoulder treatments (Eliminate shoulder drop-offs).

Targeted Solution



CONTRIBUTING FACTORS

- Reduced visibility
- Driver Inattention/distracted



TARGET CRASH TYPE

- Run-off-road



ROAD FACILITY TYPE

- All



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

Shoulder Rumble Strips

CM2

High-Visibility Pavement Markings

CM3

Enhanced Curve Delineation

Cost: \$ (Low)

Service Life: 10 years

Benefit-Cost Ratio: 2.8:1 to 62.8:1

Safety Edge Treatment. Source: FHWA.

66%

Reduces crashes of all types and K, A, B severities on rural two-lane roads ([CMF ID: 9204](#))

40%

Reduces crashes of all types and K, A, B severities on rural two-lane roads ([CMF ID: 9201](#))

Resources

- [FHWA Safety Evaluation of the Safety Edge Treatment](#)
- [FHWA Description of the Safety Edge](#)
- [Evaluation of Safety Edge Benefits in Iowa](#)

