

# Provide 2-ft Paved Shoulders (Both Sides)



2-ft paved shoulders add narrow recovery space along rural roads to reduce run-off-road crashes and improve edge safety.

## Implementation Strategy

### How and Where to Apply

- 2-ft paved shoulders are commonly used on rural two-lane roads with narrow or no shoulders.
- They are especially effective on segments with high run-off-road crash rates or roadside hazards.
- According to the **AASHTO** Roadside Design Guide, narrow shoulders can still provide safety benefits when full-width shoulders are not feasible.

### Use in a Safe System Approach

This treatment supports Safer Roads and Safer Vehicles by increasing recovery space and reducing crash severity. It helps compensate for common driver errors like distraction or overcorrection, making rural roads more forgiving. On corridors with higher speeds and limited recovery zones, 2-ft paved shoulders can significantly reduce the risk of serious roadway departure crashes.

### Key Stakeholders

State and county highway agencies  
Pavement and safety engineers

### Proactive Implementation

2-ft paved shoulders can be proactively added during resurfacing or preservation projects on rural roads with run-off-road or edge-related crash histories. A systemic approach can help identify segments with narrow lanes, steep edge drop-offs, or limited clear zones. Where full-width shoulders are not feasible, this treatment offers cost-effective safety benefits. Including it in maintenance programs allows agencies to improve safety incrementally across the network.

## Countermeasure Overview

**Objective:** Keep vehicles from encroaching on the roadside

**Strategy:** Apply shoulder treatments (Widen and/or pave shoulders)

## Selected Related Countermeasures

- CM1** Safety edge paving
- CM2** Rumble strips along shoulder edge
- CM3** Widening full-width shoulders where feasible

**Cost:** \$ (Moderate)

**Service Life:** 20 years

## Targeted Solution



### CONTRIBUTING FACTORS

- Reduced visibility
- Driver inattention



### TARGET CRASH TYPE

- Run-off-road



### ROAD FACILITY TYPE

- Not specified



### AREA TYPE

- Rural

## Safety Linkage



### NCHRP 500

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 1

2-ft paved shoulders. Source: [Shoulder](#)

## Safety Benefits

34%

Reduce run-off-road crashes on rural roads.<sup>1</sup>

18%

Reduce run-off-road crashes on rural roads<sup>2</sup>

<sup>1</sup> CMF ID: 10415

<sup>2</sup> CMF ID: 10414

## Resources

- [FHWA. Low-Cost Safety Improvements for Rural Roads](#)
- [FHWA Proven Safety Countermeasures](#)
- [AASHTO Roadside Design Guide](#)

