



# CMF / CRF Details

CMF ID: 8995

Install centerline and shoulder rumble strips

Description: Milled or rolled rumble strips.

Prior Condition: *No Prior Condition(s)*

Category: Roadway

Study: [Estimating Crash Modification Factors Using Cross-Sectional and Case-Control Methods for Rumble Strips and Paved Shoulders, Galgamuwa and Dissanayake, 2017](#)

Star Quality Rating:	
8 Stars	<a href="#">[View score details]</a>

Crash Modification Factor (CMF)	
Value:	0.87
Adjusted Standard Error:	
Unadjusted Standard Error:	0.059

Crash Reduction Factor (CRF)	
Value:	13 (This value indicates a <b>decrease</b> in crashes)
Adjusted Standard Error:	
Unadjusted Standard Error:	5.9

## Applicability

**Crash Type:**

Head on,Run off road,Sideswipe

**Crash Severity:**

K (fatal),A (serious injury),B (minor injury),C (possible injury)

**Roadway Types:**

Not specified

**Number of Lanes:**

2

**Road Division Type:**

Undivided

**Speed Limit:**

**Area Type:**

Rural

**Traffic Volume:**

30 to 15900 *Annual Average Daily Traffic (AADT)*

**Time of Day:**

All

### *If countermeasure is intersection-based*

**Intersection Type:**

**Intersection Geometry:**

**Traffic Control:**

**Major Road Traffic Volume:**

**Minor Road Traffic Volume:**

## Development Details

**Date Range of Data Used:**

2009 to 2014

**Municipality:**

**State:**

KS

**Country:**

USA

<b>Type of Methodology Used:</b>	7
<b>Sample Size Used:</b>	

<b>Other Details</b>	
<b>Included in Highway Safety Manual?</b>	No
<b>Date Added to Clearinghouse:</b>	Nov-17-2017
<b>Comments:</b>	Horizontal curve segments. Lane departure crashes

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