



## CMF / CRF Details

**CMF ID: 8993**

**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:**



[\[View score details\]](#)

### Crash Modification Factor (CMF)

**Value:** 0.94

**Adjusted Standard Error:**

**Unadjusted Standard Error:** 0.035

### Crash Reduction Factor (CRF)

**Value:** 6 (This value indicates a **decrease** in crashes)

**Adjusted Standard Error:**

<b>Unadjusted Standard Error:</b>	3.5
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### Applicability

<b>Crash Type:</b>	Head on,Run off road,Sideswipe
<b>Crash Severity:</b>	K (fatal),A (serious injury),B (minor injury),C (possible injury)
<b>Roadway Types:</b>	Not specified
<b>Number of Lanes:</b>	
<b>Road Division Type:</b>	Undivided
<b>Speed Limit:</b>	
<b>Area Type:</b>	Rural
<b>Traffic Volume:</b>	30 to 15900 <i>Annual Average Daily Traffic (AADT)</i>
<b>Time of Day:</b>	All

### *If countermeasure is intersection-based*

<b>Intersection Type:</b>	
<b>Intersection Geometry:</b>	
<b>Traffic Control:</b>	
<b>Major Road Traffic Volume:</b>	
<b>Minor Road Traffic Volume:</b>	

### Development Details

<b>Date Range of Data Used:</b>	2009 to 2014
<b>Municipality:</b>	
<b>State:</b>	KS

<b>Country:</b>	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>	Tangent segments. Lane departure crashes

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