



CMF / CRF Details

CMF ID: 10393

Install shoulder rumble strips

Description:

Prior Condition: *No Prior Condition(s)*

Category: Shoulder treatments

Study: [Evaluation of the safety effectiveness of lane departure countermeasures on two-lane undivided roadways using crash modification factors, Dissanayake and Galgamuwa, 2019](#)

Star Quality Rating:

8 Stars

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

Crash Modification Factor (CMF)

Value: 0.94

Adjusted Standard Error:

Unadjusted Standard Error: 0.018

Crash Reduction Factor (CRF)

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

Adjusted Standard Error:

Unadjusted Standard Error: 1.8

Applicability

Crash Type:	Run off road
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:	50 to 8550 <i>Annual Average Daily Traffic (AADT)</i>
Time of Day:	Not specified

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

Type of Methodology Used:	7
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Jun-01-2020
Comments:	CMF for lane departure crashes on curved road segments

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