



CMF / CRF Details

CMF ID: 3367

Install centerline rumble strips on horizontal curves

Description:

Prior Condition: No centerline rumble strips

Category: Roadway

Study: [NCHRP Report 641: Guidance for the Design and Application of Shoulder and Centerline Rumble Strips, Torbic et al., 2009](#)

Star Quality Rating:

4 Stars

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

Crash Modification Factor (CMF)

Value:

1.04

Adjusted Standard Error:

Unadjusted Standard Error:

0.065

Crash Reduction Factor (CRF)

Value:

-4 (This value indicates an **increase** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error:

6.5

Applicability

Crash Type:

All

Crash Severity:

All

Roadway Types:

Not Specified

Number of Lanes:

2

Road Division Type:

Undivided

Speed Limit:

Area Type:

Rural

Traffic Volume:

574 to 20784 *Average Daily Traffic (ADT)*

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:

1997 to 2006

Municipality:

State:

MN, PA, WA

Country:

U.S.A.

Type of Methodology Used:

2

Sample Size Used:	Crashes
Before Sample Size Used:	544 Crashes
After Sample Size Used:	348 Crashes

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Mar-21-2011
Comments:	The authors collected data on thru lanes and speed limits but did not provide those data in the report.

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