



CMF / CRF Details

CMF ID: 3538

Install shoulder rumble strips

Description:

Prior Condition: *No Prior Condition(s)*

Category: Shoulder treatments

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

Star Quality Rating:



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

Crash Modification Factor (CMF)

Value: 0.74

Adjusted Standard Error:

Unadjusted Standard Error: 0.1696

Crash Reduction Factor (CRF)

Value: 26 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

| | |
|-----------------------------------|-------|
| Unadjusted Standard Error: | 16.96 |
|-----------------------------------|-------|

Applicability

| | |
|----------------------------|---|
| Crash Type: | Run off road |
| Crash Severity: | All |
| Roadway Types: | Not Specified |
| Number of Lanes: | 2 |
| Road Division Type: | Undivided |
| Speed Limit: | |
| Area Type: | Rural |
| Traffic Volume: | 180 to 12776 <i>Average Daily Traffic (ADT)</i> |
| 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, MO, PA |

| | |
|----------------------------------|---------|
| Country: | U.S.A. |
| Type of Methodology Used: | 7 |
| Sample Size Used: | 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 (see p. 50). |

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