



CMF / CRF Details

CMF ID: 6321

Widen paved shoulder from 6 ft to 8 ft

Description: Widening the existing paved shoulder

Prior Condition: 6 ft wide paved shoulder

Category: Shoulder treatments

Study: [Safety Effects of Shoulder Paving for Rural and Urban Interstate, Multilane, and Two-Lane Highways, Li et al., 2013](#)

Star Quality Rating:



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

Crash Modification Factor (CMF)

Value: 0.81

Adjusted Standard Error:

Unadjusted Standard Error: 0.03

Crash Reduction Factor (CRF)

Value: 19 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error:

3

Applicability

Crash Type:

Fixed object,Head on,Run off road,Sideswipe

Crash Severity:

0 (property damage only)

Roadway Types:

Principal Arterial Interstate

Number of Lanes:

Road Division Type:

Speed Limit:

Area Type:

Rural

Traffic Volume:

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:

2000 to 2006

Municipality:

State:

IL

Country:	USA
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Mar-11-2015
Comments:	Crash type is "Run-off-road right, then head-on and sideswiped with a vehicle in the opposite direction; Run-off-road right, then sideswiped with a vehicle in the same direction of multilane highways; Run-off-road right, then collided with fixed object on the right; Run-off-road right, then collided with fixed object on the left; Run-off-road right, then overturned in road or roadside involving single vehicle; and Run-off-road right, then overturned in road or roadside involving multiple vehicles"

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