



CMF / CRF Details

CMF ID: 6830

Widen shoulder

Description:

Prior Condition: Narrower paved shoulder than after condition

Category: Shoulder treatments

Study: [Safety Impacts of Highway Shoulder Attributes in Illinois, Bamzai et al., 2011](#)

Star Quality Rating:



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

Crash Modification Factor (CMF)

Value: 0.9

Adjusted Standard Error:

Unadjusted Standard Error:

Crash Reduction Factor (CRF)

Value: 10 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error:

Applicability

Crash Type:

Fixed object,Head on,Run off road,Sideswipe

Crash Severity:

K (fatal)

Roadway Types:

Not specified

Number of Lanes:

Multilane

Road Division Type:

All

Speed Limit:

35-65

Area Type:

Urban

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:	2
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Jun-22-2015
Comments:	This CMF applies to urban multilane highways with a combined lane width and outside paved shoulder width less than or equal to 20 ft. This CMF applies to shoulder related crashes, defined as head-on, fixed object, sideswipe opposite direction, and run-off-road.

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