



CMF / CRF Details

CMF ID: 6658

Widen shoulder

Description:

Prior Condition: Original shoulder width 4-12 ft

Category: Shoulder treatments

Study: [Exploration and comparison of crash modification factors for multiple treatments on rural multilane roadways, Park et al., 2014](#)

Star Quality Rating:



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

Crash Modification Factor (CMF)

Value: 0.688

Adjusted Standard Error:

Unadjusted Standard Error: 0.064

Crash Reduction Factor (CRF)

Value: 31.2 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error:	6.4
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Applicability

Crash Type:	All
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Crash Severity:	K (fatal),A (serious injury),B (minor injury),C (possible injury)
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Roadway Types:	Not specified
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Number of Lanes:	multi
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Road Division Type:	
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Speed Limit:	
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Area Type:	Rural
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Traffic Volume:	2000 to 50000 <i>Annual Average Daily Traffic (AADT)</i>
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Time of Day:	
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If countermeasure is intersection-based

Intersection Type:	
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Intersection Geometry:	
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Traffic Control:	
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Major Road Traffic Volume:	
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Minor Road Traffic Volume:	
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Development Details

Date Range of Data Used:	2003 to 2012
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Municipality:	
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State:	FL
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Country:	
Type of Methodology Used:	2
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Jun-22-2015
Comments:	Before condition shoulder width between 4-12 ft The number of crashes in the after period were not reported in this study, however, they have been recorded as 300 to give 10 points as a benefit of doubt for one or more of the following: (1) number of miles/sites in the reference/treatment group, (2) number of crashes in the references/treatment group, (3) reporting AADTs for the aggregate dataset but not for the disaggregate dataset used for CMF development.

This site is funded by the U.S. Department of Transportation Federal Highway Administration and maintained by the University of North Carolina Highway Safety Research Center

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