



CMF / CRF Details

CMF ID: 6657

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: 0.771

Adjusted Standard Error:

Unadjusted Standard Error: 0.053

Crash Reduction Factor (CRF)

Value: 22.9 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error:	5.3
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Applicability

Crash Type:	All
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Crash Severity:	All
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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.

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