



CMF / CRF Details

CMF ID: 5301

Install centerline rumble strips on roads with existing shoulder rumble strips

Description: Install centerline rumble strips on roads with existing shoulder rumble strips

Prior Condition: Shoulder Rumble Strips Only

Category: Roadway

Study: [Performance Analysis of Centerline and Shoulder Rumble Strips Installed in Combination in Washington State, D. Olson, M. Sujka, and B. Manchas, 2013](#)

Star Quality Rating:



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

Crash Modification Factor (CMF)

Value: 0.758

Adjusted Standard Error:

Unadjusted Standard Error: 0.579

Crash Reduction Factor (CRF)

Value: 24.2 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error:	57.9
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Applicability

Crash Type:	Head on,Run off road,Sideswipe
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Crash Severity:	K (fatal),A (serious injury)
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Roadway Types:	Not specified
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Number of Lanes:	2
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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:	
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Time of Day:	Not specified
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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:	2002 to 2010
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Municipality:	
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State:	WA
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Country:	
Type of Methodology Used:	Simple before/after
Sample Size Used:	
Before Sample Size Used:	3
After Sample Size Used:	4

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Dec-02-2013
Comments:	Exposure is VMTBefore MVMT = 242.42After MVMT = 428.57Crash type is fatal and injury lane departures

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