



CMF / CRF Details

CMF ID: 5188

Change intersection skew angle

Description: Skew angle is defined as the absolute value of the difference between 90 degrees and the actual intersection angle (see illustration).

Prior Condition: *No Prior Condition(s)*

Category: Intersection geometry

Study: [Prediction of the Expected Safety Performance of Rural Two-Lane Highways, Harwood et al., 2000](#)

Star Quality Rating:	
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Crash Modification Factor (CMF)	
Value:	$CMF = e^{0.0040(\text{proposedSkewAngle} - \text{existingSkewAngle})}$
Adjusted Standard Error:	
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)	
Value:	(This value indicates an increase in crashes)
Adjusted Standard Error:	
Unadjusted Standard Error:	

Applicability

Crash Type:	All
Crash Severity:	All
Roadway Types:	Minor Arterial
Number of Lanes:	2
Road Division Type:	
Speed Limit:	
Area Type:	Rural
Traffic Volume:	
Time of Day:	

If countermeasure is intersection-based

Intersection Type:	Roadway/roadway (not interchange related)
Intersection Geometry:	3-leg
Traffic Control:	Stop-controlled
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details

Date Range of Data Used:	
Municipality:	
State:	
Country:	

Type of Methodology Used:	
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	
Date Added to Clearinghouse:	Dec-01-2009
Comments:	A related form of this equation is found in the HSM 1st Ed, page 14-17. The HSM form is presented with an assumption that the existing skew angle (base condition) is 90 degrees. The formula has been rearranged for presentation on the CMF Clearinghouse to allow the user to input the existing and proposed skew angles in a single equation.

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