



CMF / CRF Details

CMF ID: 5182

Modify horizontal curve radius and length and provide spiral transitions

Description: Modify horizontal curve radius and length and provide spiral transitions

Prior Condition: To determine the CMF for changing the condition, divide the "new" condition CMF by the "existing" condition CMF.

Category: Alignment

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

Star Quality Rating:

Crash Modification Factor (CMF)

Value:

$$CMF = \frac{(1.55 \times L_c) + \left(\frac{80.2}{R}\right) - (0.012 \times S)}{(1.55 \times L_c)}$$

Where:

L_c = Length of horizontal curve including length of spiral transitions, if present (mi);

R = Radius of curvature (ft); and

S = 1 if spiral transition is present; 0 if spiral transition curve is not present.

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:

Intersection Geometry:

Traffic Control:

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:	To determine the CMF for changing the condition, divide the "new" condition CMF by the "existing" condition CMF.

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