



CMF / CRF Details

CMF ID: 4199

Install dynamic signal warning flashers

Description: Dynamic signal warning flashers (DSWF) provide drivers with advance notice of the phase change. Specifically, the DSWF is linked to the signal and flashers are actuated when the signal is about to change from green to yellow.

Prior Condition: Signalized intersection without advance warning flashers.

Category: Intersection traffic control

Study: [Evaluation of Safety Strategies at Signalized Intersections, Srinivasan, et al., 2011](#)

Star Quality Rating:	
<input type="checkbox"/> Stars	[View score details]

Crash Modification Factor (CMF)	
Value:	0.792
Adjusted Standard Error:	
Unadjusted Standard Error:	0.079

Crash Reduction Factor (CRF)	
Value:	20.8 (This value indicates a decrease in crashes)
Adjusted Standard Error:	
Unadjusted Standard Error:	7.9

Applicability

Crash Type: Rear end

Crash Severity: All

Roadway Types: Not Specified

Number of Lanes:

Road Division Type:

Speed Limit:

Area Type: All

Traffic Volume:

Time of Day: All

If countermeasure is intersection-based

Intersection Type: Roadway/roadway (not interchange related)

Intersection Geometry: 3-leg,4-leg

Traffic Control: Signalized

Major Road Traffic Volume: 7500 to 99000 Annual Average Daily Traffic (AADT)

Minor Road Traffic Volume: 40 to 20100 Annual Average Daily Traffic (AADT)

Development Details

Date Range of Data Used: 1994 to 2008

Municipality:

State: NV, VA

Country: USA

Type of Methodology Used:	7
Sample Size Used:	2651

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Dec-06-2012
Comments:	Average major and minor road volumes are computed based on weighted average in NV and VA. AADT applies to all sites.

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