



CMF / CRF Details

CMF ID: 4198

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:	0.814
Adjusted Standard Error:	
Unadjusted Standard Error:	0.062

Crash Reduction Factor (CRF)	
Value:	18.6 (This value indicates a decrease in crashes)
Adjusted Standard Error:	
Unadjusted Standard Error:	6.2

Applicability

Crash Type:	All
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:	4425

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.

This site is funded by the U.S. Department of Transportation Federal Highway Administration and maintained by the University of North Carolina Highway Safety Research Center

The information contained in the Crash Modification Factors (CMF) Clearinghouse is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The U.S. Government assumes no liability for the use of the information contained in the CMF Clearinghouse. The information contained in the CMF Clearinghouse does not constitute a standard, specification, or regulation, nor is it a substitute for sound engineering judgment.