



CMF / CRF Details

CMF ID: 482

Install flashing lights and sound signals

Description:

Prior Condition: *No Prior Condition(s)*

Category: Railroad grade crossings

Study: [Handbook of Road Safety Measures, Elvik, R. and Vaa, T., 2004](#)

Star Quality Rating:

Crash Modification Factor (CMF)

Value: 0.5

Adjusted Standard Error: 0.05

Unadjusted Standard Error: 0.03

Crash Reduction Factor (CRF)

Value: 50 (*This value indicates a **decrease** in crashes*)

Adjusted Standard Error: 5

Unadjusted Standard Error: 3

Applicability

Crash Type:	All
Crash Severity:	All
Roadway Types:	Not Specified
Number of Lanes:	
Road Division Type:	
Speed Limit:	
Area Type:	Not Specified
Traffic Volume:	
Time of Day:	

If countermeasure is intersection-based

Intersection Type:	Roadway/railroad grade crossing
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:	9
Sample Size Used:	

Other Details

Included in Highway Safety Manual?	Yes. HSM lists this CMF in bold font to indicate that it has the highest reliability since it has an adjusted standard error of 0.1 or less.
Date Added to Clearinghouse:	Dec-01-2009
Comments:	Countermeasure name changed from "upgrading signs to flashing lights and sounds signals" to match HSM

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