



CMF / CRF Details

CMF ID: 10018

Implement Active Traffic Management Strategies with Hard Shoulder Running

Description: Implement a mix of advisory variable speed limits, lane use control signals, and hard shoulder running on a segment of interstate.

Prior Condition: Static speed limits, no lane use control signals, and no hard shoulder running.

Category: Advanced technology and ITS

Study: [*Evaluation of the Impact of the I-66 Active Traffic Management System: Phase II, Dutta et al., 2018*](#)

Star Quality Rating:



[\[View score details\]](#)

Crash Modification Factor (CMF)

Value: 0.711

Adjusted Standard Error:

Unadjusted Standard Error: 0.066

Crash Reduction Factor (CRF)

Value: 28.9 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:	
Unadjusted Standard Error:	6.6

Applicability

Crash Type:	Multiple vehicle
Crash Severity:	All
Roadway Types:	Principal Arterial Interstate
Number of Lanes:	6-8
Road Division Type:	Divided by Median
Speed Limit:	
Area Type:	Not specified
Traffic Volume:	133000 to 184000 <i>Annual Average Daily Traffic (AADT)</i>
Time of Day:	All

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:	2011 to 2016
Municipality:	

State:	VA
Country:	United States
Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Jul-26-2019
Comments:	Applies to a segment with advisory variable speed limits, lane use control signals, and hard shoulder running.

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