



CMF / CRF Details

CMF ID: 6859

Install adaptive traffic signal control

Description: ATSC is a traffic management strategy in which traffic signal timings change, or adapt, based on observed traffic demand. These systems utilize increased detection to continually collect data on observed demand, and signal timings are then re-optimized based on current data.

Prior Condition: Intersections with regular traffic signals

Category: Intersection traffic control

Study: [Estimation of the Safety Effects of an Adaptive Traffic Signal Control System, Ma et al., 2015](#)

Star Quality Rating:	
8 Stars	[View score details]

Crash Modification Factor (CMF)	
Value:	0.92
Adjusted Standard Error:	
Unadjusted Standard Error:	0.09

Crash Reduction Factor (CRF)	
Value:	8 (This value indicates a decrease in crashes)
Adjusted Standard Error:	

Unadjusted Standard Error:

9

Applicability

Crash Type:

All

Crash Severity:

K (fatal),A (serious injury),B (minor injury),C (possible injury)

Roadway Types:

All

Number of Lanes:

Road Division Type:

Speed Limit:

Area Type:

Urban and suburban

Traffic Volume:

Time of Day:

All

If countermeasure is intersection-based

Intersection Type:

Not specified

Intersection Geometry:

4-leg

Traffic Control:

Signalized

Major Road Traffic Volume:

Minor Road Traffic Volume:

Development Details

Date Range of Data Used:

2006 to 2013

Municipality:

State:

VA

Country:	
Type of Methodology Used:	2
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Nov-01-2015
Comments:	The number of crashes in the after period were not reported in this study, however, they have been recorded as 300 to give 10 points as a benefit of doubt for one or more of the following: (1) number of miles/sites in the reference/treatment group, (2) number of crashes in the references/treatment group, (3) reporting AADTs for the aggregate dataset but not for the disaggregate dataset used for CMF development.

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