



CMF / CRF Details

CMF ID: 2993

Convert High-Occupancy-Vehicle (HOV) lanes to High-Occupancy-Toll (HOT) lanes

Description: convert a High-Occupancy-Vehicle (HOV) interstate segment into a High-Occupancy-Toll (HOT) segment

Prior Condition: High-Occupancy-Vehicle (HOV) interstate segment

Category: Roadway

Study: [Safety Benefits of Converting HOV lanes to HOT lanes: Case Study of the I-394 MnPass, Cao et al., 2011](#)

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

Crash Modification Factor (CMF)	
Value:	0.89
Adjusted Standard Error:	
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)	
Value:	11 (This value indicates a decrease in crashes)
Adjusted Standard Error:	
Unadjusted Standard Error:	

Applicability

Crash Type:

All

Crash Severity:

O (property damage only)

Roadway Types:

Principal Arterial Interstate

Number of Lanes:

Road Division Type:

Divided by Median

Speed Limit:

Area Type:

Urban

Traffic Volume:

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:

1998 to 2008

Municipality:

Minneapolis-St. Paul

State:

MN

Country:

U.S.A.

Type of Methodology Used:	3
Sample Size Used:	
Before Sample Size Used:	1504
After Sample Size Used:	569

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Jul-15-2011
Comments:	This CMF was derived from a comparison group study, but the method does not follow Hauer's book. Data on traffic volumes, speed limits, and thru lanes are not provided. The authors only have crash and volume data for every other year.

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