



CMF / CRF Details

CMF ID: 1902

Install chevron signs on horizontal curves

Description: Along a curve with a small radius, large deflection angle, available sight distance smaller than stopping sight distance, and superelevation smaller than demanded at design and operating speed.

Prior Condition: No curve delineation treatment

Category: Signs

Study: [*Safety Evaluation of Curve Delineation Improvements An Empirical Bayes Observational Before-After Study, Montella, 2009*](#)

Star Quality Rating:	
<input type="text" value="8 Stars"/>	[View score details]

Crash Modification Factor (CMF)	
Value:	1.291
Adjusted Standard Error:	
Unadjusted Standard Error:	0.64

Crash Reduction Factor (CRF)	
Value:	-29.1 (This value indicates an increase in crashes)
Adjusted Standard Error:	
Unadjusted Standard Error:	64

Applicability

Crash Type:	Angle,Fixed object,Frontal and opposing direction sideswipe,Head on,Rear end,Rear to rear,Sideswipe,Single vehicle
Crash Severity:	All
Roadway Types:	Principal Arterial Other Freeways and Expressways
Number of Lanes:	4
Road Division Type:	
Speed Limit:	
Area Type:	Not specified
Traffic Volume:	7400 to 9746
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:	2001 to 2005
Municipality:	Trans European Road Network, Italy
State:	
Country:	

Type of Methodology Used:	2
Sample Size Used:	Sites
Before Sample Size Used:	4 Sites
After Sample Size Used:	4 Sites

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Dec-01-2009
Comments:	

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