



CMF / CRF Details

CMF ID: 7870

Convert existing barrier tollbooths to open road tolling (ORT) facility

Description: Existing barrier tollbooth facility converted to express lanes capable of collecting tolls at high-speeds (open road tolling).

Prior Condition: Roadways with traditional mainline toll plaza

Category: Advanced technology and ITS

Study: [Validation and Application of Highway Safety Manual \(Part D\) in Florida, Abdel-Aty et al., 2014](#)

Star Quality Rating:	
<input type="text" value="4 Stars"/>	[View score details]

Crash Modification Factor (CMF)	
Value:	0.54
Adjusted Standard Error:	
Unadjusted Standard Error:	0.07

Crash Reduction Factor (CRF)	
Value:	46 (This value indicates a decrease in crashes)
Adjusted Standard Error:	
Unadjusted Standard Error:	7

Applicability

Crash Type:	All
Crash Severity:	K (fatal),A (serious injury),B (minor injury),C (possible injury)
Roadway Types:	Principal Arterial Other Freeways and Expressways
Number of Lanes:	
Road Division Type:	Divided by Median
Speed Limit:	
Area Type:	Not specified
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:	2002 to 2012
Municipality:	
State:	FL
Country:	USA

Type of Methodology Used:	2
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Mar-08-2016
Comments:	CMFs of converting traditional mainline toll plaza to hybrid mainline toll plaza 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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