



# CMF / CRF Details

CMF ID: 9439

**Convert to roundabout interchanges**

**Description:** Convert to interchange roundabouts with either a single roundabout or a pair.

**Prior Condition:** Interchanges without roundabout ramp terminals

**Category:** Interchange design

**Study:** [Safety Performance Analysis of Roundabout Interchanges in Missouri, Claros et al., 2018](#)

Star Quality Rating:	
8 Stars	<a href="#">[View score details]</a>

Crash Modification Factor (CMF)	
Value:	1.067
Adjusted Standard Error:	
Unadjusted Standard Error:	

Crash Reduction Factor (CRF)	
Value:	-6.7 (This value indicates an <b>increase</b> in crashes)
Adjusted Standard Error:	
Unadjusted Standard Error:	

**Applicability**

<b>Crash Type:</b>	All
<b>Crash Severity:</b>	0 (property damage only)
<b>Roadway Types:</b>	All
<b>Number of Lanes:</b>	1-2
<b>Road Division Type:</b>	
<b>Speed Limit:</b>	25-45
<b>Area Type:</b>	All
<b>Traffic Volume:</b>	
<b>Time of Day:</b>	All

***If countermeasure is intersection-based***

<b>Intersection Type:</b>	Roadway/roadway (interchange ramp terminal)
<b>Intersection Geometry:</b>	No values chosen.
<b>Traffic Control:</b>	Roundabout
<b>Major Road Traffic Volume:</b>	2060 to 16715 Annual Average Daily Traffic (AADT)
<b>Minor Road Traffic Volume:</b>	647 to 5630 Annual Average Daily Traffic (AADT)

**Development Details**

<b>Date Range of Data Used:</b>	2003 to 2016
<b>Municipality:</b>	
<b>State:</b>	MO
<b>Country:</b>	

<b>Type of Methodology Used:</b>	2
<b>Sample Size Used:</b>	

<b>Other Details</b>	
<b>Included in Highway Safety Manual?</b>	No
<b>Date Added to Clearinghouse:</b>	Oct-27-2018
<b>Comments:</b>	This CMF is for PDO crashes at all roundabout ramp terminals. Number of lanes and speed limits entered here are for ramps.

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