



# CMF / CRF Details

**CMF ID: 4706**

**Convert high-speed rural intersection to roundabout**

**Description: Convert high-speed rural intersection to roundabout**

**Prior Condition: Stop controlled intersection (3 or 4 leg)**

**Category: Intersection geometry**

**Study: [A Statistical Analysis and Development of a Crash Prediction Model for Roundabouts on High-Speed Rural Roadways, Isebrands, 2012](#)**

<b>Star Quality Rating:</b>	
<input type="text" value="2 Stars"/>	<a href="#">[View score details]</a>

<b>Crash Modification Factor (CMF)</b>	
<b>Value:</b>	0.85
<b>Adjusted Standard Error:</b>	
<b>Unadjusted Standard Error:</b>	

<b>Crash Reduction Factor (CRF)</b>	
<b>Value:</b>	15 (This value indicates a <b>decrease</b> in crashes)
<b>Adjusted Standard Error:</b>	
<b>Unadjusted Standard Error:</b>	

## Applicability

**Crash Type:** Rear end

**Crash Severity:** All

**Roadway Types:** Not specified

**Number of Lanes:** 1 to 2

**Road Division Type:**

**Speed Limit:** 40-65 mph

**Area Type:** Rural

**Traffic Volume:**

**Time of Day:**

### *If countermeasure is intersection-based*

**Intersection Type:** Roadway/roadway (not interchange related)

**Intersection Geometry:** 3-leg,4-leg

**Traffic Control:** Roundabout

**Major Road Traffic Volume:**

**Minor Road Traffic Volume:**

## Development Details

**Date Range of Data Used:**

**Municipality:**

**State:** KS, MD, MN, OR, WA, WI

**Country:**

**Type of Methodology Used:** 3

<b>Sample Size Used:</b>	Site-years
<b>Before Sample Size Used:</b>	98 Site-years
<b>After Sample Size Used:</b>	98 Site-years

<b>Other Details</b>	
<b>Included in Highway Safety Manual?</b>	No
<b>Date Added to Clearinghouse:</b>	May-01-2013
<b>Comments:</b>	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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