



CMF / CRF Details

CMF ID: 10572

Roundabout geometry

Description: Various geometric elements of roundabout

Prior Condition: *No Prior Condition(s)*

Category: Intersection geometry

Study: [Developing crash modification factors for roundabouts using a cross-sectional method, Al-Marafi et al., 2020](#)

Star Quality Rating:

Stars

[\[View score details\]](#)

Crash Modification Factor (CMF)

Value:

$$CMF = e^{-0.068(Ex_1 - 4.2)}$$

Where Ex_1 is the exit width on the major approach (m)

Adjusted Standard Error:

Unadjusted Standard Error:

Crash Reduction Factor (CRF)

Value:

(This value indicates an **increase** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error:

Applicability

Crash Type:

All

Crash Severity:

K (fatal),A (serious injury),B (minor injury),C (possible injury)

Roadway Types:

Not specified

Number of Lanes:

Road Division Type:

Speed Limit:

Area Type:

Not specified

Traffic Volume:

Time of Day:

If countermeasure is intersection-based

Intersection Type:

Roadway/roadway (not interchange related)

Intersection Geometry:

No values chosen.

Traffic Control:

Roundabout

Major Road Traffic Volume:

1288 to 16071 Annual Average Daily Traffic (AADT)

Minor Road Traffic Volume:

1200 to 10002 Annual Average Daily Traffic (AADT)

Development Details

Date Range of Data Used:

2010 to 2015

Municipality:

Toowoomba City

State:

Country:	Australia
Type of Methodology Used:	7
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Dec-17-2020
Comments:	CMFunction for exit width on the major approach (m)

This site is funded by the U.S. Department of Transportation Federal Highway Administration and maintained by the University of North Carolina Highway Safety Research Center

The information contained in the Crash Modification Factors (CMF) Clearinghouse is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The U.S. Government assumes no liability for the use of the information contained in the CMF Clearinghouse. The information contained in the CMF Clearinghouse does not constitute a standard, specification, or regulation, nor is it a substitute for sound engineering judgment.