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## CMF / CRF DETAILS

CMF ID: 4825

### CHANGE SHOULDER WIDTH FROM X TO Y (IN FEET)

DESCRIPTION: CHANGE SHOULDER WIDTH ON A RURAL TWO-LANE HIGHWAY FROM X TO Y (IN FEET)

PRIOR CONDITION: RURAL TWO-LANE HIGHWAY WITH SHOULDER WIDTH X (IN FEET)

CATEGORY: SHOULDER TREATMENTS

STUDY: [EFFICACIES OF ROADWAY SAFETY IMPROVEMENTS ACROSS FUNCTIONAL SUBCLASSES OF RURAL TWO-LANE HIGHWAYS, LABI, 2011](#)

Star Quality Rating: [VIEW SCORE DETAILS]

Rating Points Total: 40

#### Crash Modification Factor (CMF)

Value:  $CMF = e^{(-0.0943(Y-X))}$

Adjusted Standard Error:

Unadjusted Standard Error:

#### Crash Reduction Factor (CRF)

Value:  $CRF = 100 \times (1 - e^{(-0.0943(Y-X))})$

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: Principal Arterial Other

Street Type:

Minimum Number of Lanes: 2

|                                    |  |
|------------------------------------|--|
| Maximum Number of Lanes:           | 2  |
| Number of Lanes Direction:         |  |
| Number of Lanes Comment:           |  |
| Crash Weather:                     | Not specified  |
| Road Division Type:                | Undivided  |
| Minimum Speed Limit:               |  |
| Maximum Speed Limit:               |  |
| Speed Unit:                        |  |
| Speed Limit Comment:               |  |
| Area Type:                         | Rural  |
| Traffic Volume:                    |  |
| Average Traffic Volume:            |  |
| Time of Day:                       | All  |
|                                    | <i>If countermeasure is intersection-based</i>   |
| Intersection Type:                 |  |
| Intersection Geometry:             |  |
| Traffic Control:                   |  |
| Major Road Traffic Volume:         |  |
| Minor Road Traffic Volume:         |  |
| Average Major Road Volume :        |  |
| Average Minor Road Volume :        |  |
| <b>Development Details</b>         |  |
| Date Range of Data Used:           | 1997 to 2000   |
| Municipality:                      |  |
| State:                             | IN   |
| Country:                           |  |
| Type of Methodology Used:          | Regression cross-section   |
| Sample Size (site-years):          | 2160 site-years  |
| <b>Other Details</b>               |  |
| Included in Highway Safety Manual? | No   |
| Date Added to Clearinghouse:       | May 01, 2013   |
| Comments:                          | There is no indication of statistical significance in the paper. As such, the star rating does not reflect the level of significance. There is no indication of sample size in terms of number of crashes. The star rating reflects a moderate sample based on number of site-years. |

[VIEW THE FULL STUDY DATA](#)

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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.

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