



CMF / CRF Details

CMF ID: 1414

Add signal (additional primary head)

Description:

Prior Condition: Intersection has one primary signal head per approach

Category: Intersection traffic control

Study: [Safety Benefits of Additional Primary Signal Heads, Felipe et al., 1998](#)

| | |
|-----------------------------|--|
| Star Quality Rating: | |
| | |

Crash Modification Factor (CMF)

| | |
|-----------------------------------|------|
| Value: | 0.72 |
| Adjusted Standard Error: | |
| Unadjusted Standard Error: | |

Crash Reduction Factor (CRF)

| | |
|-----------------------------------|--|
| Value: | 28 (This value indicates a decrease in crashes) |
| Adjusted Standard Error: | |
| Unadjusted Standard Error: | |

Applicability

| | |
|----------------------------|---------------|
| Crash Type: | All |
| Crash Severity: | All |
| Roadway Types: | Not specified |
| Number of Lanes: | |
| Road Division Type: | |
| Speed Limit: | |
| Area Type: | Urban |
| Traffic Volume: | |
| Time of Day: | |

If countermeasure is intersection-based

| | |
|-----------------------------------|---|
| Intersection Type: | Roadway/roadway (not interchange related) |
| Intersection Geometry: | 4-leg |
| Traffic Control: | Signalized |
| Major Road Traffic Volume: | |
| Minor Road Traffic Volume: | |

Development Details

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|---------------------------------|----------------------------|
| Date Range of Data Used: | |
| Municipality: | Richmond, British Columbia |
| State: | |
| Country: | Canada |

| | |
|----------------------------------|---|
| Type of Methodology Used: | 2 |
| Sample Size Used: | |
| Before Sample Size Used: | 8 |
| After Sample Size Used: | 8 |

| Other Details | |
|---|---|
| Included in Highway Safety Manual? | No |
| Date Added to Clearinghouse: | Dec-01-2009 |
| Comments: | The authors state that "three year of data were used for this analysis" (p. 7). This statement does not indicate if the before period was 3 years, the after period was 3 years, both were 3 years, or the total time period was 3 years (i.e. 1.5 years for before period and 1.5 years for after period). |

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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