



## CMF / CRF Details

**CMF ID: 8950**

**Implement systemic signing and visibility improvements at signalized intersections**

**Description:** Replace all signal heads. Replace pedestrian signal heads, pushbuttons, and signs. Install backplates with retroreflective borders on all signal heads. Re-stripe stop lines. Re-stripe crosswalks. Install advance warning signs. Install overhead signs (e.g., R1012, R35L, R35R in the MUTCD(4)). Install curb ramps.

**Prior Condition:** Signalized intersection without systemic signing and visibility improvements

**Category:** Intersection traffic control

**Study:** [\*Safety Effects of Low-Cost Systemic Safety Improvements at Signalized and Stop-Controlled Intersections, Le et al., 2017\*](#)

**Star Quality Rating:**



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

### Crash Modification Factor (CMF)

**Value:** 0.654

**Adjusted Standard Error:**

**Unadjusted Standard Error:** 0.079

## Crash Reduction Factor (CRF)

**Value:** 34.6 (This value indicates a **decrease** in crashes)

**Adjusted Standard Error:**

**Unadjusted Standard Error:** 7.9

## Applicability

**Crash Type:** Angle

**Crash Severity:** All

**Roadway Types:** All

**Number of Lanes:** 2

**Road Division Type:**

**Speed Limit:**

**Area Type:** All

**Traffic Volume:**

**Time of Day:** All

### *If countermeasure is intersection-based*

**Intersection Type:**

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

**Traffic Control:** Signalized

**Major Road Traffic Volume:** 4272 to 41100 Annual Average Daily Traffic (AADT)

**Minor Road Traffic Volume:** 111 to 20000 Annual Average Daily Traffic (AADT)

## Development Details

<b>Date Range of Data Used:</b>	2005 to 2014
<b>Municipality:</b>	
<b>State:</b>	SC
<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>	Nov-17-2017
<b>Comments:</b>	CMF for right-angle crashes at 2 mainline lanes and 2 cross street lanes intersections. 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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