



CMF / CRF Details

CMF ID: 9892

Change permissive left-turn phasing to protected only or protected/permissive

Description: Treatment group includes intersections where signal phases were changed from permissive to protected-only or protected/permissive.

Prior Condition: Intersections with permissive left-turn signal phasing.

Category: Intersection traffic control

Study: [*Safety Evaluation of Protected Left-Turn Phasing and Leading Pedestrian Intervals on Pedestrian Safety, Goughnour et al., 2018*](#)

Star Quality Rating:

3 Stars

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

Crash Modification Factor (CMF)

Value: 0.672

Adjusted Standard Error:

Unadjusted Standard Error: 0.11

Crash Reduction Factor (CRF)

Value: 32.8 (This value indicates a **decrease** in crashes)

Adjusted Standard Error:

Unadjusted Standard Error: 11

Applicability

Crash Type: Other

Crash Severity: All

Roadway Types: All

Number of Lanes:

Road Division Type:

Speed Limit:

Area Type:

Traffic Volume:

Time of Day: All

If countermeasure is intersection-based

Intersection Type: Roadway/roadway (not interchange related)

Intersection Geometry: Not specified

Traffic Control: Signalized

Major Road Traffic Volume: 19114 to 36289 Annual Average Daily Traffic (AADT)

Minor Road Traffic Volume: 3887 to 26564 Annual Average Daily Traffic (AADT)

Development Details

Date Range of Data Used: 2001 to 2014

Municipality: New York City

State: NY

Country:

Type of Methodology Used:	2
Sample Size Used:	

Other Details	
Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Mar-11-2019
Comments:	Crash Type = Vehicle-Vehicle Crashes

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