

# Upgrade Signs to Flashing Lights



Upgrading signs to flashing lights reduces crashes by enhancing visibility and driver awareness at high-risk or low-visibility locations.

## Implementation Strategy

### How and Where to Apply

- Install at uncontrolled, marked crosswalks on multilane roads or locations with high pedestrian activity and insufficient gaps in traffic, as recommended by FHWA guidance.
- Flashing signs are installed by attaching LED-enhanced sign units to existing or new signposts at appropriate heights and offsets, powered by solar panels or electrical connections. Installation should ensure clear visibility to approaching drivers, be free from obstructions, and be aligned per roadway geometry.

### Use in a Safe System Approach

Using flashing signs supports the Safe System Approach by enhancing driver awareness and reducing speeds, aligning with the elements of safe roads, safe speeds, and safe road users.

### Key Stakeholders

Agency maintenance personnel, DOT, Local enforcement

### Proactive Implementation

Flashing beacons should be proactively installed at stop-controlled intersections where limited visibility, high approach speeds, or increasing crash trends indicate a need for enhanced driver alertness. Selection of appropriate sites should be based on detailed analysis of crash history, approach volumes, sight distance limitations, and field conditions to ensure the beacons effectively reduce the risk of stop sign violations and collisions.

## Countermeasure Overview

**Objective:** Improve driver awareness of intersections as viewed from the intersection approach

**Strategy:** Install flashing beacons at stop-controlled intersections.

## Selected Related Countermeasures

- CM1** LED-enhanced stop signs
- CM2** Advance stop sign warning signs
- CM3** Rumble strips on approaches

**Cost:** \$ (Low)

**Service Life:** 5 years

**Benefit-Cost Ratio:** XX

## Targeted Solution



### CONTRIBUTING FACTORS

- Reduce Visibility
- Driver Inattention
- Failure to yield



### TARGET CRASH TYPE

- Angle
- Rear-end
- Turning



### ROAD FACILITY TYPE

- All



### AREA TYPE

- All

## Safety Linkage



### NCHRP 500 Series

Unsignalized Intersection



### SAFE SYSTEM APPROACH

Safe Roads



### AASHTO'S TOWARD ZERO DEATHS

Improved Safety Management

### SAFE SYSTEM ROADWAY DESIGN

- TIER 1
- TIER 2
- TIER 3
- TIER 4

Tier 4

Upgrades flashing signs. Source: Carmanah

## Safety Benefits

79%

Reduce in all types of crash severities<sup>1</sup>

78%

Reduce all types of crashes on minor arterial roads.<sup>2</sup>

<sup>1</sup> CMF ID: 485

<sup>2</sup> CMF ID: 483

## Resources

- FHWA [Low cost treatments](#)
- FHWA [proven safety countermeasure](#)

