



Install Red-light Cameras

Installing red-light cameras helps reduce angle and rear-end crashes by deterring red-light running through automated enforcement.

Implementation Strategy

How and Where to Apply

- Install at signalized intersections with frequent red-light violations or crash patterns, especially involving right-angle collisions. These are often found in high-traffic urban corridors or near schools and commercial zones.
- Install cameras aligned with signal phases, ensure legal authority, and post warning signs per local regulations.
- The MUTCD requires that automated enforcement, such as red-light cameras, be accompanied by proper signage notifying drivers and that their use complies with state and local laws.

Use in a Safe System Approach

Red-light cameras align with the Safe System Approach by enforcing compliance, reducing risky behaviors, and lowering the severity of intersection crashes.

Key Stakeholders

Agency maintenance personnel, DOT, Local enforcements

Proactive Implementation

Red-light cameras should be proactively installed at intersections with growing red-light violation trends or a history of angle crashes. Data-driven site selection helps prevent severe crashes by deterring risky driving behaviors before they escalate.

Countermeasure Overview

Objective: Improve efficiency and effectiveness of speed enforcement efforts

Strategy: Implement automated speed enforcement

Selected Related Countermeasures

- CM1** Advance warning flashers
- CM2** Retroreflective sheeting on signposts
- CM3** Automated speed enforcement cameras

Cost: \$ (Moderate to High)

Service Life: 10 years

Benefit-Cost Ratio: 2.61:1

Targeted Solution



CONTRIBUTING FACTORS

- Speeding through intersection



TARGET CRASH TYPE

- Angle
- Rear-end



ROAD FACILITY TYPE

- Not Specified



AREA TYPE

- Urban

Safety Linkage



NCHRP 500 Series

Signalized 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

Red Light Camera. Source: FHWA

Safety Benefits

48%

Reduce rural intersection crashes of all types and severities¹

21%

Reduce angle crashes²

¹ CMF ID: 8091

² CMF ID: 8092

Resources

- FHWA Safe Pedestrian
- [TTI study underscores safety benefits of red-light cameras](#)

