NCHRP 17-113 COUNTERMEASURES

Implement Automated Speed Enforcement Cameras

SPEEDING

Automated Speed Enforcement (ASE) cameras are systems that detect speeding vehicles and capture photographic evidence to support consistent, automated speed limit enforcement.

Implementation Strategy

How and Where to Apply

- ASE cameras are used where speeding is frequent and traditional enforcement is challenging.
- Ideal for school zones, work zones, high-crash corridors, and urban arterials. Not recommended on low-volume local streets, areas without speeding issues, or where engineering solutions are more appropriate.
- Can be deployed as fixed, mobile, or Point-to-Point systems based on site needs. Effective in both visible and covert operations to maximize speed compliance.

Use in a Safe System Approach

ASE cameras support the Safe Speeds element of SSA by enforcing limits consistently and reducing speeding. By accommodating human mistakes and deterring risky behavior, they uphold the principle that death and serious injuries are unacceptable.

Key Stakeholders

State DOTs, law enforcement agencies, MPOs, judicial authorities, engineering consultants.

Proactive Implementation

ASE cameras can be implemented proactively in areas with documented speeding issues. Agencies may select locations using speed studies, crash data analysis, or community-reported concerns. A systemic approach can also be used to identify corridors with risk factors such as high pedestrian activity, limited enforcement visibility, or a history of speed-related crashes.

Countermeasure Overview

Objective: Improve efficiency and effectiveness of speed enforcement efforts.
Strategy: Implement automated speed enforcement.

Targeted Solution

CONTRIBUTING FACTORS	▪ Unsafe speed ▪ Aggressive driving behaviors
TARGET CRASH TYPE	▪ Speeding
ROAD FACILITY TYPE	▪ Principal Arterial ▪ Freeways ▪ Expressways
AREA TYPE	▪ Urban/All

Safety Linkage

NCHRP 500 Series	SAFE SYSTEM APPROACH
Speeding	Safer Speeds
AASHTO'S TOWARD ZERO DEATHS	SAFE SYSTEM ROADWAY DESIGN
Improved Safety Management	TIER 1 TIER 2 TIER 3 TIER 4 Tier 4

Selected Related Countermeasures

- CM1 Dynamic speed feedback signs
- CM2 Enhanced police enforcement operations
- CM3 Speed limit reduction campaigns

Cost: $$$ (Moderate to High)
Service Life: 15 years
Benefit-Cost Ratio: 4.0:1

Automated Speed Enforcement Cameras. Source: FHWA.

Safety Benefits

35% Reduces crashes of all types and K, A, B, C severities on all roadway and area types (CMF ID: 10654)

15% Reduces crashes of all types and K, A severities on urban roadways (CMF ID: 11486)

Resources

- FHWA Speed Safety Camera Program Guide
- FHWA Speed Safety Cameras