Speed Safety Cameras are a Proven Safety Countermeasure

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Federal Highway Administration
National Roadway Safety Strategy/Safer Speeds

Proven Safety Countermeasures (PSCs)

Speed Safety Cameras

Integrating Equity

Noteworthy Practices
42,915
National Roadway Safety Strategy

U.S. DOT’s comprehensive approach to significantly reducing serious injuries and deaths on our Nation’s highways, roads, and streets.

- Sets a Department-wide vision and goal
- Adopts the Safe System Approach
- Identifies new priority actions and notable changes to existing practices
- Leverages new funding and policies in the Bipartisan Infrastructure Law to bring this strategy to life
- Advances equity and climate goals
- Calls others to action

Source: NHTSA
Safe System Approach

Source: FHWA
Safer Speeds in the NRSS

Promote safer speeds in all roadway environments through a combination of thoughtful, context-appropriate roadway design, targeted education and outreach campaigns, and enforcement.

Source: FHWA
Departmental Actions for Safer Speeds

• Clarify the applicability and **correct use of key approaches to speed limit setting, like the 85th percentile**, to account for all road users and leverage best practices such as variable speed limits

• Implement a robust, **multimodal speed management program** that takes a holistic approach to vehicle speeds and speeding via infrastructure interventions, speed limit setting, education, and enforcement

• Elevate noteworthy practices on **re-engineering roads to slow down vehicles**, and create roadway designs that "**self-enforce**" appropriate vehicle speeds

• Study and pilot **automated speed enforcement** strategies designed to ensure their equitable application.
FHWA’s Proven Safety Countermeasures

- Launched in 2008
- Updated in 2012, 2017, and 2021
- 28 countermeasures
- Selection Criteria
  - Proven effective
  - Not widespread deployment
- Guidance and Technical Assistance

Source: FHWA
28 Proven Safety Countermeasures

**SPEED MANAGEMENT**
- Speed Safety Cameras
- Variable Speed Limits
- Appropriate Speed Limits for All Road Users

**ROADWAY DEPARTURE**
- Wider Edge Lines
- Enhanced Delineation for Horizontal Curves
- Longitudinal Rumble Strips and Strikes
- Median Barriers

**INTERSECTIONS**
- Backplates with Reflective Borders
- Corridor Access Management
- Roundabouts
- Left- and Right-Turn Lanes at Two-Way Stop-Controlled Intersections
- Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections

**PEDESTRIAN/BICYCLIST**
- Crosswalk Visibility Enhancements
- Bicycle Lanes
- Rectangular Rapid Flashing Beacons
- Leading Pedestrian Interval
- Pedestrian Hybrid Beacons
- Median and Pedestrian Refuge Islands in Urban and Suburban Areas
- Roadside (Roadway Reconfiguration)

**CROSSCUTTING**
- Pavement Friction Management
- Lighting
- Local Road Safety Plans
- Road Safety Audits

Source: FHWA
2021 New PSCs

- Rectangular Rapid Flashing Beacons (RRFBs)
- Lighting (Intersection and Segments)
- Crosswalk Visibility Enhancements
- Pavement Friction Management (CPFM and HFST)
- Wider Edge Lines

- Bicycle Lanes
- Variable Speed Limits
- Speed Safety Cameras
- Appropriate Speed Limits for All Road Users
Variable Speed Limits (VSL)

Safety Effectiveness
- 34% reduction for total crashes.
- 65% reduction for rear-end crashes.
- 51% reduction for fatal and injury crashes.

Particularly effective on
- Urban and rural freeways
- High-speed arterials > 40 mph

Source: WSDOT

Source: FHWA
Appropriate Speed Limits for All Road Users

- **Applications**
  - Legislative Statutory Speed Limits
  - Non-Statutory Speed Limits
    - MUTCD/Engineering Judgement
    - Expert Systems Tools
      - USLIMITS2
      - NCHRP Report 966: Posted Speed Limit Setting Procedure and Tool
    - Safe System Approach

- **Considerations**
  - A range of factors
  - Speed limit setting to be used with other strategies

Source: FHWA, TRB
Speed Safety Cameras (SSCs)

- **Fixed-point units**
  - Up to 54% reduction for all crashes
  - Up to 47% reduction for injury crashes
  - 63% reduction in speeding during school hours (New York City)

- **Point to Point (P2P) units**
  - Up to 37% reduction for fatal and injury crashes

- **Mobile units**
  - Up to 20% reduction for fatal and injury crashes

Source: Getty Images
Speed Safety Cameras (SSCs)

Applications

• Fixed units
• Point-to-Point (P2P) units
• Mobile units

Considerations

• Public trust is essential
• Use overt and covert enforcement to encourage drivers to comply with speed limits everywhere.
• Conduct legal and policy review if SSCs are authorized within a jurisdiction.
• USDOT published SSC Guidelines in 2008, with an update ongoing.

Source: Vision Zero Network
The *Speed Enforcement Camera Systems Operational Guidelines* was published in 2008 (jointly by FHWA and NHTSA).

NTSB Recommendation H-17-29 to FHWA: Work with NHTSA to update the Guidelines to reflect the latest technologies and operating practices.

Source: NHTSA and FHWA (2008)
Growing Number of SSC Programs

SSC programs have grown in the United States since the publication of the 2008 Guide.

Source: FHWA
Data Source: IIHS, 2021
What will be addressed in the Update?

2008 SSC Guide:
- Chapter 1: Introduction.
- Chapter 2: General Considerations and Planning
- Chapter 3: Program Startup
- Chapter 4: Operations
- Chapter 5: Violation Notice Processing, Delivery
- Chapter 6: Violation Notice Receipt and Adjudication
- Chapter 7: Program Evaluation.
- Appendix: ASE Practice in the United States, Additional Resources.

Updated SSC Guide:
- Address equity in each stage:
  - Engagement of equity stakeholders during planning implementation and evaluation.
  - Evaluating impact along demographic and social categories.
  - Assure underserved communities are not disproportionality impacted by SSC citations, surveillance and fines.
  - Focus on reduction of fatalities and serious injuries, not revenue generation.
  - Assuring equitable site locations based on safety improvement, not citation generation.
  - Seeking Public trust through transparency.
  - Encourage use of funds gathered through SSCs for longer-term engineering improvements – prioritize these investments in underserved communities.
- Addition of case studies to share existing practices.
Underserved communities may experience disparities in traffic fatalities and serious injuries.

Site locations should be based on safety data not citation data.

It is important to site SSCs in overburdened communities to redress the risk of fatal and serious injury crashes caused by speeding.

However, it is critical to monitor any disproportionate impacts of SSCs to minimize the burdens of penalties on underserved or overburdened communities.

Since underserved or overburdened communities may experience a disproportionate impact from SSCs, these communities can be prioritized for longer-term engineering solutions.
Penalty Structures

- Recognize that underserved communities may be **disparately impacted** by SSC penalties.

- Encourage **innovative penalty structures**, including:
  
  - Low fines
  - Alternative penalties like community service and road safety courses
  - Progressive fines based on income
  - Emphasize consistent and fair penalties as opposed to burdensome penalties
New York City

Program Background

- SSC program owned and maintained by NYCDOT
- SSCs permitted in 750 school zones
  - Operate Monday-Friday 6:00 a.m. to 10 p.m.
  - Enforce quarter mile radius from school entrance
- Issues $50 fine to the registered vehicle for speed 10 mph or more over speed limit
  - Fine issued regardless of the violating speed or whether it was a repeat offense.
  - No points are given to the vehicle owner’s license (NYCDOT, 2017).
New York City

Program Benefits

- **Safety:**
  - Reduction in speeding
  - Low rate of repeat citations
  - Reduction in fatal crashes and injury crashes
  - Consistent enforcement compared with non-camera locations

- **Equity:**
  - No interaction between driver and law enforcement officer
  - Lower ticket cost; $50 compared to $180 and more for a "traditional" speeding ticket
  - No points on driver’s license
School Zone Speed Safety Camera Program

- Fixed camera program since 2012
- 17 cameras in school zones – operational when school zone signs are flashing.
- Contracted with vendor to lease cameras
  - Fixed price contract does not depend on amount of revenue or number of citations.
  - Contract delineates vendor and city responsibilities.
- Site selection criteria
  - Speed, camera necessity, volume, geographic balance.
- Revenues go to school traffic safety and pedestrian safety projects.
Funding

- Highway Safety Improvement Program (HSIP) Funding
- Other Federal funds and grants
- Integrate into policies and practices
SSCs are a FHWA Proven Safety Countermeasure that can reduce roadway fatalities and injuries by 20 to 37 percent.

The primary function of an SSC program is to address speeding-related safety problems within a jurisdiction that cannot be addressed more effectively with other countermeasures.

Integrating equity is critical at every stage of a successful SSC Program.

Jurisdictions who explore the use of SSCs must consider equity and civil rights concerns in all stages of an SSC program (planning, design, operation, and evaluation).
Speed Management Resources

Reference Materials

- Speed Management Practices
- Speed Management ePrimer for Rural Transition Zones and Town Centers
- Speed Management Outreach Materials
  - Lower Civicwide Speed Limits and Design Changes: Safer city arterials for all road users [PDF: 1.34 MB]
  - Speed Limit Basics [PDF: 1.25 MB]
  - Speed Management Countermeasures: More Than Just Speed Humps [PDF: 1.37 MB]
  - Speed Management Case Study: Georgia Department of Transportation Setting Speed Limits with Help from USLMITS [PDF: 1.01 MB]
  - Speed Management Case Study: Reducing Excessive Speeding in Rural Communities in Iowa [PDF: 1.15 MB]
  - Noteworthy Practice Booklet - Speed Management [PDF: 3.88MB]
    - Case Study 1: Strategic Speed Management Program – CITY OF AUSTIN, TEXAS [PDF: 8.24KB]
    - Case Study 2: Self-Enforcing Roadway – CITY OF GOLDEN, CO [PDF: 604KB]
    - Case Study 3: Setting Credible Speed Limits – NEW HAMPSHIRE DOT [PDF: 609KB]
    - Case Study 4: High Visibility Enforcement – CITY OF ORO VALLEY, ARIZONA [PDF: 289KB]
    - Case Study 5: Successful Strategies for Adoption of Safety Camera – NEW YORK CITY [PDF: 9.94KB]
    - Case Study 6: Targeted Reporting of Speeding Related Crashes – ARIZONA DOT [PDF: 470KB]
    - Case Study 7: Consistent Speed Limits for Vulnerable Road Users – Examples from Various Agencies [PDF: 1.97MB]
    - Case Study 8: Network Approach to Setting Speed Limits [NEW ZEALAND TRANSPORT AGENCY, PDF: 715KB]
  - Integrating Speed Management within Roadway Departure, Intersections, and Pedestrian and Bicyclist Safety Focus Areas

PSC Resources

https://highways.dot.gov/safety/proven-safety-countermeasures

Source: FHWA
National Roadway Safety Strategy and the Moving to a Complete Streets Design Model: A Report to Congress on Opportunities and Challenges include commitments and strategies to address national crisis of traffic fatalities and serious injuries.

Request Comments on:
- Whether changes to FHWA’s Design Standards regulation or other FHWA regulations are needed to better serve all users;
- How the safety performance of Federal-Aid projects should be assessed; and,
- How to include features that improve safety performance across Federal-Aid projects.

Use information gathered to consider future rulemakings, guidance and other resources.

Docket No. FHWA-2021-0011 in Federal Register (Open through March 20, 2023)
View and Comment on the RFI

Questions

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