

Speed Management Strategic Initiative



U.S. Department of Transportation
Federal Highway Administration
Federal Motor Carrier Safety Administration
National Highway Traffic Safety Administration

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Table of Contents

Introduction.....	1
Federal Policy on Speed Management	2
Federal Role in Speed Management.....	2
Speed Management Rationale	3
Setting Speed Limits	3
Driver Risk and Perception	4
Strategic Initiatives	5
OBJECTIVE 1: Define the relationship between travel speed and traffic safety.	7
OBJECTIVE 2: Identify and promote engineering measures to better manage speed.	8
OBJECTIVE 3: Increase awareness of the dangers of speeding.....	9
OBJECTIVE 4: Identify and promote effective speed enforcement activities.	10
OBJECTIVE 5: Solicit cooperation, support, and leadership of traffic safety stakeholders:	12
References.....	15
GLOSSARY	16
APPENDIX A - Scope of the Problem	17

Introduction

Speeding – the driver-behavior of exceeding the posted speed limit or driving too fast for conditions – has consistently been estimated to be a contributing factor in approximately one third of all fatal crashes¹. The cost of speeding-related crashes is estimated to be \$40.4 billion annually, representing approximately 18% of the total cost of crashes². The role of speeding in crashes is difficult to ascertain. The definition of speeding is broad and the determination of whether speeding was involved in a fatal crash is often based on the judgment of the investigating law enforcement officer. Even if speeding is listed as a contributing factor in a crash, it may not have been the causative factor.

Speeding is a complex problem, involving the interaction of many factors including public attitudes, road user behavior, vehicle performance, roadway design and characteristics, posted speed limits and enforcement strategies. Accordingly, an interdisciplinary approach involving engineering, enforcement, and education is needed to reduce speeding-related crashes, fatalities and injuries. This comprehensive approach is speed management. Speed management involves a balanced effort: defining the relationship between speed, speeding and safety; applying road design and engineering measures to obtain appropriate speeds; setting speed limits that are safe and reasonable; applying enforcement efforts and appropriate technology that effectively targets crash producing speeders and deters speeding; effectively marketing communication and educational messages that focus on high-risk drivers; and, soliciting the cooperation, support and leadership of traffic safety stakeholders.

While speeding can be considered a national problem, it is clear that effective solutions must be applied locally. In 2003, 86 percent of speeding-related fatalities occurred on roads that were not Interstate highways. The speeding-related fatality rate per vehicle mile traveled is highest on local and collector roads where the lowest speed limits are posted, presenting additional problems. Speed limits for motorists represent trade-offs between risk and travel times for a road class or specific highway section. Decision makers often attempt to achieve an appropriate balance between the societal goals of safety and mobility. The process of setting speed limits is often viewed as a technical exercise, but the decision involves value judgments and trade-offs that are frequently handled through the political process in state legislatures and city councils. Road conditions vary too widely to justify a “one-size-fits-all” approach. There is no single “right” answer in setting appropriate speed limits or conducting enforcement activities because policy makers in different communities may legitimately disagree on the priority given to the factors – safety, travel time, enforcement expenditures, community concerns – that affect decisions about speed limits. The primary focus of speed management must remain on safety.

Federal Policy on Speed Management

The goal of the speed management strategic initiative is to reduce speeding-related fatalities, injuries and crashes. This purpose of this strategic initiative is to galvanize the Federal effort and identify specific actions to be taken by the U.S. Department of Transportation Speed Management Team designed to effectively address managing speed and reducing speeding-related crash risk.

The Department of Transportation's policy is to provide guidance for State and local governments in designing and applying a balanced and effective speed management program to reduce speeding-related crashes.

Federal Role in Speed Management

State and local government are principally responsible for speed regulation. The federal role has traditionally been to compile speed trend and safety statistics, conduct and coordinate research, fund National Highways and safety programs, and regulate new vehicle standards. There are two notable exceptions.

From 1942 to 1945, the War Department ordered a nationwide speed limit of 35 miles per hour (mph) to conserve rubber and gasoline for the war effort.

In 1973 during the oil embargo, Congress enacted the National Maximum Speed Limit (NMSL), set at 55 miles per hour (mph), to conserve fuel. In addition to conserving fuel, the annual traffic fatality toll declined from 54,052 in 1973 to 45,196 in 1974, a drop of over 16 percent. As a result of the reduction in traffic fatalities, the Congress enacted Public Law 93-643 making the NMSL permanent.

In 1995, Congress repealed the NMSL, ending the Federal sanctions for noncompliance and the requirement for states to submit speed compliance data. In the years following the repeal, States and communities have shown renewed interest in finding better ways to effectively manage speeds and reduce speeding-related crashes.

Since repeal of the NMSL, the Federal role shifted from monitoring compliance and enforcement of the NMSL to one of conducting research and providing science-based countermeasures and technical guidance for managing speed. An interagency task force was formed to study the speed management issue and develop a U.S. Department of Transportation (DOT) policy on speeding and speed management³. This led to the creation of a U.S. DOT Speed Management Team with representatives from the National Highway Traffic Safety Administration (NHTSA), Federal Highway Administration (FHWA), and the Federal Motor Carrier Safety Administration (FMCSA), reflecting the importance of both engineering and behavioral countermeasures to reduce the number of speeding-related fatalities and injuries occurring on our highways.

Speed Management Rationale

The primary reason for regulating individual speed choices is the significant risks drivers can impose on others. For example, a driver may decide to drive faster, accepting a higher probability of a crash, injury, or even death in exchange for a shorter trip time. This driver's decision may not adequately take into consideration the risk this choice imposes on other road users. This imposition of risk on others, and the desire to protect public safety, are the primary reasons for the government's role in setting speed limits.

Another reason for regulating speed derives from the inability of some drivers to correctly judge the capabilities of their vehicles (e.g., braking, steering) and to anticipate roadway geometry and roadside conditions sufficiently to determine appropriate driving speeds. This reason may not be as relevant for experienced motorists driving under familiar circumstances. However, inexperienced drivers or experienced drivers operating in unfamiliar surroundings may underestimate risk and make inappropriate speed choices. Even drivers familiar with a particular road can make inappropriate decisions because of fatigue or other factors.

A final reason for regulating speed is the tendency of some drivers to underestimate or misjudge the effects of speed on crash probability and severity. This problem is often manifested by young and inexperienced drivers and may be a problem for other drivers. The risks imposed on others and the adequacy of information about appropriate driving speeds vary by road class. For example, the risks imposed on others by individual driver speed choices are likely to be relatively small on rural Interstate highways where free-flowing traffic creates fewer opportunities for conflict with other road users or roadside obstacles. Moreover, under normal conditions, drivers typically have adequate information to determine appropriate driving speeds because these highways are usually built to the highest design standards, access is limited, and roadside activity is minimal. In contrast, the risks imposed on others by individual driver speed choices may be large on urban arterials where roadside activities are numerous and traffic volumes are high for extended periods of the day, increasing the probability of conflict with other road users. These differences are important factors for consideration in setting appropriate speed limits on different types of roads.

Setting Speed Limits

Speed limits are the most common method for managing speed. The current framework for setting speed limits was developed in the 1920s and 1930s. Each state has a basic rule that requires drivers to operate vehicles at a speed that is reasonable and prudent for existing environmental conditions. State statutes specify speed limits that generally apply to different road types or geographic areas. However, state and most local governments have the authority to set speed limits on the basis of an engineering study by establishing speed zones for highway sections where statutory limits do not fit specific road or traffic conditions.

Speed limits in speed zones are established for favorable conditions -- good weather, free-flowing traffic, and good visibility. Drivers are expected to reduce speeds as conditions deteriorate. The most common approach sets the limit on the basis of an engineering study,

which takes into consideration such factors as operating speeds of free-flowing vehicles, crash experience, roadside development, roadway geometry, and parking and pedestrian activity levels to make a judgment about the speed at which the posted limit should be set. However, pressure from the public or elected officials to lower speed limits is common and hard to resist when procedures for setting speed limits are seen as subjective and not well understood.

Driver Risk and Perception

Drivers' speed choices impose risks that affect both the probability and severity of crashes. Speed is directly related to injury severity in a crash. The probability of severe injury increases sharply with the impact speed of a vehicle in a collision, reflecting the laws of physics. The risk is even greater when a vehicle strikes a pedestrian, the most vulnerable of road users. Although injury to vehicle occupants in a crash can be mitigated by safety belt use and airbags, the strength of the relationship between speed and crash severity alone is sufficient reason for managing speed.

Speed is also linked to the probability of being in a crash, although the evidence is not as compelling because crashes are complex events that seldom can be attributed to a single factor. Crash involvement on Interstate highways and nonlimited-access rural roads has been associated with the deviation of the speed of crash-involved vehicles from the average speed of traffic. Crash involvement has also been associated with the speed of travel, at least on certain road types. For example, single-vehicle crash involvement rates on nonlimited-access rural roads have been shown to rise with travel speed.

Speeding is a pervasive behavior with about three-quarters of drivers reporting in a recent national survey they drove over the speed limit on all types of roads within the past month, and one-quarter reported speeding over the limit on the day of interview.⁴ Speed data collected by FHWA indicate that on average 70 percent of motorists are exceeding the posted speed limits.⁵

According to the National Survey of Distracted and Drowsy Driving Attitudes and Behaviors: 2002⁶, drivers believe they can travel between 7-8 mph over the posted speed limit, on average, before police would normally give them a ticket. However, they believe the tolerances should be 2-3 mph higher suggesting that speed limits are about 10 mph below what motorists believe to be appropriate. However when questioned directly, 83 percent of the drivers say speed limits are about right on city and neighborhood streets and 61 percent say the same for interstate freeways.

Many of the drivers surveyed believe that the speed limits on interstates should generally be higher, that they would drive faster than the speed limit even if the limits were raised, and that they themselves speed at least sometimes. However, 68 percent of drivers feel that *other drivers'* speeding is a major threat to their own personal safety. More than three-quarters of drivers feel that it is at least somewhat important that something be done to reduce speeding on all road types. This suggests a strong "it's not me, it's the other guy who is a problem" mentality among many drivers.

Speeding is not only a problem in the United States, but has been identified by many countries as a key risk factor in road traffic injuries. In industrialized countries, speed is a factor in around 30 percent of highway deaths, which is similar to the United States.

Internationally, the World Health Organization has identified a number of interventions synthesized from international practice that are effective in the management and control of vehicle speed⁷:

- Setting and enforcing speed limits are two of the most effective measures in reducing road traffic injuries.
- Posted speed limits will only have a minimal effect on reducing travel speeds unless accompanied by sustained, visible enforcement of these limits.
- Speed cameras are a highly cost-effective means of reducing road crashes.
- Variable speed limits are responsive to local conditions and traffic circumstances, and are therefore more likely to be obeyed.
- Speed levels can also be affected by developing a safer infrastructure.
- Traffic calming measures can be particularly useful where enforcement of speed control laws may be ineffective.
- Design features used to mark transition zones on busy roads approaching towns and villages can influence drivers' speed. Slower-speed zones and modern roundabouts are examples of features that are useful in reducing the speed of vehicles.
- Appropriate speed can be achieved through design features that limit the speed of the vehicle itself. This is already being done in many countries with heavy load vehicles and coaches.

The issue of what constitutes appropriate driving speeds will persist as long as there are individual drivers making choices about risk and time efficiency. Ultimately, decisions about appropriate speed limits depend on judgments about society's tolerance for risk, valuation of time, and willingness to police itself.

Technological advances may offer additional techniques for controlling driving speeds on all types of roads. For example, technology could help establish limits that are more sensitive to actual changes in road conditions and thus provide drivers with better information. With modern vehicles becoming quieter and more comfortable at higher speeds, technology installed on the roadside or onboard vehicles could alert drivers and control vehicle speeds that are approaching the design limits of the road. Finally, technology could help improve the efficiency, effectiveness and safety of enforcement efforts. Further development, demonstration, and evaluation are needed for many technologies to realize their potential.

Strategic Initiatives

The Department of Transportation safety goal is to reduce the highway fatality rate to 1.0 per 100 million vehicle miles by 2008. This strategic plan is a "one-DOT" effort, developed jointly by the FHWA, NHTSA and FMSCA to address speeding as a contributor to highway crashes and fatalities. The strategies contained in this initiative incorporate recommendations of the Transportation Research Board contained in *Special Report 254, Managing Speed: Review of Current Practice for Setting and Enforcing Speed Limits*.⁸

The goal of the Speed Management Strategic Initiative is to reduce speeding-related fatalities, injuries and crashes. The strategies and actions of this initiative are grouped under five main objectives:

- 1. Better define the relationship between speed and safety.* Understanding speed as a highway safety issue necessitates accurately defining the relationships between speed limits, travel speeds and safety. Additional data is needed to identify and develop effective countermeasures and awareness campaigns to modify driver speeding behavior
- 2. Identify and promote engineering measures to better manage speed.* Establishing speed limits that achieve public support is a prerequisite to developing any effective speed management program. Greater use of speed management techniques and technology that can be built into the existing highway system or incorporated in the Intelligent Transportation system has the potential to improve voluntary compliance with speed limits and prevent traveling at inappropriate speeds.
- 3. Increase awareness of the dangers of speeding.* If the public is not aware or does not understand the potential consequences of speeding to themselves and others, they are less likely to adjust speeds for traffic and weather conditions, or to comply with posted speed limits. Public information and education contribute to public support for speed management by increasing awareness of the possible consequences of speeding.
- 4. Identify and promote effective speed enforcement activities.* Enforcement is crucial to achieving compliance with speed limits. Even if most drivers believe that the speed limits are appropriate and reasonable, and they comply within a small tolerance, enforcement is still necessary to ensure the conformity of drivers who will obey laws only if they perceive a credible threat of apprehension and punishment for noncompliance.
- 5. Obtain cooperation and support of stakeholders.* Traffic court judges, prosecutors, safety organizations, health professionals and policy makers have a stake in establishing the legitimacy of speed limits and effectively managing speed to reduce fatalities. Safety goals can only be achieved through the leadership of State and local authorities who are responsible for implementing most speed management measures.

These strategies are designed for implementation across various jurisdictions and on different types of roadways. They incorporate a balanced, 3E approach -- engineering, enforcement and education -- based on scientific research and when appropriate, include technologies designed to aid in mitigating a specific problem.

The status of each key action is indicated as in progress or planned. Planned actions may not be included in agency budgets at this time. Depending on funding availability, the timeframes indicate when the key action is to be initiated.

OBJECTIVE 1: Define the relationship between travel speed and traffic safety.

Strategy 1: Determine the effects of travel speed on crash risk

While there is consensus that crash severity increases with speed, the precise relation between travel speed and crash probability is less clear with various studies coming to different conclusions. One of the main deficiencies in studies to date is the lack of accurate knowledge of the travel speed before crashing. Scientific evidence of the relation between speed and safety will be needed to mount convincing and effective speed management campaigns.

Key Actions:

Research the relationship between travel speed and crash risk on various road types. (Planned, 2 years)

Develop a typology for speeding-related crashes. (Planned, 1 year)

Strategy 2: Identify trends in travel speeds, crash probability and injury severity.

Good speed and crash data are critical to better understand the speeding problem and make wiser decisions on where best to concentrate resources in order to have the most effect in reducing speeding related injuries and fatalities.

Key Actions:

Compile and report annually in the Traffic Safety Facts series information on the scope and nature of speeding involvement in traffic fatalities. (In progress)

Working with the States, and local agencies as necessary, monitor and report travel speed trends across the entire road network. (Planned, 2 years)

Identify States and road types where excessive and inappropriate vehicle speeds are a safety problem. (Planned, 1 year)

Work with States to ensure they identify jurisdictions and road types where excessive vehicle speeds are a safety problem. (Planned, 2 years)

Strategy 3: Evaluate the safety benefits of appropriate speed limits.

Additional research is needed on the spillover and net safety effects associated with speed limit changes for both limited- and nonlimited-access roads.

Key Actions:

Monitor changes in State speed limit laws and posted speed limits. (In progress)

Evaluate the long-term effects of raising and lowering speed limits on speed and crash risk. (In progress)

Evaluate the effects of differential limits for cars and trucks. (In progress)

Evaluate the effects of minimum speed limits. (Planned, 3 years)

OBJECTIVE 2: Identify and promote engineering measures to better manage speed.

Strategy 1: Develop criteria for setting appropriate speed limits.

Speed limits should promote safe travel and be perceived by the public as safe and reasonable. Providing appropriate speed limits is the first step towards voluntary compliance and the cornerstone for effective speed management.

Key Actions:

Develop a computer-based expert speed zone advisor for setting credible, safe, and consistent speed limits. (In progress)

Determine the frequency -- the distance between signs -- at which to post speed limits signs. (Planned, 1 year)

Develop guidance for conducting engineering studies used to set speed limits. (Planned, 3 years)

Strategy 2: Facilitate design of self-enforcing roads.

The road design process often results in speeds higher than intended, which creates undue risks for non-motorists and frustrate motorists who perceive posted speed limits as artificially low. Identifying methods to achieve desired speeds in the design process will ensure safer operating speeds compatible with road function and reduce the demands on law enforcement.

Key Actions:

Research roadway design factors that influence driver speed selection and speed prediction models that can be used in the design process to achieve appropriate travel speeds. (In progress)

Research and demonstrate methods to achieve appropriate traffic speeds on main roads through towns and other areas not suitable for traditional traffic calming techniques. (Planned, 1 year)

Identify traffic calming techniques for reducing speed in pedestrian activity areas. (Planned, 1 year)

Develop guidelines for designing new roads and retrofitting existing roads to achieve appropriate travel speeds. (Planned, 3 years)

Strategy 3: Research engineering solutions for achieving appropriate speeds on curves

Run-off-road crashes at curves are primarily due to speed. Consistently relaying appropriate curve speeds to motorists will reduce the frequency of run-off-road curve crashes.

Key Actions:

Research and evaluate low-cost driver perceptual countermeasures to reduce speeds. (In progress)

Test and evaluate speed activated roadside displays that warn drivers that are exceeding safe speeds based on curve geometry, pavement friction, and vehicle characteristics. (Planned, 3 years)

Develop and evaluate cooperative infrastructure-vehicle systems that alert drivers or adapt speed when traveling too fast for conditions. (Planned, 3 years)

Strategy 4: Test and evaluate Variable Speed Limits (VSL).

Variable speed limits are speed limits that change relative to road, traffic, and environmental conditions. Over 450,000 injury crashes and nearly 6,500 fatal crashes occur annually during adverse road conditions. Speeding is estimated to be a factor in over 50 percent of these crashes.

Key Actions:

Promote the use of VSL in work zones to increase motorists' compliance and improve worker safety. (Planned, 1 year)

Test and evaluate the effectiveness of VSL from a safety and traffic efficiency perspective on busy urban freeways and rural interstate corridors with adverse weather conditions. (Planned, 3 years)

Evaluate VSL applications in combination with automated speed enforcement systems. (Planned, 3 years)

Strategy 5: Test, evaluate, and promote onboard vehicle technologies to achieve safe and appropriate travel speeds.

Vehicle safety systems and communications technologies are rapidly evolving and provide opportunities to alert or prevent drivers from exceeding safe speeds.

Key Actions:

Evaluate the effectiveness of onboard vehicle technologies for controlling unsafe speeds for conditions. (In progress)

Promote the use of effective onboard vehicle technologies to achieve safe travel speeds. (Planned, 1 year)

Research appropriate techniques for adapting vehicle speed to the posted speed limit. (Planned, 3 years)

Field test and evaluate adaptive speed control in combination with variable speed limits. (Planned, 3 years)

OBJECTIVE 3: Increase awareness of the dangers of speeding.

Strategy 1: Develop and implement public outreach campaigns to encourage compliance with speed limits.

The introduction of revised speed limits and strict enforcement needs to be accompanied by communication and education programs to ensure motorists acceptance and enhance compliance. It will be particularly difficult to change attitudes to speeding through education and publicity unless speed limits are perceived to be realistic.

Key Actions:

Develop and evaluate awareness campaigns to educate drivers on the importance of obeying speed limits and the potential consequences of speeding. (In progress)

Educate the public about why and how speed limits are set. (Planned, 1 year)

Strategy 2: Develop national communication campaigns targeting high-risk drivers.

Years of highway safety program research have shown that communication and public education, accompanied by enforcement can modify driver behavior.

Key Actions:

Use market research to create driver profiles to clearly understand how, when and where to reach speeders. (In progress)

Develop a communications strategy to educate the public and target at risk drivers. (In progress)

Work with highway safety partners to include appropriate material on the dangers of speeding in their training curriculum. (In progress)

Strategy 3: Encourage vehicle manufacturers to promote responsible driver behavior and speed compliance in advertising.

Much of vehicle advertising appears focused on vehicle performance and fails to appropriately promote safe and responsible driving.

Key Actions:

Communicate with vehicle manufacturers, including motorcycle manufacturers, expressing concern about a focus on speed, power and performance in advertising and the need to incorporate responsible safe driving messages. (Planned, 1 year)

OBJECTIVE 4: Identify and promote effective speed enforcement activities.

Strategy 1: Provide enforcement guidelines that promote driver compliance with appropriately set speed limits.

Effective enforcement works primarily through the principle of general deterrence. The fundamental concept is that credible threats of apprehension and punishment deter unwanted driving behaviors. Enforcement activities should focus on areas where speeding is over-represented in crash occurrence.

Key Actions:

Develop best practices guidelines for speed enforcement programs in combination with education and media activities. (Planned, 2 years)

Strategy 2: Support speed enforcement operations.

Most contacts between citizens and law enforcement officers occur during traffic stops. More than half of all traffic stops result from speeding violations. Public support for speed enforcement activities depends on the confidence of the public that speed enforcement is motivated by safety concerns, fair and rational.

Key Actions:

Provide model-speed measuring device operator training programs. (In progress)

Provide performance specifications and testing protocols for speed-measuring device technologies. (In progress)

Provide independent testing laboratories for insuring the accuracy and reliability of speed-measuring device technologies. (In progress)

Strategy 3: Promote the appropriate use of automated speed enforcement.

Automated enforcement has been shown to be effective, particularly on high-volume roadways and locations where it is unsafe to conduct traditional enforcement operations. Public support of automated speed enforcement programs is dependant on it being perceived as fair and not as a revenue raising strategy.

Key Actions:

Identify appropriate applications for automated speed enforcement technology and evaluate its safety effectiveness. (In progress)

Provide implementation guidelines for automated speed enforcement systems. (Planned, 1 year)

Provide a model automated speed-measuring device operator training program. (Planned, 1 year)

Promote the application of automated speed enforcement systems that employ a combination of fines and licensing penalties designed to effectively deter speeding and prohibit revenue generation beyond reasonable operational cost. (Planned, 1 year)

Strategy 4: Promote enforcement activities that effectively target driver behaviors resulting in speeding-related crashes.

Enforcement operations should establish enforcement thresholds that focus on egregious and crash producing speeders. This strategy will not overwhelm law enforcement or the courts. The overall goal of the enforcement efforts is motorist compliance.

Key Actions:

Support speed enforcement activities that compliment a comprehensive speed management program including traffic engineering, law enforcement, and the judiciary. (In progress)

Support high visibility enforcement efforts that strategically address speeders, locations, and conditions most common, or most hazardous, in speeding-related crashes. (In progress)

Promote speed enforcement as part of the National commercial motor vehicle safety enforcement program. (Planned, 1 year)

OBJECTIVE 5: Solicit cooperation, support, and leadership of traffic safety stakeholders:

Strategy 1: Provide information and training for traffic court judges and prosecutors.

Support and leadership of traffic court judges and prosecutors is essential to ensure that speeding violations are treated seriously and consistently. Consistent treatment of speeding violations by the courts is crucial to defuse any public perception that speed limits are arbitrary or capricious.

Key Actions:

Provide speed management program training opportunities for judges and prosecutors through the American Bar Association, National Traffic Law Center, National Association of Prosecutor Coordinators, and National Judicial College. (In progress)

Educate judges and prosecutors on the negative effects of speeding on the quality of life in their communities. (In progress)

Develop sentencing guidelines and training for judges and prosecutors who handle speeding violations to ensure and promote consistent treatment of violators. (Planned, 1 year)

Strategy 2: Promote speed management as a public policy priority.

Working cooperatively with traffic safety organizations and groups can make more effective use of limited resources and win support for reducing speeding-related crashes.

Key Actions:

Create a network of key partners and health professionals to carry the speed management message and leverage their resources to extend the reach and frequency of the speed management communication campaign. (Planned, 1 year)

Target speed management initiatives at States and road types with the greatest opportunity for making a significant improvement. (Planned, 1 year)

Strategy 3: Promote a balanced and integrated speed management program.

Engineering, education and enforcement all have a role to play in combating excessive speed. Reductions in speeding-related fatalities and injuries must be achieved by working with the state and local authorities that are responsible for implementing measures to manage speed.

Key Actions:

Conduct a series of speed limit setting and enforcement demonstration projects that integrate engineering, education, and enforcement. (In progress)

Develop and pilot test a Speed Management Program Implementation Guide, based on the best practices identified through the speed limit setting and enforcement demonstration projects, to aid States and local communities in implementing a holistic, balanced and effective program. (Planned, 1 year)

Provide a Speed Management Workshop Guide to enhance communications and cooperation among the engineering, enforcement, judicial and public policy partners. (In progress)

Train facilitators to conduct speed management workshops for States and local communities. (In progress)

Promote speed management workshops through the FHWA and FMCSA Divisions, Resources Centers, NHTSA Regional Offices, State DOT Engineering Offices, State Highway Safety Offices, and Local Technical Assistance Program centers. (In progress)

Making Speed Management Work

The success of any speed management program is enhanced by coordination and cooperation among the engineering, enforcement, and educational disciplines. An additional key component in a successful speed management program is for consistent, effective public outreach programs to support traffic safety strategies and countermeasures. The likelihood of success is increased when Federal, State, local, and private sector partners work together to reduce speeding-related fatalities and injuries. However with over 35,000 owners and operators of roadways and nearly 20,000 police agencies, this is not an easy task.

As a first step, we plan to facilitate the formation of speed management working groups in State and local communities across the nation to create localized action plans that identify specific speeding problems and the actions necessary to address them and restore the credibility of posted speed limits. If the problem of speeding and speed management is to be addressed successfully, the working group needs to address these issues:

- How to effectively overcome institutional and jurisdictional barriers to setting appropriate speed limits and enforcement practices.
- How to effectively coordinate with stakeholders across organizational and jurisdictional concerns to improve support needed for establishing effective speed management.
- How to effectively communicate and exchange information between the transportation disciplines and the public to reinforce the importance of setting and enforcing appropriate speed limits.

In addition, we are supporting a national forum with highway safety leaders that addresses how States, local communities and the private sector can collaboratively work to: 1) identify effective strategies for reducing speeding-related fatalities and injuries; 2) coordinate federal, state, local and private sector speeding-related policies and programs; and 3) identify additional research, data and programs to be undertaken. The focus of the discussion will include all types of vehicles – automobiles, motorcycles, and commercial motor vehicles. The outcome of the meeting will be an action agenda developed by all the participants.

This strategic initiative is intended to provide the guidance and tools that will enable state and local authorities to more effectively manage speed and reduce speeding-related fatalities. It involves a holistic approach that addresses public attitudes, road user behavior, vehicle performance, roadway design and characteristics, speed zoning practice, and enforcement strategies.

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GLOSSARY

Causative factor	The combination of simultaneous and sequential factors without any one of which the result could not have occurred.
Contributing factor	Any circumstance contributing to a result without which the result could not have occurred.
Roundabout	A one-way circular intersection in which entering traffic yields to traffic already in the circle and specifically designed to slow the speed of traffic by using deflection and small radius circles.
Speed	Rate of progress, or change in position, usually without regard to direction; distance divided by time (if speed is constant); a scalar quantity which refers to how fast an object is moving; generally referred to in miles or kilometers per hours (mph or km per hr [km/h]).
Speed Limit, Absolute	A specified numerical value, the exceeding of which is always in violation of the law, regardless of the conditions or hazards involved.
Speed Limit, Differential	Speed limits that differ by vehicle type or time of day (e.g. day and night)
Speed Limit, Variable	Speed limits that change based on road and traffic conditions
Speed Management	Application of various methods to achieve safe and appropriate travel speeds
Speed zone	A speed limit posted on a section of road on the basis of a traffic engineering investigation that determined that the statutory limit which would otherwise apply is too high or too low
Speeding	The act of exceeding the legal speed limit or driving too fast for conditions
Speeding-related	A crash in which a driver is charged with a speeding-related offense or if the reporting officer indicated that racing, driving too fast for conditions, or exceeding the posted speed limit is a contributing factor in the crash.
Traffic calming	Combination of mainly physical measures intended to reduce traffic speed and enhance the street environment for non-motorists

APPENDIX A - Scope of the Problem

Overall trends in speeding-related fatalities (Figures 1 and 2):

- The number of speeding-related fatalities decreased continuously from 16,947 in 1986 to 12,592 in 1993. The number remained relatively constant until 2001 when the number of speeding-related fatalities started to increase again.
- The relative proportion of speeding-related fatalities to the total fatalities shows an overall downward trend from the highest level of 37 percent in 1986 to the lowest level at 30 percent in 2000.
- The upward trend since 2000 in total fatalities and the proportion of those that were speeding-related was reversed in 2003.

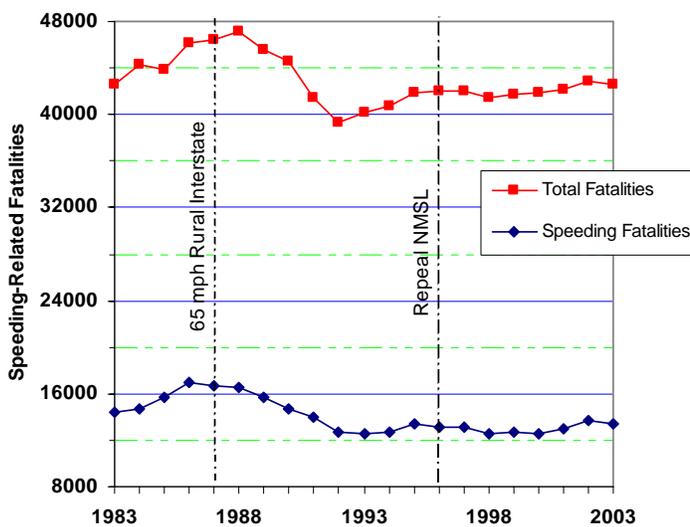


Figure 1: Trends in Speeding-Related Fatalities (Source: FARS 1983-2003)

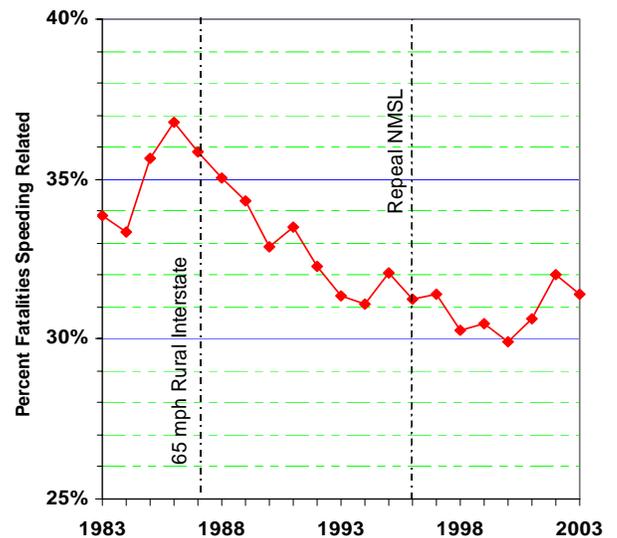
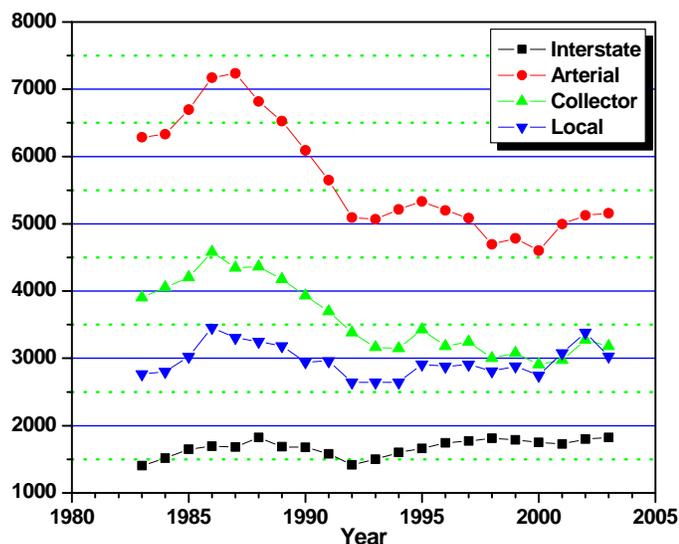


Figure 2: Percent of Fatalities That Are Speeding-Related (Source: FARS 1982-2003)

By Road Type (Figures 3 and 4):

- The number of speeding-related fatalities on local, collector, and arterial roads follows a trend similar to that of the overall speeding-related fatalities. The only exception is the trend of speeding-related fatalities on interstate freeways that peaked in 1998 and remained relatively constant since then.
- In comparison, since 2000, there is a larger increase in speeding-related fatalities on local roads than on other types of roadways until 2003 when the trend was reversed.
- The speeding-related fatality rate *per mile of travel* is more than three times higher on local roads than on interstate freeways.
- The speeding-related fatality rate *per mile of highway* is highest on interstates.



Source: FARS 1983-2003

Figure 3: Speeding-Related Fatalities by Roadway Function Class, 1983-2003

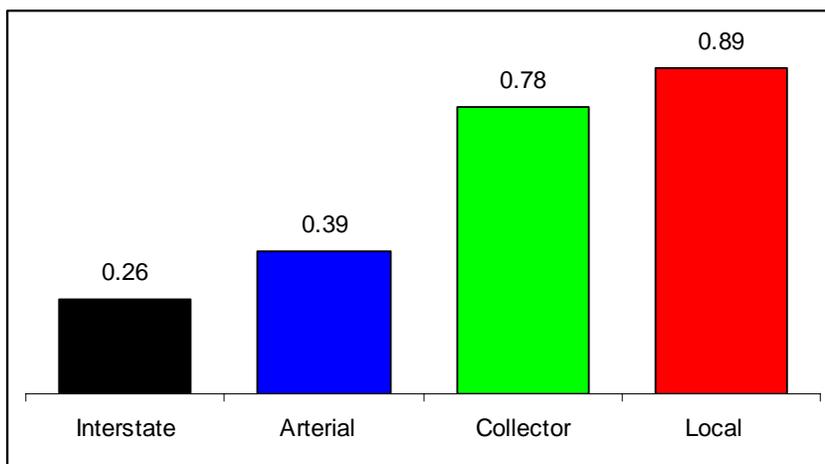


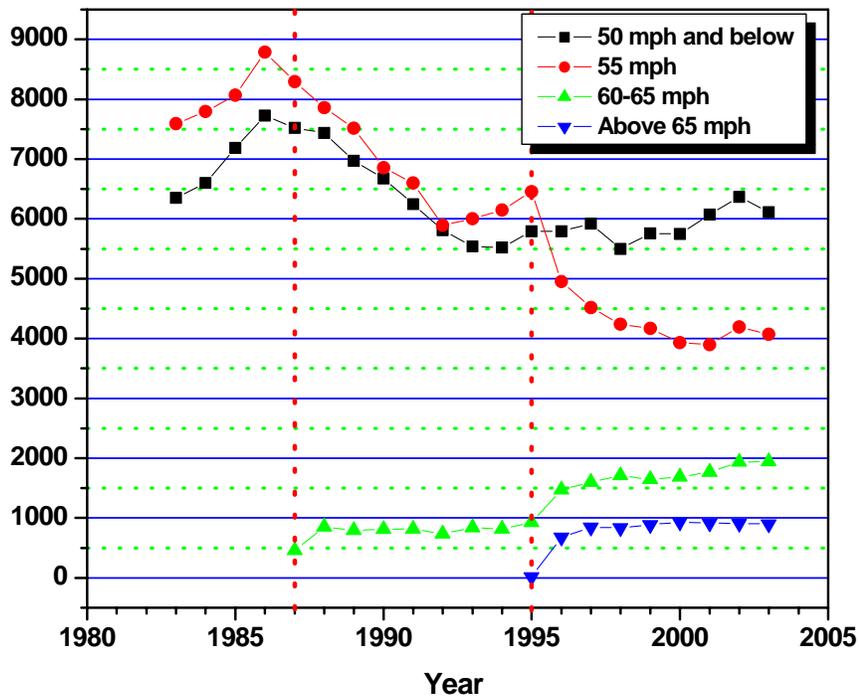
Figure 4: Speeding-Related Fatalities Per 100 Million Vehicle Miles Traveled (Source: FARS 2002, Highway Statistics 2002)

Table 1. Speeding-Related Fatalities and Fatality Rates By Road Type (Source: FARS 2002, Highway Statistics 2002)

Road Type	Speeding Fatalities	Percent Speeding	Per 100 Million Miles Traveled	Per 100 Road Miles
Interstate	1799	31%	0.26	3.9
Arterials	4600	26%	0.39	1.2
Collector	3272	36%	0.78	0.4
Local	3385	40%	0.89	0.1

By speed limits (Figure 5):

- In 1987, Congress allowed 65 mph speed limits on rural interstates. Since that time, the number of speeding-related fatalities was relatively constant on roads with 65 mph speed limits while there was a downward trend on roads with speed limits of 55 mph and under.
- In 1995, Congress abolished the NMSL. Since that time, speeding-related fatalities have been gradually increasing on roads with speed limits of 65 mph and above while the fatalities on the road with speed limits under 50 mph have been relatively stable. The large decrease on roads with a speed limit of 55 mph is partially due to a decrease in the miles of roads posted at 55 mph because of the change to the higher speed limits after eliminating the NMSL.

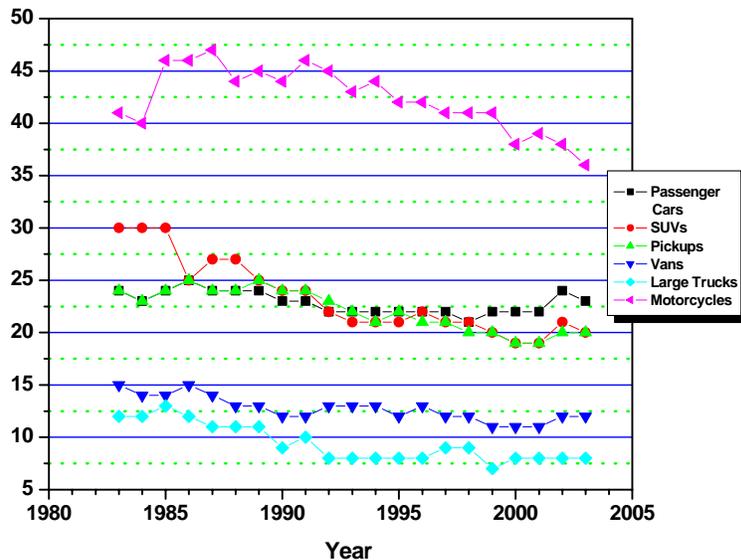


Source: FARS 1983-2003

Figure 5: Speeding-Related Fatalities by Speed Limit, 1983-2003. Note that the Congress Allowed States to Raise Speed Limits on Rural Interstates to 65 mph in 1987 and Abolished the NMSL in December 1995.

By vehicle type (Figure 6):

- The percentage of fatal crashes that were speeding-related is highest among motorcycle operators at 36 percent in 2003. This represents a decrease from the 1987 level high of 47 percent.
- The percentage of speeding involvement in fatal crashes is similar for passenger cars and light trucks. While the percentage for passenger cars are relatively constant between 1992 and 2001, the percentage for light trucks has been decreasing gradually. In 2002, all passenger vehicle types experienced an increase in the percentage of speeding involvement in fatal crashes.
- There was a steady decrease of the percentage of speeding involvement among SUVs involved in fatal crashes, from a high of 30 percent in 1983 to 19 percent in 2001.
- Drivers of large trucks involved in fatal crashes are least likely to be speeding.



Source: FARS 1983-2003

Figure 6: The Relative Proportion of Speeding Drivers in Fatal Crashes by Vehicle Type, 1983-2003

By driver characteristics:

- Male drivers are more likely to be involved in speeding-related crashes than females.
- The proportion of fatal crashes involving speeding decreases with driver age.
- Young males less than 25 years of age are over represented in speeding-related fatal crashes; however the proportion involving speeding was trending downwards until 2001 when it increased
- On an average, about 41 percent of intoxicated drivers (BAC = 0.08+) involved in fatal crashes were speeding, compared to only about 14 percent of sober drivers.
- While the percentage of speeding drivers has decreased slightly for intoxicated drivers, the percentage has been relatively constant for sober drivers.



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