



**ADVOCATES
FOR HIGHWAY
AND AUTO SAFETY**

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**IMPROVING ROADWAY SAFETY:
ASSESSING THE EFFECTIVENESS OF NHTSA'S
HIGHWAY TRAFFIC SAFETY PROGRAMS**

BEFORE THE

**HOUSE SUBCOMMITTEE ON HIGHWAYS AND TRANSIT
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE**

July 16, 2008

Good morning. My name is Jacqueline Gillan and I am Vice President of Advocates for Highway and Auto Safety (Advocates) a coalition of consumer, health and safety and major insurance companies and agents organizations working together to support adoption of laws and programs to reduce deaths and injuries on our highways. Advocates is a unique organization. We focus our efforts on all areas affecting highway and auto safety – the roadway, the vehicle, and the driver. Founded in 1989, Advocates has a long history of working with the House Committee on Transportation and Infrastructure advancing public health and safety in surface transportation legislation. We appreciate the opportunity to testify at this morning's hearing addressing strategies and solutions for achieving safety gains that will reduce deaths and injuries on our highways.

Although our nation's highway system has created mobility opportunities that are the envy of the world, it has resulted in a morbidity and mortality toll that is not a source of pride. Motor vehicle crashes are the leading cause of death for all Americans between the ages of 4 and 34. Every day 117 people are killed on America's highways and 7,000 more are injured.¹

During the five-year authorization time frame of the Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU), it is expected that more than 200,000 people will die on our highways and nearly 13 million more will be injured. This will occur despite the largest surface transportation investment in our nation's history.

Any progress in achieving significant reductions in motor vehicle deaths and injuries will require Congress to address these realities. Currently, too many states have too few of the most successful, cost-effective traffic safety laws that have been proven to save lives, prevent serious injuries and reduce the expenditure of billions of dollars in medical, government and other economic costs. Additionally, federal motor vehicle and truck safety standards that have the potential to save thousands of lives year after year continue to languish at the U.S. Department of Transportation (DOT) or are issued with only minimal, weak requirements. At the same time, highway deterioration and potential catastrophic bridge failures across the country threaten the safety of motorists while trucking interests continue to prod state legislatures and Congress to again increase the size and weight of big trucks.

Highway Safety is Stuck in Neutral

Let me begin by providing a brief overview of where we are and where we are headed in efforts to address this public health epidemic.

In 2006, the last year government figures are available, 42,642 people were killed in motor vehicle crashes and over 2.5 million were injured at a cost to society of more than \$230.6 billion. This amounts to a "crash tax" of about \$820 for every person in the United States.²

More than half of passenger vehicle occupants killed in 2006 were unrestrained, unchanged from 2005. Yet, only 26 states and the District of Columbia have enacted primary enforcement seat belt laws.³

Motorcycle deaths in 2006 increased for the ninth year in a row to a total of 4,810, an astonishing 127 percent increase from 1997.⁴ Helmet use is the most effective measure to protect motorcyclists in a crash from death or disabling brain injuries. At present, however, only 20 states and the District of Columbia require all motorcycle riders to wear a helmet.⁵ This year, 12 states attempted to repeal this lifesaving law while only four states considered, yet failed, to enact an all-rider helmet law.

The map attached to this testimony indicates how few states have adopted both life-saving primary enforcement seat belt and all-rider motorcycle helmet laws.

In 2006, 41 percent of all fatal crashes were alcohol-related. This has essentially remained the same for the past 13 years.⁶ Despite strong public opinion in support of tough measures to get drunk drivers off our streets and roads, many states still lack open container and repeat offender laws that meet federal requirements, as well as other basic impaired driving laws.

In the past 10 years the number of truck crash deaths has remained essentially the same, about 5,000 fatalities each year. Ineffective public relations campaigns, flawed research, weak safety rules and inadequate enforcement efforts have all contributed to the lack of progress by the Federal Motor Carrier Safety Administration (FMCSA) to achieve significant safety gains. The agency continues to ignore Congressional mandates, issue flawed safety regulations that are routinely overturned in scathing court decisions, and fails, by any measure of success, to achieve its safety goals.

Driver Demographics are Changing, Safety Laws and Regulations Are Not

In the next reauthorization, Congress must address changing surface transportation priorities. There is also an urgent need to acknowledge and adapt our laws and safety regulations to the changing profile of highway users, particularly more teens and older citizens who will be driving.

Approximately 8,000 people were killed in crashes involving young drivers ages 16 to 20 in 2006. Although graduated driver licensing (GDL) laws have been proven to be effective in saving lives, only the state of Delaware has all five elements of an optimal teen driving law.⁷

Older citizens are overrepresented in motor vehicle crashes as drivers, vehicle occupants and pedestrians. Older vehicle occupants represent 14 percent of vehicle occupant fatalities, and 15 percent of all pedestrian fatalities involved people over the age of 70.⁸

DOT Changes Missed Goals, But Can't Change Reality

In recent years, the National Highway Traffic Safety Administration (NHTSA) has been unable to meet a number of its announced safety performance goals. Instead of improving its performance, the agency has simply moved the goal posts.

Some years ago, NHTSA switched from using total fatalities as a measure of agency performance to relying on the overall fatality rate. Although NHTSA set a goal of achieving a fatality rate of 1.0 fatalities per 100 million vehicle miles of travel (MVMT) by 2008, the agency has now admitted that it cannot achieve that goal and has raised its 2008 goal from 1.0 to 1.37 fatalities per 100 MVMT. The goal of reducing the fatality rate to 1.0 has now been put off until 2011. Even this deferred performance goal is wishful thinking since it will require a decrease in the fatality rate in the next five years, from 1.41 (2006) to 1.0 by 2011, that is four times the drop in the fatality rate that NHTSA achieved in the previous five-year period (2001-2006). But even as NHTSA touts marginal reductions in the fatality rate, the U.S. has lost ground compared to other industrialized nations, falling from first to ninth in terms of highway safety.⁹

NHTSA also changed its traditional method of measuring the motorcycle fatality rate. After years of providing motorcycle fatality rates using the traditional exposure measure for surface transportation, that is, miles driven or 100 MVMT, NHTSA recently announced that motorcycle mileage data is flawed and can no longer be used to determine the fatality rate. The 2005 motorcycle fatality rate, based on mileage, was nearly 44 deaths per 100 MVMT. NHTSA had planned to issue a new fatality rate based on deaths per 1,000 registered motorcycles, which would have yielded an artificially low fatality rate 0.73 fatalities, less than one fatality, for every 1,000 vehicles. This was seen as an attempt to downplay the significance of the motorcycle fatality problem. The agency has instead decided to report the motorcycle fatality rate based on 100,000 registered motorcycles, which yields a fatality rate for 2006 of just under 72 deaths per 100,000 registered vehicles.

With regard to the truck fatality rate, FMCSA has engaged in a more subtle change to dilute the impact of the data by combining truck VMT with bus and passenger vehicle VMT so that truck fatalities will be divided by a much larger pool of vehicle miles of travel to yield a dramatically lower fatality rate for big trucks. As a result, instead of truck fatality rates being correctly reported as much higher than the overall highway fatality rate, the revised FY 2008 rate for large truck and bus crashes is an artificially and misleadingly low figure of just 0.171 fatalities per 100 MVMT. In comparison, the truck crash fatality rate in 2005 per 100 MVMT only using truck mileage was 2.12 fatalities per 100 MVMT, a significantly larger number indicating a serious safety problem.

This raises the concern that our federal safety agencies, NHTSA and FMCSA, instead of focusing on saving lives and decreasing the number of people who are killed and maimed in traffic crashes, are expending resources on public relations efforts intended to give the appearance of progress where there is none.

Enactment, Education and Enforcement are Key to Improving Safety

Changing human behavior, especially of a large and diverse population, is an enormous task. Most often, positive changes in safety behavior are not effective if predicated on educational efforts alone. For instance, efforts to convince people to use seat belts solely through “education, exhortation, or persuasion have had little success.”¹⁰ Research conducted by the Insurance Institute for Highway Safety (IIHS), among others, indicates that educational messages, such as public service announcements, brochures and similar attempts at behavior modification do not yield long lasting results. This has been shown repeatedly in research studies on social behavior, especially in the context of traffic safety.¹¹

Experience teaches that behavior modification in traffic safety is most effective when an educational message is combined with a legal requirement such as a state or federal law or regulation that is underscored by a real possibility of the imposition of a penalty (summons, fine, points, etc.) through adequate enforcement. “Most demonstrable improvements in driver behavior come from traffic safety laws.”¹² The underpinning of a state legal requirement, and the accompanying potential penalty, makes the need to change behavior more tangible than simply providing an educational message.

The “Click-It or Ticket” seat belt enforcement campaign is a role model of how this combination is effective. The original program was developed in North Carolina in 1993 as a means of promoting higher seat belt use rates and was launched to test the potential effectiveness of combining widespread publicity, with strong enforcement, in a state with a primary enforcement seat belt law. The educational message was integrally related to the intent of the new law, including consequences for its violation and specific information about fines, as well as the promise to fully enforce the law. The North Carolina campaign paid immediate dividends, with belt use increasing from 65 percent statewide before the effort, to 84 percent statewide approximately six months later. North Carolina now has a statewide seat belt use rate of nearly 89 percent (2007), placing it in the top-tier of states with the highest seat belt use rates.¹³

Because the Click It or Ticket program has been so successful, it has since been used in numerous other states. In addition, in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, Pub. L. 109-59 (Aug. 10, 2005) (SAFETEA-LU), Congress provided NHTSA with \$29 million each year (2006-2009), to conduct Click It or Ticket-type high visibility enforcement campaigns to reduce alcohol-impaired or drug-impaired driving and to increase seat belt use.¹⁴ NHTSA has used this funding to run a nationwide enforcement effort supported by a \$7.5 million advertising campaign focused on raising nighttime driving seatbelt use rates among teens.¹⁵

The problem, however, is that the NHTSA campaign cannot truly be a nationwide effort since not all states have primary enforcement seat belt laws. The message is not as effective in states with secondary enforcement laws.

Bold Action and Leadership are Necessary in the Next Reauthorization Legislation

Proven public health solutions to significantly reduce highway deaths and injuries are known. However, political will and executive branch leadership to advance and implement programs and policies are lacking. Many states and communities already have enacted traffic safety laws and employ ideas and programs that are resulting in important reductions in deaths and injuries. Extensive research and experience show the benefit of strong safety standards, regulations and laws. Unfortunately, much more needs to be done as a nation to ensure that every person, in every state, on every trip is adequately protected by safe roads, safe vehicles and safe driving.

Let me briefly identify some of the key issues that must be addressed in next year's reauthorization in order to achieve any real progress in reducing motor vehicle deaths and injuries.

A Primary Enforcement Seat Belt Law is a Primary Need

When you fly into any airport in any state across the country one has to wear a seat belt for landing and take-off. That's not the case when you and your family are driving across the country. At present, only 26 states¹⁶ and the District of Columbia allow primary enforcement of their seat belt law.

Research shows that lap/shoulder seat belts, when used, reduce the risk of injury to front-seat passenger occupants by 45 percent and the risk of moderate-to-critical injuries by 50 percent. In a crash, one of the most serious and deadly events that can occur to passengers is to be ejected from the vehicle. In fatal crashes in 2006, 75 percent of passenger vehicle occupants who were totally ejected from the vehicle were killed.¹⁷

Seat belts save lives and help to keep occupants in the vehicle. In states with primary enforcement laws, belt use rates are higher. A study conducted by the IIHS found that when states strengthen their laws from secondary enforcement to primary, driver death rates decline by an estimated seven percent.¹⁸ Use levels are typically 10 to 15 percentage points higher in these states than in states with weaker enforcement laws. Needless deaths and injuries that result from a lack of seat belt use cost society an estimated \$26 billion annually in medical care, lost productivity, and other injury-related costs. NHTSA estimates that in 2006, among passenger vehicle occupants over age 4, seat belts saved an estimated 15,383 lives. If all passenger occupants over age 4 had worn seat belts, 20,824 lives could have been saved or an additional 5,441 lives.¹⁹ NHTSA also estimates that, had seat belt use rates been 100 percent over the years, more than 350,000 additional lives would have been saved.²⁰

Congress, in SAFETEA-LU, provided more than \$500 million in incentive grant money to encourage states to pass primary enforcement seat belt laws. In 2006, three states acted. In 2007 only Maine passed a law. This year not a single state has adopted a primary enforcement seat belt law. At this glacial pace, one state a year, it likely will be 2032 or later before every state has this essential lifesaving law.

Impaired Driving - Stagnation After Years of Progress

The number of annual deaths on our nation's highways due to alcohol-related crashes dropped steadily from more than 26,000 in 1982 to under 17,000 from the mid-1980s through the mid-1990s. Since 2000, the number of persons killed in alcohol-involved crashes fell below 17,000 only once, in 2004, but has otherwise been climbing, reaching a new recent high of 17,602 in 2006. This indicates a reversal of the decline in impaired driving fatalities and a disturbing trend toward annual increases in deaths resulting from impaired driving.

The earlier decrease in fatalities was in large measure due to a wave of enactment of state anti-impaired driving laws, more serious enforcement of impaired driving laws, and educational efforts by Mothers Against Drunk Driving (MADD) and others to raise awareness of the problem. However, over 25 years after MADD began its campaign, there is still a patchwork of laws intended to prevent impaired driving across the nation. In fact, only two states have adopted all seven optimal laws identified by Advocates as essential to deterring and preventing impaired driving and the fatal and other injury crashes that result. Only 14 other states have adopted at least six of these laws.²¹ That means that most states, 34 and the District of Columbia, have enacted only five or fewer of these life-saving legal requirements.

Advocates recommends that a renewed emphasis be placed on efforts to prevent impaired driving through adoption of key anti-impaired driving laws. This would result in all states and the District of Columbia maintaining similar legal requirements regarding violators with extremely high blood alcohol concentration (BAC) levels; child endangerment by operating motor vehicles while impaired; open containers and repeat offender laws; sobriety checkpoints; and BAC testing for drivers involved in fatal crashes regardless of whether they survive the crash or not.

Additionally, the use of technology has been burgeoning in motor vehicles in recent years. Modern technology is used not just to provide drivers with vital safety information but also to allow internet access and entertainment and business communications that can interfere with the driving task. There is no reason that technology should not be used to prevent impaired drivers from operating motor vehicles. An effort led by MADD is already underway to urge states to adopt a mandatory interlock system to prevent persons convicted of impaired driving from starting their vehicle when they are, again, impaired. Advocates supports this effort.

Advocates also believes that more can be done through on-board technology to limit the ability of impaired drivers to start and operate motor vehicles. NHTSA should determine how sensor technology can be used to ensure that when impaired drivers get behind the wheel of a motor vehicle the vehicle is "smart" enough to prevent the driver from starting the ignition, getting on the road, and threatening the lives of others.

Motorcycle Deaths are Climbing and Helmet Laws are Under Attack

NHTSA estimates that 80 percent of motorcycle crashes injure or kill a rider. In 2006, 4,810 motorcyclists were killed and 88,000 were injured. This is more than double the motorcycle fatalities in 1997 and a level not seen since 1981.²² At present, motorcycles make up less than two percent of all registered vehicles and only 0.4 percent of all vehicle miles traveled, but motorcyclists account for 11 percent of total traffic fatalities, 13 percent of all occupant fatalities, and 4 percent of all occupants injured.²³ NHTSA estimates that helmets saved the lives of 1,658 motorcyclists in 2006 and that if all motorcyclists had worn helmets, an additional 752 lives could have been saved.²⁴

Today, only 20 states and the District of Columbia require helmet use by all motorcycle riders. This year 12 of those state laws were under attack by repeal attempts. In 2007, the National Transportation Safety Board recommended that all states adopt an all-rider helmet law. Research conclusively and convincingly shows that all-rider helmet laws save lives and reduce medical costs. While helmets will not prevent crashes from occurring, they have a significant and positive effect on preventing head and brain injuries during crashes. According to NHTSA, almost 50 percent of motorcycle crash victims have no private health insurance, so their medical bills are paid by taxpayers.²⁵ In 1992, California's all-rider helmet law took effect resulting in a 40 percent drop in its Medicaid costs and total hospital charges for medical treatment of motorcycle riders.²⁶

Finally, in a 2008 report by NHTSA guiding states on highway safety actions that work, a state all-rider motorcycle helmet use law was the only countermeasure rated as "Proven" in the "Effectiveness" category.²⁷

Strong, Uniform Teen Driving Laws Will Save Lives

After declining for 15 years, the number of teens is on the rise, growing at a faster rate than the overall U.S. population. In 1995, there were about 29 million people aged 12 to 19 in the United States. The teen population will continue to expand through the year 2010, as the children of baby boomers bring the total number of 12-to-19-year-olds to 34.9 million.²⁸

Based on estimated miles traveled annually, teen drivers ages 16 to 19 have a fatality rate four times the rate of drivers ages 25 to 69. In 2006, 3,406 young drivers aged 15 to 20 were killed in motor vehicle crashes and an additional 4,569 people, including teen passengers and others, were killed in these crashes. In all, nearly 8,000 died in crashes involving young drivers.²⁹

Graduated driver licensing (GDL) programs introduce teens to driving by phasing in full driving privileges over time and in lower risk settings. Based on research showing the effectiveness of GDL laws, Advocates recommends five components for an optimal teen driving law:

- a minimum six-month holding period for the learners permit;
- a minimum of 30 to 50 hours of supervised driving;
- intermediate stage restrictions on nighttime driving;

- intermediate stage restrictions on the number of non-family teenage passengers; and
- restrictions on non-emergency cell-phone use during both the learner's and intermediate stages.

Despite the proven success of comprehensive GDL laws in lowering the risk of a crash for teen drivers, there is a patchwork quilt of laws throughout the nation. Adoption of GDL laws has been a priority in some states but most have taken a piecemeal approach adopting one or two GDL components, but not the others. Adjacent states frequently have different rules for teen drivers concerning limits on nighttime driving, passenger restrictions and cell phone use.

This is similar to the “blood borders” problem in the 1970s and early 1980s when adjacent states had different minimum drinking ages for alcohol. Teens would drive across state borders, drink, and then drive impaired back home, killing and injuring themselves and others. This common occurrence was a catalyst for Congress to act and the Administration to concur. In 1984, President Reagan, at the urging of then-Secretary of Transportation Elizabeth Dole, signed into law a legal minimum drinking age of 21 sponsored by the late chairman of this Committee, Rep. James J. Howard (D-NJ), former Rep. Michael Barnes (D-MD) and Sen. Frank Lautenberg (D-NJ). That law gave states three years to adopt a common, uniform drinking age of 21 or be penalized federal-aid highway funds. As a result of that federal law every state complied, no state lost any federal funds and over 25,000 lives have been saved³⁰ – a remarkable achievement. It is now time for Congress to step in to protect teens and reduce deaths and injuries in every state through the uniform adoption of optimal GDL laws.

No Country for Older Drivers

The proportion of the population over age 65 is also growing significantly. In the past 10 years the number of older licensed drivers has increased by 18 percent, to 30 million in 2006.³¹ Although the proportion of older drivers in the population in recent years is about 15 percent, NHTSA estimates that this will rise to over 19 percent by the year 2030, with over 71 million drivers age 65 or older.³²

Older citizens can be expected to have problems as drivers and as pedestrians, given well-documented changes in their perceptual, cognitive, and psychomotor performance. The result is that drivers above age 65 have a higher overall crash rate than any other age group³³. Older drivers as a group are involved in fewer fatal crashes than younger drivers, but their susceptibility to both severe, disabling injury and death in a traffic crash, either as vehicle occupants or as pedestrians, is several times that of a person in their 20s, according to NHTSA. Nevertheless, NHTSA still has many safety regulations that do not meet the safety needs of older occupants. One example is NHTSA's proposed rule on side impact protection which includes injury criteria that might be adequate for vehicle occupants through middle age, but will not adequately protect older occupants. The result will be avoidable severe injuries and deaths among older vehicle occupants in side impact crashes.

The rapidly increasing population of older drivers, vehicle occupants, and pedestrians also presents daunting challenges to transportation engineers, who must ensure safety while attempting to maintain mobility on highways and streets. Studies have shown that a driver age 75 needs more than 30 times the amount of illumination compared to a 21-year old driver to see the signs and other traffic control devices without difficulty,³⁴ and that older drivers often take double the amount of time to recognize a hazard or react to a traffic control device than a young driver. This is especially crucial with respect to the amount of time and distance needed to brake quickly to avoid a collision or to reduce the severity of an impact. In addition, a higher percentage of older drivers have varying problems with vision that occur normally with aging, yet NHTSA some years ago weakened its standard for headlamp illumination so low-beam lamps provide less illumination of overhead highway signs and objects at the roadside.

Not enough attention has been paid to adopting countermeasures in our highway and street designs for older drivers. Most guidelines and recommendations concerning the need to accommodate older drivers in government publications issued both by FHWA and NHTSA, consist of voluntary rather than mandatory actions.³⁵ The pace with which traffic engineering changes are adopted is exceptionally slow, with compliance periods for the states often set at 10 years and more. In addition, shortages of adequate highway funding at all levels of government erode the possibility of timely attention to highway and street design and traffic engineering changes that will make vehicle operation by older drivers measurably safer.

These same problems also afflict older and disabled pedestrians. Most intersections in the U.S., even when signalized, are treacherous to negotiate safely for any pedestrians, but especially for older and disabled pedestrians. Traffic engineers are reluctant to extend pedestrian crossing times to increase safety because they argue that this impedes the flow of traffic and may cause backups. Only recently have there been efforts to slow crossing times at signalized intersections, and only from 4.2 feet to 3.5 feet per second.

These brief observations make it clear that older and disabled Americans are being shortchanged on traffic and vehicle safety. DOT is not taking a systems engineering approach to the problem that combines countermeasures involving highway and traffic engineering design and operation with vehicle crashworthiness design in order to protect occupants of all age groups.

Speeding Wastes Lives and Fuel

In 2006, 13,543 speeding-related traffic fatalities occurred on U.S. roadways, approximately 32 percent of all traffic fatalities that year.³⁶ This percentage for speed-involved fatal crashes has held steady, year after year. Of those fatalities, more than a third (5,587) took place on roadways posted at 55 miles per hour or higher. Although the National Maximum Speed Limit was revoked in 1995 to permit states to post higher speed limits, that did not eliminate vehicle speed and speeding as a critical factor in fatal crashes, by any means. Congress may have repealed the national maximum speed limit but it did not repeal the laws of physics.³⁷

The National Maximum Speed Limit was designed to address the need to conserve fuel in the wake of the 1973 oil crisis and gasoline shortage.³⁸ The National Academy of Sciences documented the fact that the lower, uniform national speed limit saved fuel, estimating a total savings of about 167,000 barrels per day.³⁹ From the safety perspective, the National Academy study also revealed that the national speed limit was a life saving policy. “[T]he slower speeds and more uniform pace of travel . . . accounted for 3,000 to 5,000 fewer highway fatalities.”⁴⁰ Even years after the oil crisis had passed, that national speed limit was still saving between 2,000 and 4,000 lives and preventing between 2,500 and 4,500 serious and 34,000 and 61,000 minor and moderate crash injuries.⁴¹

The National Academy study estimated that raising speed limits on rural interstate highways would result in about 500 more deaths annually.⁴² Other studies have documented that the trend to higher posted speed limits has resulted in those increased fatalities and higher fatality rates.⁴³

There are few policy measures that can compete with the safety benefits provided by a national maximum speed limit. Conditions may once again be ripe for Congress to consider a new version of the national speed limit law. One bill calling for a dual limit of 60 mph on urban highways and 65 mph on rural portions of the National Highway System has already been introduced in the House.⁴⁴ Advocates supports the consideration of a reformulated national speed limit as a policy option in order to save lives and protect the nation.

Conclusion

The quality of life for all Americans depends on a safe, reliable, economical and environmentally sound surface transportation system. However, transportation solutions involve not only costs, but safety.

As previously mentioned, highway crashes are costing our nation more than \$230 billion annually. This is money that could be better spent on addressing surface transportation needs. Many of the top priorities outlined in my testimony today can be realized by expending minimal funds from the Highway Trust Fund while achieving maximum gains in saving lives and preventing costly, disabling injuries. The health and safety community knows what works. There are no acceptable excuses for delaying any longer the adoption of proven safety measures while the death and injury toll continues to grow.

Thank you and I am pleased to answer any questions.

Endnotes:

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- ¹ *Traffic Safety Facts 2006*, DOT HS 810 818, NHTSA (2007) (Traffic Safety Facts 2006); and, *2008 Roadmap to State Highway Safety Laws*, Advocates for Highway and Auto Safety (Jan. 2008) (2008 Roadmap Report).
- ² *The Economic Impact of Motor Vehicle Crashes 2000*, DOT HS 809 446, NHTSA (May 2002).
- ³ 2008 Roadmap Report, p. 7.
- ⁴ *Motorcycles*, Traffic Safety Facts 2006 Data, DOT HS 810 806, NHTSA (Mar. 2008).
- ⁵ AL, CA, GA, LA, MD, MA, MI, MS, MO, NE, NV, NJ, NY, NC, OR, TN, VT, VA, WA and WV.
- ⁶ Traffic Safety Facts 2006, p. 32.
- ⁷ 2008 Roadmap Report, p. 22.
- ⁸ *Pedestrians*, Traffic Safety Facts 2006 Data, DOT HS 810 810, 2008, NHTSA (Mar. 2008).
- ⁹ *Once the World Leader in Traffic Safety, U.S. Drops to No. 9*, Nov. 27, 2003, NYTimes, available at:
<http://query.nytimes.com/gst/fullpage.html?res=9D00E1D6173AF934A15752C1A9659C8B63>.
- ¹⁰ Williams, A.F., Wells, J.K., The Role of Enforcement Programs in Increasing Seat Belt Use, 35 Journal of Safety Research 175-180 (2004) (references omitted).
- ¹¹ See, e.g., Education alone won't make drivers safer, *Status Report* 36:1-7, IIHS (2001).
- ¹² Importance of traffic safety laws: with publicity and education, laws change behavior, *Status Report* 36:5-6, IIHS (2001).
- ¹³ *Seat Belt Use in 2007 – Use Rates in the States and Territories*, Traffic Safety Facts, DOT HS 810 949, NHTSA (May 2008).
- ¹⁴ SAFETEA-LU, Sections 2001 & 2009, Title II, Highway Safety.
- ¹⁵ NHTSA Click It or Ticket webpage, available at:
<http://www.nhtsa.gov/portal/site/nhtsa/menuitem.ce4a601cdf97fc239d1711cba046a0/>.
- ¹⁶ AK, AL, CA, CT, DE, GA, HI, IL, IN, IA, KY, LA, MD, ME, MI, MS, NJ, NM, NY, NC, OK, OR, SC, TN, TX and WA.
- ¹⁷ *Occupant Protection*, Traffic Safety Facts 2006 Data, DOT HS 810 807, NHTSA (2007).
- ¹⁸ 2008 Roadmap Report, p.13.
- ¹⁹ *Occupant Protection*, Traffic Safety Facts 2006 Data.
- ²⁰ *Ibid.*
- ²¹ 2008 Roadmap Report.
- ²² *A Highway Safety Countermeasures Guide for State Highway Safety Offices*, DOT HS 810 891, p. 5-4, NHTSA (3d ed., Jan. 2008) (NHTSA Safety Countermeasures Guide).
- ²³ 2008 Roadmap Report, p. 15.
- ²⁴ *Motorcycles*, Traffic Safety Facts 2006 Data, DOT HS 810 806, NHTSA (Mar. 2008).
- ²⁵ 2008 Roadmap Report, p. 15.
- ²⁶ *Ibid.*

²⁷ NHTSA Safety Countermeasures Guide, p. 5-4.

²⁸ U.S. Bureau of Census (1999).

²⁹ 2008 Roadmap Report, p. 24.

³⁰ Traffic Safety Facts 2006, back cover.

³¹ *Older Population*, Traffic Safety Facts 2006 Data, DOT HS 810 808, NHTSA (Mar. 2008).

³² *See*, NHTSA Safety Countermeasures Guide, chapter 7.

³³ *See*, Owsley, C., *Visual Information Capabilities of Older Drivers*, NHTSA (2001).

³⁴ *Older Drivers: A Literature Review*, No.25, United Kingdom Department for Transport (2001).

³⁵ For example, *see*, *Guidelines and Recommendations to Accommodate Older Drivers and Pedestrians*, FHWA-RD-01-051, Federal Highway Administration (2001).

³⁶ Traffic Safety Facts 2006.

³⁷ Sec. 205(d)(1)(B), Title II, National Highway Designation Act, Pub. L. 104-59, (Nov. 28, 1995).

³⁸ The national maximum speed limit was originally an emergency measure enacted as part of the Emergency Highway Conservation Act, Pub. L. 93-239 (Jan. 2, 1974), and was made permanent in Sec. 114(a), 1974 Federal-Aid Highway Amendments, Pub. L. 93-643 (Jan. 4, 1975).

³⁹ *55: A Decade of Experience*, Transportation Research Board Special Report No. 204, p. 110, National Research Council, National Academy of Sciences (1984).

⁴⁰ *Id.* at p. 2.

⁴¹ *Id.* at p. 3.

⁴² *55: A Decade of Experience*, p. 176.

⁴³ *See for example* Baum, et al., 1989, Baum et al., 1991; and NHTSA and FHWA, 1998.

⁴⁴ H.R. 6458, was introduced on July 10, 2008 by Ms. Speier of California.

