



U.S. Department of Transportation Motorcoach Safety Action Plan



2012 UPDATE



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EXECUTIVE SUMMARY

This 2012 update was developed to document the Department's accomplishments since 2009 as well as provide information on in-process activities and new commitments made by the Agencies to improve the safety of motorcoach passengers.

Motorcoaches complete approximately 750 million passenger trips each year¹. Over the 10-year period of 2001 through 2010, motorcoach crashes resulted in an average of 17 motorcoach occupant fatalities per year. The U.S. Department of Transportation's (DOT) original Motorcoach Safety Action Plan, issued in 2009, reflected integrated activities involving five of the Department's operating administrations to improve safety in this sector of the industry. The original plan may be found at www.fmcsa.dot.gov/safety-security/pcs/index.aspx.

The DOT remains committed to a sustained focus on motorcoach safety and to the completion of identified actions to prevent crashes, deaths, and injuries. In 2011, there were 8 serious motorcoach crashes that resulted in 28 occupant fatalities. Two of the crashes in New York and Virginia accounted for 19 fatalities and multiple injuries. These crashes clearly illustrated the devastation that can occur when individuals and companies operate outside the statutory and regulatory safety requirements. As a result, all of the involved DOT agencies were required to increase their efforts.

On July 6, 2012, President Obama signed the "Moving Ahead for Progress in the 21st Century Act" (MAP-21), which defined the term "motorcoach" and incorporated in Subtitle G the "Motorcoach Enhanced Safety Act of 2012," P.L. 112-141. MAP-21 includes mandates for various motorcoach rulemakings and research projects on the crashworthiness and crash avoidance features of motorcoaches, as well as for improved oversight of motorcoach service providers.

The agencies involved committed to continuing work in this area through this updated plan are:

Federal Highway Administration (FHWA),
Federal Motor Carrier Safety Administration (FMCSA),
Federal Transit Administration (FTA),
National Highway Traffic Safety Administration (NHTSA),
Office of the Secretary (OST),
Pipeline and Hazardous Materials Safety Administration (PHMSA), and
Research and Innovative Technologies Administration (RITA).

The Department will focus resources and continue coordination to ensure that this important work is prioritized and completed on schedule so that crashes are avoided and lives are saved.

¹ "The Moving Ahead for Progress in the 21st Century Act" (MAP-21) defined "motorcoach" the same as an "over-the-road" bus meaning a bus characterized by an elevated passenger deck located over a baggage compartment, as found in section 3038(a) (3) of the Transportation Equity Act for the 21st Century (49 U.S.C.5310 note), but does not include: (a) a bus used in public transportation provided by, or on behalf of, a public transportation agency; or (b) a school bus, including a multifunction school activity bus.

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STATE OF THE INDUSTRY

Motorcoach travel remains one of the safest modes of highway transportation in the United States, transporting approximately 750 million passengers per year in over-the-road buses. However, during the 10-year period of 2001 through 2010, motorcoach crashes have resulted in an average of 17 motorcoach occupant fatalities per year. Some crashes also resulted in additional fatalities and injuries of pedestrians, drivers, and passengers of other vehicles involved in these crashes. Each of these fatalities is a tragedy that the U.S. Department of Transportation strives to prevent. Passenger safety is a top priority in the Department and, as a result, requires added vigilance.

Currently, the motorcoach industry is made up of approximately 4,000 companies operating over 35,000 vehicles. In Fiscal Year (FY) 2010, FMCSA conducted 1,044 motorcoach carrier compliance reviews on these entities. A compliance review is an in-depth examination of a motor carrier's operations and is used to determine the safety fitness rating of motor carriers. The most frequently cited violations were improper or false driver records of duty status or other violations of the hours-of-service regulations. Twenty-three percent (1,901) of all the violations cited during the compliance reviews involved these regulations.

In 2011, there were 8 serious motorcoach crashes resulting in 28 occupant fatalities. These crashes resulted in unprecedented national focus on the safety of motorcoach travel and motorcoach companies. Two crashes in New York and Virginia, with a total of 19 fatalities and multiple injuries, clearly illustrate the devastation that can occur when individuals and companies operate outside the statutory and regulatory safety requirements. The Department has continued to emphasize motorcoach safety, and the 2011 crashes increased those efforts. This 2012 update recounts those activities.

The motorcoach industry's recent crash history reflects a higher average number of fatalities for the past 10 years than the earlier decade despite changes in vehicle miles traveled.



Motorcoach Driver and Passenger Fatalities (1991–2010)

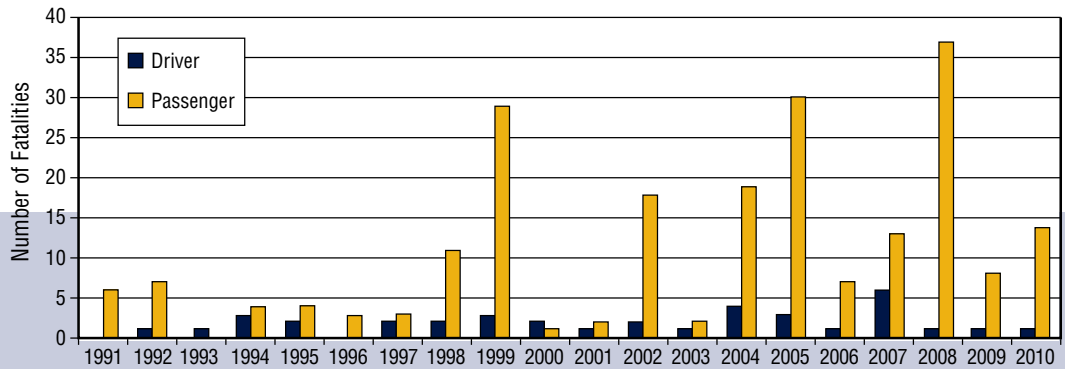


Figure 1:
Motorcoach
Driver and
Passenger Fatalities
(FARS² 1999–2010)

The NHTSA Fatality Analysis Reporting System data continues to show that rollovers and roadside events (i.e., running off-road and striking roadside objects) occurred in about 74 percent of all motorcoach fatalities, and ejection of motorcoach passengers due to a rollover event represents the highest percentage of passenger fatalities, as shown in Figures 2 and 3.

Motorcoach Fatalities by Most Harmful Event (FARS 2001–2010)

49 Events, 171 Fatalities

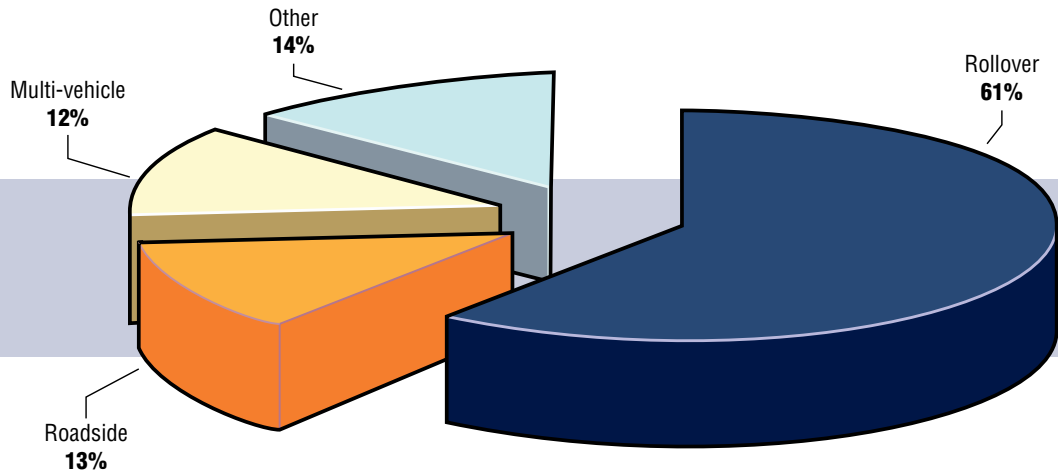


Figure 2:
Motorcoach
Fatalities by Most
Harmful Event

² NHTSA's Fatality Analysis Reporting System (FARS) contains data on a census of fatal traffic crashes in the United States and Puerto Rico. Crashes in FARS involve a motor vehicle traveling on a road customarily open to the public that results in a fatality within 30 days of the crash.

Driver and Passenger Motorcoach Fatalities (FARS 2001–2010)

49 Events with 171 Fatalities – 21 Drivers and 150 Passengers

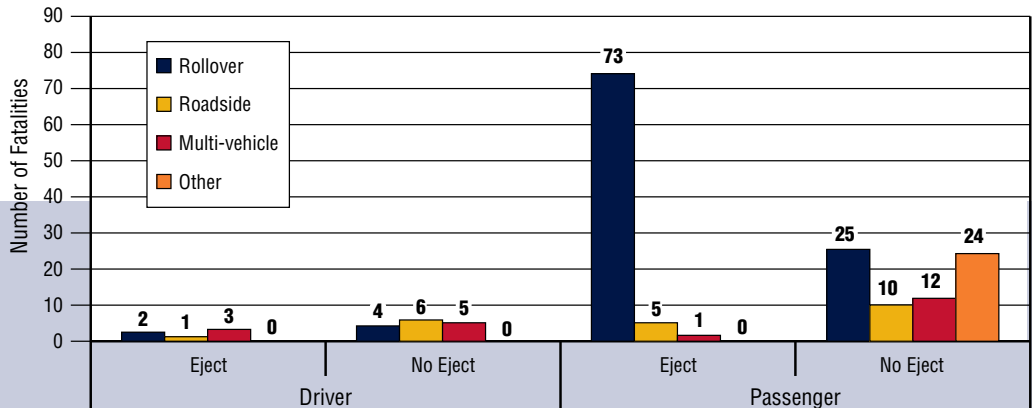


Figure 3: Driver and Passenger Fatalities by Ejection Mode and Type of Crash

The Department continues to coordinate with the National Transportation Safety Board (NTSB) to address motorcoach safety issues.

Root Cause of NTSB-Investigated Motorcoach Crashes

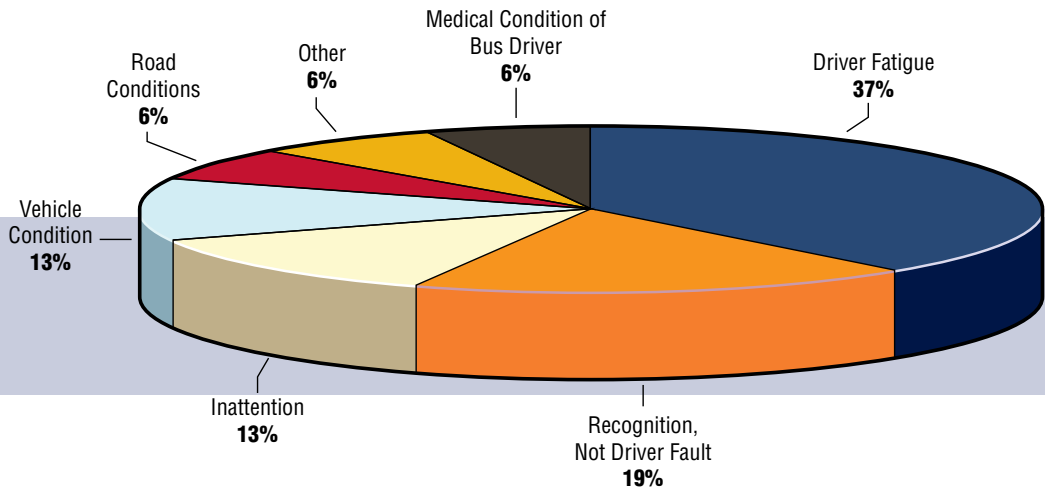


Figure 4: Root Cause of NTSB-Investigated Motorcoach Crashes



Root Cause of NTSB-Investigated Motorcoach Fatalities

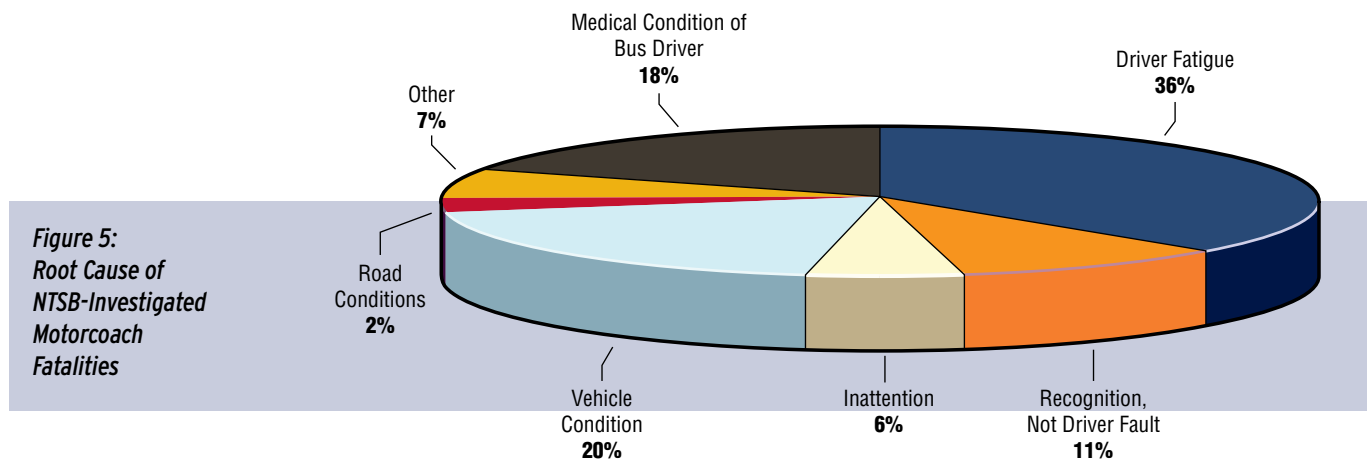


Figure 5:
*Root Cause of
NTSB-Investigated
Motorcoach
Fatalities*

Since the 2009 plan, NTSB has investigated motorcoach crashes in Saltillo, MX; Casper, WY; Doswell, VA; and New York, NY. In addition, NTSB issued 26 new recommendations in 2010, 2011, and 2012 that impact motorcoaches.

The DOT representatives participated as panelists at the NTSB's Truck and Bus Safety Forum in May 2011 and provided assistance to NTSB in the development of the "Report on Curbside Motorcoach Safety" issued on October 12, 2011. The NTSB report defines curbside motorcoach operations as "a business model in which interstate motorcoach carriers conduct scheduled trips from one city to another city or a destination and originate or terminate at a location other than a traditional bus terminal; most of these operations pick up or discharge passengers at one or more curbside locations (such as sidewalks or parking lots)." As noted in the NTSB report, curbside motorcoach operations began as an inexpensive means of travel between New York City and Boston primarily for low-income workers. Curbside operations subsequently became popular among college students and customers with higher incomes who took advantage of the convenience and low prices. This is now a distinct segment of the motorcoach industry that requires vigilant monitoring.

The NTSB continues to include bus operations safety on its "Most Wanted" list. The NTSB emphasizes the need for adequate standards for roof strength, structural integrity, window glazing, and occupant protection to be developed and implemented to ensure consistent levels of safety across the fleet. After a crash, the NTSB stresses that occupants need to be able to identify exits and quickly leave the vehicle.

The DOT has engaged organizations and individuals outside of the Department to develop a collaborative process for addressing safety problems. Both FMCSA

and NHTSA testified in two congressional hearings focused on motorcoach safety and shared information on the limitations of our authorities and our recommended legislative changes to prevent additional tragedies.

To further collaborate and generate more conversation and ideas, FMCSA, NHTSA, FTA, OST, FHWA, and RITA conducted four regional roundtables in August 2011 in Fort Worth, TX; New York, NY; Columbus, OH; and Anaheim, CA. The regional meetings culminated with the National Motorcoach Safety Summit held in Washington, DC, on September 23, 2011. The goal of these meetings was to identify the challenges related to motorcoach safety. Participants including drivers, labor representatives, company owners, safety managers, tour group organizers, safety advocates, and educators helped shape this updated plan by identifying actions necessary to increase motorcoach safety awareness, enforcement, and education. The Department was able to forge new partnerships.

The FMCSA has established a memorandum of agreement with the Department of Defense (DOD) to share information on the safety reviews conducted on passenger carriers under contract to DOD. FMCSA also completed an on-line commercial motor vehicle awareness course that can be used by law enforcement to become familiar with how to enforce unsafe driving violations on drivers of motorcoaches.

Additionally, on March 20, 2012, FMCSA unveiled its *SaferBus* iPhone/iPad application – a first-of-its-kind app that provides the public (both bus riders and trip planners) a quick and free way to review a bus company's safety record before buying a ticket or booking group travel. *SaferBus* provides access to safety records on nearly 6,000 interstate commercial passenger carriers operating in the United States today, including privately operated motorcoach, school bus, and tour bus companies. Information like this is especially important as more Americans turn to motorcoaches to meet their transportation needs. A *SaferBus* app search will provide:



- **Bus Company Safety Record:** The app gives access to up to 24 months of a bus company's safety performance record. These data provide insight into a bus company's performance in five safety-critical areas: unsafe driving, fatigued driving/hours-of-service compliance, driver fitness, controlled substances/alcohol, and vehicle maintenance. Percentiles in any area can range between 0 (best) and 100 (worst), and are based on the company's compliance with Federal safety standards. This information is also available on-line at FMCSA's Web site at: <http://ai.fmcsa.dot.gov/SMS/Default.aspx>.

- **Bus Company Operating Authority:** In addition to providing a bus company's safety record, the app will also notify users if that company is an illegal bus company that has been shut down by FMCSA with this language: "NOT ALLOWED TO OPERATE." Bus riders should NOT use interstate bus companies that do not have valid USDOT operating authority.
- **Report a Bus Safety Complaint:** *SaferBus* links to FMCSA's National Consumer Complaint Database, enabling users to instantly submit any bus safety-related concern.

On May 1, 2012, FMCSA launched a contest that challenges student software developers to use the Agency's raw performance data on commercial bus companies to create new apps and on-line solutions that enable consumers to make smart safety decisions when booking their bus travel. FMCSA hopes that the challenge will also raise public awareness about the availability and usefulness of FMCSA's bus safety data. FMCSA's Motorcoach Safety Data Utilization Student Challenge is open to all U.S. citizens and permanent residents who are 18 years or older and enrolled at a fully-accredited higher education institution, or planning to enroll in the fall of 2012 or winter of 2013. Submissions are due December 31, 2012. Winners will be announced on February 28, 2013.

On May 31, 2012, FMCSA shut down 26 bus operations, declaring them imminent hazards to public safety. This action is the largest single safety crackdown in FMCSA's history. Additionally, FMCSA ordered 10 individual bus company owners, managers, and employees to cease all passenger transportation operations, which includes selling bus tickets to passengers. The bus companies transported over 1,800 passengers a day along Interstate 95, from New York to Florida. These actions were the result of a year-long investigation. Federal safety investigators found all of the carriers had multiple safety violations, including a continuous pattern of using drivers without valid commercial driver's licenses (CDLs) and failure to have alcohol and drug testing programs. In addition, the companies operated vehicles that had not been regularly inspected and repaired. The companies' drivers also had serious hours-of-service and driver qualification violations. These many safety deficiencies, individually and in combination, posed a serious safety threat to passengers and motorists on our roadways.

Together, the actions and initiatives summarized above demonstrate the Department's comprehensive approach to passenger carrier safety.

ACTION PLAN

The 2009 plan focused on the causes of crashes and the changes that could be made to prevent future crashes, including the following:



Driver Fatigue



Driver Behavior



Medical Qualification of Drivers



Vehicle Maintenance



Operator Oversight



Crash Avoidance Measures

Additionally, the plan focused on actions to address the root causes of fatalities and injuries and the changes that could be made to prevent fatalities or lessen the severity of injuries, with an emphasis on the following:



Occupant Protection - Seat Belts



Occupant Protection - Fire Safety



Occupant Protection - Vehicle Integrity



Occupant Protection - Emergency Egress



Data Collection and Analysis

This update to the 2009 plan outlines the actions the Department has completed, the actions that we continue to work on, and new actions that have been identified since 2009 that will improve motorcoach safety in each of these areas.



PRIORITY ACTION ITEMS – COMPLETED

The DOT identified seven priority action items in the original plan that would have the greatest impact on reducing motorcoach crashes, fatalities, and injuries. The priority action items from the original plan that have been completed include the following:



DRIVER FATIGUE

- ◆ Initiate rulemaking to require electronic on-board recording devices on all motorcoaches to better monitor drivers' duty hours and manage fatigue.

The FMCSA published an Electronic On-Board Recorders (EOBR) final rule for companies violating the hours-of-service regulations on April 5, 2010. This rule, however, was vacated by the U.S. Court of Appeals for the Seventh Circuit on August 29, 2011. In addition, FMCSA published a notice of proposed rulemaking (NPRM) titled "Electronic On-Board Recorders and Hours of Service Supporting Documents" on February 1, 2011, to propose installation of EOBRs on all motorcoaches. The FMCSA has determined that it must complete a supplemental NPRM to address issues raised in response to the NPRM and by the Court. The supplemental rulemaking and related studies are FMCSA priorities for FY 2013.





DRIVER BEHAVIOR

- ◆ Initiate rulemaking to prohibit use of cellular telephones and other devices by motorcoach drivers.

The FMCSA initiated and completed a study titled, “Synthesis of Literature Relating to Cellular Telephone/Personal Digital Assistant Use in Commercial Truck and Bus Operations” that collected data and information on the risks associated with the use of cellular telephones and personal digital assistants (PDA) in commercial truck and bus operations. The study included a review of similar completed research for automobiles, an investigation of commercial motor vehicle driver behavior with such devices, and current industry policies regarding their use. This study is available at <http://www.fmcsa.dot.gov/facts-research/research-technology/report/Cell-PDA-Use-in-Commercial-Truck-and-Bus-Operations.pdf>. In addition, to combat distracted driving, FMCSA issued an NPRM titled, “Limiting the Use of Wireless Communications Devices” on April 1, 2010. This rule was finalized on September 27, 2010, and prohibits truck and motorcoach drivers from texting while driving.

The FMCSA also published an NPRM titled “Drivers of CMVs: Restricting the Use of Cellular Phones” on December 21, 2010. On December 2, 2011, FMCSA and PHMSA jointly published a final rule amending the Federal Motor Carrier Safety Regulations (FMCSRs) and the Hazardous Materials Regulations (HMR) to restrict the use of hand-held mobile telephones by drivers of commercial motor vehicles. This final rule became effective on January 3, 2012. As result, it is now illegal to talk on a handheld cellular phone while operating a commercial motor vehicle.



CRASH AVOIDANCE MEASURES

- ◆ Develop performance requirements and assess the safety benefits for stability control on motorcoaches to reduce rollover events.

To reduce rollovers and directional instability of commercial vehicles, NHTSA conducted research to evaluate stability control systems for heavy trucks and motorcoaches, assessed the potential safety benefits that can be achieved, and developed objective performance tests for these systems. Test data and the associated reports on the research are available at www.regulations.gov in docket number NHTSA-2010-0034.

In May 2012, NHTSA issued an NPRM to establish a new Federal safety standard to reduce rollover and loss of directional control crashes of truck tractors and large buses, including motorcoaches (docket number NHTSA-2012-0065). Technology that can enhance the stability of the vehicle is particularly relevant since motorcoach rollover crashes account for 61 percent of motorcoach occupant fatalities. The standard would require electronic stability control (ESC) systems on truck tractors, motorcoaches, and other large buses with a gross vehicle weight rating of more than 11,793 kg (26,000 lb). The ESC systems use engine torque control and computer-controlled braking of individual wheels to assist the driver in maintaining control of the vehicle and maintaining its heading. The proposal requires the ESC systems to meet definitional criteria and performance requirements.

The MAP-21 states that the Secretary shall prescribe regulations requiring motorcoaches to be equipped with stability enhancing technology, such as electronic stability control and torque vectoring, to reduce the number and frequency of rollover crashes among motorcoaches by 2014, if it is determined that such a standard meets the requirements and considerations set forth in subsections (a) and (b) of section 30111 of title 49, United States Code.



OCCUPANT PROTECTION – SEAT BELTS

- ◆ Initiate rulemaking to require the installation of seat belts on motorcoaches and other large buses to improve occupant protection.

The NHTSA published an NPRM on August 18, 2010, titled “Federal Motor Vehicle Safety Standards: Motorcoach Definition; Occupant Crash Protection” (docket number NHTSA-2010-0112). The NPRM proposed to amend the Federal safety standard for occupant crash protection to require, among other things, a lap/shoulder belt at all passenger seating positions on new buses with a gross vehicle weight rating of more than 11,793 kg (26,000 lb) (except for a few excluded bus types, such as transit buses). It also proposed to apply requirements for seat belt anchorage loads, to ensure that the seats and seat belts will be strong enough to withstand the loads imposed in serious crashes.

The NHTSA received over 130 comments on the NPRM from seat manufacturers, bus manufacturers and affiliates, large and small transportation providers, consumer and other organizations, and private individuals. The Agency has evaluated the comments and is actively working to complete this rulemaking action.

The MAP-21 states that the Secretary shall prescribe regulations requiring seat belts on motorcoaches at each designated seating position by 2013.



OCCUPANT PROTECTION – VEHICLE INTEGRITY

- ◆ Evaluate and develop roof crush performance requirements to enhance structural integrity.

The NHTSA completed research on multiple roof crush test procedures and developed performance requirements. Test data, reports, and a discussion paper on the research are available at www.regulations.gov in docket number NHTSA-2007-28793; item IDs NHTSA-2007-28793-0015, 0016, 0025, and 0019. The NHTSA is preparing an NPRM for improving the rollover structural integrity of motorcoaches and other large buses. The MAP-21 states that the Secretary shall establish improved roof and roof support standards for motorcoaches that substantially improve the resistance of motorcoach roofs to deformation and intrusion to prevent serious occupant injury in rollover crashes involving motorcoaches by 2014, if it is determined that such a standard meets the requirements and considerations set forth in subsections (a) and (b) of section 30111 of title 49, U.S. Code motorcoach rollover structural integrity. This action is among those included in MAP-21.



ADDITIONAL COMPLETED ACTION ITEMS

Additional action items from the 2009 plan that were completed include the following:



DRIVER FATIGUE

- ◆ Accelerate research into fatigue issues relating to motorcoach drivers, including hours-of-service and technologies to detect driver fatigue.

The FMCSA's State partner, Florida Department of Transportation, completed two reports on motorcoach driver fatigue titled, "Potential Causes of Driver Fatigue: A Study on Transit Bus Operations in Florida" and "Analysis of the Relationship between Operator Cumulative Driving Hours and Involvement in Preventable Collisions" in May 2011. These reports are available at <http://www.fmcsa.dot.gov/facts-research/art-public-reports.aspx>.

- ◆ Complete a multi-faceted strategy to address sleep disorders.

The FMCSA completed a report on sleep disorders affecting safe driving titled, "Evidence Report: Narcolepsy and CMV Driver Safety." This report was published on the FMCSA Web site at http://www.mrb.fmcsa.dot.gov/documents/PPP/01062010/Narcolepsy_CMV_Driver_Safety_1042010.pdf.

Additionally, other reports on sleep apnea have also been published on the FMCSA Web site at <http://www.fmcsa.dot.gov/rules-regulations/topics/mep/mep-reports.htm>.

The FMCSA Medical Program has established Medical Expert Panels to assist the Agency with its goal to update current, and develop new, medical fitness for duty standards and guidelines for drivers of CMVs who operate in interstate commerce.

The FMCSA Medical Program is comprised of experienced clinicians and researchers knowledgeable in evidence-based medicine. The team conducts background and preliminary research on relevant medical issues, conducts systematic reviews of medical literature, and performs meta-analyses using quantitative and qualitative models to develop evidence-based recommendations. Links to the Medical Expert Panel recommendations are located at <http://www.fmcsa.dot.gov/rules-regulations/topics/mep/mep-reports.htm>. In June 2011, the Medical Review Board (MRB), one of FMCSA's two Federal advisory committees, met in a public forum to discuss three topics, one of which was obstructive sleep apnea. A summary of the June 30, 2011, MRB public meeting can be found at <http://www.mrb.fmcsa.dot.gov/meetingSum2011.aspx>.



Most recently FMCSA's two Federal advisory committees, the Motor Carrier Safety Advisory Committee (MCSAC) and the MRB, met to develop joint recommendations for FMCSA regarding obstructive sleep apnea. Their proceedings and recommendations can be found at <http://mcsac.fmcsa.dot.gov/meeting.htm>. Recommendations are listed under Task 11-05 and are expected to be incorporated into FMCSA guidance in 2012 to assist the medical community in identifying, screening, and treating obstructive sleep apnea.

Additionally, other reports on obstructive sleep apnea have been published on the FMCSA Web site at <http://www.fmcsa.dot.gov/rules-regulations/topics/mep/mep-reports.htm>.

The FMCSA also published driver-focused educational materials, created in partnership with the National Sleep Foundation, on the prevention of fatigued driving, especially sleep apnea. Information is available at <http://www.fmcsa.dot.gov/safety-security/sleep-apnea/sleep-apnea.aspx>.



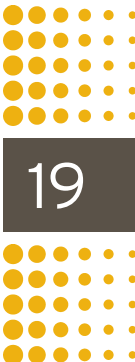
DRIVER BEHAVIOR

- ◆ Implement driver safety history Pre-employment Screening Program (PSP).

The FMCSA awarded a contract to support PSP in July 2009. The program became operational in September 2009. As a result, employers can query the system for information about prospective drivers (once the drivers grant permission) in advance of hiring and review a driver's safety history. Since the program was initiated, the average number of transactions each month is nearly 36,000. The Web site is available at <http://www.psp.fmcsa.dot.gov>.

- ◆ Accelerate research on driver distraction.

In support of FMCSA's cellular phone rulemaking, the Agency completed research on the impacts of cellular phone and personal digital assistants when driving. The report titled, "Distraction in Commercial Trucks and Buses: Assessing Prevalence and Risk in Conjunction with Crashes and Near-Crashes," and dated September 2010 was included in the docket for the associated rulemaking.



- ◆ Increase outreach and enforcement activities emphasizing improving driver behavior.

The Commercial Vehicle Safety Alliance (CVSA) annually coordinates Operation Safe Driver and the International Roadcheck across North America to increase commercial motor vehicle and non-commercial vehicle traffic enforcement as well as commercial motor vehicle inspections. Activities include safety belt enforcement, driver roadside inspections, driver regulatory compliance, implementation of commercial driver educational and awareness programs to the motor carrier population, and safety awareness to the motoring public about operations around commercial motor vehicles.

Passenger Carrier Strike Force activities are one part of the overall compliance review and inspection program for motorcoach companies. FMCSA, in partnership with State and local law enforcement, conducts the annual National Passenger Carrier Strike Force event. In FY 2012, additional focus was placed on intercity curbside operators.

Passenger carrier strike force operations also address motorcoach transportation at casinos, theme parks, and similar destinations and are conducted across the Nation continuously. The Western Region recently completed a surprise overnight strike force inspecting northbound buses along the New Mexico border. The Eastern Region conducted a regional strike force in May 2012. The focus of the strike force was inspections of curbside operators in the inner cities and destination inspections related to year-end school field trips at popular locations along the east coast. In addition, high risk motorcoach operations were targeted for on-site investigations. Finally, concentrated traffic enforcement was conducted in high volume bus traffic corridors during the event.



MEDICAL QUALIFICATION OF DRIVERS

- ◆ Conduct research on driver risk factors.

The FMCSA initiated a driver characteristics study in July 2009. The report was completed in January 2011 and is titled, "The Safety Performance of Passenger Carrier Drivers." The report is currently in the final stages of Agency review and will be posted on FMCSA's Web site in 2013.



◆ Enhance driver medical oversight programs.

The FMCSA began addressing driver medical issues in April 2009 by working with CVSA to revise the North American Standard Out-of-Service Criteria to include operating a motorcoach with expired, invalid, or non-existent medical certifications as an out-of-service item. FMCSA also took additional actions to address driver medical issues, including initiating a study to: (1) identify safety risk factors, including driver age, medical condition, violation history, crash history, employment history, and years of experience; and (2) establish training, testing, and certification standards for medical examiners responsible for certifying that interstate commercial motor vehicle drivers meet established physical qualifications standards, as well as creating a database of medical examiners that meet the prescribed standards for use by motor carriers, drivers, and Federal and State enforcement personnel.

The FMCSA posted an on-line Medical Examiner Handbook to give assistance to medical examiners who conduct examinations to determine physical fitness regarding duty for commercial motor vehicle drivers operating in interstate commerce, which is available at <http://nrcme.fmcsa.dot.gov/mehandbook/MEhandbook.aspx>. In addition, FMCSA provides an on-line Sample Training Manual to assist organizations in developing curricula to train medical examiners.

The FMCSA published an NPRM titled, "National Registry of Certified Medical Examiners" on December 1, 2008. The final rule was published on April 18, 2012.





VEHICLE MAINTENANCE

- ◆ Complete strengthening of the new entrant safety audit guidance on motorcoach companies.

In December 2009, FMCSA revised the new entrant safety audit guidance to add questions specific to motorcoach operations. Two new questions were added to the safety audit to determine if an over-the-road bus (OTRB) company owns or leases a facility for inspection, repair, and maintenance or if the company has a contract or other arrangement for this work.



OPERATOR OVERSIGHT

- ◆ Enhance oversight of unsafe motorcoach companies and carriers attempting to evade sanctions.

A robust compliance and enforcement program is critical to ensuring that motorcoach carriers operate safely. To this end, FMCSA continues to enhance its oversight of high-risk carriers and new entrants. In response to heightened concerns about unsafe motorcoach companies evading detection by shutting down one operation and starting another, FMCSA continues to enhance the Passenger Carrier Operating Authority Vetting Program. Through this program, the Agency identifies carriers that attempt to reinvent themselves, rather than correcting identified safety deficiencies or paying penalties assessed by FMCSA. One of FMCSA's top priorities is raising the safety bar for entry into the industry. To date, 24 percent of all passenger carriers that applied for operating authority have been rejected due to evidence of the intent to reincarnate or incomplete disclosures on the application.

To address the concerns expressed by Congress, NTSB, advocacy groups, MCSAC, industry, and others, FMCSA continues a vigorous compliance review and inspection program using the components of the Compliance, Safety, Accountability Program designed to identify and take action against such unsafe operations. FMCSA is also using enforcement tools, such as unsatisfactory safety rating and imminent hazard out-of-service orders, administrative subpoena, and cease and desist orders to a greater extent.

In addition, FMCSA conducted best practice webinars with Federal, State, and local law enforcement to enhance uniformity of enforcement and updated the Passenger Carrier Resource Guide for enforcement personnel.

- ◆ Establish minimum knowledge requirements for people applying for authority to transport passengers.

The FMCSA published an advance NPRM titled, "New Entrant Assurance Process: Implementation of Section 210(b) of the Motor Carrier Safety Improvement Act of 1999," on August 25, 2009. In addition, FMCSA is conducting a study to evaluate the effectiveness of some of the recommendations. The phased research is analyzing the cost effectiveness of fostering a safety culture in new entrants via training and testing.



- ◆ Ensure compliance with the Americans with Disabilities Act (ADA).

In November 2009, FMCSA developed guidelines outlining conditions under which FMCSA will suspend or revoke operating authority based on ADA non-compliance. In 2009, FMCSA trained its Passenger Carrier Technical Advisory Group to conduct ADA reviews on OTRB companies. In addition, ADA requirements were integrated into the new entrant safety audit process so that auditors collect information regarding compliance during the audit.

The ADA reviews are being fully integrated into FMCSA's enforcement software and then additional FMCSA safety investigators will be trained to conduct ADA reviews.

Since March 2009, FMCSA has conducted 175 ADA reviews. FMCSA and the Department of Justice (DOJ) have jointly entered into consent agreements with two companies that were found to be in violation of the ADA regulations. The DOJ fined each of these companies \$55,000 and has initiated separate actions on additional companies based on the information discovered during ADA investigations completed by FMCSA.

- ◆ Design and deploy a consumer complaint database that will allow the public to file complaints about specific bus companies with FMCSA.

To address concerns expressed by advocacy groups and the MCSAC, FMCSA redesigned the passenger carrier information available on the FMCSA Web site. The new design can be seen at <http://www.fmcsa.dot.gov/safety-security/pcs/Index.aspx>.



In addition, FMCSA redesigned the National Consumer Complaint Database (NCCDB) to assist consumers in identifying motorcoach companies with safe operating histories and providing an easier on-line process for reporting complaints and problems. The NCCDB is available at <http://nccdb.fmcsa.dot.gov/HomePage.asp>. FMCSA also included links to the NCCDB in its *SaferBus* iPhone/iPad application to make it easier and more convenient for consumers to report safety or service complaints and problems.

- ◆ Request statutory authority to regulate companies that lease buses and drivers through the DOT reauthorization process.

In technical assistance provided to the Senate Commerce Committee and the House Transportation and Infrastructure Committees in December 2011, FMCSA provided language to close the loophole that allows companies that rent or lease buses, but that do not “assign” drivers to operate the vehicles, to remain outside the Secretary’s jurisdiction. These companies’ customers – colleges, churches, scouting groups, civic clubs and the like, which rent the vehicles for their own use – may assume they are dealing with a charter bus company. The customers do not intend to take on such safety responsibilities themselves, and often they are not sufficiently trained or knowledgeable to do so. The result is a dangerous gap in safety regulation.

The FMCSA technical assistance was not included in MAP-21. This section would have broadened the definition of “employer” to include companies that rent or lease vehicles – whether or not for-hire – if from the same location or as part of the same business the company provides names or contact information of drivers, or holds itself out to the public as a charter bus company.



CRASH AVOIDANCE MEASURES

- ◆ Expand research on crash-avoidance warning systems.

NHTSA recently completed characterization testing of forward collision warning and collision mitigation braking systems for motorcoaches; the Agency is currently estimating safety benefits and developing objective test procedures and performance requirements for these advanced technologies. The NHTSA is also researching driver warning interface designs and operations to address the unique challenges of the motorcoach environment.

Unintended lane change maneuvers (due to fatigue, distraction, and other factors) are also a significant safety challenge for heavy commercial vehicles. The NHTSA has expanded research in this area and will initiate characterization testing of the latest generation heavy vehicle lane departure warning systems with the intent of developing test procedures applicable to motorcoaches.

- ◆ Initiate rulemaking to improve tire performance.

On September 29, 2010, NHTSA issued a proposal to upgrade the Federal motor vehicle safety standard governing the performance of tires used on commercial motor vehicles, including motorcoaches. This NPRM included a more stringent endurance test and a new high speed test.

- ◆ Enhance signage to guide vehicles safely through highway entrances and exits.

Improved traffic control measures can also enhance the ability of a motorcoach operator to identify potentially hazardous road conditions and situations and adapt behavior to safely navigate them. In one of the motorcoach crashes it investigated, NTSB identified the probable cause to be the driver's misidentification of a left exit ramp off the highway for a through-lane. The NTSB concluded that the highway signage and road markings were not adequate to reliably alert drivers to the left exit ramp and to provide route guidance for interstate through traffic. To address this concern, FHWA modified the *Manual on Uniform Traffic Control Devices* to add signs and plaques for guiding vehicles safely through highway entrances and exits, particularly those with limited sight distances, short ramps, or multiple route choices.



OCCUPANT PROTECTION – FIRE SAFETY

- ◆ Evaluate the feasibility of more stringent motorcoach flammability requirements and evaluate the need for fire detection and protection systems.

In 2011, NHTSA completed an assessment on the feasibility of more stringent flammability requirements and the need for fire detection and protection systems titled, "Motorcoach Flammability Project Final Report: Tire Fires – Passenger Compartment Penetration, Tenability, Mitigation, and Material Performance." This document is available at www.regulations.gov at docket number NHTSA-2007-28793; item ID NHTSA-2007-28793-0027.



- ◆ Evaluate fire incidents and conduct a detailed root cause analysis.

The FMCSA entered into an interagency agreement with the NHTSA Special Crash Investigation Unit to evaluate motorcoach fire incidents, conduct detailed engineering root cause analyses, and help identify any particular areas of focus for maintenance monitoring that might be warranted. The NHTSA's Special Crash Investigation Unit investigated 10 motorcoach fire incidents and the draft reports of these investigations are currently under review within the Department. A final report will be completed in 2013.



OCCUPANT PROTECTION – VEHICLE INTEGRITY

- ◆ Research on improved glazing and window retention techniques.

In 2003, NHTSA initiated a joint research program with Transport Canada that focused on improving glazing³ and window retention on motorcoaches to prevent ejections. The results of that research formed the basis for a dynamic test procedure that could potentially be used for testing glazing materials and bonding techniques to evaluate their effectiveness for prevention of ejections. However, the research program also concluded that significant improvement in roof strength and structural integrity of the motorcoach was needed before the benefits of advanced glazing materials could be achieved. Therefore, NHTSA determined that pursuing seat belts on motorcoaches was a more expedient safety measure to address occupant ejection and that further efforts on window retention and advanced glazing would be resumed after motorcoach rollover structural integrity was improved. Since the Agency is preparing a proposal for motorcoach rollover structural integrity, the Agency resumed research to evaluate multiple performance requirements for window retention and advanced glazing. NHTSA completed an evaluation of test procedures based upon the Transport Canada approach. Expanded research to evaluate multiple motorcoach and glazing designs to establish performance requirements is underway. The MAP-21 directs the Secretary to prescribe regulations that address anti-ejection countermeasures, including advanced glazing by 2014, if such a standard meets the requirements and considerations set forth in subsections (a) and (b) of section 30111 of title 49, United States Code.

³ Glazing is the clear part of a window that may be made of tempered glass, laminated glass, polycarbonate, or other materials. In a motorcoach rollover event, there is a high likelihood of occupant impact with the window glazing. If the glazing breaks or gets detached during this occupant interaction, it may result in occupant ejection through the window.



OCCUPANT PROTECTION – EMERGENCY EGRESS

- ◆ Examine ways to convey safety information to passengers and improve evacuation for a diverse population.

In response to an NTSB recommendation, FMCSA published guidance on September 13, 2007, to the motorcoach industry for providing pre-trip safety information to motorcoach passengers. To assist motorcoach companies with implementation, FMCSA distributed safety brochures, posters, and an audio compact disc based on the published guidance. The original audio compact disc contained safety announcements in the English language. In response to requests from the motorcoach industry, FMCSA translated the safety announcements into six other languages and distributed the second audio compact disc with the safety announcements in all seven languages.



The FMCSA is concerned that motorcoach passengers are not receiving pre-trip safety awareness and emergency preparedness information. To better understand the level of voluntary compliance by the industry in providing this information to its customers, FMCSA collected data on this issue during strike force operations and other motorcoach related activities. The data received showed a voluntary adoption rate of 23 percent in 2008 (the baseline collection year), 69 percent in 2009, and 76 percent in 2010. Although the survey data has shown increased adoption levels, this data is based solely on input from the motorcoach companies and not actual passengers.

The FMCSA is in the process of seeking the Office of Management and Budget's approval for a robust survey of actual motorcoach passengers in 2013.

- ◆ Develop enhanced emergency egress requirements, with special attention to children, older people and people with disabilities.

The NHTSA has identified enhancing the ability of passengers to evacuate a motorcoach in an accident as a priority safety upgrade with potential to reduce fatalities and injuries. In 2010, NHTSA completed a 2-year research project to determine effective measures to facilitate passenger evacuations and assess the need for enhancements to current standards. The research included simulations to determine egress rates under various scenarios, examination of occupant ergonomics and strength capabilities (including children and older people) for opening various emergency exits, and evaluation of the effect of emergency exit lighting, signage, and markings on passenger egress rates. Based on this research, candidate emergency egress requirements were developed for different motorcoach emergency scenarios. Reports of this research program are available at www.regulations.gov in NHTSA's docket number NHTSA-2007-28793; item IDs NHTSA-2007-28793-22 and 24.

ON-GOING MOTORCOACH SAFETY ACTIONS

The Department made progress toward completing the following commitments from the 2009 plan. The lead agency and the updated timeframe for completion are provided below.



DRIVER FATIGUE

- ◆ Accelerate research into fatigue issues relating to motorcoach drivers, including hours of service and technologies to detect driver fatigue. **(FMCSA)**

The FMCSA initiated a three-phase motorcoach driver fatigue study to examine operating practices and driver schedules in the various types of service including charter, tour, regular route, and commuter. Phases 1 and 2 of the study are complete. Phase 3 is underway and will be complete in 2013.

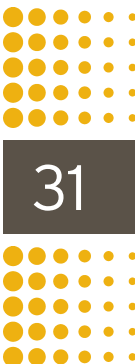
The FMCSA also initiated the Drowsy Driver Mitigation System, a Small Business Innovation Research (SBIR) Phase II Project. The objective of this project is to develop and test a prototype system to unobtrusively detect and alert drowsy, distracted, and aggressive drivers prior to performance degradation. Advisory and warning messages are presented to the driver and supplemental notifications to fleet management are also supported. Completing Phase II of the project completes the development of the system. The FMCSA anticipates the project will be completed in fall 2013.



DRIVER BEHAVIOR

- ◆ Develop a national drug and alcohol testing database to assist carriers with identifying a driver with a history of drug or alcohol abuse. **(FMCSA)**

The FMCSA will continue to develop an NPRM for the drug and alcohol database. The current rulemaking schedule projects publication of the NPRM in 2013.





VEHICLE MAINTENANCE

- ◆ Strengthen State bus inspection programs. *(FMCSA)*

The FMCSA will continue working with its State and local enforcement partners to improve bus inspection programs by emphasizing uniformity and sharing relevant safety information. This is being done through several efforts outlined in the plan, including enhanced outreach and additional training for our State partners.

Additionally, as required by MAP-21 and more fully detailed as a new safety action, FMCSA will undertake a rulemaking to consider requiring States to establish an annual inspection program for passenger carriers.

- ◆ Initiate rulemaking to support the development and implementation of the new enforcement model to better identify and address high risk carriers and drivers. *(FMCSA)*

The FMCSA will continue to work on its NPRM regarding the Carrier Safety Fitness Determination process. The current rulemaking schedule projects publication of the NPRM in 2013.



OPERATOR OVERSIGHT

- ◆ Enhance oversight of unsafe motorcoach companies and carriers attempting to evade sanctions. *(FMCSA)*

The FMCSA will continue to work on the automation of its operating authority vetting process. In addition, FMCSA published an NPRM on December 13, 2011, proposing procedures to place reincarnated motor carriers out of service. The final rule titled, "Amendment to Agency Rules of Practice" was published on April 26, 2012.

Further, FMCSA developed an NPRM to implement the provisions of 49 USC 31135, which authorizes the Agency to suspend or revoke the operating authority of motor carriers that employ officers who have shown egregious disregard for safety compliance. FMCSA published the NPRM in November 2012.



DATA COLLECTION AND ANALYSIS

- ◆ Make agency decision on installation and performance characteristics of heavy vehicle event data recorders (HVEDR) on motorcoaches. **(NHTSA)**

For the past several years, NHTSA has been working with the Society of Automotive Engineers (SAE) Truck and Bus Committee in the development of SAE Recommended Practice J2728, "Heavy Vehicle Event Data Recorder (HVEDR) - Base Standard." The SAE released Recommended Practice J2728 on June 7, 2010, which defined specifications and functional requirements for HVEDRs for the reliable and accurate recording of the crash parameters that are relevant to heavy vehicles.

The NHTSA has also initiated research on EDRs for both light and heavy vehicles to gather information about potential implementation costs, manufacturer plans for future upgrades, fleet-wide installation of EDRs, and survivability factors of importance to protect EDR data. This research effort is expected to be completed in 2012.

As a result of these activities, NHTSA is evaluating the installation and performance characteristics of HVEDRs on motorcoaches so that an agency decision can be reached.

- ◆ Supplement FMCSA motorcoach data to improve performance monitoring of carriers. **(FMCSA)**.

To augment the data it currently collects on motorcoach drivers and operators, FMCSA will continue to explore other passenger carrier data sources to determine the feasibility of adding to FMCSA's existing motorcoach data.



Photo courtesy of Commercial Vehicle Safety Alliance

NEW MOTORCOACH SAFETY ACTIONS

Through the work initiated under the 2009 plan and the collaboration that has occurred in the 3 years since, the Department has identified the following additional actions to improve motorcoach safety. The focus of these efforts is on preventing crashes, fatalities, and injuries.

GENERAL

- ◆ Develop a Web-based Motorcoach Rural Roads Infrastructure Assessment Tool.

(FHWA - 2013)

The Web-based Motorcoach Rural Roads Assessment Tool will allow States to adequately assess motorcoach travel and safety infrastructure along rural routes, and provide in terms of safety, of the infrastructure along those routes, and provide recommendations and guidance for remediation. The tool will also seek to assess the ability of the Emergency Management Systems to respond to a mass casualty incident should a motorcoach crash occur.

- ◆ Complete a review of FMCSA's current authority over motorcoach operations.

(OST - 2013)

The OST and FMCSA will examine the effectiveness of FMCSA's organizational structure, the adequacy of the regulatory and statutory authority available, the fine and fee structure, and the adequacy of the data systems to track a motorcoach operator(s) regulatory compliance and safety.



DRIVER FATIGUE

- ◆ Publish a Supplemental NPRM concerning Electronic Logging Devices on all motorcoaches.

(FMCSA - 2013)

The FMCSA has determined that it must complete a supplemental NPRM to address issues raised in response to its NPRM and by the Court. Drafting this supplemental rulemaking is one of FMCSA's top priorities. In addition, MAP-21 requires FMCSA to complete rulemaking on "Electronic Logging Devices."



- ◆ Publish guidance for medical examiners on the diagnosis and treatment of obstructive sleep disorders.
(FMCSA - 2012)

The FMCSA MCSAC and MRB met early in 2012 to provide combined recommendations for guidance for medical examiners regarding medical certification of drivers with obstructive sleep apnea. FMCSA will publish the proposed guidance for public comment later this year.

- ◆ Host public listening sessions focusing on hours of service for motorcoach operators.
(FMCSA - 2012)

On January 9, 2012, FMCSA held a public listening session to solicit concepts, ideas, and information on hours of service requirements for motorcoach drivers. FMCSA sought data and answers relating to driving time, duty time/driving window, time-on-task function, and cumulative fatigue.

On October 30, 2012, FMCSA held a second public listening session seeking additional concepts, ideas and information on hours of service requirements for motorcoach drivers.

- ◆ Update and publish the passenger carrier driver fatigue video.
(FMCSA - 2013)

The FMCSA plans to revise the passenger carrier driver fatigue video to incorporate the most up-to-date information in this vitally important area.



DRIVER BEHAVIOR

- ◆ Update the Model Training Curriculum for Motorcoach Drivers.
(FMCSA - 2014)

In the mid 1990's, the FHWA published a Model Training Curriculum for Motorcoach Drivers. The updated version will incorporate new best practices and information to aid motorcoach companies when training drivers.



VEHICLE MAINTENANCE

- ◆ Initiate a rulemaking to consider requiring States to establish a program for annual inspections of commercial motor vehicles designed or used to transport passengers.
(FMCSA - 2013)

As required by MAP-21, FMCSA will undertake a rulemaking to consider requiring States to establish an annual inspection program for passenger carriers. The rulemaking will consider the risks associated with improperly maintained or inspected commercial motor vehicles designed to transport passengers, the effectiveness of using existing Federal standards for the inspection of these vehicles, and the costs and benefits of a mandatory inspection program.



OPERATOR OVERSIGHT

- ◆ Develop an NPRM to establish minimum knowledge requirements for people applying for authority to transport passengers to comply with new provisions in MAP-21 requiring the Secretary to develop a written proficiency exam for carriers seeking authority from the Department.
(FMCSA - 2013)

The FMCSA published an Advance NPRM titled “New Entrant Assurance Process: Implementation of Section 210(b) of the Motor Carrier Safety Improvement Act of 1999” on August 25, 2009. In addition, FMCSA is conducting research evaluating the effectiveness of an approach that could address various issues in the ANPRM’s docket. The phased research is analyzing the cost effectiveness of fostering a safety culture in new entrants via training and testing, and its impacts on their safety performance, including crash rate.

- ◆ Complete integration of ADA reviews into FMCSA’s enforcement software.
(FMCSA - 2013)

FMCSA is focused on ensuring that motorcoach operations are ADA-compliant and has implemented the requirements of the Over-the-Road Bus Transportation Accessibility Act of 2007 (P. L. 110-291). After ADA reviews are integrated into FMCSA’s enforcement software, and additional FMCSA investigators complete ADA training, an ADA review will become part of the overall comprehensive review of over-the-road bus companies.



- ◆ Implement enhancements to the NCCDB.
(FMCSA - 2012)

FMCSA is redesigning the NCCDB to aid consumers by assisting them in identifying the motorcoach companies with safe operating histories and will provide an improved on-line process for reporting both safety and ADA issues.

- ◆ Continued motorcoach safety strike forces.
(FMCSA - Ongoing)

Passenger Carrier Strike Force activities are one part of the overall compliance review and inspection program for motorcoach companies. FMCSA, in partnership with State and local law enforcement, will conduct the annual National Passenger Carrier Strike Force event sometime during calendar year 2012. Regional strike force operations to address motorcoach transportation at casinos, theme parks, and similar destinations are conducted across the nation continuously.

- ◆ Initiate a rulemaking implementing the requirements for bus leasing.
(FMCSA - 2012)

This action is necessary to ensure that unsafe passenger carriers cannot evade FMCSA oversight and enforcement by operating under the authority of another carrier that exercises no actual control over those operations. The new regulation is under development and is one of FMCSA's high priority rulemakings.

- ◆ Update the Passenger Vehicle Inspection Course for Federal, State and local law enforcement.
(FMCSA - 2013)

This course is a training requirement for all Motor Carrier Safety Assistance Program inspectors conducting Level I and/or Level II North American Standard Inspections on passenger carrier vehicles. The revised Passenger Vehicle Inspection Course is in the last phase of development.

- ◆ Implement MAP-21 motorcoach registration and operator safety requirements.
(FMCSA - Ongoing)

MAP-21 requires FMCSA to implement a number of new registration and operator safety mandates intended to improve motorcoach safety. These requirements include developing a written proficiency examination for new operators and standards for a motorcoach driver notification system; improving the public's understanding of the Agency's motorcoach safety ratings; and reviewing certain inspection programs. FMCSA is currently preparing a number of new rulemakings and initiatives to implement these requirements. To learn more about the motorcoach safety requirements under MAP-21, visit FMCSA's MAP-21 Web site at <http://www.fmcsa.dot.gov/about/what-we-do/MAP-21/Map21.aspx>.



CRASH AVOIDANCE MEASURES

- ◆ Develop final decisions on the rulemaking proposal to upgrade the performance of commercial vehicle tires. **(NHTSA)**

The NHTSA is conducting additional testing and analysis to address comments received on the September 2010 NPRM. This additional testing and analysis will be completed in 2012. In accordance with MAP-21, a final rule shall be issued by 2015 if the DOT Secretary determines that the upgrades to the Federal Motor Vehicle Safety Standards (FMVSS) meet the requirements and considerations set forth in subsections (a) and (b) of section 30111 of title 49, United States Code (National Traffic and Motor Vehicle Safety Act).

- ◆ Conduct research on forward collision avoidance and mitigation systems. **(NHTSA)**

The NHTSA is developing objective test procedures, performance metrics, and costs and benefits information for forward collision warning and automatic braking systems. In addition, human factors research related to Driver-Vehicle Interfaces is underway. Similarly, the Agency is initiating field operational tests in late 2012 involving the latest generation collision mitigation braking systems. In accordance with MAP-21, NHTSA will complete research and testing by 2015. Also in accordance with MAP-21, a final rule shall be issued by 2017, if the DOT Secretary determines an FMVSS meets the requirements and considerations set forth in subsections (a) and (b) of section 30111 of title 49, United States Code.

- ◆ Conduct research on lane departure warning systems. **(NHTSA)**

The NHTSA plans to initiate a field operational test involving the latest generation lane departure warning systems in late 2012 and begin development of objective test procedures and performance metrics in 2013. NHTSA expects to complete a cost-benefit and synthesis study in 2013. In accordance with MAP-21, NHTSA will complete research and testing on lane departure warning systems by 2015. Also in accordance with MAP-21, a final rule shall be issued by 2017, if the DOT Secretary determines an FMVSS meets the requirements and considerations set forth in subsections (a) and (b) of section 30111 of title 49, United States Code.



- ◆ Develop a rulemaking proposal requiring installation of speed limiting devices on heavy vehicles, including motorcoaches. **(NHTSA)**

On January 3, 2011, NHTSA published a notice announcing its intention to propose a new FMVSS that would require the installation of speed limiting devices on certain heavy vehicles. Although this notice focused on speed limiting devices on heavy trucks, NHTSA is also considering the costs and benefits of requiring speed limiting devices on other types of heavy vehicles, including motorcoaches. NHTSA is continuing work on this proposal.

- ◆ Develop objective test procedures and performance metrics for stability control systems for single unit trucks and medium size buses. **(NHTSA)**

The NHTSA is investigating stability control systems for single unit trucks and medium-size buses. However, testing of stability control systems in these vehicles has been difficult due to the limited availability of stability control technology for these classes of vehicles. NHTSA is currently testing those vehicles for which stability control technology is available.

- ◆ Consider a rulemaking requiring tire pressure monitoring systems. **(NHTSA)**

In accordance with MAP-21, a final rule shall be issued by 2015, if the DOT Secretary determines an FMVSS meets the requirements and considerations set forth in subsections (a) and (b) of section 30111 of title 49, United States Code.



OCCUPANT PROTECTION – SEAT BELTS

- ◆ Publish a final rule requiring seat belts on motorcoaches. **(NHTSA)**

NHTSA received over 130 comments on the NPRM published on August 18, 2010. The Agency has analyzed the comments and is developing a final rule for motorcoaches and other large buses that, in accordance with MAP-21, is required to be published by 2013.



OCCUPANT PROTECTION – FIRE SAFETY

- ◆ Complete follow-up research for evaluating the efficacy of fire detection and suppression systems and fire retardant and fire hardening materials. *(NHTSA)*

Following completion of NHTSA's research on wheel-well fires in motorcoaches, NHTSA is initiating research and testing to develop candidate test procedures and performance metrics for evaluating fire detection systems, and to evaluate the performance of available fire suppression systems. In addition, research and testing will be initiated to evaluate the effectiveness of fire hardening and fire retardant materials to mitigate fire propagation/penetration into the occupant compartment from fires originating at wheel wells and the engine compartment. In accordance with MAP-21, NHTSA may issue a final rule by 2015 based on the results of the research and testing, taking into account highway size and weight restrictions applicable to motorcoaches, if the DOT Secretary determines an FMVSS meets the requirements and considerations set forth in subsections (a) and (b) of section 30111 of title 49, United States Code.





OCCUPANT PROTECTION – VEHICLE INTEGRITY

- ◆ Publish an NPRM on rollover structural integrity performance standards. *(NHTSA)*

The NHTSA conducted roof crush/rollover tests on motorcoaches in 2008 and 2009 to evaluate existing test procedures and performance requirements and to determine the feasibility of their application to motorcoaches and other large buses. NHTSA is currently developing a proposal for a new FMVSS to improve the structural integrity of motorcoaches and other large buses in rollover events. In accordance with MAP-21, a final rule shall be issued by 2014 if the DOT Secretary determines that the new FMVSS meets the requirements and considerations set forth in subsections (a) and (b) of section 30111 of title 49, United States Code.

- ◆ Complete expanded research on window retention and advanced glazing to mitigate occupant ejection. *(NHTSA)*

In 2011, NHTSA completed an evaluation of test procedures for advanced glazing and window retention to evaluate their effectiveness for preventing occupant ejections. NHTSA is currently evaluating various glazing designs to establish performance requirements. In accordance with MAP-21, a final rule shall be issued by 2014 if the DOT Secretary determines that upgrades to FMVSS meet the requirements and considerations set forth in subsections (a) and (b) of section 30111 of title 49, United States Code.



OCCUPANT PROTECTION – EMERGENCY EGRESS

- ◆ Initiate research to determine how often the pre-trip safety information is being provided to passengers and its effectiveness in raising awareness of emergency procedures. *(FMCSA - 2013)*

The FMCSA is concerned whether or not motorcoach passengers are receiving pre-trip safety awareness and emergency preparedness information. We want to better understand the level of voluntary compliance by the industry in providing this information to its customers. FMCSA will conduct a limited number of in-person motorcoach passenger survey events to eliminate concerns with the accuracy of self-reported data provided by motorcoach operators.

- ◆ Evaluate practicability, feasibility, and cost/benefit of candidate performance requirements for emergency egress in motorcoaches. *(NHTSA)*

The NHTSA completed a two-year research project to determine effective measures to facilitate passenger evacuations and assess the need for enhancements to current standards. NHTSA is currently evaluating the cost/benefit, practicability, and feasibility of candidate performance requirements for motorcoach emergency egress to ensure effective evacuation under different emergency scenarios for various occupant groups, including children and the elderly.



OCCUPANT PROTECTION – INTERIOR IMPACT PROTECTION

- ◆ Complete research and testing on enhanced occupant impact protection techniques. *(NHTSA)*

The MAP-21 requires that NHTSA shall complete research and testing on enhanced occupant impact protection techniques for motorcoach interiors to reduce serious injuries for all passengers of motorcoaches by 2015. Also in accordance with MAP-21, a final rule shall be issued by 2017, if the DOT Secretary determines an FMVSS meets the requirements and considerations set forth in subsections (a) and (b) of section 30111 of title 49, United States Code.



OCCUPANT PROTECTION – COMPARTMENTALIZATION SAFETY COUNTERMEASURES

- ◆ Complete research and testing on enhanced compartmentalization safety countermeasures for motorcoaches. *(NHTSA)*

The MAP-21 requires that NHTSA shall complete research and testing on enhanced compartmentalization safety countermeasures for motorcoaches, including enhanced seating designs by 2015. Also in accordance with MAP-21, a final rule shall be issued by 2017, if the DOT Secretary determines an FMVSS meets the requirements and considerations set forth in subsections (a) and (b) of section 30111 of title 49, United States Code.





NEXT STEPS

The U.S. Department of Transportation recognizes that our focus on motorcoach safety must remain steady and strong. FMCSA, NHTSA, FHWA, FTA, PHMSA, RITA, and OST are committed to continuing the partnership that was strengthened through the development of this plan. We will continue to share information and coordinate on these important initiatives. We remain dedicated to ensuring that motorcoach travel remains a very safe mode of highway transportation for the more than 750 million passenger trips each year.

To document our progress on the action items identified in this plan, and any new information about this segment of the passenger transportation industry, the Department will provide an update to this plan in 2014. Any questions or requests for information regarding actions in this plan should be directed to:

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APPENDIX A

Open Motorcoach Safety Recommendations from the National Transportation Safety Board



DRIVER FATIGUE

- H-07-41:** *Require all interstate commercial vehicle carriers to use electronic on-board recorders that collect and maintain data concerning driver hours of service in a valid, accurate, and secure manner under all circumstances, including accident conditions, to enable the carriers and their regulators to monitor and assess hours-of-service compliance.*
- H-08-13:** *Develop and implement a plan to deploy technologies in commercial vehicles to reduce the occurrence of fatigue-related crashes.*
- H-09-32:** *Update and redistribute your Driver Fatigue Video to include current information on fatigue and fatigue countermeasures and make the video NTSB Highway Accident Summary Report 69 available electronically. Implement a plan to regularly update and redistribute the video.*
- H-10-9:** *Require all motor carriers to adopt a fatigue management program based on the North American Fatigue Management Program guidelines for the management of fatigue in a motor carrier operating environment.*
- H-12-29:** *Establish an ongoing program to monitor, evaluate, report on, and continuously improve fatigue management programs implemented by motor carriers to identify, mitigate, and continuously reduce fatigue-related risks for drivers.*
- H-12-30:** *Incorporate scientifically based fatigue mitigation strategies into the hours-of-service regulations for passenger carrying drivers who operate during the nighttime window of circadian low.*





DRIVER BEHAVIOR

- H-01-25:** *Develop a system that records all positive drug and alcohol test results and refusal determinations that are conducted under the U.S. Department of Transportation testing requirements, require prospective employers to query the system before making a hiring decision, and require certifying authorities to query the system before making a certification decision.*
- H-10-11:** *Require motor carriers to review and use video event recorder information in conjunction with other performance data to verify that driver actions are in accordance with company and regulatory rules and procedures essential to safety.*
- H-11-26:** *Prohibit the use of both handheld and hands-free cellular telephones by all commercial driver's license holders while operating a commercial vehicle, except in emergencies. [This recommendation supersedes Safety Recommendation H-06-27.]*



MEDICAL QUALIFICATION OF DRIVERS

- H-01-17:** *Develop medical oversight program to ensure only qualified individuals perform medical exams.*
- H-01-18:** *Develop medical oversight program to ensure all prior applications for medical certification are recorded and reviewed.*
- H-01-19:** *Develop medical oversight program to periodically update medical certifications regulations.*
- H-01-20:** *Develop medical oversight program to provide individuals performing medical exams with specific guidance and source of information for questions.*
- H-01-21:** *Develop medical oversight program to prevent or identify and correct inappropriate issuance of medical certificates.*
- H-01-24:** *Develop medical oversight programs to include mechanisms for reporting medical conditions to authorities and for evaluating medical conditions between exams.*



VEHICLE MAINTENANCE

- H-02-15:** Amend 49 CFR 396.13 to require pre-trip brake adjustment inspection procedures.
- H-05-03:** Revise the FMCSR's appendix G to subchapter B, "Minimum Periodic Inspection Standards" part 10 "Tires," Sections A(5) and B(7), to address tire's speed rating.
- H-05-04:** Safety analysis on the effectiveness of the self-inspection and certification process motor carriers use in order to comply with annual inspection requirements.
- H-05-05:** Revise FMCSR's appendix G to subchapter B, "Minimum Periodic Inspection Standards." Develop method of inspecting motorcoach seat anchorages.
- H-09-19:** Require that tire pressure be checked with a tire pressure gauge during pre-trip inspections, vehicle inspections, and roadside inspections of motor vehicles.
- H-09-20:** Require those States that allow private garages to conduct Federal Motor Carrier Safety Administration inspections of commercial motor vehicles to have a quality assurance and oversight program that evaluates the effectiveness and thoroughness of those inspections.



CRASH AVOIDANCE MEASURES

ADVANCED TECHNOLOGIES

- H-01-06:** Complete rulemaking on adaptive cruise control and collision warning system performance standards for new commercial vehicles. At a minimum, these standards should address obstacle detection distance, timing of alerts, and human factors guidelines, such as the mode and type of warning.
- H-01-07:** After promulgating performance standards for collision warning systems for commercial vehicles, require that all new commercial vehicles be equipped with a collision warning system.
- H-08-15:** Determine whether equipping commercial vehicles with collision warning systems with active braking and electronic stability control systems will reduce commercial vehicle crashes. If these technologies are determined to be effective in reducing crashes, require their use on commercial vehicles.



- H-09-22:** *Require new motor vehicles over 10,000 pounds to be equipped with direct tire pressure monitoring systems to inform drivers of the actual tire pressures.*
- H-10-01:** *Require new commercial motor vehicles with a gross vehicle weight rating above 10,000 pounds to be equipped with lane departure warning systems.*
- H-11-7:** *Develop stability control system performance standards for all commercial motor vehicles and buses with a gross vehicle weight rating greater than 10,000 pounds, regardless of whether the vehicles are equipped with a hydraulic or a pneumatic brake system. [This safety recommendation supersedes H-10-5.]*
- H-11-8:** *Once the performance standards from Safety Recommendation H-11-7 have been developed, require the installation of stability control systems on all newly manufactured commercial vehicles with a gross vehicle weight rating greater than 10,000 pounds. [This safety recommendation supersedes H-10-6.]*
- H-12-13:** *Develop and disseminate guidance for motor carriers on how to most effectively use currently available onboard monitoring systems and develop a plan to periodically update the guidance.*
- H-12-14:** *Upon completion of the field operational tests for onboard monitoring systems, determine whether test results indicate that such systems would reduce accidents or injuries, and, if so, require commercial motor carriers to use these systems to improve driver safety.*
- H-12-20:** *Develop performance standards for advanced speed-limiting technology, such as variable speed limiters and intelligent speed adaptation devices, for heavy vehicles, including trucks, buses, and motorcoaches.*
- H-12-21:** *After establishing performance standards for advanced speed-limiting technology for heavy commercial vehicles, require that all newly manufactured heavy vehicles be equipped with such devices.*

TRAFFIC CONTROL

- H-09-7:** *Develop and implement, in conjunction with the American Association of State Highway and Transportation Officials and the National Association of State Emergency Medical Services Officials, criteria based on traffic patterns, passenger volume, and bus types that can be used to assess the risks of rural travel by large buses. Use these criteria as part of the SAFETEA-LU requirement to identify and select Highway Safety Improvement Program projects.*

H-12-23: *Work with the American Association of State Highway and Transportation Officials to establish performance and selection guidelines for State transportation agencies to use in developing objective warrants for high-performance barriers applicable to new construction and rehabilitation projects where barrier replacement has been determined to be appropriate.*

H-12-24: *Until barrier testing has been completed, selection guidelines have been developed, and barrier guidance has been updated in the American Association of State Highway and Transportation Officials "Roadside Design Guide," provide information to State transportation agencies about (1) the unique considerations associated with commercial passenger vehicle "run-off-the-road" accidents involving point hazards, and (2) the associated potential for catastrophic loss of life.*



OCCUPANT PROTECTION

GENERAL OCCUPANT PROTECTION

H-99-47 (MW): *In 2 years, develop performance standards for motorcoach occupant protection systems that account for frontal impact collisions, side impact collisions, rear impact collisions, and rollovers.*

H-99-48: *Once pertinent standards have been developed for motorcoach occupant protection systems, require newly manufactured motorcoaches to have an occupant crash protection system that meets the newly developed performance standards and retains passengers, including those in child safety restraint systems, within the seating compartment throughout the accident sequence for all accident scenarios.*

H-99-49: *Expand research on current glazing to include its applicability to motorcoach occupant ejection prevention, and revise window glazing requirements for newly manufactured motorcoaches based on the results of this research.*

H-99-50 (MW): *In 2 years, issue performance standards for motorcoach roof strength that provide maximum survival space for all seating positions and that take into account current typical motorcoach window dimensions.*

H-99-51: *Once performance standards have been developed for motorcoach roof strength, require newly manufactured motorcoaches to meet those standards.*

H-05-01: *Develop performance standards for passenger seat anchorages in motorcoaches.*



- H-10-03:** *In your rulemaking to improve motorcoach roof strength, occupant protection, and window glazing standards, include all buses with a gross vehicle weight rating above 10,000 pounds, other than school buses.*
- H-10-04:** *Develop performance standards for all newly manufactured buses with a gross vehicle weight rating above 10,000 pounds to require that overhead luggage racks are constructed and installed to prevent head and neck injuries and remain anchored during an accident sequence. [This recommendation supersedes Safety Recommendations H-09-23 and H-09-24.]*
- H-12-22:** *Evaluate the effects of seat spacing and armrests as factors for potential occupant injury, and if safer spacing or armrest configurations are identified, develop and implement appropriate guidelines.*

FIRE PROTECTION

- H-07-04:** *Develop a Federal Motor Vehicle Safety Standard to provide enhanced fire protection of the fuel system in areas of motorcoaches and buses where the system may be exposed to the effects of a fire.*
- H-07-05:** *Develop a Federal Motor Vehicle Safety Standard to provide fire-hardening of exterior fire-prone materials, such as those in areas around wheel wells, to limit the potential for flame spread into a motorcoach or bus passenger compartment.*
- H-07-06:** *Develop detection systems to monitor the temperature of wheel well compartments in motorcoaches and buses to provide early warning of malfunctions that could lead to fires.*
- H-07-07:** *Evaluate the need for a Federal Motor Vehicle Safety Standard that would require installation of fire detection and suppression systems on motorcoaches.*

PASSENGER EVACUATIONS

- H-99-9:** *Revise the Federal Motor Vehicle Safety Standard (FMVSS) No. 217, "Bus Emergency Exits and Window Retention and Release," to require that other than floor-level emergency exits can be easily opened and remain open during an emergency evacuation when a motorcoach is upright or at unusual attitudes.*
- H-00-01:** *Revise the FMVSS to require that all motorcoaches be equipped with emergency lighting fixtures that are outfitted with a self-contained independent power source.*
- H-00-02:** *Revise the FMVSS to require the use of interior luminescent or exterior retro-reflective material, or both, to mark all emergency exits in all motorcoaches.*

- H-07-08:** *Evaluate current emergency evacuation designs of motorcoaches and buses by conducting simulation studies and evacuation drills that take into account, at a minimum, acceptable egress times for various post-accident environments, including fire and smoke; unavailable exit situations; and the current above-ground height and design of window exits to be used in emergencies by all potential vehicle occupants.*
- H-11-37:** *Modify Federal Motor Vehicle Safety Standard 217 or the corresponding laboratory test procedure to eliminate the potential for objects such as latch plates to protrude into the emergency exit window opening space even when that protrusion still allows the exit window to meet the opening size requirements.*
- H-11-38:** *To cover the interim period until Federal Motor Vehicle Safety Standard 217 is modified as specified in Safety Recommendations 1 and 2 above, provide the States with guidance on how to minimize potential evacuation delays that could be caused by protruding latch mechanisms on emergency exit windows and by exit windows that require additional manual assistance to remain open during egress.*



OPERATOR OVERSIGHT

- H-93-28:** *Develop systematic process to identify carriers subject to FMCSA's jurisdiction, including immediate entry of new carriers into MCMIS.*
- H-99-06:** *Change the safety fitness rating methodology so that adverse vehicle/driver performance-based data alone are sufficient to result in overall unsatisfactory rating.*
- H-02-16:** *Require that vehicle inspections of a motor carrier's fleet occur during compliance reviews.*
- H-02-18:** *During compliance reviews, rate companies Unsatisfactory in the vehicle factor category if brake inspectors are not qualified.*
- H-03-02:** *Require all new carriers seeking operating authority to demonstrate safety skills prior to obtaining new entrant authority.*
- H-06-17:** *Establish a program to verify that motor carriers have ceased operations after the effective date of revocation of operating authority.*
- H-07-03:** *To protect the traveling public until completion of the Comprehensive Safety Analysis (CSA) 2010 Initiative, immediately issue an Interim Rule to include all Federal Motor Carrier Safety Regulations in the current compliance review process so that all violations of regulations are reflected in the calculation of a carrier's final rating.*



- MH-07-062, B02:** *Ensure that adequate space is available to conduct bus inspections by working on a site-specific basis with the U.S. Customs and Border Plan with respect to periodically determining the effectiveness of the bus inspection plan by surveying field personnel or through other methods.*
- H-09-21:** *Develop an evaluation component to determine the effectiveness of your New Applicant Screening Program.*
- H-09-29:** *Direct the National Highway Traffic Safety Administration and the Federal Motor Carrier Safety Administration to work in conjunction with the U.S. Customs and Border Protection Agency to develop and implement a process to detect motor carriers that are currently operating non-FMVSS-compliant motorcoaches or other passenger-carrying commercial motor vehicles, other than exempted vehicles, in the United States (outside of the commercial zone), and when such vehicles are detected, to ensure that the Federal Motor Carrier Safety Administration has the authority to place such vehicles out of service and require that these motor carriers cease operating those vehicles in commercial interstate passenger service or face revocation of their operating authority.*
- H-09-33:** *Revise 49 Code of Federal Regulations Part 376 to require that passenger motor carriers are subject to the same limitations on the leasing of equipment as interstate for-hire motor carriers of cargo.*
- H-09-34:** *Seek statutory authority to deny or revoke operating authority for commercial interstate motor carriers found to have applications for operating authority in which the applicant failed to disclose any prior operating relationship with another motor carrier, operating as another motor carrier, or being previously assigned a U.S. Department of Transportation number.*
- H-09-36:** *Establish a requirement to review all passenger carrier lease agreements during new entrant safety audits and compliance reviews to identify and take action against carriers that have lease agreements that result in a loss of operational control by the certificate holder.*
- H-09-40:** *Require that passenger motor carriers certify on their OP-1(P) forms (Application for Motor Passenger Carrier Authority) and initial MCS-150 form (Motor Carrier Identification Report [Application for USDOT Number]) and subsequent required biennial submissions that all vehicles operated, owned, or leased per trip or per term met the FMVSSs in effect at the time of manufacture.*
- H-09-41:** *Seek statutory authority to suspend, revoke, or withdraw a motor carrier's operating authority upon discovering the carrier is operating any non-FMVSS-compliant passenger-carrying commercial motor vehicles, a violation of the FMVSS-compliant certification requested in Safety Recommendation H-09-40.*

- H-12-10:** *Revise the passenger carrier safety information posted on the Federal Motor Carrier Safety Administration website and SaferBus mobile application to assist consumers in interpreting safety information. The revisions should (1) address means to assist consumers in locating and interpreting information about passenger carrier safety, (2) enable consumers to compare the safety of two or more passenger carriers, (3) assist consumers in understanding the percentage safety ranking scales, and (4) incorporate easy-to-use ranking methods, such as quantitative star ratings.*
- H-12-11:** *Evaluate (1) whether passenger carrier consumers, drivers, and operators can easily find and use the National Consumer Complaint Database (NCCDB) and (2) whether conducting additional advertising of the NCCDB and providing additional instructions on its use could ensure that passenger carrier consumers, drivers, and operators are aware of and able to use the NCCDB reporting system.*
- H-12-15:** *Revise 49 Code of Federal Regulations 391.23 to require that motor carriers obtain a 10-year driving history for all prospective commercial vehicle drivers.*
- H-12-17:** *Include safety measurement system rating scores in the methodology used to determine a carrier's safety fitness to operate in the safety fitness rulemaking for the new Compliance, Safety, Accountability initiative.*
- H-12-18:** *Include in the safety fitness rating rulemaking for the new Compliance, Safety, Accountability initiative a structured process, such as the Safety Management Cycle, to be used by Federal Motor Carrier Safety Administration investigators and their State Motor Carrier Safety Assistance Program agents, as an audit tool for investigators to (1) identify the root cause of safety risks found during compliance reviews, and (2) deliver constructing guidance to motor carriers to ensure the promotion of safety management.*
- H-12-19:** *Include information regarding the Safety Management Cycle in your "Safety is Good Business" motor carrier website.*
- H-12-31:** *As a component of your new entrant safety audits, review with each new entrant motor carrier a structured process, such as the Safety Management Cycle, to (1) identify the root cause of safety risks and (2) maintain an effective safety assurance program.*





DATA COLLECTION AND ANALYSIS

- H-99-53:** *Require that all school buses and motorcoaches manufactured after January 1, 2003, be equipped with on-board recording systems that record vehicle parameters, including, at a minimum, lateral acceleration, longitudinal acceleration, virtual acceleration, heading, vehicle speed, engine speed, driver's seat belt status, braking input, steering input, gear selection, turn signal status (left/right), brake light status (on/off), head/tail light status (on/off), passenger door status (open/closed), emergency door status (open/closed), hazard light status (on/off), brake system status (normal/warning), and flashing red light status (on/off) (school buses only). For those buses so equipped, the following should also be recorded: status of additional seat belts, air bag deployment criteria, air bag development time, and air bag deployment energy. The on-board recording system should record data at a sampling rate that is sufficient to define vehicle dynamics and should be capable of preserving data in the event of a vehicle crash or an electric power loss. In addition, the on-board recording system should be mounted to the bus body, not the chassis, to ensure that the data necessary for defining bus body motion are recorded.*
- H-99-54:** *Develop and implement, in cooperation with other government agencies and industry standards for on-board recording of bus crash data that address, at a minimum, parameters to be recorded, data sampling rates, duration of recording, interface configurations, data storage format, incorporation of fleet management tools, fluid immersion survivability, impact shock survivability, fire survivability, independent power supply, and ability to accommodate future requirements and technological advances.*
- H-07-01:** *Establish a process to continuously gather and evaluate information on the causes, frequency, and severity of bus and motorcoach fires and conduct ongoing analysis of fire data to measure the effectiveness of the fire prevention and mitigation techniques identified and instituted as a result of the Volpe National Transportation Systems Center fire safety analysis study.*
- H-09-30:** *Develop, in conjunction with the Federal Motor Carrier Safety Administration, a Web-based database of FMVSS-compliant passenger-carrying commercial motor vehicles that can be utilized by Federal, State, and local enforcement inspection personnel to identify non-FMVSS-compliant passenger-carrying commercial motor vehicles so that these vehicles (other than exempted vehicles) are placed out of service and cease operating in the United States. Implement a process to periodically update this database.*

- H-09-31:** *When the database requested in Safety Recommendation H-09-30 is completed, make the database known and accessible to State vehicle registration agencies and to Federal, State, and local enforcement inspection personnel for their use during roadside inspections and compliance reviews to identify non-FMVSS-compliant passenger-carrying commercial motor vehicles.*
- H-09-37:** *Assist the National Highway Traffic Safety Administration in developing a Web-based database of FMVSS-compliant passenger-carrying commercial motor vehicles that can be utilized by Federal, State, and local enforcement inspection personnel to identify non-FMVSS-compliant passenger-carrying commercial motor vehicles so that these vehicles (other than exempted vehicles) are placed out of service and cease operating in the United States. Implement a process to periodically update this database.*
- H-09-38:** *Require that Federal and State inspectors utilize the database requested in Safety Recommendation H-09-37 during both roadside and compliance review inspections of passenger-carrying commercial motor vehicles to identify and place out of service non-FMVSS-compliant vehicles.*
- H-10-02:** *To maintain consistency in bus body classifications and to clarify the scope of bus safety initiatives, develop regulatory definitions and classifications for each of the different bus body types that would apply to all U.S. Department of Transportation agencies and promote use of the definitions among the bus industry and State governments. [This recommendation supersedes Safety Recommendations H-99-43 and H-99-44.]*
- H-10-07:** *Require that all buses above 10,000 pounds gross vehicle weight rating be equipped with on-board recording systems that: (1) record vehicle parameters, including, at minimum, lateral acceleration, longitudinal acceleration, vertical acceleration, heading, vehicle speed, engine speed, driver's seat belt status, braking input, steering input, gear selection, turn signal status (left/right), brake light status (on/off), head/tail light status (on/off), passenger door status (open/closed), emergency door status (open/closed), hazard light status (on/off), brake system status (normal/warning), and flashing red light status (on/off; school buses only); (2) record status of additional seat belts, airbag deployment criteria, airbag deployment time, and airbag deployment energy; (3) record data at a sampling rate sufficient to define vehicle dynamics and be capable of preserving data in the event of a vehicle crash or an electrical power loss; and (4) are mounted to the bus body, not the chassis, to ensure recording of the necessary data to define bus body motion.*

- H-10-10:** *Require all heavy commercial vehicles to be equipped with video event recorders that capture data in connection with the driver and the outside environment and roadway in the event of a crash or sudden deceleration event. The device should create recordings that are easily accessible for review when conducting efficiency testing and system-wide performance-monitoring programs.*
- H-12-07:** *Revise the MCS-150 reporting requirements, as specified in 49 Code of Federal Regulations 390.19, to require that motor carriers report fleet mileage, by year, for the 2-year reporting period.*
- H-12-08:** *Develop and implement a plan for consistent, nationwide enforcement of the MCS-150 reporting requirements, as specified in 49 Code of Federal Regulations 390.19, among interstate passenger carriers.*
- H-12-09:** *Revise the safety measurement system for passenger carrier risk assessment and ranking to include an analysis that uses only passenger carrier data for performance comparisons, to ensure accurate and comparable safety rankings.*
- H-12-12:** *Develop and implement a system for incorporating information about passenger carriers, derived from the National Consumer Complaint Database, for use in prioritizing passenger carrier inspections.*

MISCELLANEOUS AND OTHER

- H-99-08:** *Require motorcoach operators to provide passengers with pretrip safety information.*
- H-02-18:** *Revise 49 CFR 396.25 (Qualifications of Brake Inspectors) to require formal training and certification as prerequisites for qualification.*
- H-02-33:** *Develop/distribute in cooperation with UMA and the ABA, a booklet to educate motorcoach drivers on the different types of retarders and their use in slippery road conditions.*
- H-05-18:** *Modify tread depth requirements after NHTSA completes research recommended by H-05-17.*
- H-09-4:** *Develop a plan that can be used by the States and public safety answering points to pursue funding for enhancements of wireless communications coverage that can facilitate prompt accident notification and emergency response along high-risk rural roads, as identified under SAFETEA-LU criteria, and along rural roads having substantial large bus traffic (as defined by the criteria established in Safety Recommendation H-09-7).*

- H-09-5:** *Evaluate the system of emergency care response to large-scale transportation related rural crashes and, once that evaluation is completed, develop guidelines for emergency medical service response and provide those guidelines to the States.*
- H-09-18:** *Establish a regulatory requirement within 49 Code of Federal Regulations 382.405 that provides the National Transportation Safety Board, in the exercise of its statutory authority, access to all positive drug and alcohol test results and refusal determinations that are conducted under the U.S. Department of Transportation testing requirements.*
- H-09-39:** *Institute a requirement for Federal and State enforcement officials to obtain training on a procedure to physically inspect passenger-carrying commercial motor vehicles for an FMVSS compliance label, and work NTSB Highway Accident Summary Report 70 with the Commercial Vehicle Safety Alliance to develop and provide this training.*
- H-12-13:** *Develop and disseminate guidance for motor carriers on how to most effectively use currently available onboard monitoring systems and develop a plan to periodically update the guidance.*
- H-12-16:** *Revise 49 Code of Federal Regulations 384.225 to require that States retain on the Commercial Driver's License Information System driver record all convictions, disqualifications, and other licensing actions for violations during the prior 10 years.*





APPENDIX B

Stakeholder Consultations

Following is the list of stakeholders DOT consulted as it developed this 2012 action plan, during the regional roundtables, and at the National Motorcoach Safety Summit:

- A Yankee Line
- ABC Bus Companies, Inc.
- A. W. Griffith Transportation Consulting, LLC
- Academy Express, LLC
- Adirondack Trailways
- Advocates for Highway and Auto Safety (AHAS)
- Alabama Department of Public Safety
- Alliance Bus Charters
- Amador Stage Lines
- Amalgamated Transit Union
- America Interstate
- American Automobile Association (AAA)
- American Association of Motor Vehicle Administrators (AAMVA)
- American Association of Retired Persons (AARP)
- American Bus Association (ABA)
- American Camp Association, Inc.
- American Federation of Teachers
- American Highway Users Alliance
- Anderson Coach & Travel
- Annett Bus Lines
- A P Express
- Asian Americans for Equality
- Autobuses Ejecutivos, LLC
- Autobuses Tlapehuala
- Automobile Club of Southern California
- Badger Coaches Inc
- Bendix Commercial Vehicle Systems, LLC
- Best Bus Charter Corp
- Best Trails & Travel Corp
- Better Business Bureau of the Southland
- BK Charter, Inc.
- Blue Lake Charter & Tours
- Blue Ridge Tours
- Bolt Bus
- Bristol Tours, Inc.
- Brown Coach
- BRT Charter Service
- Buckhead Coach
- Bus & Motorcoach News
- BusRates.com, Inc.
- C&J Bus Company
- California Highway Patrol
- CANAPAT
- Capitol Bus Lines, Inc.
- Cardinal Transportation, LTD
- Cavalier Tours, LTD
- Chinatown Partnership, LDC
- City Sights/Twin America
- CM Chin
- Coach America
- Coach USA
- Commercial Vehicle Safety Alliance (CVSA)
- Connecticut Department of Motor Vehicles
- Contiki Holidays
- Continental Casualty Company

- Cooper-Global Chauffeured Transportation
- Creative Coach Co/Fun Bus
- Crucero USA
- CUBRC
- Daecher Consulting Group
- Daimler AG
- Dan Dipert Coaches
- DATTCO, Inc.
- D.C. Metropolitan Police
- Dos Naciones, Inc.
- Double Hi Express Tours, Inc.
- Draco Services
- Durango Tours Plus
- Eagle Trailways
- Excursions Trailways
- Executive Coach, Inc.
- Eyre Bus Service
- FIA Foundation/
Make Roads Safe
- Firetrace International
- First Group plc
- First Priority Tours, Inc.
- First Priority Trailways, Inc.
- First Student, Inc.
- Foothill Transit
- Georgia Department
of Public Safety
- Globus Family of Brands
- Golden Eagle Charter
- Goldfield Stage
- Great Escapes Tours
& Travel, Ltd.
- Greyhound Lines, Inc.
- Grupo Senda
- H&L Charter
- H & R Tours
- Hampton Jitney, Inc.
- HAP Alaska Yukon
- Harrah's Rincon
Casino and Resort
- Hogan & Hartson, LLP
- Holiday Tours, Inc.
- Huastecos Transports, Inc.
- Huber Bus Service, Inc.
- Hyundai Tours & Travel, Inc.
- IC Bus
- IMMI
- Indian Trails, Inc.
- Inland Empire Tours
and Transportation
- Insurance Institute for
Highway Safety
- International Motorcoach
Group, Inc.
- IRP, Inc.
- J.J. Keller & Associates, Inc.
- James River Bus Lines
- Kiewit
- Konsultants in Driver
Safety, Ltd.
- Laguna Rainbow Corporation
- Lancer Insurance Company
- Lenzner Coach Lines
- Link Engineering
- Lone Star Coaches
- Long Island Transit, Inc.
- Los Angeles County
Metropolitan Transportation
Authority (LACMTA)
- Magic Carpet Tours Bus
- Maine State Police
- Manot Bus Line
- Mares Bus Lines
- Maryland General Assembly
- Maryland Motorcoach
Association
- Maryland State Police
- McCarney Tours
- Megabus
- Minnesota Department
of Transportation
- Motorcoach Industries
Int'l, Inc. (MCI)
- Motorcoach Class A
Transportation
- Motorcoach Eticket
Solutions, Inc.
- Nason Partners dba:
Kelley Transit Co.

- National Association of City Transportation Officials (NACTO)
- National Association of Motorcoach Operators (NAMO)
- National Association of State Directors of Pupil Transportation Services (NASDPTS)
- National School Transportation Association (NSTA)
- National Crash Analysis Center
- National Interstate Insurance Company
- National Organizations for Youth Safety (NOYS)
- National Parent Teacher Association (PTA)
- National Seating
- National Tour Association
- National Transportation Safety Board (NTSB)
- Nelson Mullins
- New Jersey Motor Vehicle Commission
- New York City Council
- New York City Department of Transportation
- New York City Office of the Mayor
- New York Department of Motor Vehicles
- New York Department of Transportation
- New York East Travel
- New York Police Department - 5th Precinct
- New York State Police
- North Central Texas Council of Governments
- Office of Representative John Lewis
- Ohio State Highway Patrol
- Ohio Trucking Association
- Omnibus Express
- Ontario Motorcoach Association
- Pacific Coachways Charter Services, Inc.
- Pacific Coast Motor Carrier Safety Institute
- Pacific Coachways Trailways
- Paradise Travel
- PDQ Transportation, Inc. dba Urban Express Charter
- Pechanga Resort and Casino
- Peter Pan Bus Lines, Inc.
- Pennsylvania State Police
- Prevost, a division of Volvo Bus Corporation
- Property Casualty Insurers Association of America (PCIAA)
- Public Utilities Commission of Ohio
- Reichert Bus
- Roberts Brothers Coach Leasing Company, Inc.
- Rocky Mountain Area Motorcoach Association
- Rolling Strong
- S & S Coach Co.
- Salter Bus Lines, Inc.
- Senate Commerce Committee
- Senator Sherrod Brown - Ohio staff
- Silver State Trailways
- Sleep Dynamics
- South Carolina State Transport Police
- South Carolina Trucking Association (SCTA)
- Southwestern Coaches, Inc.
- Spirit of American Charter Bus Co., Inc.
- Star Shuttle, Inc.
- State Senator Daniel Squadron staff
- Student & Youth Travel Association (SYTA)
- Sun Diego Charter, Inc.
- Sundance Stage Lines
- Sunline Transit Agency
- Sycuan Casino
- TDSM
- Texas Bus Association, Inc.
- Texas Transportation Institute



- The Sandy Johnson Foundation
- Thrasher Brothers
- Turismo Express
- Trailways/International Trailways
- Transport Workers Union of America
- Trans-Bridge Lines
- Trans-Com
- Transporters Intercalifornias
- Transportes Juventino Rosas. Inc.
- Tri City Charter
- Trolley Tours
- Truck Club Insurance
- Turismos, LLC
- Twin America
- Urban Express Charter
- U.S.-Mexico Chamber of Commerce
- United Motorcoach Association (UMA)
- University of Texas School of Public Health
- Van Hool NV
- Venture Tours, Inc.
- Vermont Department of Motor Vehicles
- Virginia State Police
- Virginia Tech Transportation Institute
- Vision Tours, LLC
- West Point Tours Inc Trailway
- WOSU News Columbus
- YMCA
- Zavala Plus, LLC
- Zurich Insurance
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Federal Highway Administration (FHWA)

**Federal Motor Carrier Safety
Administration (FMCSA)**

Federal Transit Administration (FTA)

**National Highway Traffic Safety
Administration (NHTSA)**

Office of the Secretary (OST)

**Pipeline and Hazardous Materials
Safety Administration (PHMSA)**

**Research and Innovative Technologies
Administration (RITA)**