

## **Advanced Notice of Proposed Rulemaking and Responses to Relevant Comments on the National Public Transportation Safety Plan**

On October 3, 2013, the Federal Transit Administration (FTA) issued a consolidated advance notice of proposed rulemaking (ANPRM),<sup>1</sup> 78 FR 61251, which sought public comment on a wide range of topics pertaining to the new Public Transportation Safety Program (National Safety Program) and the requirements of the new transit asset management (TAM) provisions (National TAM System) authorized by the Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21). Pub. L. 112-141, July 6, 2012. Together, the National Safety Program and the National TAM System will contribute to improving the safety of the Nation's public transportation systems, ensuring that those systems are in a state of good repair, and providing increased transparency into agencies' budgetary decision-making processes.

The ANPRM posed 123 questions on the following subjects: FTA's proposed adoption of Safety Management Systems (SMS) as the foundation of the Public Transportation Safety Program; the requirements of the National Public Transportation Safety Plan (National Safety Plan) to establish performance criteria for all modes of public transportation and minimum safety performance standards for public transportation vehicles used in revenue service; Public Transportation Agency Safety Plans (Agency Safety Plans); the Public Transportation Safety Certification Training Program; the National TAM System and the definition of state of good repair; and the potential costs and benefits of forthcoming rules.

This document includes FTA's responses to comments related to the National Safety Plan. 49 U.S.C. 5329(b)(2)(A) and (C). FTA will provide responses to comments related to the Public Transportation Safety Certification Training Program, the National TAM System and the

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<sup>1</sup> The ANPRM is available at <http://www.gpo.gov/fdsys/pkg/FR-2013-10-03/pdf/2013-23921.pdf>.

definition of state of good repair, Agency Safety Plans, and costs and benefits in the preamble to the Transit Asset Management and Public Transportation Agency Safety Plans NPRMs, respectively.

### **Safety Performance Criteria for all Modes of Public Transportation (Questions 1-7)**

The ANPRM posed a series of questions related to safety performance criteria, and how they should be developed and used within the Public Transportation Safety Program. Specifically, FTA asked questions related to what criteria and measures were already used by the public transportation industry; what specific performance criteria FTA should consider; proposed categories of performance measures established by the Transit Advisory Committee for Safety (TRACS), including casualties, operations, systems and equipment, and organizational culture and human performance.; and the industry's experience with establishing performance targets and measures to monitor and achieve safety outcomes. FTA also asked whether the National Safety Plan should include measures to collect information on occurrences, described in the ANPRM as near-misses, close calls, or near-collisions, to help identify circumstances that pose an increased risk of collision with roadway workers, vehicles, pedestrians, trespassers and others.

Comments: Some commenters indicated that many transit agencies already use safety performance criteria to monitor overall safety levels. Commonly used criteria include: total safety events, fatalities and injuries reported to the National Transit Database (NTD), per revenue vehicle mile, passenger trip and/or passenger mile traveled; OSHA recordable injuries per 200,000 employee hours worked; measures of rule violations based on number and type; and preventable versus non-preventable accidents, defined based on agency-specific thresholds. Commenters generally indicated that larger transit agencies tend to use a broader range of

performance criteria than smaller transit agencies that may monitor monthly safety performance without establishing formal criteria.

Many commenters recommended that FTA focus on criteria available from existing NTD reporting, including total safety events, fatalities and injuries per revenue vehicle mile, passenger trip or passenger mile traveled. Several commenters also suggested that FTA consider OSHA recordable injuries per 200,000 employee hours worked and an established definition and ratio for preventable versus non-preventable accidents. Many commenters advised FTA to proceed cautiously in selecting national safety performance criteria due to the importance of local conditions and differences in modal and agency operations. Further, due to the complexity of the U.S. transit industry and the range of operations, many commenters expressed that safety criteria established at the national level should not be used to direct the allocation and use of grant funds at the local level. One commenter suggested that TRACS assist FTA in its development of performance criteria.

While a number of commenters agreed with the categories recommended by TRACS, some commenters expressed concern for the level of detail being put forth by TRACS. Several commenters indicated agreement with the direction of the TRACS recommendations, but strongly suggested phasing the requirements in as agencies are building their Agency Safety Plans and reporting capabilities. Commenters from industry associations expressed concern regarding their members' lack of exposure to and understanding of the TRACS categories and criteria, and their potentially overly ambitious nature. Instead of using the full set of TRACS criteria, several commenters suggested that FTA focus on performance criteria using NTD data, along with probable cause information, rules-compliance information, and "close calls" in passenger services.

Many commenters expressed their understanding that FTA has responsibility, at the national level, to focus on establishing and measuring safety performance outcomes. However, these commenters expressed that specific risk controls and safety issues are best managed, tracked, and resolved locally. Commenters also shared specific experiences related to the establishment of desired outcomes, controls, and indicators. Many of these experiences reflect the industry's adoption of system safety program plans (SSPPs) and hazard management programs. Commenters noted benefits from the following practices: the use of hazard matrices to assess all reported safety issues and concerns; safety committees with formal safety performance reviews monthly or quarterly; adoption of leading indicators to measure safety activity and performance reported monthly or quarterly; active monitoring of the medical qualification, training, and performance of operational personnel to identify and manage issues early; and active monitoring of the condition and performance of infrastructure and equipment for safety concerns.

Many commenters stated that FTA should not establish measures for "close calls" because these measures would be too difficult to define across the different modes, too subjective, and potentially too challenging to validate. Commenters also raised concerns regarding how this information could potentially be used in lawsuits or legal disputes to misrepresent the agency's overall safety record. Commenters in favor of establishing a measure for "close calls" generally stated their support for the information sharing opportunities such measures could provide to guide FTA, State and local oversight activity, training, and safety initiatives.

Response: FTA’s proposed safety performance criteria are *categories of measures*<sup>2</sup> that focus on the reduction of safety events, and fatalities and injuries of people accessing and riding public transportation. In order to capture the broad and varied nature of public transportation, FTA has selected criteria that can be applied to all modes of public transportation and are based on data currently collected in FTA’s National Transit Database (NTD).

Implementing an SMS-based approach to safety will require gathering and analyzing data in ways that may be new for many public transit providers. The work of the TRACS committee in researching what would be required to implement SMS for the transit industry led to defining categories of data that, when analyzed along with performance data, could inform decisions that should have a positive outcome for safety. While some transit providers have already begun work monitoring their performance in a more holistic way, this new approach may represent a significant change for others. A fully mature SMS will take time to implement and FTA anticipates that agencies will need to expand their understanding of the relationship between operations and maintenance data with safety performance. As a result, FTA intends for the National Safety Plan to provide updated, state-of-the-industry information both to and from public transportation providers to consider and incorporate into plans and programs going forward. In addition, FTA will provide guidance, technical assistance, and other tools to assist the industry with its implementation of the new safety requirements.

### **Vehicle Safety Performance Standards (Questions 11-16)**

FTA posed six questions about “minimum safety performance standards” for public transportation vehicles. The standards must take into account both National Transportation Safety Board (NTSB) recommendations and available consensus-based standards and best

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<sup>2</sup> Section 5329(b) requires the establishment of safety performance criteria, where other sections use the term performance measures. To maintain consistency and measurability, criteria are performance measures toward which transit agencies’ performance will be measured and targets will be set.

practices from industry. Commenters were asked to identify potential sources of safety performance standards. FTA included a list of consensus-based safety performance standards related to vehicle crashworthiness, event data recorders, emergency access and egress from rail transit vehicles in distress, and fire-life safety, and inquired whether these standards should be adopted in the National Public Transportation Safety Plan, and if so, how to prioritize their adoption.

Comments: A number of commenters identified the American Public Transportation Association (APTA) voluntary consensus-based standards program as the best source for safety performance standards that reflect industry best practices. Commenters also communicated support for using the original equipment manufacturer (OEM) requirements, State vehicle safety regulations, and the new pass-fail criteria being developed for the Altoona Bus Testing Facility to develop safety performance standards. Others urged FTA to work closely with vehicle manufacturers, including the Mid-Sized Bus Manufacturers Association, when selecting safety performance standards. Many commenters recommended specific standards development organizations as potential sources of safety performance standards, including the American National Standards Institute (ANSI), the American Society of Mechanical Engineers (ASME), the Institute of Electrical and Electronics Engineers (IEEE), the Society for Automotive Engineers (SAE), the National Fire Protection Association (NFPA), the American Railway Engineering and Maintenance-of-Way Association (AREMA), the American Society for Testing and Materials (ASTM), the Association of American Railroads (AAR), the Institute of Transportation Engineers (ITE), Institute of Asset Management (IAM), the American Association of State Highway and Transportation Officials (AASHTO) and the Community Transportation Association of America (CTAA). Other commenters included standards

developed and adopted by other Federal agencies, such the Federal Railroad Administration (FRA), the Occupational Safety and Health Administration (OSHA), and the National Highway Traffic Safety Administration (NHTA), and cited specific Federal standards, such as the Federal Motor Vehicle Safety Standards (FMVSS), FRA's regulation at 49 CFR 200 to 260, and the Americans with Disabilities Act (ADA) regulations, as effective potential sources of safety performance standards.

Many commenters suggested that FTA use criteria developed in the APTA standards program to identify, prioritize, and develop performance-based vehicle standards. These commenters voiced support for the APTA, ASME, IEEE and NFPA standards developed to address NTSB recommendations for vehicle crashworthiness and emergency evacuation and fire-life safety features. A number of commenters recommended that FTA begin with these standards, and then establish a working group of stakeholders to evaluate other available standards from APTA, as well as standards from other organizations. Commenters also urged FTA to apply vehicle safety performance standards only to the procurement of new vehicles, and to keep performance standards affordable.

For bus vehicles, several respondents recommended that FTA consider the use of industry standard measures for vehicle performance, such as miles between road call and maintenance cost per mile instead of prescriptive vehicle performance requirements, and yet others supported adoption of the new pass/fail criteria being developed by the Altoona Bus Testing Facility. Most commenters also mentioned the importance of the vehicle manufacturer's performance standards and the quality of the maintenance and inspection program established by the rail transit agency. Commenters from larger agencies highlighted the importance of the APTA Bus Procurement Guidelines, the Federal Motor Vehicle Safety Standards, as well as

State vehicle codes and Altoona Test Reports. Some commenters indicated that crashworthiness yield the greatest safety improvements. Other commenters, primarily large transit agencies, also recommended: collision avoidance technology; on board cameras and event recorders or black boxes to record various inputs such as speed, braking pressure, or throttle position; fire detection and suppression systems as well as systems to detect electrical shorts; deceleration lights; rear vehicle markings for visibility; non-slip floor surfaces; defrosters at entrances; passenger hand holds on seats; improved wheel-chair securements; driver protective barriers; safety devices designed to deflect a person out of the path of bus wheels (S-1 Gard); design standards to minimize driver blind spots and enhance visibility; and brake override systems. A few commenters questioned the need for bus vehicle safety standards while others urged FTA to undertake additional analysis regarding the safety performance of the nation's bus transit fleet and let the results direct the development of any needed standards.

For rail vehicles, most commenters suggested that FTA's adoption of crashworthiness standards would yield the greatest safety improvement. Enhancements in train control performance (to ensure trains cannot enter occupied blocks) and positive train control standards were also commonly stated as high-yielding categories. Inward-and outward-facing audio and video cameras, event data recorders, fire safety improvements, driver visibility enhancements, door safety enhancements, emergency communications, and emergency exits also received high marks as the types of standards that would offer clear safety improvements. Hours-of-service was also mentioned as an area of consideration, since rail transit vehicles would be operated more safely in passenger service if the operators were less fatigued.

Some commenters urged FTA to exercise caution before adopting any standards developed to address NTSB recommendations. These commenters expressed concern that NTSB



may not consider the cost of its recommendations before issuing them, and requested that FTA conduct a full cost-benefit analysis before making any decisions. Many commenters also cautioned FTA in applying specific NTSB recommendations issued for rail transit vehicles, such as event data recorders, to bus transit vehicles. A few commenters recommended that FTA develop an hours-of-service standard and medical fitness-for-duty qualification program for public transportation as a top priority rather than issuing vehicle safety standards or other standards.

Response: There is a broad base of available safety performance standards. FTA appreciates that APTA works closely with other standards development organizations, particularly ANSI, ASME, IEEE, and NFPA, and that many APTA standards reference or incorporate standards developed by these organizations. In the National Public Transportation Safety Plan, FTA will encourage agencies to review and adopt a number of specified voluntary standards. FTA will conduct additional industry outreach, and may conduct rulemakings for mandatory vehicle standards in the future.

For buses, FTA agrees that the congressionally mandated pass/fail criteria are the appropriate starting point for bus vehicle safety performance standards. Due to the number and variety of buses and vans procured each year in the public transportation industry, FTA agrees with commenters that additional analysis should be undertaken before adopting any other standards.

FTA agrees that crashworthiness, emergency lighting and signage, fire-life safety and event data recorders are areas where there may be a need for Federal standards for transit. FTA agrees with commenters who stated that hours-of-service and medical fitness-for-duty qualifications are perhaps even more important to the overall safety performance of the public

transportation industry than vehicle safety standards. FTA also agrees that enhancing the testing, inspection, maintenance, and overall condition of signal and train control systems is critically important for public transportation safety.

Most transit agencies and vehicle manufacturers already incorporate industry standards based on NTSB recommendations into new vehicle procurements. While FTA encourages rail transit agencies to make enhancements during vehicle retrofits and overhauls, due to cost considerations, FTA does not propose requiring application of these standards. FTA may ask TRACS to evaluate APTA vehicle standards, and the other APTA standards for potential adoption as part of FTA's National Safety Plan.

In the first proposed National Safety Plan, FTA is recommending that agencies adopt several voluntary consensus-based standards for rail vehicles, to address crashworthiness, event data recorders, emergency lighting and signage, and fire and life safety. FTA strongly encourages all public transportation agencies to adopt these voluntary, consensus-based standards and recommended practices to better prepare agencies for implementing mandatory safety standards in the future.