

**TESTIMONY OF**  
**WILLIAM MILLAR, PRESIDENT**  
**AMERICAN PUBLIC TRANSPORTATION ASSOCIATION**  
**BEFORE THE**  
**SUBCOMMITTEE ON FEDERAL WORKFORCE, POSTAL SERVICE AND THE**  
**DISTRICT OF COLUMBIA**  
**OF THE**  
**HOUSE COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM**

\*\*\*\*\*

**JULY 14, 2009**

**SUBMITTED BY**

**American Public Transportation Association  
1666 K Street, N.W.  
Washington, DC 20006  
Tel: (202) 496-4800  
Fax: (202) 496-4324**



**The American Public Transportation Association (APTA) is a nonprofit international association of over 1,500 public and private member organizations, including transit systems and high-speed, intercity and commuter rail operators; planning, design, construction, and finance firms; product and service providers; academic institutions; transit associations and state departments of transportation. APTA members serve the public interest by providing safe, efficient and economical transit services and products. More than 90 percent of the people using public transportation in the United States and Canada are served by APTA member systems.**

## **INTRODUCTION**

Chairman Lynch, Ranking Member Chaffetz and members of the subcommittee, on behalf of the American Public Transportation Association (APTA), I thank you for the opportunity to testify today on the safety of our nation's public transportation systems and the steps APTA and the transit industry are taking to ensure the continued safety and reliability of our nation's transit systems for our riders.

## **ABOUT APTA**

The American Public Transportation Association (APTA) is a nonprofit international association of over 1,500 public and private member organizations, including transit systems and high-speed, intercity and commuter rail operators; planning, design, construction, and finance firms; product and service providers; academic institutions; transit associations and state departments of transportation. APTA members serve the public interest by providing safe, efficient and economical transit services and products. More than 90 percent of the people using public transportation in the United States and Canada are served by APTA member systems.

## **OVERVIEW**

Americans are using public transportation in modern record numbers. Despite significant declines in gasoline prices, high unemployment, a general economic downturn, and lower state and local revenue, approximately 2.6 billion trips were taken on public transportation in the first quarter of 2009. This figure nearly matches last year's record usage. Among the many reasons why the American public chooses to ride public transportation, there is one undeniable common thread. The United States continues to rely on public transportation because our systems are safe. Years of proven performance records have instilled a confidence in the riding public that our systems will transport them safely. The Federal Transit Administration (FTA) has reported that for the period from 2002 to 2008, heavy rail passenger fatalities occurred at a rate of .03 per 100 million passenger miles. In contrast, the Federal Highway Administration (FHWA) has reported that from 2003 to 2007, passenger automobile fatalities occurred at rate of 0.87 per 100 million passenger miles. In other words, one is 29 times more likely to die from using an automobile for travel than when using heavy rail public transportation. Furthermore, in its final report, the Congressionally created National Surface Transportation Policy and Revenue Study Commission indicated that highway travel accounts for 94 percent of all fatalities and 99 percent of injuries on the Nation's surface transportation system. This data clearly indicates the public's trust is not misplaced -- public transit is among the safest methods of transportation available to travelers. Numbers and statistics aside, nothing is infallible. Therefore, APTA and its members remain vigilant, continuing our commitment to advancing transit safety and promoting the safe operation of rail transit systems.

## **APTA AND SAFETY STANDARDS**

For decades, APTA has been the leading force in developing safety programs and standards for public transportation operations, maintenance, and procurement. In the 1980's, APTA was asked by the U.S. rail transit industry and the FTA's predecessor, the Urban Mass Transit Administration (UMTA) to develop a standardized program for rail transit safety, which we established under the auspices of the Rail Safety Review Board. APTA's commitment to safety is the basis for our Standards Development Program. Initiated in

1996, this program currently includes standards for rail transit, commuter rail, bus operations, procurement, intelligent communications interface, and security. Our organization has been designated as a Standards Development Organization (SDO) by the U.S. Department of Transportation and is funded, in part, through grants provided by the FTA.

Congress has also officially recognized the importance of promoting voluntary industry-based standards as a way of creating uniformity within the legal and regulatory structure of the United States. The National Technology Transfer and Advancement Act of 2005 (P.L. 104-113) encourages government agencies to work together with industry leaders to develop private, voluntary safety standards for federal grantees. APTA has answered this call by working together with the Federal Railroad Administration (FRA), the FTA and other federal agencies, public transit systems, academics, and a variety of outside experts to develop a wide-range of industry safety standards.

As an official SDO, APTA is required to adhere to policies specified by the American National Standards Institute (ANSI), an organization which serves as the administrator and coordinator of private sector voluntary standardization systems. Partnerships with other SDO's such as the American Society of Mechanical Engineers (ASME), the Institute of Electrical and Electronics Engineers (IEEE) and the American Rail Engineering and Maintenance of Way Association (AREMA), as well as a wide range of experts in the fields of transit system operation, car manufacturers, vehicle operations management, technical consultants, safety professional and government representatives, has allowed APTA to create and implement 170 consensus based standards providing the tools necessary for designing safe and efficient transit systems. Routine maintenance of these standards is required, with procedures in place to guarantee reviews are conducted on an ongoing basis to allow for necessary updates and amendments.

Of APTA's 170 rail standards, the categories applicable to heavy rail transit, such as the system operated by the Washington Metro Area Transit Authority (WMATA), include: Vehicle Inspection and Maintenance, Operating Practices, Fixed Structures Inspection and Maintenance, and Signals and Communications Inspection and Maintenance. The Heavy Rail Crashworthiness Standard, developed by the ASME in collaboration with APTA, highlights our vigorous and highly technical standards process. Released in 2008 after 5 years of development, the intent of this standard is to ensure that all occupants in rail cars are provided with an improved level of protection. The standard was developed using modern-day approaches to crashworthiness, including the application of the "Crash Energy Management" (CEM) concept, a method of vehicle structure design and manufacture that specifies certain sections of the car body that should absorb a portion of the energy of a collision by collapsing in a controlled manner. The application of CEM results in a vehicle design that absorbs energy at the point of impact while preserving occupant space within the vehicle and keeping the vehicle aligned on the track without override between cars. In addition to heavy rail crashworthiness standards, APTA has also worked to establish crashworthiness standards for light rail vehicles, collaborating again with ASME using funds provided by the Transportation Research Board, an organization affiliated with the National Academies.

It should be noted that APTA, ASME and other related contemporary standards applying to vehicle structures were not available for older vehicle designs. Vehicles designed and manufactured prior to the advent of such standards used best practices known at the time. Despite an absence of standards, common industry-based practices were still widely available and commonly applied. As technology advanced and new computer simulation tools became available, new standards were developed that enhanced the safety and

efficiency of transportation systems. The development of APTA's vigorous safety standards program highlights the industry's steadfast commitment to not only maintaining, but advancing the safety of public transportation, making a real difference to the management and operations of transit organizations around the world.

## **TRAIN CONTROL SYSTEMS**

The underlying structure of the train control system used by WMATA has a proven record of safe performance for many years. This fundamental safety system technology also provides safe and effective service in other major cities such as Boston, Atlanta, Baltimore, Miami, Philadelphia and San Francisco.

These train control systems are simple in concept, but complex in implementation and reflect the significant technological advances in hardware and software applications. Rapid transit train control systems are comprised of 3 main elements that control train movement, enforce train safety and direct train operations. The first element is Train Protection, which is used by most systems around the world to prevent collisions. The train control system is mechanized through the deployment of track circuits which detect the presence of trains and communicate indications of occupancy to the wayside logic system. The wayside logic system in turn issues speed commands to following trains. The Train Protection system used by WMATA is automatic. The second element is Train Operation. The train operation system provides for the operation of trains in accordance with the parameters defined by the Automatic Train Protection system, and other operating parameters such as station stops. Many systems, such as WMATA, can employ this system either manually or automatically. The final element of a rapid transit train control system is Train Supervision. Train supervision provides for overall system management and is generally mechanized in a central control location where trains are monitored, dispatched and routed throughout the network. Some train supervision functions are operated manually, while others are automatic.

## **CONCLUSION**

I once again thank the subcommittee for holding this hearing and for allowing me to share APTA's views today. Our members represent safe and reliable systems and are committed to ensuring the safety of all transit systems across the world. We urge the subcommittee to continue working with WMATA, the FTA, the NTSB and all involved parties to ensure a thorough investigation is completed and we stand ready to provide any technical expertise you may need. With that, I would be pleased to answer questions.