

Transit Responds to Te

Following aircraft attacks on the World Trade Center and the Pentagon, attention was rightly trained on the security of aviation systems. But did this focus leave public transportation systems vulnerable? Think Madrid, March 2004.

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On September 11, 2001, terrorists turned commercial aircraft into missiles and directed them towards high-rise and federal buildings, striking the World Trade Center and the Pentagon. After this tragic event, Congress focused its attention on airport security, and for good reason, because the attacks happened via the aviation system. But the nation's public transportation system did not receive an equivalent amount of attention, although transit systems are also highly vulnerable to terrorist acts.

Unfortunately, acts of terrorism are not new to public transit systems. The United Kingdom has had a long-running battle with the Irish Republican Army's (IRA) terrorist campaign against public transportation, and Israel continues to feel the effects of Palestinian suicide bombings on its transit system. On American soil, a passenger train was derailed in Arizona in 1995 by an organization referring to itself as the "Sons of Gestapo." Also in 1995, members of a Japanese cult called Aum Shinri Kyo released sarin, a colorless, odorless, and lethal gas, in and around Tokyo's busiest subway stations. The incident destroyed Japan's long-cherished sense of a safe, crime-free society, and the nation still feels the effects of this event. This was the first large-scale act of terrorism involving chemical weapons, and it increased concerns worldwide about terrorists using chemical weapons.

A more recent example was the bombing of four packed commuter trains in Spain in March 2004. Ten nearly simultaneous explosions were timed to coincide with the morning rush-hour commute. The bombs were placed in backpacks and left unattended on trains and tracks at three train sta-

tions in Madrid. Described as the worst terrorist attack in modern Spanish history, the explosions left nearly 200 people dead and more than 1,400 wounded.

While terrorist attacks on transit systems are not a regular occurrence in America, they have increased across the globe over the past 25 years, and bus and rail systems in particular are becoming primary targets. Transit systems, buses in particular, were the primary targets, and America's transit system is vulnerable.

Before 2001, most transit agencies already had emergency management plans in place, conducted drills regularly, and, in general, considered themselves prepared for emergencies. As such, safety and security were often overlooked in transit project planning. Transit planning security was usually equated with violence or the fear of violence that could affect a rider's decision to use transit. In the opinion of many transit officials, the primary responsibility for security lay with local law

enforcement. Transit planning focused on hazard reduction and emergency management plans, and few improvement projects were allotted for issues related to security.

Terrorism and Vulnerability

Vulnerability exists when the readiness to avoid and respond to terrorists does not. The ability to react consists of catastrophe readiness and emergency management. But this only accounts for the responsive element of readiness. Prevention is the essential co-equivalent.

Several characteristics of transit systems make them vulnerable to terrorist acts.

Public transportation systems are naturally open, accessible, and part of the community.

Transit vehicles travel in predictable paths at predictable times.

Unlike the airline industry, there is not typically a single point of egress and access.

On average, America's public trans-



Trimet's Westside Metropolitan Area Express (MAX) line has a portion of its tracks constructed in a tunnel through Portland's West Hills neighborhood. The agency has adopted numerous new safety measures.

terrorism

portation system carries nine billion passengers annually, compared to 700 million annual air travelers.

The chronology of recent terrorist acts against public transportation systems indicates that terrorists consider transit a killing field.

For those intent on killing in quantity and willing to kill arbitrarily, transit provides the perfect target. Transit passengers are strangers, providing terrorists anonymity and an easy getaway.

Additionally, it is widely believed that future terrorist attacks will not utilize the same tactics used on September 11. According to Anthony Kordsman, a terrorism expert at the Center for Strategic and International Studies in Washington, DC, "the next time they attack, they will not be using aircraft. The likelihood is they will use a different weapon, something to break up the predictability. It could be mass transit or it could be public utilities, historic sites, or the media. Tightening security in one area will tend to push terrorists in other directions, but one act of mass terrorism does not predict the next occurrence." Nearly one out of three of the world's terrorist attacks are aimed at public transportation facilities, due to the vast number of transit stops and stations, easy access to the facilities, and the enormous length of tracks in rail systems.

Certain aspects of transit systems make them both vulnerable and difficult to secure. The high ridership of some transit agencies makes them attractive targets for terrorists, but also makes certain security measures, such as metal detectors, unfeasible. Transit must continue to be readily accessible, convenient, and inexpensive. While security measures such as X-ray machines, explosives sniffing dogs, searches by hand, and armed guards have established themselves as standard features at airports, these measures are not easily transferred to transit stops and would only result in long delays at enormous costs. These features only begin to explain why it is crucial that public transportation systems be better protected.

In analyzing the vulnerability reduction measures taken by the Federal Transit Administration (FTA), of the United States Department of Transportation (USDOT) and several transit agencies, it is important to note that no security measure will completely prevent terrorism from occurring in public places. However, good security systems can increase the difficulty of terrorist operations, increase the likelihood of terrorists being detected, minimize injuries and loss of life, decrease panic, and calm riders during times of panic. Good security measures displace the vulnerability, forcing would-be terrorists toward targets that are still at risk, but less lucrative, in which their acts are less likely to result in loss of life. Only by comprehending the threat are we able to establish security measures that work.

Post-9/11 Measures

Before September 11, the FTA had limited authority to govern transit security. After the tragic events of September 11, Congress passed the Aviation and Transportation Security Act, which created the Transportation Security Administration (TSA), an organization also within the USDOT. Congress granted this new organization responsibility for transit security. However, the TSA has not yet assumed complete responsibility for the security of any mode of transportation, except aviation. For this reason, the TSA and the FTA are currently establishing a memorandum of understanding to identify each organization's function in overseeing and regulating transit security.

The FTA has taken the lead and launched an ambitious five-part security initiative to improve the security of America's public transportation systems and help agencies that oversee them address these newly highlighted threats. The FTA identified four keys to terrorism prevention:

1. Training and awareness of decision-makers
2. Regular communication with emergency agencies

3. Constant drilling
4. Communication with the public

As the FTA considered numerous measures to improve public transportation security, it realized that the resulting actions must ensure that three needs are maintained: security, personal mobility, and preservation of economic vitality. With these three needs in mind, the FTA began a five-part security initiative to improve public transportation security:

1. Immediately after the attacks on the Pentagon and World Trade Center, the FTA sent expert security evaluation teams to 36 of the nation's largest transit agencies. These teams used proven threat and vulnerability assessment tactics to assess the vulnerability of each agency. Several of these agencies had conducted assessments before September 11. Included in each assessment was an evaluation of the agency's emergency response plans and the coordination of these plans with local fire, police, and other emergency response agencies. It is widely believed throughout the FTA that the most cost-effective example of enhanced security in the transit industry is establishing relationships between local police and fire departments, the mayor's office, and the transit agency. This would allow them to work together comfortably, develop a plan, and gather the resources to carry out that plan. Several transit agency managers that had utilized this suggestion have said, "Hey, the first six months, we all got around the table and defended our turf, and once we got

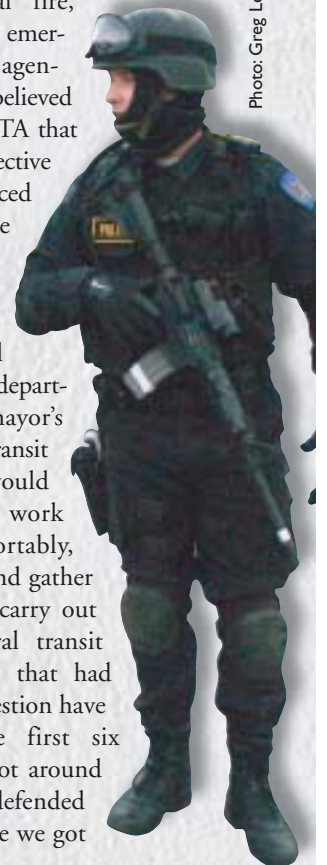


Photo: Greg Leaman



TriMet's system serves 574 sq. mi. in Oregon's Multnomah, Clackamas, and Washington counties. Eighty TriMet security patrols are used throughout the system to provide safety and security for its patrons.

to know each other and trusted each other and got down to business, we developed the partnership that is critical in order to assure as much as possible the safety of the traveling public."

2. As a result of the FTA's findings from these 36 assessments, the administration sent emergency response and assistance teams to 60 of the nation's transit agencies to help them create and update their emergency response plans, creating agency-specific procedures to respond to varying Department of Homeland Security threat levels, provide analysis of training needs, and create agency-specific security awareness documents for employees and patrons. The 60 agencies were selected with FBI assistance based on intelligence information on threats and vulnerabilities.

3. The FTA awarded federal grants of up to \$50,000 to 83 transit agencies for drills by emergency services and agencies. The goal of these drills is to test and enhance their emergency preparedness.

4. The FTA has accelerated the testing of the "PROTECT" system. PROTECT is a chemical detection system used in subway systems.

5. The FTA has also facilitated a new two-day security awareness course for transit employees and supervisors nation-

wide. These forums promote coordination among transit and local fire, police, and medical service providers. As of March 2004, 125 transit agencies have participated in these forums held in ten locations nationwide.

While many transit agencies have made great improvements in enhancing security and emergency readiness, the FTA stresses that there is still much more to do. Through the FTA's vulnerability assessments, the agency identified a list of "Top 20 Security Program Action Items for Transit Agencies" and is working with transit agencies to encourage them to utilize those measures in their programs. (See box.)

Perhaps the most critical component of these 20 action items is the development of public awareness materials. As transit agencies in New York and Washington, DC, learned on September 11, there is no replacement for security awareness and emergency preparedness. Because the nation's transit systems are naturally open and accessible, we must depend on and cultivate the capabilities of passengers and front-line transit employees to deter, detect, mitigate, and respond to security threats. Passengers and front-line employees are the "eyes and ears" of the transit industry's most important security systems because they are in the ideal position to notice suspicious packages, substances, and behavior. For them to acquire the skills in what to look for and how to respond, the FTA established the "Transit Watch" program. Similar to the "Neighborhood Watch" program, Transit Watch encourages the active participation of riders and front-line employees in looking for suspicious activities and reporting them to transit and police authorities. This forces the open nature of transit systems, previously identified as a liability, to become an asset by using the ongoing presence of riders and employees who are familiar with their environment and are on a heightened level of security awareness.

Programs in Place

Before September 11, major transit agencies such as New York City Transit, Washington Metropolitan Area Transit Authority, and San Francisco's Bay Area

Rapid Transit had several programs in place to deal with emergencies, including:

- Regular drills
- Established communication lines with emergency providers such as local police and fire departments
- System safety and security programs
- Redundant communications networks
- Yearly counter-terrorism and explosive incident education
- Federally sponsored employee training specifically aimed at the potential use of nuclear, biological, and chemical weapons
- Closed circuit television and intrusion alarms

The attacks on September 11 uncovered a new dimension of potential acts of terrorism that prompted transit agencies to take steps to provide additional safety and security for their systems. A good example of the new safety measures adopted by major agencies are those taken by the Tri County Metropolitan Transportation District of Oregon (TriMet).

TriMet was established in 1969 after the previous transit provider, Rose City Transit, went bankrupt. TriMet serves a population of 1.3 million and covers an area of 574 sq mi of the urban portions of Multnomah, Washington, and Clackamas counties. The system consists of 665 buses serving 8,100 bus stops along 100 different bus routes and 78 Metropolitan Area Express (MAX) trains serving 54 MAX stations along 38 miles of track. The 15-mile Eastside MAX line opened in 1986, running from downtown Portland to Gresham. The 18-mile Westside MAX line opened in 1998, stretching between downtown Portland and Hillsboro. Ironically enough, September 10, 2001, was the day Tri-Met celebrated the opening of its third light rail MAX extension, the 5.5-mi Airport MAX line, with service from downtown Portland to Portland International Airport (PDX). The celebration was short-lived, however, as the tragic events unfolded the next day.

Before September 11, TriMet believed it had a state-of-the-art emergency plan in place. The Westside MAX

line was among the first of its kind, with a portion of its tracks constructed in a tunnel through Portland's West Hills neighborhood. CCTV's were installed along this rail line, and TriMet conducted several emergency response drills in the event of a fire in the tunnel.

After September 11, there were immediate concerns that the Airport MAX terminus was located in such close proximity to the terminal. The Federal Aviation Administration (FAA) immediately requested that no train ever be left unattended at PDX. The following changes also became part of the security protocol of TriMet facilities at PDX:

- TriMet security staff patrol the PDX station during all hours of operation.
- MAX trains are now swept for any belongings left behind. Anything found is turned over to airport police.
- CCTV cameras were installed at the PDX station to deter terrorist acts and provide evidence if there is an occurrence.

Not only was security enhanced at PDX, but the whole system was reassessed. Because of its efforts in preparing for the 2002 Winter Olympics, Utah was the first state in which the FTA deployed a security assessment team. Shortly after Utah, TriMet became one of the remaining 35 transit agencies to which the FTA deployed assessment teams. TriMet received a \$50,000 grant award to help fund the following improvements to its security system:

- CCTV cameras were installed on all 78 MAX trains, approximately half of the bus fleet, and all MAX stations with elevators. Cameras were also installed at the Gresham, Sunset, and Hillsboro parking garages, and are currently being installed at the Lloyd Center, Rose Quarter, and Skidmore Fountain MAX stations.
- Eighty TriMet security patrols are used throughout the system to provide a presence of safety and security.
- In addition, TriMet contracts with Wackenhut, Inc., a security service that deploys its patrols at the airport MAX station to ensure that all MAX vehicles destined for the airport are

free of suspicious packages. This agency also provides security services at TriMet's Park & Ride lots and other facilities.

- TriMet also contracts with the "Northeast Coalition of Neighborhoods." This organization provides six Rider Advocates along north and northeast Portland bus routes and MAX trains. Their presence is intended to deter disruptive behavior, and they are equipped with radios to call for help if needed. TriMet is the first transit agency in America to utilize such a program.
- Approximately 20 fare inspectors throughout the system provide an additional presence to deter disruptive behavior. To help maintain the safety of the system, TriMet has increased the penalty for fare evasion from \$77 to \$250.
- TriMet also utilizes police departmental review of all new transit projects such as Interstate MAX, a 5.8-mile extension currently under construction, and Park & Ride facilities, to ensure rider safety. Police analyze lighting, fencing, and other related measures to ensure safety at bus stops and MAX stations.
- TriMet was one of the first transit providers in America to utilize a satellite-aided, computer controlled bus dispatch system. With this system, each bus can be located anywhere along its route with an accuracy of approximately 30 ft.
- TriMet conducts regular multi-jurisdictional drills with Portland Police and Fire Bureaus as well as local emergency providers.
- TriMet has attended several vulnerability/security conferences and in general takes advantage of every opportunity to improve the security of its system.
- Additional security measures were incorporated into the design of the Interstate MAX line.

Conclusion

On September 11, 2001, America entered a new era in transportation history, in which one of the nation's most prized freedoms—that of mobility—has

been challenged. The tragic events that occurred on that day drove home the vulnerability of America's transit systems. While many agencies in the cities directly impacted by the terrorist attacks were prepared and responded heroically, the vulnerability of the transit system in general was exposed. The resulting vulnerability assessments have produced much safer transit systems throughout the world. General Douglas MacArthur once said "all disasters are explained in two words: 'too late.'" Before September 11, quality of service may have been the biggest measure of a transit agency's success. In a post-September 11 world, however, the new measure of an agency's service may be how quickly it can respond to an emergency and not be "too late." **GE**

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The Top 20

"The Top 20 Security Program Action Items for Transit Agencies" (January 2003) contains measures recommended by the Federal Transit Administration for immediate consideration and implementation by transit agencies to improve both security and emergency preparedness. The goal of this program is to ensure that the nation's public transportation systems:

1. Are prepared for and well-protected against attacks.
2. Respond rapidly and effectively to natural and human-caused threats and disasters.
3. Appropriately support the needs of emergency management and public safety agencies.
4. Can be quickly and efficiently restored to full capability.

You will find a significant amount of information on transit security and emergency preparedness at [http://transit-safety-volpe.dot.gov/security/Security Initiatives/Top20/default.asp](http://transit-safety-volpe.dot.gov/security/Security%20Initiatives/Top20/default.asp).