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On the Role of Intercity Passenger Rail During National Emergencies

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Subcommittee on Railroads, Pipelines, and Hazardous Materials
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New Orleans Union Passenger Terminal

Chairwoman Brown, Representative Shuster, and members of the committee, it is an honor to testify today on the use of intercity rail to improve disaster response.

There are at least 70 million people in the US today with limited or no access to personal vehicles. These include elderly, low-income, and disabled persons. In cities with populations greater than 250,000, the number of people that do not own a vehicle can be significant. For example, in New York City, 56% of households do not own vehicles. In pre-Katrina New Orleans, an estimated 27% of households did not own a vehicle. Hurricane Katrina, as well as the events of 9/11, highlighted the importance of identifying these transportation-disadvantaged populations and bringing them to safety.

Our company, Innovative Emergency Management (IEM), has a unique perspective on this topic. We have 22 years of experience in disaster preparedness, and have worked in over 40 states developing, reviewing, exercising, and improving response plans. We supported FEMA in developing the initial 2007 Federal Support Plan for Louisiana Hurricane Evacuation, which involved the use of Amtrak, and we helped create the Louisiana Department of Transportation and Development's plans for providing evacuation assistance to the state's transportation-disadvantaged and special needs populations. Through ongoing contracts with FEMA, IEM is supporting historic catastrophic planning initiatives in the eight-state New Madrid Seismic Zone and in Florida. This includes mass evacuation planning and a companion project that is developing plans to support evacuee reception and care in host cities in the states of Arkansas, Georgia, Oklahoma, Tennessee, and Texas. In addition, IEM has more than 15 years of experience supporting emergency preparedness and response planning—including evacuation—for the eight chemical weapons stockpile sites in the U.S.

Guided by these and other experiences, my testimony focuses on some of the key factors that must be considered in developing workable, effective plans for using passenger rail to improve mass evacuation during a national emergency.

Employ a Comprehensive Planning Approach

Clearly, rail is an attractive option for evacuating the transportation-disadvantaged and other populations during an emergency, because of its capacity levels as well as its ability to reduce traffic on roadways.

Roadways can quickly become gridlocked when large numbers of people are trying to evacuate. In 1999, the evacuation of Charleston, South Carolina, from Hurricane Floyd created a traffic jam extending more than 100 miles. A similar situation occurred in Texas as 2.5 million people evacuated by car from the threat of Hurricane Rita. Reports showed that in some instances it took 15 hours to travel 90 miles. In Hurricane Katrina, evacuees reported that the trip from New Orleans to Baton Rouge took as long as 12 hours, when it normally takes one hour.

During times of emergency, passenger trains, such as Amtrak, and light rail trains can transport up to 200 people per car. An eight-car train would be able to evacuate 1,600 people per trip. Prior to Hurricane Rita, Galveston evacuated approximately 3,200 people on 100 buses. Had eight-car passenger trains been employed, this same number of people could have been

evacuated in only two trips, freeing up 100 buses that could be used to help transport supplies or additional evacuees.

However, simply having the capacity to evacuate thousands of transportation-disadvantaged people from a city via rail does not equal a successful evacuation. There are a significant number of considerations that all must be addressed in order to develop a workable plan for transporting people out of a city via railways. Some of these issues are listed below, and will be discussed in more detail later in the testimony.

- To ensure that plans are fully integrated and coordinated, and that roles and responsibilities are clear, understood, and accepted, all key decision-makers from each level of government and relevant non-governmental agencies must be involved in the planning process.
- The plan must identify personnel and resources for registering evacuees at the rail station, for operating and staffing the trains, and for providing security for evacuees on the train (if personnel will be different from daily staff on duty). Because rail systems typically operate with limited personnel, we cannot expect that there will be a supply of people ready and available to run the trains during an emergency. The response to Hurricane Katrina showed how difficult it can be to acquire personnel resources during a disaster, both because of difficulty locating people during a disaster and because of the role conflicts that many will experience when their families are in danger and they also have a professional responsibility to perform.
- The plan must include procuring resources for care and feeding of evacuees on the train.
- The plan must account for the re-allocation and prioritization of commuter rail tracks during a disaster to support both freight and passengers. Likewise, if tracks are used by multiple agencies, there must be an understanding of prioritization of use before the disaster strikes. If old tracks are to be used, the plan must ensure that they are inspected prior to use.
- The Federal Transit Administration and Federal Rail Administration recommend restricting train usage when winds exceed established safety levels. As a result, hurricane-related plans must ensure that evacuations are completed before winds reach this level. This will likely require a phased evacuation.
- In some areas, there may be only one track going in one direction, so a single train breakdown can bring the whole system to a halt. Additionally, a freight train may travel into the evacuation route and impede the evacuation. There must be contingency plans in place to address these scenarios. Where possible, planning should include routes with multiple tracks.
- Many rail agencies are concerned about transporting special needs populations, and their policies may prohibit transport of pets other than service animals. These concerns must be discussed and resolved during the planning process.
- Plans must contain procedures for dealing with “unique populations” such as registered offenders who may require transport.

- The plan must address means of getting the transportation-disadvantaged to the train station for evacuation, as well as sources of transport for evacuees once they reach the host city's train station. Specific means of transport, as well as drivers, must be identified and ready. Pick-up points must be established and communicated, and routes and timelines must be planned and coordinated to avoid roadways clogged with self-evacuees driving personal vehicles.

Integrate Evacuation and Sheltering

If evacuees transported by rail are left stranded in an unfamiliar host city, even though they are out of harm's way, the goal of protecting them has not been accomplished. In most response planning, the Emergency Support Functions for Transportation and Sheltering are addressed separately. But when accomplishing a mass evacuation of people using public transportation, these two functions and their associated plans must be closely integrated to ensure that evacuees are cared for when they reach their destination. One example of a group that is focused on this type of coordination is the National Sheltering System.

Based on disaster case studies, planners assume that only 10% of evacuees driving personal vehicles will require public sheltering. Most people will stay with relatives or friends. However, it is safe to assume that 100% of transportation-disadvantaged individuals will require sheltering. Planners must coordinate with local, state, and federal personnel in the host city to ensure sufficient shelter capacity and that transport will be available to take evacuees to shelter locations from the rail station once they arrive. It is especially critical to communicate with local officials in the host cities as they are the ones responsible for taking in and caring for the evacuees. It is possible that evacuees may need to be transported to multiple host cities along the rail route to accommodate the large volume of people.

Developing a single, integrated plan for mass evacuation via rail that contains clear roles and responsibilities for each jurisdiction, the agencies within those jurisdictions, and all rail operators involved can address these concerns. In addition to ensuring that evacuees are received and brought to shelters, this integration ensures that a state can track the location of evacuees, so they can be provided with key information about reunification with family members and about when and how they can return home.

Develop and Implement a Strong Outreach Plan

Once a transportation plan using rail has been developed, a strong public outreach campaign is necessary to link the plan to the transportation-disadvantaged population. People can only be part of the solution if they know what is required of them and are ready to take the appropriate actions to be transported to safety.

Through the outreach campaign, specific, meaningful messages must be created and communicated to the target audience so that they are armed with basic information about what to do when an evacuation is required. This information should include:

- How they will be evacuated

- Where they should go to be picked up for transport to the rail station, and how they will be alerted when it is time to do so
- Where the train will take them
- How they will be returned home once it is deemed safe
- What can and cannot be brought aboard the train

The transportation-disadvantaged population within any community will be made up of different types of people and groups, including elderly, low-income, and disabled individuals. Messages must be created specifically for each group and distributed through channels unique to each group. Grass roots campaigns utilizing multiple languages can be an effective means of reaching these groups. Additionally, due to compliance with the Americans with Disabilities Act, public transit systems have established multiple methods for communicating information to their public customers. Officials can take advantage of these existing channels to distribute evacuation information to the transportation-disadvantaged population—one of the largest users of public transportation. Other mechanisms could include public service announcements, integration with the 2-1-1 telephone system, and participation in community meetings. It is important that these messages be integrated with those being promulgated by area cities, states, and regional governments to ensure consistency and avoid confusion.

To ensure that the outreach campaign is achieving its intended goals, focused, science-based surveys should be developed and conducted to capture the perceptions, attitudes, and level of understanding of the target audience. As an example, FEMA's Chemical Stockpile Emergency Preparedness Program has been conducting public outreach to communities surrounding chemical weapon stockpile sites for more than a decade. These communities include a large contingent of low-income, minority individuals, similar to those who make up the transportation-disadvantaged population. The outreach is designed to educate the population about what they must do to protect themselves when they hear a siren that indicates a chemical emergency. Targeted outreach has been conducted for the last decade, with professional surveys conducted on a consistent basis to measure the effectiveness of the campaign.

Through this program, FEMA has found that it takes five to six years and millions of dollars to sufficiently educate the audience so that they know what actions to take during an emergency and are prepared to do so. For a mass evacuation using rail to be successful, this same level of sustained outreach to the transportation-disadvantaged population will be crucial.

Apply a Scenario-Based Planning Process

Comprehensive planning for catastrophic response is daunting, but not impossible. What is needed is a method that facilitates collaborative planning and relationship-building among responders and officials at all levels of government, all stakeholder agencies, and among personnel from neighboring states who will receive and shelter evacuees.

A scenario-based planning approach, such as the one employed by FEMA's catastrophic planning process, represents one solution to this challenge. This method is being used to develop catastrophic plans for the eight-state New Madrid Seismic Zone and the State of Florida. For each of these projects, hundreds of federal, state, and local personnel—both planners and

operational personnel—are presented with the consequences of a catastrophic disaster within a scenario-based workshop environment. Personnel from different jurisdictions are divided into groups to begin tackling the operational complexities involved in addressing key response and recovery results. The focus is on operational concerns, interagency coordination, and initiating dialogue between the many different stakeholders involved.

Recognizing that evacuee support is integral to the success of catastrophic planning, FEMA also launched a separate project to address this topic. Scenario-based planning workshops are being conducted with the states of Arkansas, Georgia, Oklahoma, Tennessee, and Texas, to develop plans for transporting, receiving, and sheltering evacuees from potential disasters in states bordering the Gulf of Mexico. Based on this model, they are also developing planning guidance for producing evacuee support plans in the rest of the nation.

This project is tackling many of the specific challenges to rail transport described in this testimony. In addition, it is addressing medical transport, special needs transport, evacuation of pets, and reunification. Interagency agreements are being developed between states, federal agencies, rail companies, and bus companies in advance of a disaster, and stakeholders from federal, state, local, the National Sheltering System, and other non-governmental organizations are closely involved.

Other state and regional projects have also used this method. For example, after Hurricane Katrina, the Warm Cell at the Louisiana Joint Field Office in Baton Rouge used it to develop and refine the 2007 Federal Support Plan for Louisiana Hurricane Evacuation, which integrated the New Orleans city plan with Louisiana's state plan and the Jefferson parish plan. Based on IEM's experience with this effort, bringing all participants together to discuss and resolve planning issues brought creative resolutions to problems and produced greater results than previous efforts that relied on other planning methods.

The scenario-based workshop methodology encourages collaboration and focus on developing plans that address the catastrophic consequences presented. Working together, participants identify response actions to be taken as well as available resources needed to support these actions. In the case of a rail transportation plan, officials can work together to determine, for example, whether there are enough trains and enough track to evacuate the target population, where they will find the drivers, whether there are enough shelters in the host cities, and how much food and water will be needed for evacuees on the train.

In scenario-based workshops, participants have shown that they are committed to producing results. The disaster becomes real for participants at all levels and encourages them to cut through conflicting priorities, turf issues, and resource concerns and focus on meaningful results.

In concert with the scenario-based planning process, modeling and simulation technology can be a sophisticated option for measuring the effectiveness of plans developed in the workshops, as well as any proposed improvements. It can be especially useful in studying social and traffic patterns after an evacuation order has been issued to see how quickly the transportation disadvantaged can get to the train station and be evacuated. This can play a key role in ensuring that the rail transportation plan developed accomplishes the necessary results.

Conclusion

Intercity passenger rail can be an effective solution to mass evacuation, in conjunction with other transportation systems, such as bus systems, barges, ferries, and airlines. As such, it must be considered as a component of large-scale disaster plans. In some disasters, if roads and airport runways are unusable, rail may be the only option for transportation of people and supplies.

However, for this planning to be effective, it is critical that all stakeholders be involved in the plan development and evaluation process and that all challenges to successful rail evacuation be carefully considered and addressed. A consistent, long-term public outreach campaign must be implemented to ensure that transportation-disadvantaged individuals know what to do when a disaster occurs, and evacuation and sheltering must be integrated to ensure that evacuees are cared for upon arrival in host cities. Scenario-based planning is a proven method for developing collaborative plans that address these and other concerns.

Finally, evacuation is more than just a standard logistics challenge or commodity-distribution problem. It's about people, our most precious national commodity, and we cannot forget that. Through proper planning that addresses the full spectrum of human needs, we can ensure that those being evacuated will be treated with the respect and dignity they deserve during a time of uncertainty and chaos.