

# ***Emergency Preparedness Task Force***



***Passenger Safety Working Group***

*February 20, 2008*



# Final Rule on Passenger Train Emergency Systems

# *Final Rule*



- Emergency Window Exits
- Rescue Access Windows
- Emergency Communications
- Emergency Roof Access
- Inspection and Repair of Emergency Systems

# *Compliance Timeline – All Equipment*



- April 1, 2008
  - Rescue access windows - number, location, and ease of operability (except certain single level cars)
  - Emergency window exits - instructions taking into account any fixtures that may hinder removal
  - Back-up power for PA and intercom systems, if so equipped
  - Daily inspection of rescue access markings; notification to train crew of inoperative doors; PA and intercom systems, if so equipped
  - Periodic inspection of roof access markings, if so equipped

# *Compliance Timeline – All Equipment*



- August 1, 2009
  - Emergency window exits in non-main levels of multi-level cars
  - Number and location of rescue access windows in single-level cars equipped with certain door safety features
- April 1, 2010
  - Intercom markings and instructions, if so equipped (already required on Tier II)
- January 1, 2012
  - Public address system (already required on Tier II)

# *Additional Requirements for New Equipment*



- Equipment ordered on or after April 1, 2008 or placed in service for the first time on or after April 1, 2010
  - PA systems including capability to communicate to those in the vicinity of the train
  - Intercom systems for Tier I equipment (currently required on Tier II)

# *Additional Requirements for New Equipment*



- Equipment ordered on or after April 1, 2009 or placed in service for the first time on or after April 1, 2011
  - Dimensions for rescue access windows
  - Emergency roof access for passenger cars and Tier II power cars (other Tier II equipment must comply with 1999 standards)



# Follow-Up Notice of Proposed Rulemaking on Passenger Train Emergency Systems



# *Emergency Systems NPRM II*



- Modify Part 238:
  - Require removable panels / windows in vestibule doors for new passenger cars
  - Clarify that new passenger cars must have at least 2 exterior side doors, one on each side
  - Incorporate by Reference APTA Emergency System Standards:
    - Emergency Lighting
    - Low-Location Exit Path Markings
    - Signage for Emergency Egress / Access

# *Emergency Systems NPRM II*



- Consolidate door requirements in §§ 238.235, 238.439, and 239.107
- Move requirements for emergency window exits from § 239.107 to § 238.113
  - Markings
  - Testing and maintenance & associated records
- Revise Part 239 to explicitly address train crew participation in debrief and critique sessions



# Doors

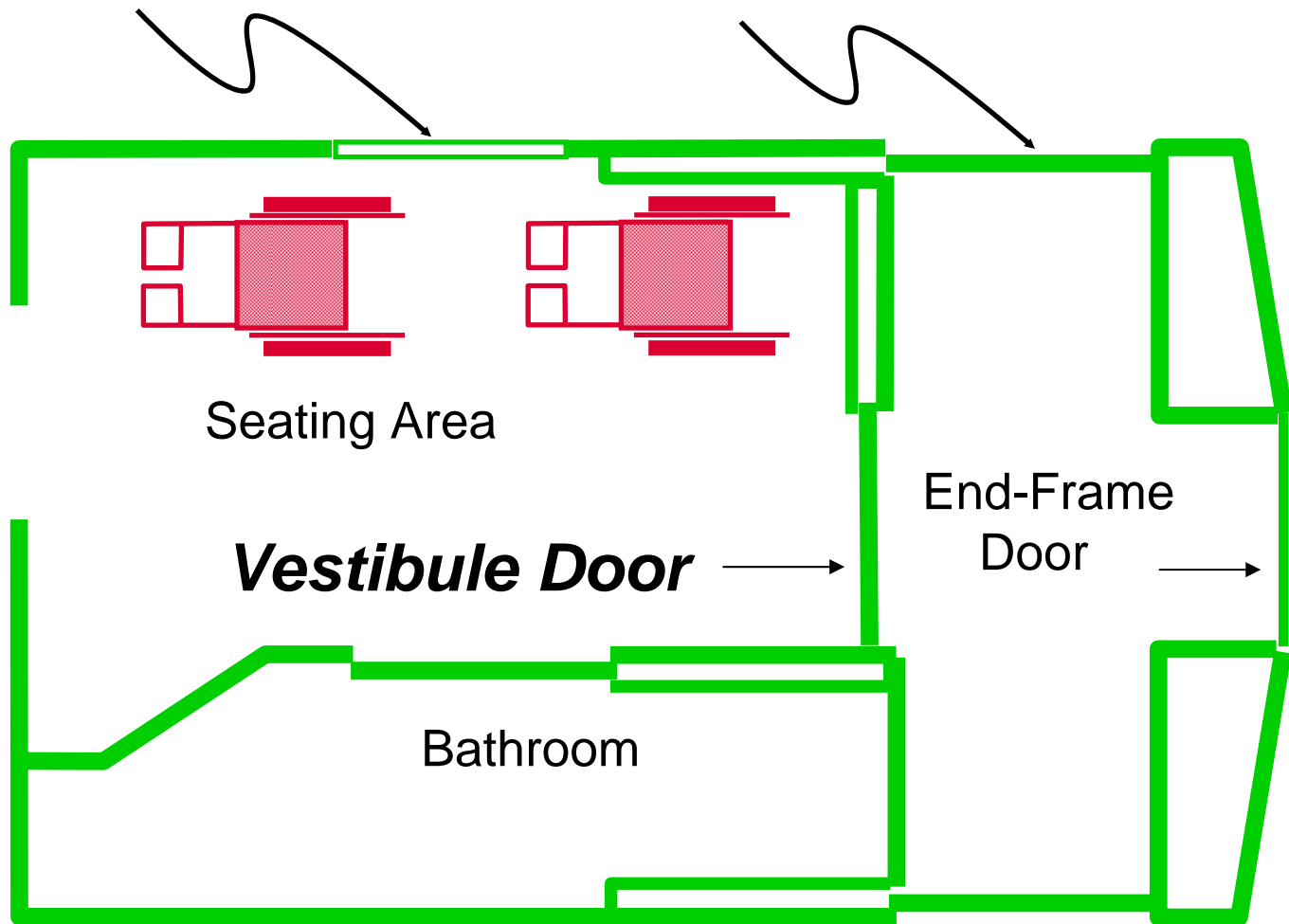
# *Vestibule Doors*



- New equipment - Except doors providing access to control compartment
- To gain access from the seating area to the exterior doors in the vestibule
- Bi-parting doors - manual override device and retention mechanism for each door leaf

Rescue Access and Emergency  
Egress Window

Door



**Example of car end with a vestibule door**



# APTA PRESS Emergency Egress System Standards

# *APTA: Emergency Lighting*



- All passenger cars must comply with minimum light levels by 2015
- New cars must have an independent power source, located no more than a half-car length away from the fixture it powers in the event the main car battery is not able to power the system

# *APTA: Signage*



- Emergency exit signage / photoluminescent markings enable occupants to identify, reach and operate emergency exits, especially in conditions of darkness
  - Doors
  - Emergency window exits
- Rescue access signage and retroreflective markings enable emergency responders to readily identify such locations and gain access into the cars
  - Side doors
  - Rescue access windows
  - Roof access locations



# *APTA: Low-Location Exit Path Marking*



- Conspicuous identification of primary exit path under conditions of darkness and/or smoke – no higher than 18 in. off floor
- Electrically powered or High-Performance Photoluminescent markings
- Capable of operating independently of the car's normal and emergency lighting systems for 1.5 hours



# Debriefing and Critique

# *Debriefing and Critique*



- Consider revising § 239.105 *Debriefing and critique* to clarify that train crewmembers should participate in the debrief and critique session held following a train emergency situation or a full-scale simulation
- Allow “indirect” participation

# Debriefing and Critique – Revised TF Recommendation

## § 239.105 Debriefing and critique.

(a) *General.* Except as provided in paragraph (b) of this section, each railroad operating passenger train service shall conduct a debriefing and critique session after each passenger train emergency situation or full-scale simulation to determine the effectiveness of its emergency preparedness plan, and shall improve or amend its plan, or both, as appropriate, in accordance with the information developed. The debriefing and critique session shall be conducted within 60 days of the date of the passenger train emergency situation or full-scale simulation. ***To the extent practicable, all on-board personnel, control center personnel, and any other employees involved in the emergency situation or full-scale simulation shall participate in the session either:***

***(1) in person;***

***(2) offsite via teleconference; or***

***(3) indirectly via a written statement responding to questions provided prior to the session, and by providing any follow-up information.***



# Ongoing Research

# *Wireless Communication*



- Small Business Innovative Research Contract
  - Develop a back-up PA system to provide continued communication capability if there is a trainline break
    - Power supply independent from the car battery
    - One hour of “talk time”
    - Accessible by train radio or radio handset

# *Removable Panels / Windows in End-Frame Doors*



- Small Business Innovative Research Contract
  - Challenges: Research and develop design requirements
    - Meet Federal glazing standards while being relatively easy to operate in an emergency requiring quick egress
    - Non-destructive periodic testing
  - Assess effectiveness of alternative strategies

# *Automated External Defibrillators*



- Supplier Technical Presentations
- Review In Service Experience





Questions ?