

Emergency Preparedness Task Force



Passenger Safety Working Group

June 26, 2007

Notice of Proposed Rulemaking



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

Notice of Proposed Rulemaking



- Status:
 - Published in the Federal Register on August 24, 2006
 - Docket # FRA-2006-25273
 - Comment period closed October 23, 2006
 - TF assisted with review of comments
 - WG approved TF recommendations

Notice of Proposed Rulemaking



- Comments:
 - NTSB
 - Rescue access window requirements consistent with intent of Safety Recommendation R-03-21
 - Supports proposed emergency communications & roof access requirements

Notice of Proposed Rulemaking



- Comments:
 - California DOT
 - Concern over potential requirement to stagger emergency window exits
 - Propose decreasing frequency of inspection of roof access markings from every 184 days to once a year
 - TF agrees with commenter

Notice of Proposed Rulemaking



- Comments requested by FRA:
 - Move § 239.107(a) door marking signage requirements into § § 238.235 & 238.439?
 - TF: Not at this time.
 - Retain figures?
 - TF: Yes

Notice of Proposed Rulemaking



- Comments requested by FRA:
 - Should elements of the APTA Standard for Emergency Signage for Egress / Access be included in the final rule?
 - TF: Not advisable to do so – too complex. Wait for the Standard to be incorporated by reference
 - Add APTA Standard criteria for retroreflective material to § 238.114 Rescue Access Windows?
 - TF: Yes

Notice of Proposed Rulemaking



- Comments requested by FRA:
 - Any intercom misuse problems?
 - TF: No
 - Should intercom luminescent marking be HPPL?
 - Yes, but not in this final rule
 - Wait for APTA to revise its Standard for Passenger Railroad Emergency Communications to include more specific requirements for marking emergency communication systems

Notice of Proposed Rulemaking



- Comments requested by FRA:
 - How many minutes of intermittent communication should intercom / PA systems provide for 90 minutes?
 - TF: 15 minutes of continuous communication at the end of 90 minutes

Notice of Proposed Rulemaking



- Comments requested by FRA:
 - Clarify that “[a]ll safety-related signage is in place and legible” in the interior daily inspection (§ 238.305) includes signage, markings, & instructions?
 - TF: Not necessary

Notice of Proposed Rulemaking



- Comments requested by FRA:
 - Marking, instructions, testing of emergency window exits smaller than 24" x 26" in cars ordered on or after Sep. 8, 2000, or placed in service for the first time on or after Sep. 9, 2002 or should they be removed?
 - TF: Any window exits *in addition* to the minimum required should be marked, have instructions, and be inspected, but should not be subject to the dimension requirements



New Issues:

Part 239 Passenger Train Emergency Preparedness

New Issues



- § 239.101 Emergency preparedness plan
 - Addresses communication, employee training, onboard emergency equipment, liaison with emergency responders, etc.
 - Does not explicitly address persons with special needs / disabilities (e.g., notifying emergency responders of their location onboard)
 - Presidential Executive Order 13347

New Issues



- § 239.101(a)(2)(ii) Emergency preparedness plan - Employee training and qualification - Control center personnel
 - As written, given the definition of “control center”
 - Requires training of train dispatchers
 - Does not require training of other personnel who may be responsible for notifying emergency responders (e.g., railroad police)

New Issues



- § 239.101(a)(1)(ii) Emergency preparedness plan – Notification by control center.
 - Requires prompt notification of:
 - Outside emergency responders, adjacent rail modes of transportation, and appropriate railroad officials.
 - Consider adding “pipeline and utility companies”

New Issues



- § 239.201 Emergency preparedness plan; filing and approval
 - Expedite review of “non-substantive” amendments

New Issues



- §239.301 Operational (efficiency) testing
 - Certain items not addressed (e.g., objective pass / fail criteria, written program)
 - Most railroads combine testing with §217.9 Railroad Operating Rules efficiency testing
 - Exclusive §239.301 testing may not be equivalent



Questions?



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

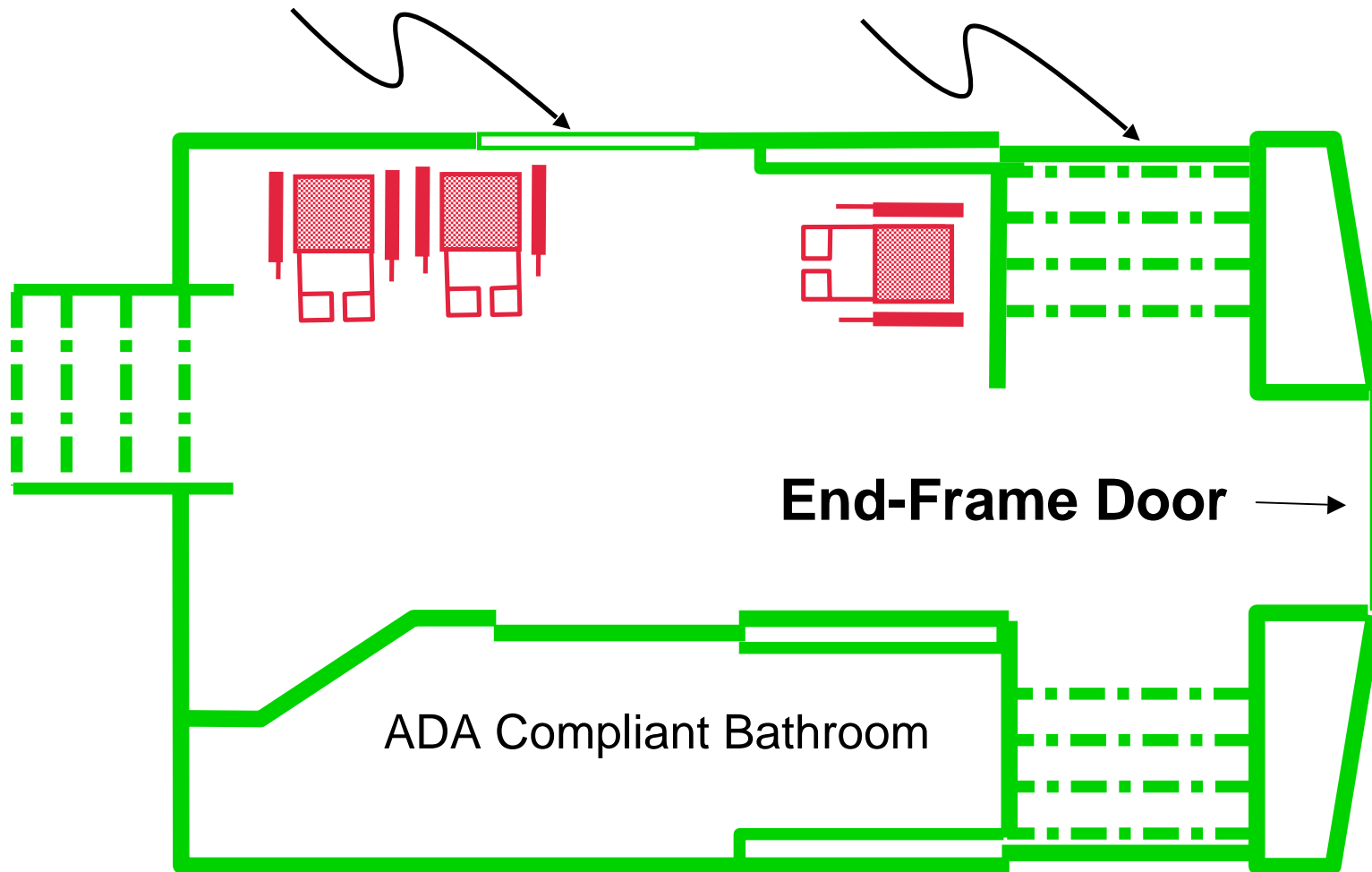
Debriefing and Critique



- **§ 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 in person or offsite via teleconference.***

Rescue Access and Emergency
Egress Window

Pocket Side Door

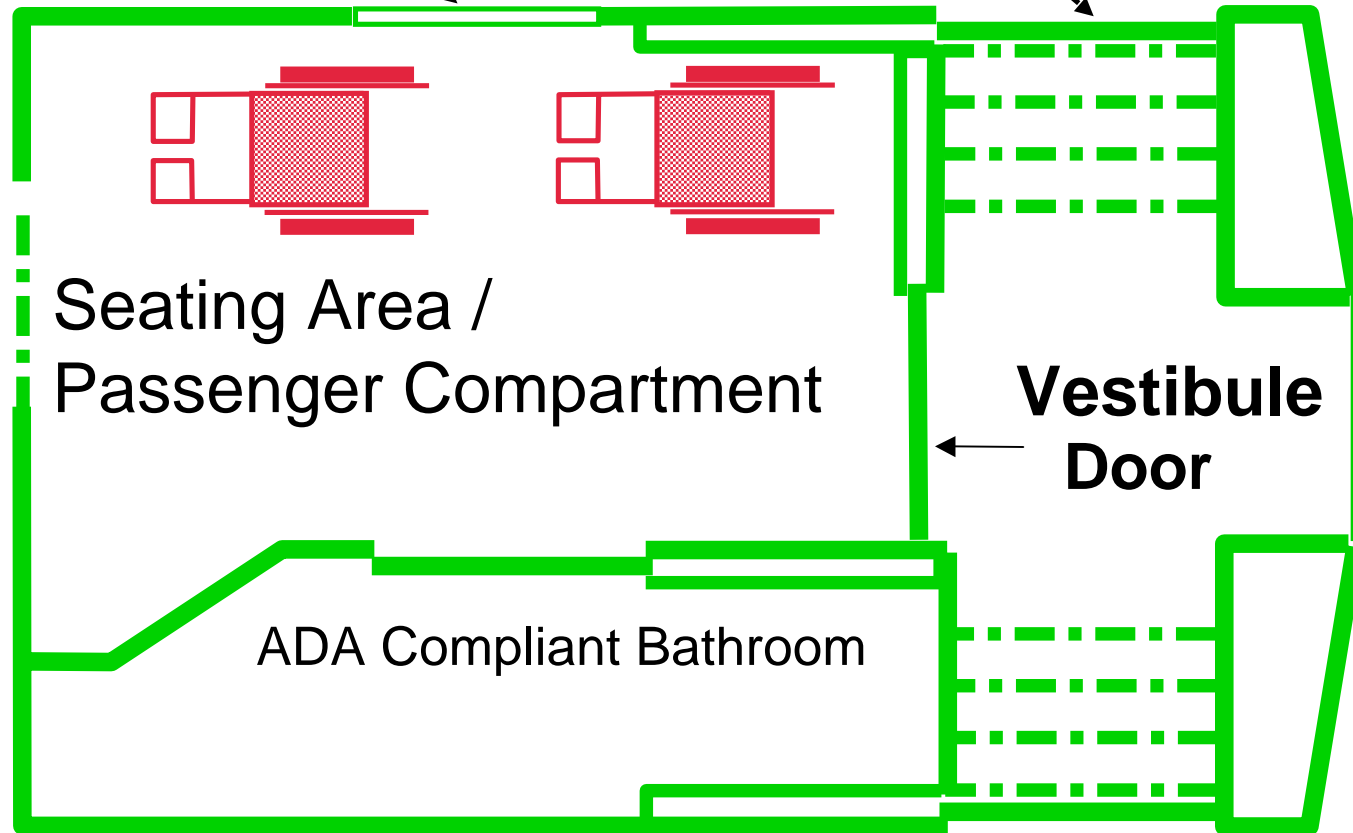


End-Frame Door →

ADA Compliant Bathroom

Rescue Access and Emergency
Egress Window

Pocket Door



Seating Area /
Passenger Compartment

**Vestibule
Door**

ADA Compliant Bathroom

End-Frame Doors (alternative text)



- ***Except as*** provided in paragraph (e)(4) of this section, each end-frame door located in an area of a passenger car separated from any side door exit by another level of the car shall be equipped with a removable panel or removable window for egress in the event the door will not open, or the car is on its side and the door is difficult to open. ***The requirements of this paragraph (e) do not apply to an end-frame door in an end of a passenger car where a control stand is located.***

“Rollover Rig”

Emergency Evacuation Simulator



Emergency Egress



- Volpe Center emergency evacuation simulations
 - To predict the amount of time needed to evacuate passenger rail cars
 - various circumstances
 - different environments
 - To develop a tool for evaluating and comparing alternative egress system configurations

Emergency Egress

MBTA, North Station, Boston, MA August 2005





Study of the Safety of Push-Mode and MU Operations

Appropriations Committee



- “...the Committee directs FRA to conduct a definitive study regarding the use of cab cars during the push-pull mode or in MU locomotives as compared to standard passenger locomotives as leading vehicles in passenger trains, to include a review of the following: the relative frequency and severity of accidents, with special emphasis placed on the differences associated with derailments; the efficacy of crashworthiness features; and a review of the FRA’s Emergency Order No. 20 and its effectiveness in increasing passenger safety.”

Serious Accident Probability



- Proxy: Proportion of grade crossing collisions resulting in derailment or onboard fatality
 - Collisions with motor vehicles involving first unit of train
 - Collisions resulting in significant property damage (exceeding accident reporting threshold)

Commuter Rail – Push & Pull



Accident Frequency (1996 – 2005)

| | Crossing Collisions | Derailments | Proportion |
|--------------------|------------------------|-------------|------------|
| Pull | 290 | 2 | .0069 |
| Push | 218 | 3 | .0138 |
| Push + Glendale | 219 | 4 | .0183 |

Commuter Rail – Push & Pull



Rate Comparison

| | Percentage Point Difference in Proportion | Is Difference Statistically Significant |
|-----------------------------|--|---|
| Push & Pull | 0.69 | No |
| (Push + Glendale) & Pull | 1.14 | No |

Other Operations (1996 – 2005)



- Commuter: MU
 - 105 grade crossing accidents exceeding accident reporting threshold
 - 1 non-fatal derailment
 - 1 non-derailment fatal incident
- Intercity: Push – pull corridors
 - 3 derailments
 - push-mode
 - Insufficient data for statistical analysis

Data Issues



- Insufficient data from which to draw meaningful conclusions
- Accident reports do not clearly distinguish among modes of operation (push – pull - MU)
 - FRA to address this issue



Questions?



Backup Slides

Accident Review 1986 - 1995



- MU Accidents
 - NICTD, Head-on collision with freight cars fouling track
 - Metro North, Rear-end collision occurred when train “stopped to inspect pantographs”
 - Metro North, Obstruction impact as a tree fell and a limb smashed through barrel door
 - NICTD, Head-on collision between 2 NICTD trains, Gary, IN

Crossing Incidents 1996 - 2005



- Accident Frequency
 - All incidents involving the first unit
 - Form FRA-6180.57
 - Contacted railroads to reconcile mode of operation information
- Derailment
 - Form FRA-6180.57

New Definitions



- Seating area means an area of a passenger car that normally contains passenger seating.
- Passenger compartment means an area of a passenger car that consists of a seating area and any vestibule that is connected to the seating area by an open passageway.

Progress Table (continued)



| Issue | Research Ongoing | Agreement in Principle |
|---|---|---|
| Removable Panels in Passageway Doors | Y for end frame doors N for interior doors | Y for end frame doors Y for interior doors |
| Emergency Lighting Independent Power Source | Y | Y, for new equipment |
| Rescue Access Window Zip-Strips | Y | N |