

Rule Text as of 1-28-08

[Note: Alignment, spacing, and other formatting matters to be corrected, as necessary]

§ 238.5 Definitions.

End-frame door means an end-facing door normally located between or adjacent to the collision posts or similar end-frame structural elements.

Seating area means an area of a passenger car that normally contains passenger seating.

Vestibule means an area of a passenger car that normally does not contain seating, is located adjacent to a side exit door, and is used in passing from a seating area to a side exit door.

Vestibule door means a door separating a seating area from a vestibule. End-frame doors and doors separating sleeping compartments or similar private compartments from a passageway are not vestibule doors.

§ 238.112 Doors.

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(b) Each passenger car ordered on or after September 8, 2000, or placed in service for the first time on or after September 9, 2002, shall have a minimum of two exterior side doors, **one in each side of the car**. Each such door shall provide a minimum clear opening with dimensions of 30 inches horizontally by 74 inches vertically. If the door is powered, it shall have a manual override device that is.....

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[Modify paragraph (d) and add paragraph (e)]

(d) All door exits intended for emergency egress shall be conspicuously and legibly marked on the inside of the car, and legible and understandable instructions shall be provided for their use, **as specified in §238.125.**

(e) All door exits intended for emergency access by emergency responders for extrication of passengers shall be marked **on the exterior of the car** with retroreflective material, and legible and understandable instructions shall be posted at or near each such door **exit, as specified in §238.125.**

(f) Except for a vestibule door providing access to a control compartment and as provided in paragraph (f)(4) of this section, each vestibule door in a passenger car ordered on or after [INSERT EFFECTIVE DATE OF FINAL RULE], or placed in service for the first time on or after [INSERT DATE 4 YEARS AFTER EFFECTIVE DATE OF FINAL RULE], shall be equipped with a removable panel or removable window in the event the door will not open in an emergency, or the car is on its side and

the door is difficult to open.

(1) Ease of operability. Each removable panel or removable window shall be designed to permit rapid and easy removal from both the vestibule and the passenger seating area during an emergency situation without requiring the use of a tool or other implement.

(2) Dimensions. Removal of the panel or window shall create an unobstructed opening in the door with minimum dimensions of 21 inches horizontally by 28 inches vertically.

(3) Location. Each removable panel or removable window shall be located so that the lowest point of the opening created by removing the panel or window is no higher than 18 inches from the floor.

(4) Bi-Parting doors. Each powered, bi-parting vestibule door in a passenger car shall be equipped with a manual override device and mechanism to retain each door leaf in the open position (e.g., ratchet and pawl, or sprag). Each manual override device must be:

- (i) capable of releasing the door leaf to permit it to be opened without power;
- (ii) located adjacent to the door leaf it controls; and
- (iii) designed and maintained so that a person may readily access and operate the override device from both the vestibule and the passenger seating area without the use of any tool or other implement.

(5) Marking and instructions. Each removable panel or removable window shall be conspicuously and legibly marked with HPPL material on both the vestibule and the passenger seating area sides of the door to facilitate passenger egress in an emergency situation. Legible and understandable operating instructions shall be posted on both the vestibule and the passenger seating area sides of the door at each such panel or window. For bi-parting doors, each manual door override device and each retention mechanism shall be conspicuously and legibly marked with luminescent material. Legible and understandable operating instructions for each manual override device and each retention mechanism shall be posted at or near each such device or mechanism.

(6) Inspection, maintenance, and repair. Each railroad operating passenger train service shall:

- (i) provide for scheduled inspection, maintenance, and repair of removable panels, removable windows, manual override devices, and door retention mechanisms;
- (ii) test a representative sample of removable panels, removable windows, manual override devices, and door retention mechanisms on its cars at least once every 184 days to verify that they are operating properly; and
- (iii) repair each inoperative removable panel, removable window, manual override device, and door retention mechanism on a car before returning the car to service.

[Consolidate sections 238.235, 238.439, and parts of 239.107 as modified to reflect APTA Signage standard requirements (e.g., door signs are not optional.)]

§ 238.113 Emergency window exits.

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(d) Marking and instructions. (1) Each emergency window exit shall be conspicuously and legibly marked with luminescent material on the inside of each car to facilitate passenger egress **as specified in §238.125.**

(2) Legible and understandable operating instructions, including instructions for removing the window, shall be posted at or near each such window exit **as specified in §238.125.** If window removal may be hindered by the presence of a seatback, headrest, luggage rack, or other fixture, the instructions shall state the method for allowing rapid and easy removal of the window, taking into account the fixture(s), and this portion of the instructions may be in written or pictorial format.

§ 238.114 Rescue access windows.

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(d) Marking and instructions. Each rescue access window shall be marked with retroreflective material **on the exterior of each car as specified in §238.125.** A unique and easily recognizable symbol, sign, or other conspicuous marking shall also be used to identify each such window. Legible and understandable window-access instructions, including instructions for removing the window, shall be posted at or near each access window **as specified in §238.125.**

§ 238.115 Emergency lighting.

Emergency lighting shall be provided in each passenger car in accordance with the minimum requirements specified in APTA SS-E-013-99, Rev. 1 (*authorized on October 7, 2007*), Standard for Emergency Lighting System Design for Passenger Cars; or an alternative standard providing at least an equivalent level of safety if approved by FRA pursuant to § 238.21. See Appendix F of this part for a summary table showing the contents of this standard. The Director of the Federal Register approves incorporation by reference of APTA SS-E-013-99, Rev. 1 (*authorized on October 7, 2007*), Standard for Emergency Lighting System Design for Passenger Cars, in this section in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy of the incorporated standard from the American Public Transportation Association, 1666 K Street, NW, Washington, DC 20006. You may inspect a copy of the incorporated standard at the Federal Railroad Administration, Docket Clerk, 1200 New Jersey Ave., SE, Third Floor West Building, Washington, DC 20590 or at the National Archives and Records Administration (NARA), call 202-741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

§ 238.121 Emergency communications.

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(b)(2) *Marking and instructions.* The following requirements apply to each Tier I passenger car on or after [Date 26 months after date of publication of final rule in the Federal Register] and to all Tier II

passenger cars:

- (i) The location of each intercom intended for passenger use shall be conspicuously marked with luminescent material **meeting the minimum requirements specified in section 5.4.2. or 5.6 of APTA SS-PS-002-98, Rev. 3 (authorized on October 7, 2007), Standard for Emergency Signage for Egress/Access of Passenger Rail Equipment, incorporated by reference in § 238.125; or an alternative standard providing at least an equivalent level of safety if approved by FRA pursuant to § 238.21; and**
- (ii) Legible and understandable operating instructions shall be posted at or near each such intercom.

[Consider addressing reliability, operating conditions. Add requirements for testing and maintenance. TF will not vote on 238.121 until the next meeting. APTA requests that existing equipment not be required to be upgraded to improve charging levels – sign replacement is okay.]

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§ 238.123 Emergency roof access.

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(e) *Marking and instructions.* As specified in §238.125, each emergency roof access location shall be conspicuously marked with retroreflective material of contrasting color and legible and understandable instructions shall be posted at or near each such location.

§ 238.125 Emergency signage and markings for egress and access. (Add new section)

Emergency signage and markings shall be provided for each passenger car in accordance with the minimum requirements specified in APTA SS-PS-002-98, Rev. 3 (*authorized on October 7, 2007*), Standard for Emergency Signage for Egress/Access of Passenger Rail Equipment; or an alternative standard providing at least an equivalent level of safety if approved by FRA pursuant to § 238.21. See Appendix H of this part for a summary table showing the contents of this standard. The Director of the Federal Register approves incorporation by reference of APTA SS-PS-002-98, Rev. 3 (*authorized on October 7, 2007*), Standard for Emergency Signage for Egress/Access of Passenger Rail Equipment, in this section in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy of the incorporated standard from the American Public Transportation Association, 1666 K Street, NW, Washington, DC 20006. You may inspect a copy of the incorporated standard at the Federal Railroad Administration, Docket Clerk, 1200 New Jersey Ave., SE, Third Floor West Building, Washington, DC 20590 or at the National Archives and Records Administration (NARA), call 202-741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

§ 238.127 Low-location emergency exit path marking. (Add new section)

Low-location emergency exit path marking shall be provided in each passenger car in accordance with the minimum requirements specified in APTA SS-PS-004-99, Rev. 2 (*authorized on October 7, 2007*), Standard for Low-Location Exit Path Marking; or an alternative standard providing at least an

equivalent level of safety if approved by FRA pursuant to § 238.21. See Appendix G of this part for a summary table showing the contents of this standard. The Director of the Federal Register approves incorporation by reference of APTA SS-PS-004-99, Rev. 2 (*authorized on October 7, 2007*), Standard for Low-Location Exit Path Marking, in this section in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy of the incorporated standard from the American Public Transportation Association, 1666 K Street, NW, Washington, DC 20006. You may inspect a copy of the incorporated standard at the Federal Railroad Administration, Docket Clerk, 1200 New Jersey Ave., SE, Third Floor West Building, Washington, DC 20590 or at the National Archives and Records Administration (NARA), call 202-741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

§ 238.305 Interior calendar day mechanical inspection of passenger cars.

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(c)

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(11) All low-location emergency exit path markings required under § 238.127 are in place and conspicuous.

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§ 238.307 Periodic mechanical inspection of passenger cars and unpowered vehicles used in passenger trains.

[Text of (c)(4), concerning testing representative sample of window exits in accordance with 239.107, will be combined with 239.107 and moved to revised paragraph (d), **below**. The subparagraphs of paragraph (c) will be renumbered to reflect this deletion (**i.e., (c)(5) through (c)(12) will become (c)4 through (c)(11).**)]

(d) **At an interval not to exceed 184 days**, as part of the periodic mechanical inspection, a railroad shall test a representative sample of emergency window exits on its cars to **determine** that they are operating **as intended**. This portion of the periodic mechanical inspection may be conducted independently of the requirements in paragraph (c) of this section. **The sampling method used to select which cars are to be tested must conform to a formalized statistical test method, such as MIL-STD-105(E), Sampling for Attributes, or ANSI/ASQC Z1.4-1993, Sampling Procedures for Inspections by Attributes.**

(e) [previous paragraph (d) redesignated as paragraph (e).]

(f) [previous paragraph (e) redesignated as paragraph (f).]

(g) [previous paragraph (f) redesignated as paragraph (g).]

§ 238.439 Doors.

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[Modify paragraph (g) and add paragraph (h)]

(g) All door exits intended for emergency egress shall be conspicuously and legibly marked on the inside of the car, and legible and understandable instructions shall be **posted at or near each such door exit, as specified in §238.125.**

(h) All door exits intended for emergency access by emergency responders for extrication of passengers shall be marked with retroreflective material, and legible and understandable instructions shall be posted at each such door, **as specified in §238.125.**

§ 238.441 Emergency roof access.

(b) *Marking and instructions.* As specified in §238.125, each emergency roof access location shall be conspicuously marked with retroreflective material of contrasting color and legible and understandable instructions shall be posted at or near each such location.

APPENDIX F TO PART 238—APTA SS-E-013-99, Rev. 1 (*authorized on October 7, 2007*),
Standard for Emergency Lighting System Design for Passenger Cars

This appendix identifies the contents of APTA SS-E-013-99, Rev. 1 (*authorized on October 7, 2007*), Standard for Emergency Lighting System Design for Passenger Cars.

1. Overview

1.1 Scope

1.2 Purpose

2. References

3. Definitions, abbreviations, and acronyms

3.1 Definitions

3.2 Abbreviations and acronyms

4. Types of lighting and power sources

4.1 Normal

4.2 Standby

4.3 Emergency

5. Emergency lighting system requirements

5.1 Location

5.2 Illuminance Criteria

5.3 Power source and activation

6. Evaluation measurements and tests

6.1 Preparation for tests

6.2 Data collection

6.3 Procedures for measuring illuminance of emergency lighting systems

6.3.1 Required equipment

6.3.2 Data collection timing

6.3.3 Required location measurements

6.4 Recordkeeping

7. System reliability

8. Operating conditions

9. Maintenance

9.1 Periodic inspections and tests

9.2 Defect reporting, repair, and recordkeeping

Annex A (informative) Bibliography

Annex B (informative) Automatic testing of electrically powered lighting systems that use independent power sources

Annex C (informative) Data collection guidance

Annex D (informative) Alternatives to increase illumination levels

Annex E (informative) Representative sample sizes – Periodic maintenance

APPENDIX G TO PART 238—APTA SS-PS-004-99, Rev. 2 (*authorized on October 7, 2007*),
Standard for Low-Location Exit Path Marking

This appendix identifies the contents of APTA SS-PS-004-99, Rev. 2 (*authorized on October 7, 2007*), Standard for Low-Location Exit Path Marking.

1. Overview

1.1 Scope

1.2 Purpose

2. References

3. Definitions, abbreviations, and acronyms

3.1 Definitions

3.2 Abbreviations and acronyms

4. General system requirements

4.1 Visual identity and recognition

4.2 Multilingual signs

5. System design requirements

5.1 Location

5.1.1 Door exits

5.1.2 Exit path marking / delineators delineators

5.2 Illuminance / luminance criteria

5.2.1 Electrically powered systems

5.2.2 Passive HPPL Systems

5.2.3 Dual Mode

6. Evaluation measurements and tests

6.1 Electrically (active) powered systems

6.2 PL Passive) systems

6.2.1 Material luminance

6.2.2 Ambient light charge

6.3 Recordkeeping

7. System reliability

8. Operating Conditions

9. Maintenance

9.1 Daily inspections

9.2 Periodic inspections and tests

9.2.1 Electrically powered (active) systems

9.2.2 PL (Passive) Systems

9.3 Defect reporting, repair, and recordkeeping

Annex A (informative) Bibliography

Annex B (informative) Passive HPPL material technical considerations HPPL material technical considerations

Annex C (informative) Procedures for measuring charging light illuminance

Annex D (informative) Automatic testing of electrically powered LLEPM systems that use independent power sources

Annex E (informative) Test laboratories

Annex F (informative) Representative sample sizes – Periodic maintenance

APPENDIX H TO PART 238—Contents of APTA SS-PS-002-98, Rev. 3 (*authorized on October 7, 2007*), Standard for Emergency Signage for Egress/Access of Passenger Rail Equipment

This appendix identifies the contents of APTA SS- PS-002-98, Rev. 3 (*authorized on October 7, 2007*), Standard for Emergency Signage for Egress/Access of Passenger Rail Equipment.

- 1. Overview
 - 1.1 Scope
 - 1.2 Purpose
- 2. References
- 3. Definitions, abbreviations, and acronyms
 - 3.1 Definitions
 - 3.2 Abbreviations and acronyms
- 4. General system requirements
 - 4.1 Visual identity and recognition
 - 4.2 Multilingual signs
- 5. Design requirements - interior
 - 5.1 Location
 - 5.1.1 Door exits
 - 5.1.2 Emergency window exits
 - 5.2 Letter / sign size
 - 5.2.1 Letter size
 - 5.2.2 Sign size
 - 5.3 Color and contrast
 - 5.4 Illuminance / luminance criteria
 - 5.4.1 Active electrically powered systems
 - 5.4.2 HPPL (Passive)
 - 5.4.3 Dual-mode systems

5.5 Component materials

5.5.1 Vestibule, end-frame and side doors

5.5.2 Additional requirements to mark side door exit locations without independently powered emergency lighting

5.5.3 Door exit control locator signs / markings

5.5.4 Emergency window exits

5.6 Grandfathering of PL signs / markings

6. Design requirements - exterior

6.1 Location

6.1.1 Rescue access doors

6.1.2 Rescue access windows

6.1.3 Emergency roof access

6.2 Color and contrast

6.3 Materials

7. Evaluation measurements and tests

7.1 Interior signs / markings

7.1.1 Electrically powered (active) systems

7.1.2 HPPL (passive) systems

7.2 Exterior signs / markings

7.3 Recordkeeping

8. System reliability

9. Operating conditions

10. Maintenance

10.1 Daily inspections

10.2 Periodic inspections and tests

10.2.1 Interior signs / markings

10.2.2 Exterior signs / markings

10.3 Defect reporting, repair, and recordkeeping

Annex A (informative)_Bibliography

Annex B (informative)_HPPL material technical considerations

Annex C (informative)_Procedures for measuring charging light illuminance

Annex D (informative)_Automatic testing of electrically powered signage systems that use independent power sources

Annex E (informative)_Test laboratories

Annex F (informative)_Representative sample sizes – Periodic maintenance

§ 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:**

- (i) **in person;**
- (ii) **offsite via teleconference; or**
- (iii) **indirectly via a written statement responding to questions provided prior to the session, and by providing any follow-up information.**

[Preamble to discuss that that these questions must include, at a minimum, the five basic questions in § 239.105(c) of this chapter. OR rewrite it to state:

- (iii) **indirectly via a written statement by submitting, prior to the session, a response to the questions set forth in § 239.105(c) of this chapter, and by providing any follow-up information.**

§ 239.107 Emergency exits. [Delete section]

- (a) *Marking.* [Delete. Contents reworded and moved to §§238.235 and 238.439 – see above.]
- (b) *Inspection, maintenance, and repair.* [Delete. Window requirements reworded and moved to §238.307 – see above. Door requirements deleted – daily and annual testing requirements already included in §§238.305 and 307.]