

Comparison of the 2006 NFPA 101 and OSHA Subpart E (Means of Egress)

The purpose of this comparison is to determine if the 2006 edition of NFPA 101 provides employee protection equivalent to the Subpart E exit route provisions, and is therefore able to serve as a compliance option instead of the 2000 edition currently allowed by §1910.35. The following analysis compares §1910.34, §1910.36, and §1910.37 to the corresponding sections of NFPA 101-2006. Portions of NFPA 101 with no relevant counterparts in these three sections of Subpart E are excluded.

The subpart E provisions (see first column) are very general in nature, mostly performance oriented, and not intended to specifically cover every specific situation in the infinite array of new and existing buildings. NFPA 101 is much more specific, containing very detailed requirements (see portions in second column) tailored to 15 different occupancy types. Subpart E comprises less than six pages of the Code of Federal Regulations, while NFPA 101 is a 428 page document. In some cases, Subpart E incorporates notes to direct employers to NFPA 101, recognizing that more specific guidance is often needed in order to be applied properly. Many features covered by NFPA 101 are not addressed at all in Subpart E.

The third column addresses the similarities and differences between the OSHA and NFPA standards, and each row contains a determination of the suitability of NFPA 101 – 2006 to serve as an alternative compliance option as discussed above. In many cases, the level of employee protection provided by NFPA 101 is equivalent to or exceeds the OSHA standard. In some cases, commensurate protection is provided by NFPA 101.

To elaborate on the meaning of commensurate protection, NFPA 101 contains many provisions which are more detailed for the various occupancies and use conditions. In a few cases, specific requirements in NFPA 101 are less stringent than the corresponding general Subpart E provisions, but cover specific situations where the level of safety would be equivalent to the general provision for one or more reasons, such as:

- Occupancy type and/or occupant load is limited
- Compensatory protection feature(s) are provided
- Contemporary technology is available
- The provisions are more detailed & comprehensive

When a specific NFPA 101 provision is less stringent than subpart E but the level of safety is equivalent, that particular provision is noted to be commensurate. In these cases where NFPA 101 is deemed to have commensurate protection, it is suitable as a compliance alternative to Subpart E. Stated differently, if a building was built and operated in compliance with NFPA 101-2006, it would it would

provide employee protection equal to or greater than §1910.34, §1910.36, and §1910.37.

To summarize, this analysis has identified no instance where NFPA 101-2006 provides a lower level of employee protection than Subpart E. All corresponding provisions are deemed to provide employee protection in excess of, equivalent with, or commensurate to the features of Subpart E. Therefore, this analysis shows that NFPA 101-2006 can be recognized as a compliance alternative.

| Subpart E | NFPA 101 (2006) | Comments |
|--|--|---|
| <p>1910.34(a) Every employer is covered.</p> <p>Sections 1910.34 through 1910.39 apply to workplaces in general industry except mobile workplaces such as vehicles or vessels.</p> | <p>1.3 Application</p> <p>1.3.1* New and Existing Buildings and Structures. The <i>Code</i> shall apply to both new construction and existing buildings and existing structures.</p> <p>11.6* Vehicles and Vessels.</p> <p>11.6.1 Vehicles. Where immobile, attached to a building, or permanently fixed to a foundation, and where subject to human occupancy, the following vehicles shall comply with the requirements of this <i>Code</i> that are appropriate to buildings of similar occupancy:</p> <ol style="list-style-type: none"> (1) Trailers (2) Railroad cars (3) Streetcars (4) Buses (5) Conveyances similar to those in 11.6.1(1) through 11.6.1(4) <p>11.6.2 Vessels. Any ship, barge, or other vessel permanently fixed to a foundation or mooring, or unable to get underway by means of its own power, and occupied for purposes other than navigation shall be subject to the requirements of this <i>Code</i> that apply to buildings of similar occupancy.</p> | <p>Both cover new & existing buildings.</p> <p>Both cover vehicles & vessels when immobile.</p> <p>1910.38 and 1910.39 are not part of this analysis.</p> <p>101 protection is equivalent to Subpart E</p> |
| <p>1910.34(b) Exits routes are covered.</p> | <p>1.2* Purpose.</p> <p>The purpose of this <i>Code</i> is to provide minimum requirements, with due regard to</p> | <p>Both cover fire and other emergencies, however 101 coverage extends to</p> |

| | | |
|--|---|---|
| <p>The rules in §§ 1910.34 through 1910.39 cover the minimum requirements for exit routes that employers must provide in their workplace so that employees may evacuate the workplace safely during an emergency. Sections 1910.34 through 1910.39 also cover the minimum requirements for emergency action plans and fire prevention plans.</p> | <p>function, for the design, operation, and maintenance of buildings and structures for safety to life from fire. Its provisions will also aid life safety in similar emergencies.</p> | <p>features other than exit routes and is therefore more comprehensive than E.</p> <p>1910.38 and 1910.39 are not part of this analysis.</p> <p>E does not mention accessible means of egress implicitly. NFPA 101 covers this in Section 7.5.4.</p> <p>101 protection exceeds Subpart E</p> |
| <p>1910.34(c) Definitions.</p> <p>Electroluminescent means a light-emitting capacitor. Alternating current excites phosphor atoms when placed between the electrically conductive surfaces to produce light. This light source is typically contained inside the device.</p> | <p>3.3.57* Electroluminescent. Refers to a light-emitting capacitor in which alternating current excites phosphor atoms placed between electrically conductive surfaces and produces light.</p> <p>A.3.3.57 Electroluminescent. This light source is typically contained inside the device.</p> | <p>Not used at all in 101 MOE chapter 7.</p> <p>E uses term in 1910.37(b)(6).</p> <p>101 definition is equivalent to Subpart E</p> |
| <p>Exit means that portion of an exit route that is generally separated from other areas to provide a protected way of</p> | <p>3.3.70* Exit. That portion of a means of egress that is separated from all other spaces of a building or structure by construction or equipment as required to provide a protected way of travel to the exit discharge.</p> | <p>101 does not use the undefined term “generally” – it is noted in NFPA’s Manual of Style as a possible unenforceable and vague term to be avoided in their</p> |

| | | |
|---|---|---|
| <p>travel to the exit discharge. An example of an exit is a two-hour fire resistance-rated enclosed stairway that leads from the fifth floor of an office building to the outside of the building.</p> | <p>A.3.3.70 Exit. Exits include exterior exit doors, exit passageways, horizontal exits, exit stairs, and exit ramps. In the case of a stairway, the exit includes the stair enclosure, the door to the stair enclosure, stairs and landings inside the enclosure, the door from the stair enclosure to the outside or to the level of exit discharge, and any exit passageway and its associated doors, if such are provided, so as to discharge the stair directly to the outside. In the case of a door leading directly from the street floor to the street or open air, the exit comprises only the door.</p> <p>Doors of small individual rooms, as in hotels, while constituting exit access from the room, are not referred to as exits, except where they lead directly to the outside of the building from the street floor.</p> | <p>standards.</p> <p>101 definition is equivalent to Subpart E</p> |
| <p>Exit access means that portion of an exit route that leads to an exit. An example of an exit access is a corridor on the fifth floor of an office building that leads to a two-hour fire resistance-rated enclosed stairway (the Exit).</p> | <p>3.3.71 Exit Access. That portion of a means of egress that leads to an exit.</p> | <p>101 definition is equivalent to Subpart E</p> |
| <p>Exit discharge means the part of the exit route that leads directly outside or to a street, walkway, refuge area, public way, or open space with access to the outside. An example of an exit discharge is a door at the bottom of a two-hour fire resistance-rated</p> | <p>3.3.72 Exit Discharge. That portion of a means of egress between the termination of an exit and a public way.</p> | <p>101 only allows exit discharge to end at public way (with the exception of areas of refuge in detention & correctional occupancies – 7.7.1.4), and is therefore more protective.</p> <p>Literal application of the OSHA definition allows an exit route to end in a walkway, courtyard, or refuge area even if</p> |

| | | |
|--|---|--|
| <p>enclosed stairway that discharges to a place of safety outside the building.</p> | | <p>employees cannot get from there to a public way.</p> <p>101 protection exceeds Subpart E</p> |
| <p>Exit route means a continuous and unobstructed path of exit travel from any point within a workplace to a place of safety (including refuge areas). An exit route consists of three parts: The exit access; the exit; and, the exit discharge. (An exit route includes all vertical and horizontal areas along the route.)</p> | <p>3.3.151* Means of Egress. A continuous and unobstructed way of travel from any point in a building or structure to a public way consisting of three separate and distinct parts: (1) the exit access, (2) the exit, and (3) the exit discharge.</p> <p>A.3.3.151 Means of Egress. A means of egress comprises the vertical and horizontal travel and includes intervening room spaces, doorways, hallways, corridors, passageways, balconies, ramps, stairs, elevators, enclosures, lobbies, escalators, horizontal exits, courts, and yards.</p> | <p>OSHA changed the term MOE to Exit Routes in 2002 plain language update.</p> <p>101 is more protective by virtue of the difference in definition of the exit discharge component (see above).</p> <p>101 protection exceeds Subpart E</p> |
| <p>High hazard area means an area inside a workplace in which operations include high hazard materials, processes, or contents.</p> | <p>3.3.168.8.2* High Hazard Industrial Occupancy. An industrial occupancy in which industrial operations that include high hazard materials, processes, or contents are conducted.</p> <p>A.3.3.168.8.2 High Hazard Industrial Occupancy. A high hazard industrial occupancy includes occupancies where gasoline and other flammable liquids are handled, used, or stored under such conditions that involve possible release of flammable vapors; where grain dust, wood flour or plastic dust, aluminum or magnesium dust, or other explosive dusts are produced; where hazardous chemicals or explosives are manufactured, stored, or handled; where materials are processed or handled under conditions that might produce flammable flyings; and where other situations of similar hazard exist. Chapters 40 and 42 include detailed provisions on high hazard industrial and storage occupancies.</p> | <p>101 definition is equivalent to Subpart E</p> |

| | | |
|---|--|--|
| <p>Occupant load means the total number of persons that may occupy a workplace or portion of a workplace at any one time. The occupant load of a workplace is calculated by dividing the gross floor area of the workplace or portion of a workplace by the occupant load factor for that particular type of workplace occupancy. Information regarding "Occupant load" is located in NFPA 101-2000, Life Safety Code.</p> | <p>3.3.144.2 Occupant Load. The total number of persons that might occupy a building or portion thereof at any one time. [5000, 2006]</p> <p>7.3.1.2* Occupant Load Factor. The occupant load in any building or portion thereof shall be not less than the number of persons determined by dividing the floor area assigned to that use by the occupant load factor for that use as specified in Table 7.3.1.2, Figure 7.3.1.2(a), and Figure 7.3.1.2(b). Where both gross and net area figures are given for the same occupancy, calculations shall be made by applying the gross area figure to the gross area of the portion of the building devoted to the use for which the gross area figure is specified and by applying the net area figure to the net area of the portion of the building devoted to the use for which the net area figure is specified.</p> | <p>OSHA's definition combines 101's Chapt. 3 definition and Chapt. 7 requirement.</p> <p>101 uses net instead of gross for educational & assembly occupancies, which would yield lower occupant load and smaller exits. However, 1910.36(f) would limit the occupant load proportionally.</p> <p>The table of occupant load factors vs. use is not reproduced here. No load factors are given for storage or special purpose industrial – load for these two is based on "probable number of occupants" – performance language similar to E.</p> <p>101 definition is commensurate with Subpart E</p> |
| <p>Refuge area means either:</p> <p>(1) A space along an exit route that is protected from the effects of fire by separation from other spaces within the building by a barrier with at least a one-hour fire resistance-rating; or</p> | <p>3.3.18* Area of Refuge. An area that is either</p> <p>(2) a space located in a path of travel leading to a public way that is protected from the effects of fire, either by means of separation from other spaces in the same building or by virtue of location, thereby permitting a delay in egress travel from any level.</p> <p>7.2.12.3.4* Each area of refuge shall be separated from the remainder of the story by a barrier with not less than a 1-hour fire resistance rating, unless one of the following criteria applies:</p> <p>(1) A greater rating is required in other provisions of this Code.</p> <p>(2) The barrier is an existing barrier with a minimum 30-minute fire resistance rating.</p> | <p>OSHA's definition combines 101 Chapter 3 definition and 101 Chapter 7 requirement.</p> <p>Exception for existing buildings is mitigated by compensatory features in 7.2.12, including elevator protection, communication system, door features, and penetration protection.</p> |

| | | |
|--|---|--|
| <p>(2) A floor with at least two spaces, separated from each other by smoke-resistant partitions, in a building protected throughout by an automatic sprinkler system that complies with § 1910.159 of this part.</p> | <p>3.3.18* Area of Refuge (continued) (1) a story in a building where the building is protected throughout by an approved, supervised automatic sprinkler system and has not less than two accessible rooms or spaces separated from each other by smoke-resisting partitions; or</p> | <p>101 definition is commensurate with Subpart E</p> |
| <p>Self-luminous means a light source that is illuminated by a self-contained power source (e.g., tritium) and that operates independently from external power sources. Batteries are not acceptable self-contained power sources. The light source is typically contained inside the device.</p> | <p>3.3.211* Self-Luminous. Illuminated by a self-contained power source and operated independently of external power sources.</p> <p>A.3.3.211 Self-Luminous. An example of a self-contained power source is tritium gas. Batteries do not qualify as a self-contained power source. The light source is typically contained inside the device.</p> | <p>A portion of E wording is in 101 annex.</p> <p>101 definition is equivalent to Subpart E</p> |
| <p>1910.36(a) Basic requirements. Exit routes must meet the following design and construction requirements:</p> | <p>7.1.1* Application. Means of egress for both new and existing buildings shall comply with this chapter. (See also 4.5.3.)</p> | <p>101 definition is equivalent to Subpart E</p> |
| <p>1910.36(a)(1) An exit route must be permanent. Each exit route must be a permanent part of the workplace.</p> | <p>7.2.2 Stairs. 7.2.2.3.1.1 All stairs serving as required means of egress shall be of permanent fixed construction, unless they are stairs serving seating that is designed to be repositioned in accordance with Chapter 12 and Chapter 13.</p> | <p>E does not define permanent.</p> <p>101 includes the word permanent in the provisions for stairs & ramps.</p> |

| | | |
|--|--|--|
| | <p>7.2.5.3 Ramp Details. 7.2.5.3.1 Construction. Ramp construction shall be as follows: (1) All ramps serving as required means of egress shall be of permanent fixed construction.</p> <p>7.1.10 Means of Egress Reliability. 7.1.10.1* General. Means of egress shall be continuously maintained free of all obstructions or impediments to full instant use in the case of fire or other emergency.</p> | <p>Permanence for other features is covered by reliability section of 101.</p> <p>101 definition is equivalent to Subpart E</p> |
| <p>1910.36(a)(2) An exit must be separated by fire resistant materials. Construction materials used to separate an exit from other parts of the workplace must have a one-hour fire resistance-rating if the exit connects three or fewer stories and a two-hour fire resistance-rating if the exit connects four or more stories.</p> | <p>7.1.3.2.1 Where this Code requires an exit to be separated from other parts of the building, the separating construction shall meet the requirements of Section <u>8.2</u> and the following:</p> <p><u>(1)*</u> The separation shall have not less than a 1-hour fire resistance rating where the exit connects three stories or less.</p> <p><u>(2)*</u> The separation shall have not less than a 2-hour fire resistance rating where the exit connects four or more stories, unless one of the following conditions exists . . .</p> <p>(3) The 2-hour fire resistance-rated separation required by <u>7.1.3.2.1(2)</u> shall be constructed of an assembly of noncombustible or limited-combustible materials and shall be supported by construction having not less than a 2-hour fire resistance rating. In Type III, Type IV, and Type V construction, fire-retardant-treated wood enclosed in noncombustible or limited-combustible materials shall be permitted.</p> | <p>101 has specific provisions that are less stringent, but contain compensatory features. Others are found in 7.2.2.5.1.3 (two story bldgs.) and 7.2.2.6.3.1 (outside stairs).</p> <p>All Three exceptions to item (2) include compensatory features such as sprinkler systems, sprinkler supervision, and standpipe systems.</p> <p>Additionally, 101 addresses the enclosure of vertical openings that are not exits (8.6) and rating of exit access corridors (7.1.3.1).</p> <p>101 protection is commensurate with Subpart E</p> |
| <p>1910.36(a)(3) Openings into an exit must be</p> | <p>7.1.3.2.1 <u>(5)*</u> Openings in exit enclosures shall be limited to doors from normally</p> | <p>All three exceptions to item (5) contain compensatory</p> |

| | | |
|---|---|--|
| <p>limited. An exit is permitted to have only those openings necessary to allow access to the exit from occupied areas of the workplace, or to the exit discharge.</p> <p>An opening into an exit must be protected by a self-closing fire door</p> <p>that remains closed or automatically closes in an emergency upon the sounding of a fire alarm or employee alarm system.</p> | <p>occupied spaces and corridors and doors for egress from the enclosure, unless one of the following conditions exists:</p> <p>(4) Openings in the separation shall be protected by fire door assemblies equipped with door closers complying with 7.2.1.8.</p> <p>7.2.1.8 Self-Closing Devices. 7.2.1.8.2 In any building of low or ordinary hazard contents, as defined in 6.2.2.2 and 6.2.2.3, or where approved by the authority having jurisdiction, doors shall be permitted to be automatic-closing, provided that the following criteria are met:</p> <p>(1) Upon release of the hold-open mechanism, the door becomes self-closing.</p> <p>(2) The release device is designed so that the door instantly releases manually and, upon release, becomes self-closing, or the door can be readily closed.</p> <p>(3) The automatic releasing mechanism or medium is activated by the operation of approved smoke detectors installed in accordance with the requirements for smoke detectors for door release service in NFPA 72, <i>National Fire Alarm Code</i>.</p> <p>(4) Upon loss of power to the hold-open device, the hold-open mechanism is released and the door becomes self-closing.</p> <p>(5) The release by means of smoke detection of one door in a stair enclosure results in closing all doors serving that stair.</p> | <p>features such as limits on combustibles, sprinkler protection, and rated penetration seals.</p> <p>101 covers the rating of doors in exit enclosures in 8.3.4, while E is silent on rating.</p> <p>101 limits the auto closing feature to low or ordinary hazard, while E allows it without limitation.</p> <p>101 requires smoke detection activation, while E allows any fire alarm activation (could be manual, heat, or sprinkler).</p> |
|---|---|--|

| | | |
|--|---|---|
| <p>Each fire door, including its frame and hardware, must be listed or approved by a nationally recognized testing laboratory. Section 1910.155(c)(3)(iv)(A) of this part defines "listed" and § 1910.7 of this part defines a "nationally recognized testing laboratory."</p> | <p>8.3.3 Fire Doors and Windows. 8.3.3.1 Openings required to have a fire protection rating by Table 8.3.4.2 shall be protected by approved, listed, labeled fire door assemblies and fire window assemblies and their accompanying hardware, including all frames, closing devices, anchorage, and sills in accordance with the requirements of NFPA 80, <i>Standard for Fire Doors and Fire Windows</i>, except as otherwise specified in this Code. 8.3.3.2* Fire protection ratings for products required to comply with 8.3.3 shall be as determined and reported by a nationally recognized testing agency in accordance with NFPA 252, <i>Standard Methods of Fire Tests of Door Assemblies</i>; ASTM E 2074, <i>Standard Test Method for Fire Tests of Door Assemblies, Including Positive Pressure Testing of Side-Hinged and Pivoted Swinging Door Assemblies</i>; UL 10B, <i>Standard for Fire Tests of Door Assemblies</i>; or UL 10C, <i>Standard for Positive Pressure Fire Tests of Door Assemblies</i>; or NFPA 257, <i>Standard on Fire Test for Window and Glass Block Assemblies</i>; ASTM E 2010, <i>Standard Test Method for Positive Pressure Fire Tests of Window Assemblies</i>; or UL 9, <i>Standard for Fire Tests of Window Assemblies</i>.</p> | <p>101 addresses fire windows in addition to fire doors.</p> <p>101 specifies test method in addition to NTRL.</p> <p>101 protection is commensurate with or exceeds Subpart E</p> |
| <p>1910.36(b) The number of exit routes must be adequate.</p> | <p>4.5.3.1 Number of Means of Egress. Two means of egress, as a minimum, shall be provided in every building or structure, section, and area where size, occupancy, and arrangement endanger occupants attempting to use a single means of egress that is blocked by fire or smoke.</p> | <p>101 protection is equivalent to Subpart E, in conjunction with sections below</p> |
| <p>1910.36(b)(1) Two exit routes. At least two exit routes must be available in a workplace to permit prompt evacuation of</p> | <p>7.4.1.1 The number of means of egress from any balcony, mezzanine, story, or portion thereof shall be not less than two, except under one of the following conditions: [See 1910.36(b)(3) for exceptions]</p> | <p>This one paragraph of E combines three concepts: number of exits, common path of exit access, and remoteness of exits.</p> |

| | | |
|--|---|---|
| <p>employees and other building occupants during an emergency, except as allowed in paragraph (b)(3) of this section.</p> <p>The exit routes must be located as far away as practical from each other so that if one exit route is blocked by fire or smoke, employees can evacuate using the second exit route.</p> | <p>7.4.1.1 The number of means of egress from any balcony, mezzanine, story, or portion thereof shall be not less than two, except under one of the following conditions:</p> <ol style="list-style-type: none"> (1) Where a single means of egress is permitted in Chapter 11 through Chapter 42 (2) Where a single means of egress is permitted for a mezzanine or balcony and the common path of travel limitations of Chapter 12 through Chapter 42 are met <p>7.5.1.1 Exits shall be located and exit access shall be arranged so that exits are readily accessible at all times.</p> <p>7.5.1.1.1* Where exits are not immediately accessible from an open floor area, continuous passageways, aisles, or corridors leading directly to every exit shall be maintained and shall be arranged to provide access for each occupant to not less than two exits by separate ways of travel, unless otherwise provided in 7.5.1.1.3 and 7.5.1.1.4.</p> <p>7.5.1.1.2 Exit access corridors shall provide access to not less than two approved exits, unless otherwise provided in 7.5.1.1.3 and 7.5.1.1.4.</p> <p>7.5.1.1.3 The requirements of 7.5.1.1.1 and 7.5.1.1.2 shall not apply where a single exit is permitted in Chapter 12 through Chapter 42.</p> <p>7.5.1.1.4 Where common paths of travel are permitted for an occupancy in Chapter 12 through Chapter 42, such common paths of travel shall be permitted but shall not exceed the limit specified.</p> <p>7.5.1.3.1 Where more than one exit is required from a building or portion thereof,</p> | <p>101 additional provisions for remoteness include the ½</p> |
|--|---|---|

| | | |
|--|--|--|
| | <p>such exits shall be remotely located from each other and shall be arranged and constructed to minimize the possibility that more than one has the potential to be blocked by any one fire or other emergency condition.</p> <p>7.5.1.3.5 In existing buildings, where more than one exit or exit access door is required, such exits or exit access doors shall be permitted to be remotely located in accordance with 7.5.1.3.1.</p> | <p>rule for unsprinklered (7.5.1.3.2) and the 1/3 rule for sprinklered (7.5.1.3.3).</p> <p>Additionally, 101 addresses travel distance in 7.6, while E is silent on this concept.</p> <p>101 protection is commensurate with or exceeds Subpart E</p> |
| <p>1910.36(b)(2) More than two exit routes. More than two exit routes must be available in a workplace if the number of employees, the size of the building, its occupancy, or the arrangement of the workplace is such that all employees would not be able to evacuate safely during an emergency.</p> | <p>7.4.1.2 The number of means of egress from any story or portion thereof, other than for existing buildings as permitted in Chapter 12 through Chapter 42, shall be as follows:</p> <ol style="list-style-type: none"> (1) Occupant load more than 500 but not more than 1000 — not less than 3 (2) Occupant load more than 1000 — not less than 4 | <p>101 specifies occupant load thresholds for 3 and 4 exits, while E uses performance language.</p> <p>101 protection is commensurate with Subpart E</p> |
| <p>1910.36(b)(3) A single exit route. A single exit route is permitted where the number of employees, the size of the building, its occupancy, or the arrangement of the workplace is such that all employees would be able to evacuate safely during an emergency.</p> | <p>7.4.1.1 The number of means of egress from any balcony, mezzanine, story, or portion thereof shall be not less than two, except under one of the following conditions:</p> <ol style="list-style-type: none"> (1) Where a single means of egress is permitted in Chapter 11 through Chapter 42 (2) Where a single means of egress is permitted for a mezzanine or balcony and the common path of travel limitations of Chapter 12 through Chapter 42 are met | <p>Occupancy chapters specify the thresholds and compensatory provisions that are alluded to by the E performance language.</p> |

| | | |
|---|--|--|
| <p>Note to paragraph 1910.36(b): For assistance in determining the number of exit routes necessary for your workplace, consult NFPA 101-2000, Life Safety Code.</p> | | <p>101 protection is commensurate with Subpart E</p> |
| <p>1910.36(c) Exit discharge.</p> | | <p>Title only – requirements follow</p> |
| <p>1910.36(c)(1) Each exit discharge must lead directly outside or to a street, walkway, refuge area, public way, or open space with access to the outside.</p> | <p>7.7 Discharge from Exits.</p> <p>7.7.1* Exit Termination. Exits shall terminate directly, at a public way or at an exterior exit discharge, unless otherwise provided in 7.7.1.2 through 7.7.1.4.</p> <p>7.7.1.2 The requirement of 7.7.1 shall not apply to interior exit discharge as otherwise provided in 7.7.2.</p> <p>7.7.1.3 The requirement of 7.7.1 shall not apply to rooftop exit discharge as otherwise provided in 7.7.6.</p> <p>7.7.1.4 Means of egress shall be permitted to terminate in an exterior area of refuge for detention and correctional occupancies as otherwise provided in Chapter 22 and Chapter 23.</p> | <p>Additionally, 101 addresses discharge through level of exit discharge (7.7.2) or over roofs (7.7.6).</p> <p>Literal application of E would not allow the commonly used option of discharge through level of exit discharge..... and would allow an exit route to end in a walkway, courtyard, or refuge area even if employees cannot get from there to a public way.</p> <p>101 protection is commensurate with Subpart E</p> |
| <p>1910.36(c)(2) The street, walkway, refuge area, public way, or open space to which an exit discharge leads must be large enough to accommodate the building occupants likely to use the exit route.</p> | <p>7.7.1.1 Yards, courts, open spaces, or other portions of the exit discharge shall be of the required width and size to provide all occupants with a safe access to a public way.</p> | <p>Street is large enough under 101 definition (3.3.238). For others listed in E, 101 requires public way access.</p> <p>E does not define “large enough” or “likely”.</p> <p>101 protection is equivalent to Subpart E</p> |

| | | |
|---|---|--|
| <p>1910.36(c)(3) Exit stairs that continue beyond the level on which the exit discharge is located must be interrupted at that level by doors, partitions, or other effective means that clearly indicate the direction of travel leading to the exit discharge.</p> | <p>7.7.3 Arrangement and Marking of Exit Discharge. Stairs that continue more than one-half story beyond the level of exit discharge shall be interrupted at the level of exit discharge by partitions, doors, or other effective means.</p> | <p>101 sets the threshold for an interruption barrier at ½ story, while E uses performance language.</p> <p>101 protection is commensurate with Subpart E</p> |
| <p>1910.36(d) <i>An exit door must be unlocked.</i></p> | <p>7.2.1.5 Locks, Latches, and Alarm Devices.</p> | <p>Title only – requirements follow</p> |
| <p>1910.36(d)(1) Employees must be able to open an exit route door from the inside at all times without keys, tools, or special knowledge. A device such as a panic bar that locks only from the outside is permitted on exit discharge doors.</p> | <p>7.2.1.5.1 Doors shall be arranged to be opened readily from the egress side whenever the building is occupied.</p> <p>7.2.1.5.2 Locks, if provided, shall not require the use of a key, a tool, or special knowledge or effort for operation from the egress side.</p> | <p>The 101 wording “egress side” is more protective than OSHA’s “inside” for courtyard situations.</p> <p>101 addresses panic hardware details in 7.2.1.7 and requires its use in high risk occupancies, while E only allows its use.</p> <p>101 protection exceeds Subpart E</p> |
| <p>1910.36(d)(2) Exit route doors must be free of any device or alarm that could restrict emergency use of the exit route if the device or alarm fails.</p> | <p>7.1.9 Impediments to Egress. Any device or alarm installed to restrict the improper use of a means of egress shall be designed and installed so that it cannot, even in case of failure, impede or prevent emergency use of such means of egress, unless otherwise provided in 7.2.1.6 and Chapters 18, 19, 22, and 23.</p> | <p>Additionally, 101 goes on to address in detail power operated doors, delayed egress locks and access controlled doors, rather than the performance language used in E.</p> <p>101 protection is commensurate with Subpart E</p> |
| <p>1910.36(d)(3)</p> | <p>7.2.1.5.3 The requirements of 7.2.1.5.1 and</p> | <p>Chapters 18-23 correspond</p> |

| | | |
|--|--|--|
| <p>An exit route door may be locked from the inside only in mental, penal, or correctional facilities and then only if supervisory personnel are continuously on duty and the employer has a plan to remove occupants from the facility during an emergency.</p> | <p>7.2.1.5.2 shall not apply where otherwise provided in Chapter 18 through Chapter 23.</p> <p>Chapters 18 & 19 Health Care</p> <p>Chapters 20 & 21 Ambulatory Health Care</p> <p>Chapters 22 & 23 Detention & Correction</p> | <p>to the facility types listed in E. All of these chapters have compensatory staff operating procedures.</p> <p>Additionally, 101 goes on to address stair re-entry in 7.2.1.5.7.</p> <p>101 protection is commensurate with Subpart E</p> |
| <p>1910.36(e) <i>A side-hinged exit door must be used.</i></p> | | <p>Title only – requirements follow</p> |
| <p>1910.36(e)(1) A side-hinged door must be used to connect any room to an exit route.</p> | <p>7.2.1.4.1* Any door in a means of egress shall be of the side-hinged or pivoted-swinging type, and shall be installed to be capable of swinging from any position to the full required width of the opening in which it is installed, unless otherwise specified in 7.2.1.4.1.1 through 7.2.1.4.1.9.</p> | <p>Additionally, 101 goes on to address width during a door's swing, as well as revolving doors (which would be precluded by literal application of E).</p> <p>101 protection is commensurate with Subpart E</p> |
| <p>1910.36(e)(2) The door that connects any room to an exit route must swing out in the direction of exit travel if the room is designed to be occupied by more than 50 people</p> <p>or if the room is a high hazard area</p> | <p>7.2.1.4.2 Doors required to be of the side-hinged or pivoted-swinging type shall swing in the direction of egress travel where serving a room or area with an occupant load of 50 or more, except under the following conditions:</p> <p>(1) Doors in horizontal exits shall not be required to swing in the direction of egress travel where permitted by 7.2.4.3.7.1 or 7.2.4.3.7.2.</p> <p>(2) Smoke barrier doors shall not be required to swing in the direction of egress travel in existing health care occupancies as provided in Chapter 19.</p> <p>7.2.1.4.3 A door shall swing in the direction of egress travel under either of the following</p> | <p>101 is slightly more protective (when the occupant load is exactly 50).</p> <p>101 has compensatory staff operating procedures in occupancy chapters.</p> <p>101 provision applies to all exit enclosures, while E</p> |

| | | |
|--|---|--|
| <p>(<i>i.e.</i>, contains contents that are likely to burn with extreme rapidity or explode).</p> | <p>conditions:</p> <p>(1) Where the door is used in an exit enclosure, unless the door is the door of an individual living unit that opens directly into an exit enclosure</p> <p>(2) Where the door serves a high hazard contents area</p> | <p>applies only to those served by > 50 occupants.</p> <p>Additionally, 101 goes on to address door force limits in 7.2.1.4.5.</p> <p>101 protection exceeds Subpart E</p> |
| <p>1910.36(f) <i>The capacity of an exit route must be adequate.</i></p> | | <p>Title only – requirements follow</p> |
| <p>1910.36(f)(1) Exit routes must support the maximum permitted occupant load for each floor served.</p> | <p>7.3.1.1 Sufficient Capacity for Occupant Load. The total capacity of the means of egress for any story, balcony, tier, or other occupied space shall be sufficient for the occupant load thereof.</p> <p>7.3.3 Egress Capacity. 7.3.3.1 Egress capacity for approved components of means of egress shall be based on the capacity factors shown in Table 7.3.3.1.</p> | <p>101 table 7.3.3.1 gives specific egress width factors depending on occupancy type and sprinkler protection.</p> <p>101 protection is commensurate with Subpart E</p> |
| <p>1910.36(f)(2) The capacity of an exit route may not decrease in the direction of exit route travel to the exit discharge.</p> <p>Note to paragraph 1910.36(f): Information regarding "Occupant load" is located in NFPA 101-2000, Life Safety Code.</p> | <p>7.3.4.2 Where a single exit access leads to an exit, its capacity in terms of width shall be not less than the required capacity of the exit to which it leads.</p> <p>7.3.4.3 Where more than one exit access leads to an exit, each shall have a width adequate for the number of persons it accommodates.</p> <p>7.3.1.2* Occupant Load Factor. The occupant load in any building or portion thereof shall be not less than the number of persons determined by dividing the floor area assigned to that use by the occupant load factor for that use as specified in Table 7.3.1.2, Figure 7.3.1.2(a), and Figure 7.3.1.2(b).</p> | |

| | | |
|---|--|---|
| | | 101 protection is equivalent to Subpart E |
| 1910.36(g) <i>An exit route must meet minimum height and width requirements.</i> | | Title only – requirements follow |
| 1910.36(g)(1) The ceiling of an exit route must be at least seven feet six inches (2.3 m) high. Any projection from the ceiling must not reach a point less than six feet eight inches (2.0 m) from the floor. | 7.1.5* Headroom. 7.1.5.1 Means of egress shall be designed and maintained to provide headroom in accordance with other sections of this <i>Code</i> , and such headroom shall be not less than 7 ft 6 in. (2285 mm), with projections from the ceiling not less than 6 ft 8 in. (2030 mm) nominal above the finished floor, unless otherwise specified in 7.1.5.1.1 and 7.1.5.1.2 . 7.1.5.1.1 In existing buildings, the ceiling height shall be not less than 7 ft (2135 mm) from the floor, with projections from the ceiling not less than 6 ft 8 in. (2030 mm) nominal above the floor. 7.1.5.1.2 Headroom in industrial equipment access areas as provided in 40.2.5.2 shall be permitted. | 101 has specific, less stringent provisions for headroom & projections in existing buildings, industrial occupancies (40.2.5.2), stairs, and rooms with varying ceiling height. Literal application of E would preclude these common features. 101 protection is commensurate with Subpart E |
| 1910.36(g)(2) An exit access must be at least 28 inches (71.1 cm) wide at all points. Where there is only one exit access leading to an exit or exit discharge, the width of the exit and exit discharge must be at least equal to the width of the exit access. | 7.3.4 Minimum Width. 7.3.4.1.2 In existing buildings, the width of exit access shall be permitted to be not less than 28 in. (710 mm). 7.3.4.2 Where a single exit access leads to an exit, its capacity in terms of width shall be not less than the required capacity of the exit to which it leads. | 101 basic requirement is 36" (7.3.4.1) – more protective. 101 has specific provisions for furniture and movable partitions (7.3.4.1.1). 101 has specific, less stringent provisions for width for industrial equip access (40.2.5.2), but a compensatory limit on occupant load. 101 protection exceeds or is commensurate with |

| | | |
|---|---|---|
| <p>1910.36(g)(3) The width of an exit route must be sufficient to accommodate the maximum permitted occupant load of each floor served by the exit route.</p> | <p>7.3.1.4 Exits Serving More than One Story. Where an exit serves more than one story, only the occupant load of each story considered individually shall be used in computing the required capacity of the exit at that story, provided that the required egress capacity of the exit is not decreased in the direction of egress travel.</p> | <p>Subpart E 101 is more stringent in situations with convergence from above & below, balconies, or mezzanines. 101 protection exceeds with Subpart E</p> |
| <p>1910.36(g)(4) Objects that project into the exit route must not reduce the width of the exit route to less than the minimum width requirements for exit routes.</p> | <p>7.3.2 Measurement of Means of Egress. 7.3.2.1 The width of means of egress shall be measured in the clear at the narrowest point of the egress component under consideration, unless otherwise provided in 7.3.2.2 or 7.3.2.3. 7.3.2.2 Projections within the means of egress of not more than 4½ in. (114 mm) on each side shall be permitted at a height of 38 in. (965 mm) and below. 7.3.2.3 In health care and ambulatory health care occupancies, projections shall be permitted in corridors in accordance with Chapter 18 through Chapter 21. 7.2.1.2.3* Measurement. 7.2.1.2.3.1 For purposes of determining minimum door width, the clear width shall be used unless door leaf width is specified. 7.2.1.2.3.2 For swinging doors, projections of not more than 4 in. (100 mm) into the doorway width on the hinge side shall not be considered reductions in width, provided that such projections are for purposes of accommodating panic hardware or fire exit hardware and are located not less than 34 in. (865 mm) above the floor. 7.2.1.2.3.3 Projections exceeding 6 ft 8 in. (2030 mm) above the floor shall not be considered reductions in width.</p> | <p>101 contains allowances for knobs, handrails, door closers, etc., while E is silent. However, the basic 101 corridor width requirements in 7.3.4 are more stringent than E and would result in wider corridors even with these allowances. 101 protection is commensurate with Subpart E</p> |
| <p>1910.36(h) An outdoor exit route is permitted. Each outdoor exit route must meet the minimum height and</p> | <p>7.5.3 Exterior Ways of Exit Access. 7.5.3.1 Exit access shall be permitted to be by means of any exterior balcony, porch, gallery, or roof that conforms to the requirements of this chapter.</p> | <p>101 treats exterior egress height & width the same as interior.</p> |

| | | |
|---|--|--|
| <p>width requirements for indoor exit routes and must also meet the following requirements:</p> | <p>7.2.2.6 Special Provisions for Outside Stairs. 7.2.2.6.1 Access. Where approved by the authority having jurisdiction, outside stairs shall be permitted to lead to roofs of other sections of a building or an adjoining building where the construction is fire resistive and there is a continuous and safe means of egress from the roof. (See also 7.7.6.)</p> | <p>101 protection exceeds Subpart E</p> |
| <p>1910.36(h)(1) The outdoor exit route must have guardrails to protect unenclosed sides if a fall hazard exists.</p> | <p>7.1.8* Guards. Guards in accordance with 7.2.2.4 shall be provided at the open sides of means of egress that exceed 30 in. (760 mm) above the floor or grade below.</p> | <p>101 requires guards for both indoor and outdoor exit routes. 101 protection exceeds Subpart E</p> |
| <p>1910.36(h)(2) The outdoor exit route must be covered if snow or ice is likely to accumulate along the route, unless the employer can demonstrate that any snow or ice accumulation will be removed before it presents a slipping hazard.</p> | <p>7.1.10.1* General. Means of egress shall be continuously maintained free of all obstructions or impediments to full instant use in the case of fire or other emergency. A.7.1.10.1 A proper means of egress allows unobstructed travel at all times. Any type of barrier including, but not limited to, the accumulations of snow and ice in those climates subject to such accumulations is an impediment to free movement in the means of egress.</p> | <p>101 text is general and applies to more situations than E. 101 Annex mentions snow & ice specifically. 101 protection exceeds Subpart E</p> |
| <p>1910.36(h)(3) The outdoor exit route must be reasonably straight and have smooth, solid, substantially level walkways.</p> | <p>7.1.6.3 Level. 7.1.6.3.1 Walking surfaces shall comply with the following: (1) Walking surfaces shall be nominally level. (2) The slope of a walking surface in the direction of travel shall not exceed 1 in 20, unless the ramp requirements of 7.2.5 are met. (3) The slope perpendicular to the direction of travel shall not exceed 1 in 48.</p> | <p>101 does not use the undefined terms “reasonably” and “substantially” – they are noted in NFPA’s Manual of Style as a possible unenforceable and vague term to be avoided in their standards. 101 provision applies indoors & outdoors.</p> |

| | | |
|--|---|---|
| | | 101 protection exceeds Subpart E |
| 1910.36(h)(4) The outdoor exit route must not have a dead-end that is longer than 20 feet (6.2 m). | 7.5.3.4 Exterior exit access shall be arranged so that there are no dead ends in excess of those permitted for dead-end corridors in Chapter 11 through Chapter 42 . | 101 addresses both indoor and outdoor dead ends. Some chapters allow dead ends >20 ft, with compensatory protection or use limitations. 101 protection exceeds or is commensurate with Subpart E |
| 1910.37(a) <i>The danger to employees must be minimized.</i> | | Title only – requirements follow |
| 1910.37(a)(1) Exit routes must be kept free of explosive or highly flammable furnishings or other decorations. | 7.1.10.2 Furnishings and Decorations in Means of Egress. 7.1.10.2.1 No furnishings, decorations, or other objects shall obstruct exits, access thereto, egress therefrom, or visibility thereof. | 101 covers obstructions other than explosives or highly flammable items. Additionally, 101 goes on to regulate interior finish in Chapter 10. 101 protection exceeds Subpart E |
| 1910.37(a)(2) Exit routes must be arranged so that employees will not have to travel toward a high hazard area, unless the path of travel is effectively shielded from the high hazard area by suitable partitions or other physical barriers. | 7.11 Special Provisions for Occupancies with High Hazard Contents. See Section 6.2 . 7.11.1* Where the contents are classified as high hazard, exits shall be provided and arranged to allow all occupants to escape from the building or structure, or from the hazardous area thereof, to the outside or to a place of safety with a travel distance of not more than 75 ft (23 m), measured as required in 7.6.1 , unless otherwise provided in 7.11.2 . 7.5.2 Impediments to Egress. See also 7.1.9 and 7.2.1.5 . 7.5.2.1* Access to an exit shall not be through kitchens, storerooms other than as provided in Chapter 36 and Chapter 37 , restrooms, workrooms, closets, bedrooms or similar spaces, or other rooms or spaces subject to locking, unless passage through | 101 does not use the terms ‘effectively’ or ‘suitable’, which are both noted in NFPA’s Manual of Style as possible unenforceable and vague terms to be avoided in their standards. E does not define these terms. 101 protection is commensurate with |

| | | |
|--|--|---|
| | such rooms or spaces is permitted for the occupancy by Chapter 18 , 19 , 22 , or 23 . | Subpart E |
| <p>1910.37(a)(3)</p> <p>Exit routes must be free and unobstructed. No materials or equipment may be placed, either permanently or temporarily, within the exit route.</p> <p>The exit access must not go through a room that can be locked, such as a bathroom, to reach an exit or exit discharge, nor may it lead into a dead-end corridor.</p> | <p>7.1.10 Means of Egress Reliability. 7.1.10.1* General. Means of egress shall be continuously maintained free of all obstructions or impediments to full instant use in the case of fire or other emergency.</p> <p>7.5.2 Impediments to Egress. See also 7.1.9 and 7.2.1.5. 7.5.2.1* Access to an exit shall not be through kitchens, storerooms other than as provided in Chapter 36 and Chapter 37, restrooms, workrooms, closets, bedrooms or similar spaces, or other rooms or spaces subject to locking, unless passage through such rooms or spaces is permitted for the occupancy by Chapter 18, 19, 22, or 23.</p> <p>7.5.1.2 Corridors shall provide exit access without passing through any intervening rooms other than corridors, lobbies, and other spaces permitted to be open to the corridor, unless otherwise provided in 7.5.1.2.1 and 7.5.1.2.2. 7.5.1.2.1 Approved existing corridors that require passage through a room to access an exit shall be permitted to continue to be used, provided that the following criteria are met:</p> <ol style="list-style-type: none"> (1) The path of travel is marked in accordance with Section 7.10. (2) Doors to such rooms comply with 7.2.1. (3) Such arrangement is not prohibited by the applicable occupancy chapter. <p>7.5.1.2.2 Corridors that are not required to</p> | <p>101 exceptions contain compensatory use conditions.</p> <p>101 allows MOE components other than stairs and ramps. One is</p> |

| | | |
|--|---|--|
| <p>Stairs or a ramp must be provided where the exit route is not substantially level.</p> | <p>be fire resistance rated shall be permitted to discharge into open floor plan areas.</p> <p>7.1.7 Changes in Level in Means of Egress. 7.1.7.1 Changes in level in means of egress shall be achieved by an approved means of egress where the elevation difference exceeds 21 in. (535 mm). 7.1.7.2* Changes in level in means of egress not in excess of 21 in. (535 mm) shall be achieved either by a ramp complying with the requirements of 7.2.5 or by a stair complying with the requirements of 7.2.2.</p> | <p>more protective (smokeproof enclosures). Others (horizontal exits, ladders, slide escapes, and alternating tread devices) are equivalent based on limitations on their use or they reflect new technology.</p> <p>101 protection is commensurate with or exceeds Subpart E</p> |
| <p>1910.37(a)(4) Safeguards designed to protect employees during an emergency (e.g., sprinkler systems, alarm systems, fire doors, exit lighting) must be in proper working order at all times.</p> | <p>4.5.7 Maintenance. Whenever or wherever any device, equipment, system, condition, arrangement, level of protection, or any other feature is required for compliance with the provisions of this <i>Code</i>, such device, equipment, system, condition, arrangement, level of protection, or other feature shall thereafter be maintained, unless the <i>Code</i> exempts such maintenance.</p> <p>4.6.12 Maintenance, Inspection, and Testing. 4.6.12.1 Whenever or wherever any device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature is required for compliance with the provisions of this <i>Code</i>, such device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or other feature shall thereafter be continuously maintained in accordance with applicable NFPA requirements or requirements developed as part of a performance-based design, or as directed by the authority having jurisdiction.</p> | <p>Together these 101 sections cover the E requirement.</p> <p>101 protection is equivalent to Subpart E</p> |
| <p>1910.37(b) <i>Lighting and marking must be adequate and</i></p> | | <p>Title only – requirements follow</p> |

| | | |
|---|---|---|
| <i>appropriate.</i> | | |
| <p>1910.37(b)(1) Each exit route must be adequately lighted so that an employee with normal vision can see along the exit route.</p> | <p>4.5.3.3 Awareness of Egress System. Every exit shall be clearly visible, or the route to reach every exit shall be conspicuously indicated. Each means of egress, in its entirety, shall be arranged or marked so that the way to a place of safety is indicated in a clear manner.</p> <p>7.8 Illumination of Means of Egress. 7.8.1 General. 7.8.1.1* Illumination of means of egress shall be provided in accordance with Section 7.8 for every building and structure where required in Chapter 11 through Chapter 42.....</p> <p>7.8.1.2 Illumination of means of egress shall be continuous during the time that the conditions of occupancy require that the means of egress be available for use, unless otherwise provided in 7.8.1.2.2.</p> <p>7.8.1.2.2 Automatic, motion sensor–type lighting switches shall be permitted within the means of egress, provided that the switch controllers are equipped for fail-safe operation, the illumination timers are set for a minimum 15-minute duration, and the motion sensor is activated by any occupant movement in the area served by the lighting units.</p> | <p>101 does not use the undefined term “adequately” – it is noted in NFPA’s Manual of Style as a possible unenforceable and vague term to be avoided in their standards.</p> <p>Additionally, 101 goes on to address emergency lighting (7.9) in addition to ordinary illumination.</p> <p>101 allows equivalent alternative based on contemporary technology.</p> <p>101 protection exceeds Subpart E</p> |
| <p>1910.37(b)(2) Each exit must be clearly visible and marked by a sign reading "Exit."</p> | <p>7.10 Marking of Means of Egress. 7.10.1 General. 7.10.1.1 Where Required. Means of egress shall be marked in accordance with Section 7.10 where required in Chapter 11 through Chapter 42. 7.10.1.2* Exits. Exits, other than main exterior exit doors that obviously and clearly are identifiable as exits, shall be marked by an approved sign that is readily visible from any direction of exit access. 7.10.3* Sign Legend.</p> | <p>The 101 occupancy chapters specify thresholds below which exit marking would not affect life safety, rather than the performance language in E.</p> <p>101 does not require marking where it would serve no purpose.</p> |

| | | |
|---|---|--|
| | <p>7.10.3.1 Signs required by 7.10.1 and 7.10.2 shall read as follows in plainly legible letters, or other appropriate wording shall be used:</p> <p style="text-align: center;">EXIT</p> | <p>101 protection is commensurate with Subpart E</p> |
| <p>1910.37(b)(3) Each exit route door must be free of decorations or signs that obscure the visibility of the exit route door.</p> | <p>7.2.1.1.2 Every door and every principal entrance that is required to serve as an exit shall be designed and constructed so that the path of egress travel is obvious and direct. Windows that, because of their physical configuration or design and the materials used in their construction, have the potential to be mistaken for doors shall be made inaccessible to the occupants by barriers or railings.</p> <p>7.1.10.2.1 No furnishings, decorations, or other objects shall obstruct exits, access thereto, egress therefrom, or visibility thereof.</p> <p>7.1.10.2.2 No obstruction by railings, barriers, or gates shall divide the means of egress into sections appurtenant to individual rooms, apartments, or other occupied spaces. Where the authority having jurisdiction finds the required path of travel to be obstructed by furniture or other movable objects, the authority shall be permitted to require that such objects be secured out of the way or shall be permitted to require that railings or other permanent barriers be installed to protect the path of travel against encroachment.</p> <p>7.1.10.2.3 Mirrors shall not be placed on exit doors. Mirrors shall not be placed in or adjacent to any exit in such a manner as to confuse the direction of egress.</p> | <p>101 provisions apply to egress components other than doors.</p> <p>101 prohibits certain specific items.</p> <p>101 protection exceeds Subpart E</p> |
| <p>1910.37(b)(4) If the direction of travel to the exit or exit discharge is not immediately apparent, signs must be posted along the exit access indicating</p> | <p>7.10.1.5.1 Access to exits shall be marked by approved, readily visible signs in all cases where the exit or way to reach the exit is not readily apparent to the occupants.</p> <p>7.10.1.5.2* New sign placement shall be such that no point in an exit access corridor is in excess of the rated viewing distance or</p> | |

| | | |
|---|---|--|
| <p>the direction of travel to the nearest exit and exit discharge. Additionally, the line-of-sight to an exit sign must clearly be visible at all times.</p> | <p>100 ft (30 m), whichever is less, from the nearest sign. 7.10.2* Directional Signs. A sign complying with 7.10.3 with a directional indicator showing the direction of travel shall be placed in every location where the direction of travel to reach the nearest exit is not apparent.</p> | <p>101 protection is equivalent to Subpart E</p> |
| <p>1910.37(b)(5) Each doorway or passage along an exit access that could be mistaken for an exit must be marked "Not an Exit" or similar designation, or be identified by a sign indicating its actual use (e.g., closet).</p> | <p>7.10.8.3* No Exit. 7.10.8.3.1 Any door, passage, or stairway that is neither an exit nor a way of exit access and that is located or arranged so that it is likely to be mistaken for an exit shall be identified by a sign that reads as follows: <p style="text-align: center;">NO EXIT</p></p> | <p>101 protection is equivalent to Subpart E</p> |
| <p>1910.37(b)(6) Each exit sign must be illuminated to a surface value of at least five foot-candles (54 lux) by a reliable light source and be distinctive in color. Self-luminous or electroluminescent signs that have a minimum luminance surface value of at least .06 footlamberts (0.21 cd/m²) are permitted.</p> | <p>7.10.5.2.1 Every sign required to be illuminated by 7.10.6.3, 7.10.7, and 7.10.8.1 shall be continuously illuminated as required under the provisions of Section 7.8, unless otherwise provided in 7.10.5.2.2. 7.10.5.2.2* Illumination for signs shall be permitted to flash on and off upon activation of the fire alarm system. 7.10.6.3* Level of Illumination. Externally illuminated signs shall be illuminated by not less than 5 ft-candles (54 lux) at the illuminated surface and shall have a contrast ratio of not less than 0.5.</p> | <p>101 does not address photoluminescent signs outright, but 7.10.7.1 allows listed internally illuminated signs. The light level of internally illuminated signs is addressed by 101 through their listing (7.10.7.1). 101 protection is equivalent to Subpart E</p> |
| <p>1910.37(b)(7) Each exit sign must have the word "Exit" in plainly legible letters not less than six inches (15.2 cm) high, with the</p> | <p>7.10.3* Sign Legend. 7.10.3.1 Signs required by 7.10.1 and 7.10.2 shall read as follows in plainly legible letters, or other appropriate wording shall be used: <p style="text-align: center;">EXIT</p> 7.10.3.2* Where approved by the authority</p> | <p>101 allows equivalent</p> |

| | | |
|--|--|---|
| <p>principal strokes of the letters in the word "Exit" not less than three-fourths of an inch (1.9 cm) wide.</p> | <p>having jurisdiction, pictograms shall be permitted.</p> <p>7.10.6 Externally Illuminated Signs. 7.10.6.1* Size of Signs. 7.10.6.1.1 Externally illuminated signs required by 7.10.1 and 7.10.2, other than approved existing signs, unless otherwise provided in 7.10.6.1.2, shall read EXIT or shall use other appropriate wording in plainly legible letters sized as follows:</p> <ol style="list-style-type: none"> (1) For new signs, the letters shall be not less than 6 in. (150 mm) high, with the principal strokes of letters not less than 7/8 in. (19 mm) wide. (2) For existing signs, the required wording shall be permitted to be in plainly legible letters not less than 4 in. (100 mm) high. | <p>pictograms.</p> <p>The graphics on internally illuminated signs are addressed by 101 through their listing (7.10.7.1).</p> <p>101 addresses existing 4" lettering.</p> <p>101 protection is commensurate with Subpart E</p> |
| <p>1910.37(c) <i>The fire retardant properties of paints or solutions must be maintained.</i> Fire retardant paints or solutions must be renewed as often as necessary to maintain their fire retardant properties.</p> | <p>4.6.12 Maintenance, Inspection, and Testing. 4.6.12.1 Whenever or wherever any device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature is required for compliance with the provisions of this <i>Code</i>, such device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or other feature shall thereafter be continuously maintained in accordance with applicable NFPA requirements or requirements developed as part of a performance-based design, or as directed by the authority having jurisdiction.</p> | <p>101 covers much more than FR paint.</p> <p>E does not require FR paint (or otherwise regulate interior finish), yet requires the FR paint properties to be maintained.</p> <p>101 protection exceeds Subpart E</p> |
| <p>1910.37(d) <i>Exit routes must be maintained during construction, repairs, or alterations.</i></p> | | <p>Title only – requirements follow</p> |

| | | |
|---|---|---|
| <p>1910.37(d)(1) During new construction, employees must not occupy a workplace until the exit routes required by this subpart are completed and ready for employee use for the portion of the workplace they occupy.</p> | <p>4.6.10.2* In buildings under construction, adequate escape facilities shall be maintained at all times for the use of construction workers. Escape facilities shall consist of doors, walkways, stairs, ramps, fire escapes, ladders, or other approved means or devices arranged in accordance with the general principles of the <i>Code</i> insofar as they can reasonably be applied to buildings under construction.</p> | <p>101 protection is equivalent to Subpart E</p> |
| <p>1910.37(d)(2) During repairs or alterations, employees must not occupy a workplace unless the exit routes required by this subpart are available and existing fire protections are maintained, or until alternate fire protection is furnished that provides an equivalent level of safety.</p> | <p>4.6.10.1* Buildings, or portions of buildings, shall be permitted to be occupied during construction, repair, alterations, or additions only where required means of egress and required fire protection features are in place and continuously maintained for the portion occupied or where alternative life safety measures acceptable to the authority having jurisdiction are in place.</p> | <p>101 extends further than E to cover construction and additions.</p> <p>101 protection exceeds Subpart E</p> |
| <p>1910.37(d)(3) Employees must not be exposed to hazards of flammable or explosive substances or equipment used during construction, repairs, or alterations, that are beyond the normal permissible conditions in the</p> | <p>4.6.10.3 Flammable or explosive substances or equipment for repairs or alterations shall be permitted in a building while the building is occupied if the condition of use and safeguards provided do not create any additional danger or impediment to egress beyond the normally permissible conditions in the building.</p> | <p>101 protection is equivalent to Subpart E</p> |

| | | |
|---|---|--|
| workplace, or that would impede exiting the workplace. | | |
| <p>1910.37(e) An employee alarm system must be operable. Employers must install and maintain an operable employee alarm system that has a distinctive signal to warn employees of fire or other emergencies, unless employees can promptly see or smell a fire or other hazard in time to provide adequate warning to them. The employee alarm system must comply with § 1910.165.</p> | <p>4.5.4* Occupant Notification. In every building or structure of such size, arrangement, or occupancy that a fire itself might not provide adequate occupant warning, fire alarm systems shall be provided where necessary to warn occupants of the existence of fire.</p> | <p>Each 101 chapter prescribes the threshold (based on occupant load and/or facility size) above which a fixed fire alarm system is required, while E uses performance language.</p> <p>101 protection is commensurate with Subpart E</p> |

NOTE: This comparison and its conclusions apply only to the unamended NFPA 101. It is recognized that some local or State jurisdictions throughout the country have adopted NFPA 101 with amendments. OSHA is unable to evaluate all the possible amendment scenarios. Amended codes may still provide equal or greater employee protection, however this must be established on a case by case basis.