

Compliance – Resource Bulletin

Means Of Egress

Overview:

An essential component of the design and construction of public buildings is the provision of proper and luminous means of egress (exit & entry) from the building; especially from the standpoint of life safety during a fire or other emergency incident. Different components play a crucial role at different levels; illumination of the pathway, signs displaying critical information and photoluminescent marking.

The International Building Code (IBC), adopted widely by municipalities in the U.S., stipulates design requirements for the means of egress in public buildings. The Occupational Safety & Health Administration (OSHA) stipulates the standards for the signs required to designate an exit or entry in the Code of Federal Regulations; 29 CFR 1910.37. The OSHA standards were adopted from the National Fire Protection Association (NFPA) Life Safety Code; NFPA 101 and NFPA 170 Standard for Fire Safety and Emergency Symbols.

California and a number of other states have also adopted requirements for exit signs that focus on accessibility issues. California's standards are found in the California Code of Regulations; Title 8, Sec. 3216 and the DSA Access Compliance Manual (DSA A.C.M).

Resources:

OSHA Standard 1910.37: (Free)

<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.37>

California Standard 3216: (Free)

<http://www.dir.ca.gov/title8/3216.html>

California DSA A.C.M: (Free)

2019_CBC_Advisory_Manual.pdf

NFPA 101: Life Safety Code (2015): (\$\$\$)

http://www.nfpa.org/aboutthecodes/list_of_codes_and_standards.asp

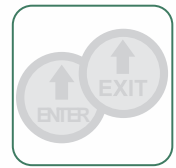
NFPA 170: Std. for Fire & Emergency Symbols: (\$\$\$)

ComplianceSigns.com Product Data Bulletin: (Free)

<http://www.compliancesigns.com/media/productbulletins/Glow-in-the-Dark.pdf>

Design of Means of Egress Signs:

- Exit and entry signs posted at the location of exterior doors to a building, as well as signs directing the path to exits when they are not directly visible, are essential to efficient daily traffic flow in public buildings. But these signs become a matter of life and death during a fire or other emergency, especially when the loss of lighting or the presence of smoke compounds the difficulty of quickly exiting a building. Therefore, these signs must be designed for maximum visibility at all times.



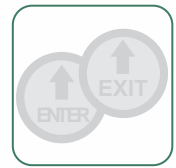
Compliance – Resource Bulletin

(Means Of Egress Continued)

- **SIGN LOCATIONS:** Each exit must be marked by a sign reading “EXIT.” If the direction of travel to the exit is not visibly apparent, signs must be posted along the exit access indicating the direction of travel to the nearest exit. Each doorway along the exit route that might be mistaken for an exit must be marked “NOT AN EXIT” or similar designation, or be marked with a sign indicating its actual use.

Example: closet, laboratory, etc. In addition, California requires that an “Exit” and/or directional sign be provided at exit stairways or ramps and at the intersection of all corridors. (1910.37.b.2, 4, 5) (3216.b).

- **SIGN LAYOUT:** Exit signs must comply with standards specifying text, color, luminance, symbols, and accessibility standards.
 - **TEXT:** Each sign must display the word “EXIT” in letters not less than 6” high and having a stroke width of not less than $\frac{3}{4}$ ”. (1910.37.b.7); New York City Building Code – 1011.4.2, requiring 8” lettering with proportional stroke width.
 - **COLOR:** OSHA does not specify a color for exit signs as long as the text is distinctive in color and contrast with the background. Local building codes may require certain colors. ^[1]The most common colors used in the U.S. are red or green text on a white background. (1910.37.b.6). NYC (27-385.C) and Municipal Code of Chicago (13-160-750) require red lettering.
 - **LUMINANCE:** Each sign must be illuminated in at least one of the following ways: IBC
 - *Externally illuminated:* A reliable light source achieving an illumination level of 5 foot-candles at the sign surface. NYC (24-385.a.) Building code requires 25 foot-candles.
 - *Be internally illuminated:* Electrically powered, self-luminous (radioactive phosphorescent - Tritium), or photoluminescent to a level of at least .06 foot-lamberts. (Shall be listed in accordance with ANSI/UL 924), IBC 2012-1011.
 - **SYMBOLS:** Though not required by OSHA, other codes (NFPA 101, IBC, NYC) require it for low level signs as a complement to indicate the direction to an exit. Some common symbols are:
 - The standard exit symbol, “running man,” is green & white in color and may also have directional arrows. NFPA 170, table 4.2 lists these symbols with the appropriate application. In addition to the NFPA symbols, NYC RS6 (2.2.9.1) specifies that for the final exit door, supplemental directional text shall be added.
 - The international symbol of accessibility, “a man in a wheel chair” may be used to indicate an accessible exit or an automatic door at an entrance.
 - **ACCESSIBILITY STANDARDS:** OSHA does not require but encourages that exits also be marked with ADA compliant signs that include tactile and braille features. ^[2] However NFPA 101- 7.10.1.3 requires that a tactile signage compliant with ICC/ANSI A117.1 shall be located at each exit door requiring an exit sign. California also requires that braille signs be posted at exits, exit stairways or ramps, and at other means of egress such as corridors. (DSA A.C.M. 11B-703)



Compliance – Resource Bulletin

(Means Of Egress Continued)

Luminous Path Markings

An important part of the fluid flow of occupants to exit the building, NFPA 101-7.2.2.5.5, IBC section 1024, NYC RS6 requires a photoluminescent egress path.

- **STEPS:** A continuous and solid stripe applied to the horizontal edge of minimum 1 in. and maximum 2 in. (NYC RS6 2.2.1, IBC 1024.2.1, NFPA 101 -7.2.2.5.5.1). An alternate side edge marking (“L” shape) applied to the side of the stairs for existing building (prior to July 1st 2006, NYC RS6).
- **LANDINGS:** The leading edge of landings has to be marked with a continuous and solid stripe using the dimensional requirements of steps. (NYC RS6 2.2.2, IBC 1024.2.2, NFPA 101 -7.2.2.5.5.2).
- **HANDRAILS:** A continuous and solid stripe having a minimum width of 1 in. and maximum 2 in shall be placed on top surface of the handrail. A gap of not more than 4 in. is permitted where the handrail bends or turns corners. (NYC RS6 2.2.3, IBC 1024.2.3, NFPA 101 – 7.2.2.2.5.5.3).
- **PERIMETER DEMARCATION LINES:** A continuous and solid stripe of minimum 1 in. and maximum 2 in that can be either floor or wall mounted, or both. Interruption shall not exceed 4 in. (NYC RS6 2.2.4, IBC 1024.2.4, NFPA 101 – 7.2.2.2.5.5.4).
- **OBSTACLES:** Standpipes, hose cabinets or any other potential obstacle, at or below 6 feet 6 in. in height and projecting more than 4 in. into the egress path have to be outlined using a marking no less than 1 in. and not more than 2 in. with a pattern of alternating equal bands angled at 45 degrees, of luminescent material and black. (NYC RS6 2.2.5, IBC 1024.2.5, NFPA 101 – 7.2.2.2.5.5.5).
- **DOORS:** Continuous and solid marking stripes of minimum 1 in. and maximum 2 in. at the top and the sides are required for all doors through which occupants must pass to exit the building. Codes also require that the hardware (handle) shall be marked with no less than 16 square in. of luminous material. (NYC RS6 2.2.9.2, IBC 1024.2.5, NFPA 101 – 7.2.2.2.5.5.5).

For Means Of Egress signs and components please visit our store:

https://www.compliancesigns.com/Exit_Signs_Labels.shtml

[1] OSHA Standard Interpretation 09/14/1972 http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=18336

[2] OSHA Standard Interpretation 04/05/2002 http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=INTERPRETATIONS&p_id=24081