



Standard Guide for Recommended Uses of Photoluminescent (Phosphorescent) Safety Markings¹

This standard is issued under the fixed designation E 2030; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This guide describes recommended uses and information on installation of photoluminescent safety markings. This guide does not establish a standard practice to follow. Required markings shall be installed in accordance with applicable building codes.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

E 284 Terminology of Appearance

E 2072 Specification for Photoluminescent (Phosphorescent) Safety Markings

3. Terminology

3.1 Definitions of terms in Terminology E 284 are applicable to this guide.

4. Significance and Use

4.1 Photoluminescent safety markings may be used to indicate the direction of the means of egress (escape route).

NOTE 1—Specification E 2072 covers photometric requirements for photoluminescent (phosphorescent) safety materials.

4.2 Photoluminescent safety markings can be divided into the following categories:

4.2.1 *Floor Mounted Markings*—These markings include floor tiles, stair treads, stair nosings, floor inserts, tactile warning strips, coatings, epoxy casting resins, and other markings attached to the floor.

4.2.2 *Wall Mounted Markings*—These markings include coatings, wall bases, tapes, corner guards, signage, exit maps, guidance strips, and other markings attached to walls, doors, handrails, columns, and other obstructions.

5. Recommended Applications

5.1 *Floor Proximity Exit Path Marking*—This provides a continuous delineation of the means of egress (escape route) from the occupied area to any exit doors that lead directly to the public way, except as interrupted by intersecting corridors. Floor proximity exit path markings should be at least 100-mm (4-in.) wide in all locations. If narrower widths are used, the luminance shall increase, as indicated in Specification E 2072, section on Installation Site, On-Site Luminance. Floor proximity exit path markings should be applied to the floor surface or installed on the wall, close to the floor (see Figs. 1-3).

5.2 *Continuous Wall and Floor Markings in Corridors*

5.2.1 Corridors 2-m (2.2-yd) or wider should be marked on both sides.

5.2.2 In dead end corridors only, the direction of travel should be indicated by directional indicators pointing in the direction of the means of egress (escape route). The maximum spacing between the individual directional indicators should be 1-m (1.1-yd).

5.3 *Marking of Exit Doors and Emergency Exits*—Exit doors and emergency exits in the course of the egress path should be marked with high and floor proximity exit signs. Such doors should also either be marked all around by highlighting their entire frames or by leading the pathway marking up to the level of the door handle on the side of the door where the handle is located (see Figs. 1-3). To aid in locating the door release, its knob/latch/bar should be marked by placing photoluminescent material behind it or on it. (see Figs. 2 and 3).

5.3.1 Doors inside an enclosed exit stairway that do not allow re-entry into the building should be marked by photoluminescent material connecting the wall markings at the same height (see Figs. 2 and 3).

¹ This guide is under the jurisdiction of ASTM Committee E12 on Color and Appearance and is the direct responsibility of Subcommittee E12.13 on Photoluminescent Safety Markings.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

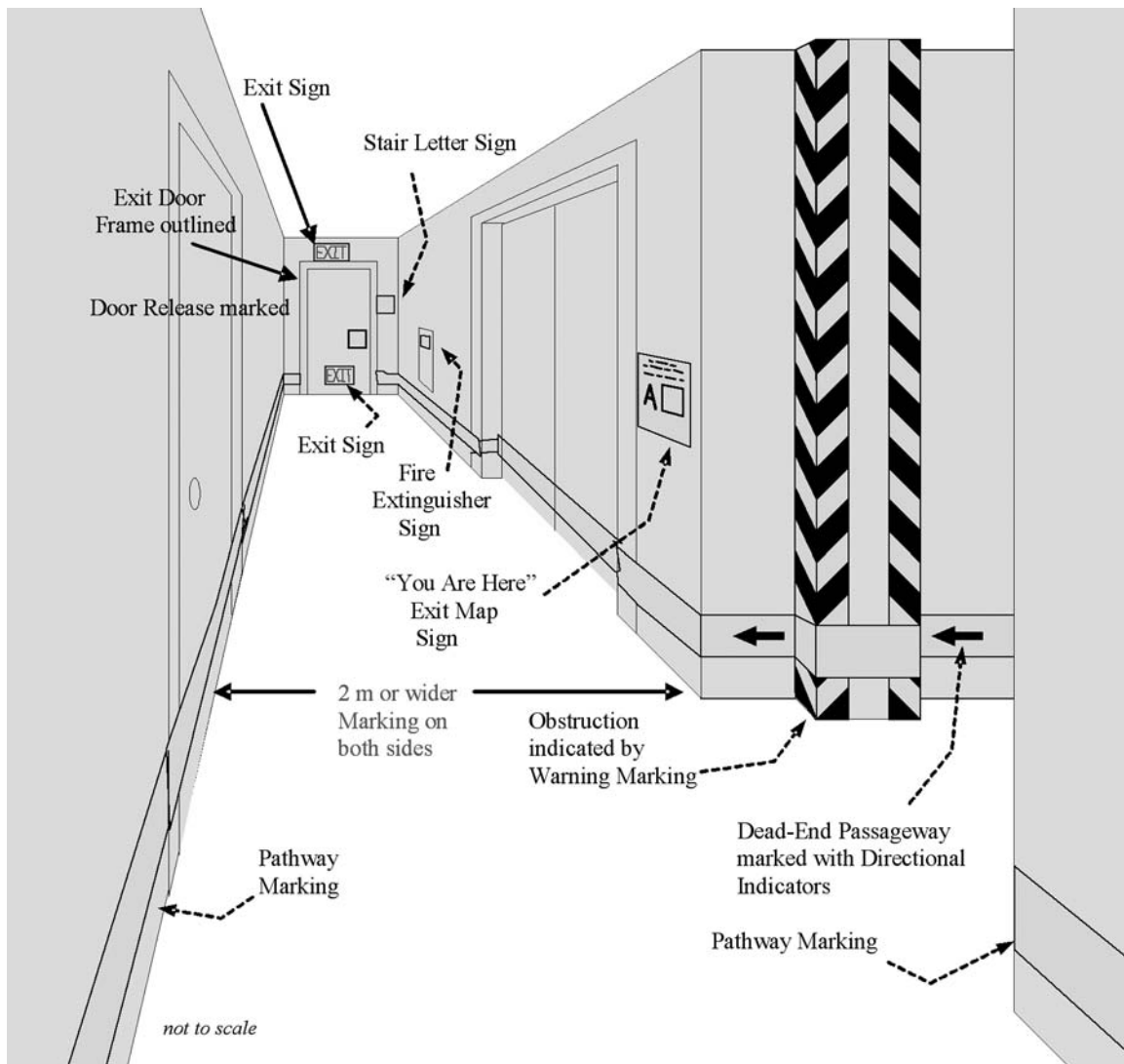


FIG. 1 Wall and Floor Markings in a Corridor

5.4 *Marking of Stairs and Ramps*—Photoluminescent markings on stairs, ramps, and landings should clearly indicate their beginning, course, and end. Markings should be applied to the tread, the landing, and, where present, to the side(s) of the stairs (see Figs. 2 and 3).

5.5 *Handrails* should be marked as part of the exit guidance process. The marking may be on the handrail or applied to the wall (see Figs. 2 and 3).

5.6 *Obstacles, Protrusions and Other Hazards* should be identified with photoluminescent warning markings to be clearly visible in a blackout condition (see Fig. 1).

5.7 *Fire Fighting Equipment* should be marked by a sign (for example, hose station) or by placing photoluminescent material behind it (for example, a fire extinguisher) to aid in finding such equipment in darkness situations (see Figs. 1-3).

5.8 *Exit Maps* should be provided on each floor, located next to the elevators, if present, or by the main stair(s), if no elevators are present (see Figs. 1 and 4).

5.9 At any exit door leading to a stair, a sign should be provided that identifies the stair (see Figs. 1 and 5).

5.10 In stairs, a sign should be provided on each floor landing that identifies the stair, the floor, and whether re-entry into the building is acceptable (see Fig. 2, Fig. 3 and Fig. 6).

5.11 *Exit Signs*—High and floor proximity photoluminescent exit signs may be used. Listed signs complying with UL924, Standard for Emergency Lighting and Power Equipment, tested by a Nationally Recognized Testing Laboratory, shall be used (see Figs. 1-3).

6. Keywords

6.1 low location lighting; photoluminescent safety markings; emergency lighting

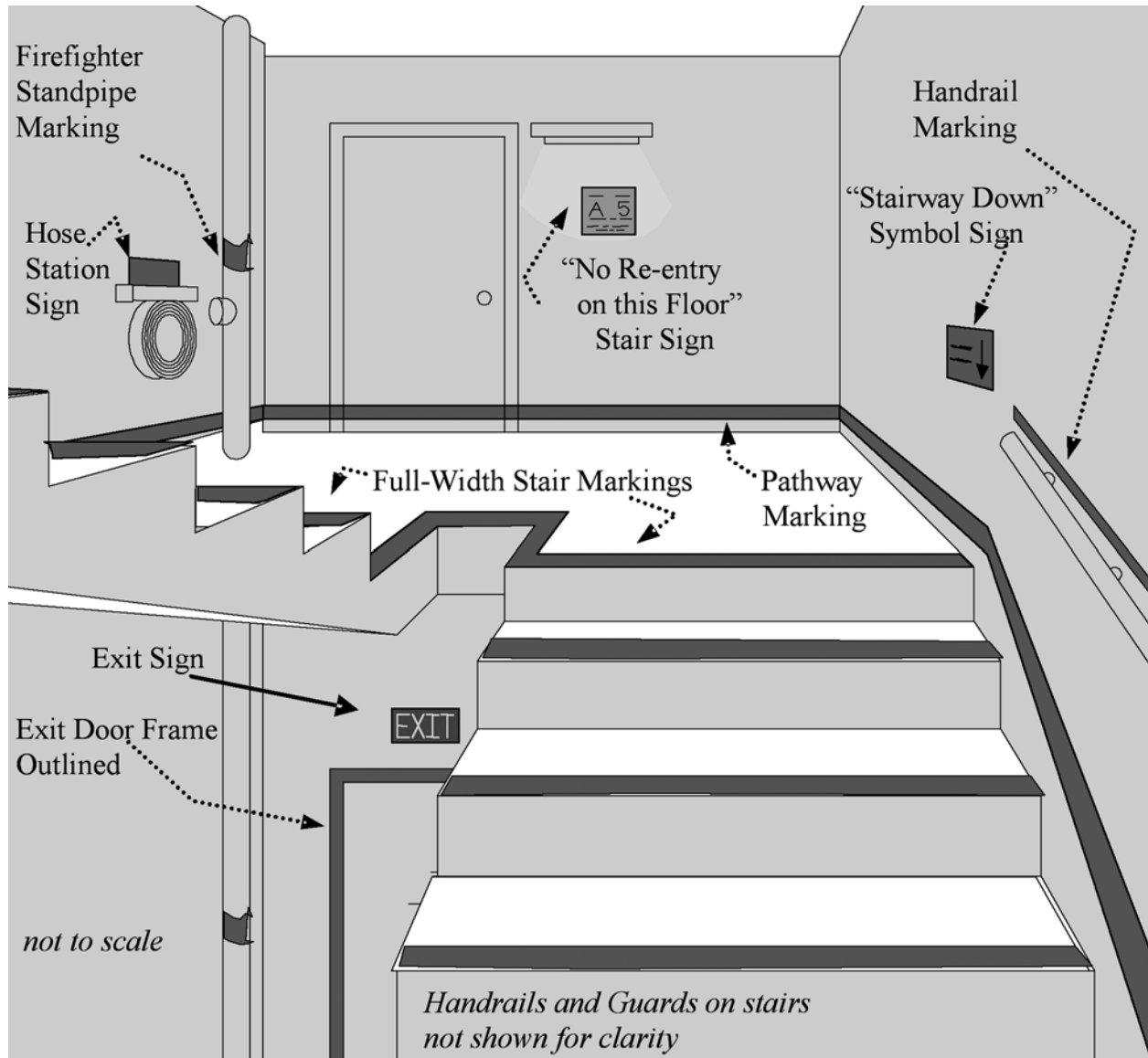


FIG. 2 Wall and Floor Markings in an Enclosed Exit Stairway

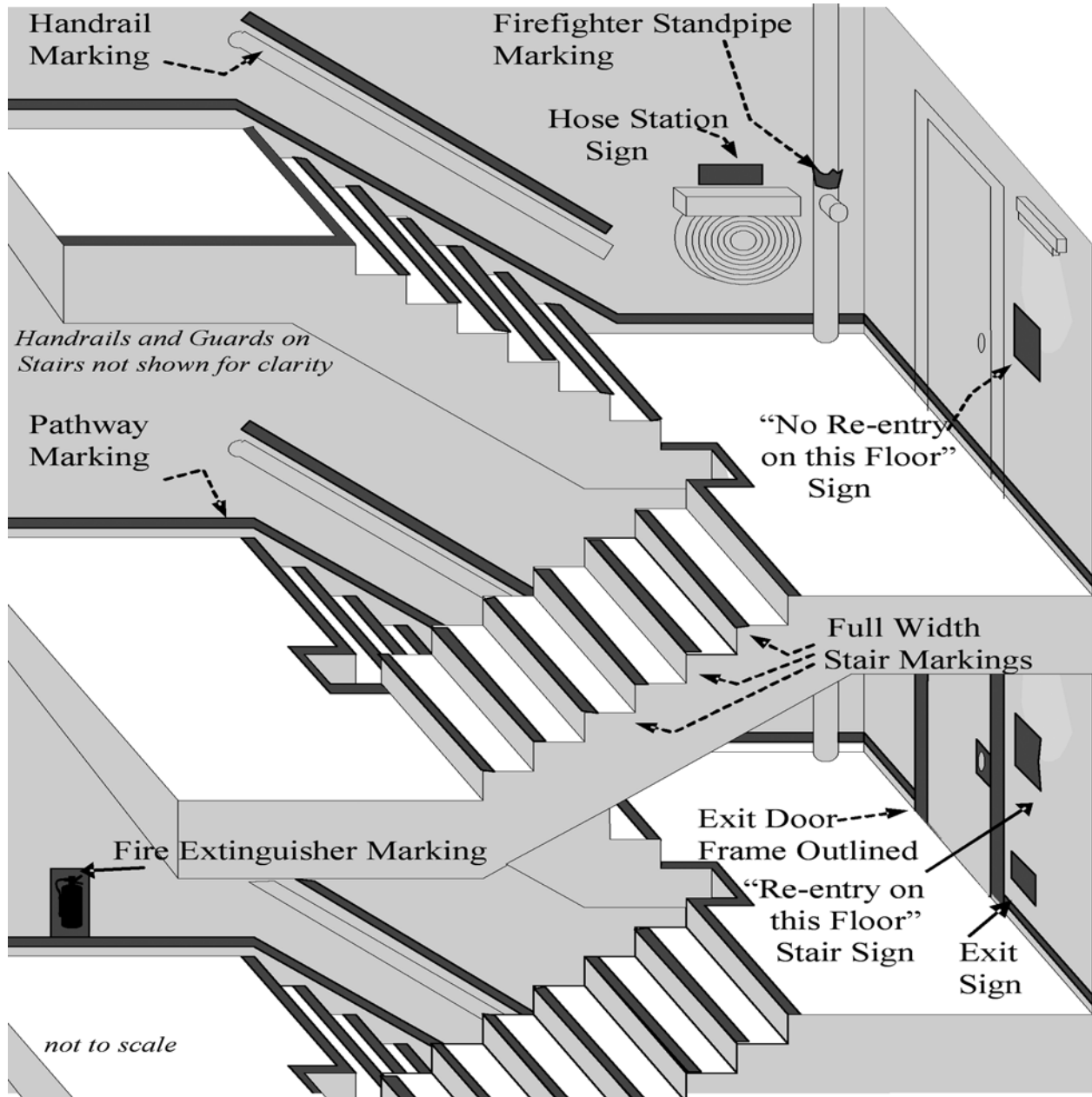


FIG. 3 Stair Markings in an Enclosed Exit Stairway

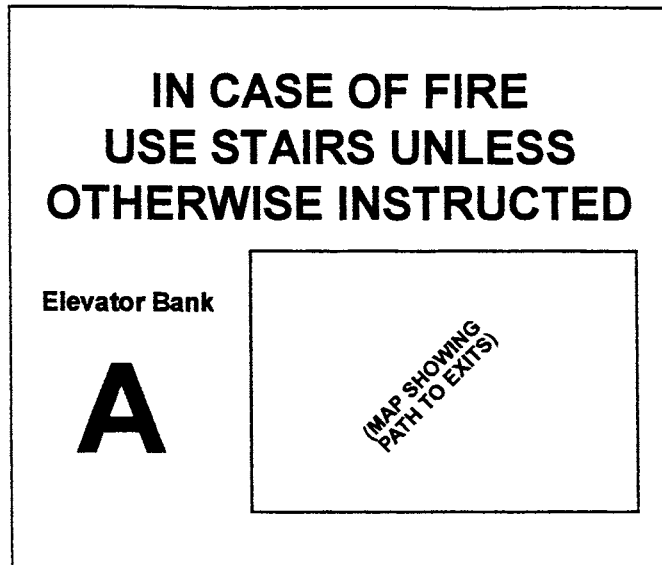


FIG. 4 Exit Map

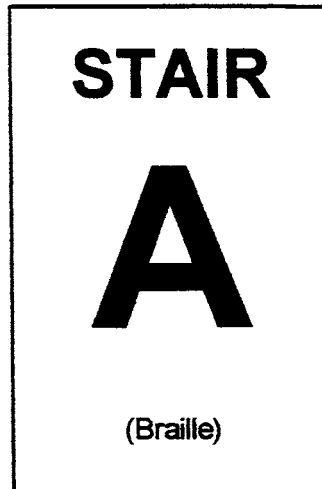


FIG. 5 Identification Sign for Stairs



FIG. 6 Reentry Sign

APPENDIX

(Nonmandatory Information)

X1. RELATED INFORMATION

X1.1 Further information on photoluminescent markings can be found in the following materials:

DIN 67510 Parts 1-4, Beuth Verlag GmbH, 10772 Berlin, Germany.

IMO Resolution A.752(18), available from International Maritime Organization, Publications Section, 4 Albert Embankment, London SE1 7SR, England.

JIS-Z9107, available from Japanese Standards Association, 1- 24, Akasaka 4, Minato-ku, Tokyo 107, Japan.

MSC62/QP.17, Maritime Safety Committee of IMO.

PSPA Standard 002 Part 2, 1993, PSPA, United Kingdom.

UL 924 AND UL 1994 (Underwriters Laboratories standards, available from Global Engineering Documents, Boulder, Colorado).

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