Chapter ILHR 51

DEFINITIONS AND STANDARDS

ILHR 51.01Definitions (p. 17)ILHR 51.01Standard exit (p.ILHR 51.02General requirements (p. 31)ILHR 51.03Glasses of construction standards (p. 39)ILHR 51.16Standard exit (p.ILHR 51.04Scope (p. 47)ILHR 51.044Scope (p. 47)ILHR 51.044Approved rating methods (p.ILHR 51.044Approved testing laboratories (p. 48)ILHR 51.045Typical examples of fire-resistive structural components (p. 49)ILHR 51.046Calculation method (p. 53)ILHR 51.047Crise (addition method (p. 53)ILHR 51.046Calculation method (p. 53)ILHR 51.04	74)
ILHR 51.015 Scope (p. 33)ILHR 51.05 Standard exit (p.ILHR 51.02 General requirements (p. 34)ILHR 51.06 Stairways (p. 76)ILHR 51.03 Classes of construction stan- dards (p. 39)ILHR 51.16 Handrails (p. 77)ILHR 51.04 Scope (p. 47)ILHR 51.042 General requirements (p. 47)ILHR 51.043 Approved rating methods (p. ries (p. 48)ILHR 51.165 Stairway identi ILHR 51.046 Typical examples of fire-re- sistive structural compo- nents (p. 49)ILHR 51.046 Calculation method (p. 53)ILHR 51.120 Fire rescapes (p. 87)	74)
ILHR 51,03Classes of construction stan- dards (p. 39)ILHR 51,161Handrails (p. 77)ILHR 51,04Scope (p. 47)ILHR 51,042General requirements (p. 47)ILHR 51,164Headroom (p. 79)ILHR 51,042General requirements (p. 47)ILHR 51,164Headroom (p. 79)ILHR 51,164Headroom (p. 79)ILHR 51,044Approved rating methods (p. 48)ILHR 51,164Headroom (p. 79)ILHR 51,164Headroom (p. 79)ILHR 51,044Approved rating methods (p. rics (p. 48)ILHR 51,165Stairway identi 79)ILHR 51,045Typical examples of fire-re- sistive structural compo- nents (p. 49)ILHR 51,17Smokeproof stai 80)ILHR 51,046Calculation method (p. 53)ILHR 51,20Fire escapes (p. 8	• • •
ILHR 51,03Classes of construction stan- dards (p. 39)ILHR 51,161Handrails (p. 77)ILHR 51,04Scope (p. 47)ILHR 51,042General requirements (p. 47)ILHR 51,164Headroom (p. 79)ILHR 51,042General requirements (p. 47)ILHR 51,164Headroom (p. 79)ILHR 51,164Headroom (p. 79)ILHR 51,044Approved rating methods (p. 48)ILHR 51,164Headroom (p. 79)ILHR 51,164Headroom (p. 79)ILHR 51,044Approved rating methods (p. rics (p. 48)ILHR 51,165Stairway identi 79)ILHR 51,045Typical examples of fire-re- sistive structural compo- nents (p. 49)ILHR 51,17Smokeproof stai 80)ILHR 51,046Calculation method (p. 53)ILHR 51,20Fire escapes (p. 8	
dards (p. 39) ILHR 51.042 General requirements (p. 47) ILHR 51.043 Approved rating methods (p. 1LHR 51.044 Approved testing laborato- ries (p. 48) ILHR 51.045 Typical examples of fire-re- sistive structural compo- nents (p. 49) ILHR 51.046 Calculation method (p. 53) ILHR 51.047 Fire-rated door assemblies in ILHR 51.047 Fire-rated door assemblies in	
ILHR 51.04Scope (p. 47)ILHR 51.04Headroom (p. 79)ILHR 51.042General requirements (p. 47)ILHR 51.043Approved rating methods (p. 48)ILHR 51.165Basement stairway identilILHR 51.044Approved testing laboratories (p. 48)ILHR 51.044Approved testing laboratories (p. 48)ILHR 51.045Typical examples of fire-resistive structural components (p. 49)ILHR 51.165Basement stairway identilILHR 51.045Typical examples of fire-resistive structural components (p. 49)ILHR 51.18Interior enclosed 80)ILHR 51.046Calculation method (p. 53)ILHR 51.20Fire escapes (p. 82)	3
ILHR 51.042 General requirements (p. 47) ILHR 51.042 General requirements (p. 47) ILHR 51.043 Approved rating methods (p. 48) ILHR 51.044 Approved testing laboratories (p. 48) ILHR 51.045 Typical examples of fire-resistive structural components (p. 49) ILHR 51.165 Stairway identify (p. 48) ILHR 51.046 Calculation method (p. 53) ILHR 51.046 Calculation method (p. 53)	{
ILHR 51.043 Approved rating methods (p. 48) ILHR 51.044 Approved testing laboratories (p. 48) ILHR 51.045 Exit access (p. 79) ILHR 51.044 Approved testing laboratories (p. 48) ILHR 51.047 Exit access (p. 79) ILHR 51.045 Typical examples of fire-resistive structural components (p. 49) ILHR 51.18 Interior enclosed 80) ILHR 51.046 Calculation method (p. 53) ILHR 51.20 Fire escapes (p. 8	j Fration /-
48) ILHR 51.044 Approved testing laborato- ries (p. 48) ILHR 51.045 Typical examples of fire-re- sistive structural compo- nents (p. 49) ILHR 51.046 Calculation method (p. 53) ILHR 51.047 Exit access (p. 79 ILHR 51.167 Exit access (p. 79 ILHR 51.167 Exit access (p. 79 ILHR 51.17 Smokeproof stai 80) ILHR 51.18 Interior enclosed 80) ILHR 51.20 Fire-rated door assemblies in ILHR 51.20 Fire escapes (p. 8	nearion (p.
ILHR 51.044 Approved testing laboratories (p. 48) ILHR 51.167 Exit access (p. 79 ILHR 51.045 Typical examples of fire-re-sistive structural components (p. 49) ILHR 51.18 Interior enclosed 80) ILHR 51.046 Calculation method (p. 53) ILHR 51.20 Fire-sated door assemblies in ILHR 51.20 Fire escapes (p. 8)	(
ries (p. 48) ILHR 51,045 Typical examples of fire-re- sistive structural compo- nents (p. 49) ILHR 51,046 Calculation method (p. 53) ILHR 51,047 Fire-rated door assemblies in ILHR 51.20 Fire escapes (p. 8	ays (p. 79)
ILHR 51,045 Typical examples of fire-re- sistive structural compo- nents (p. 49) 80) ILHR 51,046 Calculation method (p. 53) ILHR 51.18 Interior enclosed 80) ILHR 51,047 Fire-rated door assemblies in ILHR 51.20 Fire escapes (p. 8)	
sistive structural compo- nents (p. 49) ILHR 51.046 Calculation method (p. 53) ILHR 51.047 Fire-rated door assemblies in ILHR 51.20 Fire escapes (p. 8	r tower (p.
ILHR 51.046 Calculation method (p. 53) ILHR 51.19 Horizontal exit (ILHR 51.047 Fire-rated door assemblies in ILHR 51.20 Fire escapes (p. 8	
ILHR 51.046 Calculation method (p. 53) ILHR 51.19 Horizontal exit (ILHR 51.047 Fire-rated door assemblies in ILHR 51.20 Fire escapes (p. 8	stairway (p.
ILHR 51.046 Calculation method (p. 53) ILHR 51.19 Horizontal exit (ILHR 51.047 Fire-rated door assemblies in ILHR 51.20 Fire escapes (p. 8	
ILHR 51.047 Fire-rated door assemblies in ILHR 51.20 Fire escapes (p. 8	p. 81)
	(2)
fire-rated construction (p. 53) ILHR 51.21 Standpipe and h	ose systems
ILHR 51.048 Fire window and glass block (p. 85)	
assemblies in fire-rated con- ILHR 51.22 Fire extinguisher	's (p. 88)
struction (p. 55) ILHR 51.23 Automatic sprint	klers (p. 89)
ILHR 51.049 Miscellaneous openings in ILHR 51.24 Fire alarm system	ms (p. 90)
fire-rated construction (p. 55) ILHR 51.245 Smoke detectors	
ILHR 51.05 Roof coverings (p. 56) ILHR 51.95 Adoption of A	STM stan-
ILHR 51.06 Foam plastics (p. 56) ILHR 51.06 Foam plastics (p. 56) ILHR 51.06 Foam plastics (p. 56)	
ILHR 51,065 Light-transmitting plastics ILHR 51.26 Adoption of AC	I standards
(p. 96)	
ILHR 51.07 Interior finishes (p. 67) ILHR 51.27 Adoption of m	iscellaneous
ILHR 51.08 Occupancy separations (p. standards (p. 96)	
1 P P P P P P P P P P P P P P P P P P P	
Balles Binstan, """ ale de la companya de	

Note: Chapter Ind 51 was renumbered to be chapter ILHR 51 effective January 1, 1984.

Note: The definitions of words and phrases not defined in this section should be taken from the current edition of Webster's New International Dictionary.

ILHR 51.01 Definitions. (1) "Accessory room" means any room or enclosed floor space used for eating, cooking, bathrooms, water closet compartments, laundries, pantries, foyers, hallways and other similar floor spaces. Rooms designated as recreation, study, den, family room, office and other similar floor spaces, in addition to habitable rooms, are not considered accessory rooms.

(1a) AIR CONDITIONING. The process of treating air to control simultaneously its temperature, humidity, cleanliness and distribution to meet the requirements of the conditioned space.

(2) ALLEY. Any legally established public thoroughfare less than 30 feet in width but not less than 10 feet in width whether designated by name or number.

wat hear para brain inihaana ta' ana ayaa yaa gaala a

(3) APPROVED. Approval granted by the department under the regulations stated in this code.

Definitions and standards

(

(3a) "Approved diversified tests" means fire tests which evaluate materials or construction assemblies representative of actual end use applications.

Note: Approved diversified tests may include, but are not limited to, ASTM E84-81a — Test for Surface Burning Characteristics of Building Materials, ASTM E119 — Fire Tests of Building Construction and Materials, ASTM D1929 - 1977 — Standard Test Method for the Ignition Properties of Plastics, FM 4880 — Factory Mutual Building Corner Fire Test, PICC 401-1980 — Enclosed Room Corner Test and UL 1040 — Outline of Investigation of Insulated Wall Construction, January, 1980.

(4) AREA (GROSS). The maximum horizontal projected area within the perimeter of the outside surface of walls or supports of the building or structure. Exterior cantilever open balconies are not included.

(5) AREA (NET). The occupied or usable floor area in a building but not including space occupied by columns, walls, partitions, mechanical shafts or ducts.

(5a) AREAWAY. Exterior area whose grade is below the grade (at building) and having at least one side consisting of the exterior wall of a building.

(6) ATTIC. The space not used for human occupancy located between the ceiling of uppermost story and the roof.

(7) AUTOMATIC. Automatic as applied to a fire protective device, is one which functions without human intervention and is actuated as a result of the predetermined temperature rise, rate of rise of temperature, combustion products or smoke density such as an automatic sprinkler system, automatic fire door, automatic fire shutter, or automatic fire vent.

(7a) "Automatic fire sprinkler system", for fire protection purposes, means an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The system includes a suitable water supply, such as a gravity tank, fire pump, reservoir or pressure tank or connection beginning at the supply side of an approved gate valve located at or near the property line where the pipe or piping system provides water used exclusively for fire protection and related appurtenances and to standpipes connected to automatic sprinkler systems. The portion of the sprinkler system above ground is a network of specially sized or hydraulically designed piping installed in a building, structure or area, generally overhead, and to which sprinklers are connected in a systematic pattern. The system includes a controlling valve and a device for actuating an alarm when the system is in operation. The system is usually activated by heat from a fire and discharges water over the fire area.

(7b) "Automatic fire suppression system" means a mechanical system designed and equipped to detect a fire, actuate an alarm and supress or control a fire using water, water spray, foam, carbon dioxide, halogenated agent or other approved suppression agent.

(8) BALCONY (EXTERIOR). An elevated platform attached to a building and enclosed on one or more sides by railings.

(9) BALCONY (INTERIOR). An open intermediate level or stepped floor. Also see "Stories, Number of."

(147) WALL (HOLLOW BONDED). Wall built of masonry units with or without any air space within the wall, and in which the facing and backing of the wall are bonded together with masonry units.

(148) WALL (NONBEARING EXTERIOR). Wall which supports no vertical load other than its own weight.

(148a) WALL (NONBEARING INTERIOR). See "Partition."

(149) WALL (PANEL). An exterior nonbearing wall in skeleton construction.

(150) WALL (PARAPET). That part of a wall entirely above the roof line.

(151) WALL (PARTY).* Walls used for separation between 2 buildings on the property line between adjoining properties.

(152) WALL (RETAINING). Wall used to resist laterally imposed pressures.

(153) WALL (VENEERED). Wall having facing which is attached to the backing but not so bonded as to exert common action under load.

(153a) WAREHOUSE. A warehouse is a place adapted to the reception and storage of goods and merchandise.

(154) YARD (FRONT). An open, unoccupied space unobstructed to the sky, extending across the full width of a lot, or plot of land between the street line and the base of a front building wall. Unenclosed terraces, slabs or stoops without roofs or walls may project into this open space.

History: Cr. Register, June, 1972, No. 198, eff. 1-1-73; renum. (1) to be (1a), r. and recr. (10), (54), (67) and (121), cr. (1), (5a), (22a), (56a), (57a), (67a), (76a), (106a) and (148a), Register, September, 1973, No. 213, eff. 10-1-73; cr. (102a), (104a) and (105a), Register, December, 1974, No. 228, eff. 1-1-75; cr. (7a), (41a), (139a) and (153a) and am. (125), Register, December, 1976, No. 252, eff. 1-1-77; cr. (42a), (42b), (42c), (42d), and (120a), am. (139a), Register, December, 1977, No. 264, eff. 1-1-78; am. (23) to (26), (97) and (139a), r. (86) (c), Register, December, 1977, No. 264, eff. 1-1-78; am. (23) to (26), (97) and (139a), r. (86) (c), Register, December, 1978, No. 276, eff. 1-1-79; cr. (16a), (71a), (79a) and (114a), Register, May, 1980, No. 293, eff. 6-1-80; am. (1) and (124), r. (123), r. and recr. (120), renum. (102a) to be (102b), renum. (114a) to be (114b), cr. (19a), (36a), (36b), (36c), (37a), (36a), (36b), (71b), (75a), (80a), (82a), (102a), (114a), (119a), (119b), (119c) and (130a), Register, December, 1981, No. 312, eff. 1-1-82; renum, (71a) to be (71c), cr., (68a), (71a), (86a) and (93a), Register, February, 1982, No. 330, eff. 7-1-83; renum. (120a) to be (120b), cr. (7b) and (19a), Register, June, 1963, No. 330, eff. 7-1-83; renum. (120a) to be (120b), cr. (3b), (57b), (58a), (58b) and (120a), r. and recr. (13), am. (86) (a), (104) and (120), Register, December, 1983, No. 336, eff. 1-1-84; am. (7b), Register, February, 1984, No. 338, eff. 3-1-84.

Standards for Classes of Construction

ILHR 51.015 Scope. This section covers minimum standards for common types of building designs currently being constructed. This section does not specifically include classification for uncommon building designs such as shells, domes, space frames, inflatable and similar types of designs. The standards contained herein shall be used as a guide for such uncommon building designs to achieve the degree of safety intended by these standards.

History: Cr. Register, June, 1972, No. 198, eff. 1-1-73; renum. Register, September, 1973, No. 213, eff. 10-1-73.

*See Appendix A for further explanatory material.

WISCONSIN ADMINISTRATIVE CODE

ILHR 51

34

Definitions and standards

(

ILHR 51.02 General requirements. (1) FIRE-RESISTIVE RATINGS. The fire-resistive ratings shown in "Classes of Construction" Table 51.03-A are to satisfy the structural integrity end point for the time specified. For heat transmission end point requirements see s. ILHR 51.042 (5).

(2) SUBSTITUTE. Substitution of a building element fire-resistive rating will be permitted in any class of construction providing it is equal to or better than the required fire-resistive rating as specified in Table 51.03-A.

(a) Construction requiring the use of noncombustible material shall not be replaced by combustible construction regardless of fire-resistive rating unless mentioned specifically under classes of construction standards.

(b) Noncombustible construction may be substituted for combustible construction provided the fire-resistive rating indicated in Table 51.03-A is equal to or better than that noted for combustible construction.

Note: See ILHR 64.41 (1) for requirements pertaining to combustible ceiling materials used in conjunction with air-handling plenums.

(c) Fire-retardant treated wood exposed to high humidity or accelerated weathering shall be pressure impregnated and so identified. Subsequent to treatment, lumber 2 inches or less in thickness shall be dried to a moisture content of 19% or less, and plywood to a moisture content of 15% or less.

Note: The department will accept fire-retardant treated lumber and plywood which meet the standards of the American Wood Preservers Association, "Fire-Retardant Treatment by Pressure Processes," and ASTM D 2898, "Standard Methods of Test for Durability of Fire-Retardant Treatment of Wood."

(3) FLOOR FRAMING. (a) All floor framing shall satisfy the requirements of Table 51.03-A, whether floor system is considered part of a story or not, unless more restrictive requirements are noted under the occupancy chapters of this code.

(4) EXTERIOR WALL CONSTRUCTION, (a) All exterior walls which are in contact with the soil shall be of masonry or concrete except that all-weather wood foundations are permitted if constructed in accordance with the provisions outlined in s. ILHR 53.64.

(b) Exposed exterior walls between the first floor structural system and grade shall be of masonry or concrete except as follows:

1. Walls may be constructed of material other than masonry or concrete providing the following conditions are satisfied:

a. The construction shall meet the requirements of Table 51.03-A for specified class of construction.

b. Any portion of exposed wall above grade and below the first floor structural system, when other than masonry or concrete, shall be counted as a story, and is also considered when determining height of wall.

Note: Buildings utilizing wood foundations in accordance with the provisions outlined in s. ILHR 53.64 will be limited to 3 levels (including 2-story and basement, 2-story and ground floor, or 3-story with treated wood frost wall and no crawl space or basement).