

CR 83-183

RULES CERTIFICATE

STATE OF WISCONSIN)
) SS
DEPT. OF INDUSTRY,)
LABOR & HUMAN RELATIONS)

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TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETINGS:

I, Howard S. Bellman, Secretary of the Department of Industry, Labor and Human Relations, and custodian of the official records of said department, do hereby certify that the annexed rule(s) relating to Chs. ILHR 50-64 - Building & Heating, Vent and A/C Code - Automatic Fire Sprinkler System for Low Rise Bldgs (Amendments) were duly approved and adopted by this department on 1/11/84.

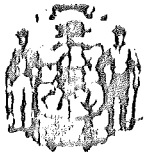
(Subject)

(Date)

I further certify that said copy has been compared by me with the original on file in this department and that the same is a true copy thereof, and of the whole of such original.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of the department at 4:30 in the city of Madison, this 11th day of January A.D. 1984.

Howard S. Bellman
Secretary



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RULES in FINAL DRAFT FORM

Rule: Chs. Ind 50-64

Relating to: Building & Heating, Ventilating & Air Conditioning
Code - Automatic Fire Sprinkler Rules (Amendments)

Clearinghouse Rule No.: 83-183

Administrative rules to repeal s. Ind 52.015 (3) (b) 2. b.; to renumber s. Ind 52.015 (3) (b) 2. c.; to amend ss. Ind 51.01 (7b), Ind 52.015 (3) (a) 1., 2., (h); to repeal and recreate ss. Ind 52.015 (3) (c), (d), (j), (4), (5), 52.02 (2), A52.015; to create s. Ind 52.015 (6), relating to automatic fire sprinkler systems, automatic fire suppression systems and wall openings in low rise public buildings and places of employment.

ANALYSIS OF RULES

Chapter 320, Laws of 1981, mandated the Department of Industry, Labor and Human Relations to promulgate administrative rules for automatic fire sprinkler systems in public buildings and places of employment. The law states "The rules of the department governing such places and buildings under 60 feet in height shall be in substantial conformity with those provisions of Article 17 of the Building Officials and Code Administrators International, Inc., Basic Building Code, 1981, 8th edition, which will relate to fire protection systems in buildings under 60 feet in height."

In response to that mandate, the department developed a series of administrative rules under Clearinghouse Rule Report #82-208. The proposals were subjected to the administrative rulemaking process specified in ch. 227, Stats., were adopted and became effective on July 1, 1983.

Subsequent to the adoption of the rules, the department became aware or was informed as to certain interpretations and clarifications of the rules based upon the 1981 edition of the BOCA Basic Building Code. Although the mandate of ch. 320, Laws of 1981 specifically references Article 17 of the BOCA Basic Building Code, those Article 17 provisions are amended, clarified and interpreted in other articles of the BOCA code. In addition, further interpretive language can be found in the National Fire Protection Association Standard NFPA 13-1980, which is used as the basis for the automatic sprinkler rules in the 1981 BOCA Basic Building Code and is adopted by reference in the current Wisconsin Administrative Building and Heating, Ventilating and Air Conditioning Code.

In response to concerns regarding the codification of these interpretations, the department, on October 10, 1983, promulgated an emergency rule regarding the hourly rating of fire separations used in conjunction with or in lieu of automatic fire sprinkler systems.

The proposed rules are intended to codify the emergency rule language on a permanent basis and to codify the other interpretations and clarifications of the current automatic fire sprinkler rules, as mandated by ch. 320, Laws of 1981.

Section Ind 51.01 (7b) is amended to include the word "automatic" in the term being defined.

Section Ind 52.015 (3) (a) 1. clarifies the requirements dealing with sprinkler protection for storage and workshop areas. The proposal codifies exceptions based upon ss. 309.3 and 1702.1 - Exception of the BOCA code.

Section Ind 52.015 (3) (a) 5. deals with sprinkler protection for "windowless stories" Subparagraph a. codifies the requirement found in s. 1702.13 of the BOCA code. The exception found in subpar. b. is based upon the language of s. A-4-4 of the NFPA standard 13-1980 and applies to buildings of totally noncombustible construction with noncombustible contents. The exception under subpar. c. addresses factory occupancies housing low hazard industrial processes and is based upon ss. 309.3 and 304.3.3 of the BOCA code. The exception under subpar. d. deals with telephone central office equipment buildings and is based upon the language of s. 1702.19.1 of the BOCA code. The exception under subpar. e. deals with windowless floor levels within individual living units and is based upon s. 1702.1 - Exception of the BOCA code.

Section Ind 52.015 (3) (b) 2. b. and c. are changed to reflect the intent of s. 1702.19.1 of the BOCA code by moving the requirements to s. Ind 52.015 (3) (a) 5. Again, these sections address the topic of telephone central office equipment buildings.

Section Ind 52.015 (3) (c), (d), (h) and (j) are clarification of the current requirements dealing with automatic fire sprinkler protection for restaurants, recreation centers, lecture halls, dance halls, night clubs, museums, art galleries, libraries and theatres and other places of assembly with fixed seats. The requirements are based on ss. 302.3, 302.4, 1702.3 and 1702.4 of the BOCA code. A specific series of exceptions for indoor participant recreation centers is also included based upon s. 507.1.2 of the BOCA code.

Section Ind 52.015 (4) codifies the October 10, 1983, emergency rule and is based upon s. 1402 of the BOCA code. Section Ind 52.015 (5) deals with the hourly separations needed between multiple use buildings and is based upon ss. 312.1 and 1704.2 of the BOCA code. Section Ind 52.015 (6) addresses the subject of fire separations between portions of buildings which are protected by an automatic fire sprinkler system and those which are not. The language is based upon NFPA standard 13-1980 and s. 1704 of the BOCA code.

Section Ind 52.02 (2) deals with the requirements for windowless floor levels. The requirements are based on ss. 1406.4 and 1702.13 of the BOCA code.

Section A52.015 is being revised to include additional information and clarifications.

Pursuant to the authority vested in the state of Wisconsin's Department of Industry, Labor and Human Relations by s. 101.02 (1), ss. 101.02 (15) (h) to (j) and ss. 101.14 (4) (a) and (c), the department hereby repeals, renumbers, amends, repeals and recreates and creates rules interpreting ss. 101.02 (15) (h) to (j) and ss. 101.14 (4) (a) and (c), Stats., as follows:

SECTION 1. Ind 51.01 (7b) is amended to read:

Ind 51.01 (7b) "Fire Automatic fire suppression system" means a mechanical system designed and equipped to detect a fire, actuate an alarm and suppress or control a fire using water, water spray, foam, carbon dioxide, halogenated agent or other approved suppression agent.

SECTION 2. Ind 52.015 (3) (a) 1. is amended to read:

Ind 52.015 (3) (a) 1. 'Storage and workshop areas'. Storage a. Except as provided in subpars. b. and c., storage and workshop areas exceeding 50 sq. ft. in area and located in assembly halls, theaters, offices, schools and residential occupancies;

b. Storage and workshop areas within individual living units are exempt from the provisions of subpar. a.

c. Rooms or areas used for storage of noncombustible materials, low hazard wares that do not burn rapidly or combustible materials stored in metal cabinets are exempt from the provisions of subpar. a.

Note: See Table A52.015-3 of Appendix A for additional information pertaining to low, moderate and high hazard classifications.

SECTION 3. Ind 52.015 (3) (a) 5. is amended to read:

Ind 52.015 (3) (a) 5. 'Windowless floor levels'. Floor a. Except as provided in subpars. b. to e., floor levels of buildings without openings as specified in s. Ind 52.02 (2) (a) shall be protected by an automatic fire sprinkler system as specified in s. Ind 52.02 (2) (b).

b. Buildings or portions of buildings of totally noncombustible construction and containing noncombustible contents are exempt from the provisions of subpar. a.

c. Factory occupancies housing low hazard industrial processing are exempt from the provisions of subpar. a;

d. Within telephone central office equipment buildings, the automatic fire suppression system may be omitted in the generator and transformer rooms and the communication equipment areas provided the rooms or areas are protected with an approved automatic fire alarm system. The communication equipment areas shall be used exclusively for the equipment and shall be separated from the remainder of the building by at least one-hour fire-resistive rated walls and at least 2-hour fire-resistive rated floor/ceiling assemblies.

e. Windowless floor levels within individual living units are exempt from the provisions of subpar. a.

SECTION 4. Ind 52.015 (3) (b) 2. b. is repealed.

SECTION 5. Ind 52.015 (3) (b) 2. c. is renumbered b.

SECTION 6. Ind 52.015 (3) (c) is repealed and recreated to read:

Ind 52.015 (3) (c) Restaurants and recreation centers. 1. Except as provided in subd. 2., restaurants and recreation centers, either of which exceed 12,000 square feet in area per floor.

2. Indoor participant recreation centers, including tennis courts, skating rinks, swimming pools and equestrian clubs, are exempt from the provisions of subd. 1., provided the following conditions are satisfied:

- a. Direct exits to the outside are provided for all the occupants;
- b. The recreation area is conspicuously posted as to use and occupant load;
- c. The building is equipped with a manual fire alarm system as specified in s. Ind 51.24; and
- d. All areas of the building other than the participant recreation areas are protected by an automatic fire suppression system.

SECTION 7. Ind 52.015 (3) (d) is repealed and recreated to read:

Ind 52.015 (3) (d) Dance halls and night clubs. Dance halls and night clubs either of which exceed 5,000 square feet in total area or are more than one story in height.

SECTION 8. Ind 52.015 (3) (h) is amended to read:

Ind 52.015 (3) (h) Theatres and other places of assembly with fixed seats except places of worship. ~~All~~ Except for places of worship, all areas of theatres and other places of assembly with fixed seats except the auditorium, foyer, lobby and toilet rooms.

SECTION 9. Ind 52.015 (3) (j) is repealed and recreated to read:

Ind 52.015 (3) (j) Museums, art galleries and libraries. Museums, art galleries and libraries any of which exceed 12,000 square feet in area per floor.

SECTION 10. Ind 52.015 (4) is repealed and recreated to read:

Ind 52.015 (4) AREA SEPARATION WALLS. (a) Buildings having an area exceeding the area limitations specified in sub. (3) may be constructed without complete automatic fire sprinkler systems provided the building is divided into areas less than the specified area limitations by at least 2-hour rated vertical fire separation walls.

(b) Where additions to buildings result in the area of the entire building exceeding the area limitations specified in sub. (3), the existing building and the building addition shall be protected as follows:

1. The existing building and the building addition shall be completely protected by an automatic fire sprinkler system;

2. The building addition shall be separated from the existing building by a 2-hour rated vertical fire separation wall. If the area of the building addition exceeds the area limitations specified in sub. (3), the building addition shall be completely protected by an automatic fire sprinkler system or the building addition shall be divided with 2-hour rated vertical fire separation walls as specified in par. (a); or

3. The existing building and the building addition shall be separated by 2-hour rated vertical fire separation walls as specified in par. (a).

SECTION 11. Ind 52.015 (5) is repealed and recreated to read:

Ind 52.015 (5) MULTIPLE USE BUILDINGS. Where a building contains multiple occupancies or use areas and one occupancy or use area is required by sub. (3) (b) to (1) to be protected by an automatic fire sprinkler system having more than 20 sprinkler heads, one of the following conditions shall apply:

(a) The occupancy or use area protected by the automatic fire sprinkler system shall be separated from the unprotected areas by at least 2-hour fire-resistive rated construction; or

(b) The entire building shall be protected by an automatic fire sprinkler system.

Note: See ss. Ind 55.05 and 59.22 for occupancy separation requirements mandating fire-resistive separations of more than 2-hour rating.

SECTION 12. Ind 52.015 (6) is created to read:

Ind 52.015 (6) SEPARATION WALLS FOR PARTIAL AUTOMATIC FIRE SPRINKLER SYSTEMS. Where the provisions of sub. (3) (a) require the protection of an automatic fire sprinkler system, the protected area or room shall be enclosed with construction assemblies as specified in chs. Ind 54 to 62 and as designated in Table 51.03-A for the class of construction.

Note: This rule is intended to require an effective fire barrier between those portions of the building protected by the automatic fire sprinkler system and the adjoining unprotected portions. The fire barrier is not required to be of fire-resistive construction unless required for the occupancy, use or class of construction.

SECTION 13. Ind 52.02 (2) is repealed and recreated to read:

Ind 52.02 (2) FIRE DEPARTMENT ACCESS OPENINGS. (a) Except as provided in par. (b), every story or basement either of which is not protected by an automatic fire sprinkler system shall be provided with at least 20 square feet of aggregate opening entirely above the adjoining ground level in each 50 lineal feet or fraction thereof of exterior wall in the story or basement, on at least one side of the building.

1. Openings shall have minimum dimensions of not less than 22 inches by 42 inches.

2. The openings shall be accessible to the fire department from the exterior and shall be unobstructed to allow firefighting and rescue operations from the exterior.

a. A clear space not less than 5 feet in width measured perpendicular to the building wall shall be provided outside of windows or access panels.

b. Access to a basement may be provided by a door opening directly to an outside stairway not less than 3 feet in width.

c. A skylight or hatch may serve as a basement access opening if a ladder or stairs from the floor below is provided.

d. Access openings shall be doors, windows, glazed panels or other panels readily identifiable and openable from the outside. Access panels requiring the use of a key, special tools or devices for opening will be permitted if approved by the fire department having jurisdiction.

3. Every story of a building more than 75 feet deep, measuring at right angles to the openings, shall have openings in that story on at least 2 sides of the building.

4. Openings in the basement shall be located so any location in the basement is within 75 feet of an opening.

(b) The provisions of par. (a) do not apply to the following:

1. Hospitals;
2. Nursing homes;
3. Community-based residential facilities;
4. Day care centers;
5. Buildings used for farming purposes or primarily for the sale of farm machinery; and
6. Buildings listed in s. Ind 52.015 (3) (a) 5. b. to e.

SECTION 14. A52.015 is repealed and recreated to read:

A52.015 FIRE CLASSIFICATIONS. The following information is provided to assist building owners and designers in determining the fire classifications of typical building usage or occupancy:

FIRE CLASSIFICATION	DESCRIPTION OF FUEL LOAD	TYPICAL EXAMPLES
Low Hazard	Buildings or structures used for the manufacture or storage of noncombustible or low hazard materials, that do not ordinarily burn rapidly, such as but not limited to asbestos, chalk, non-alcoholic beverages, brick and masonry, ceramic products, gypsum, food products, glass and metals.	Metal fabricating and assembly; offices; foundries; water pumping and waste water treatment plants; schoolrooms; churches; assembly halls; telephone exchanges; and similar occupancies with slight combustibles.
Moderate Hazard	Buildings and structures used for the manufacture or storage of moderate hazard materials, which are likely to burn with moderate rapidity, but which do not produce either poisonous gases, fumes or explosives, such as but not limited to: cloth, burlap and paper bags; bamboo and rattan; canvas and leather belting; baskets; books and paper in rolls or packs; boots and shoes; buttons; cardboard and cardboard boxes; clothing; cordage; furniture; furs; glue, mucilage, paste and size; linoleum; silk; soap; sugar; tobacco, cigars, cigarettes and snuff; and wax candles.	Mercantile storage and display; auto showrooms; aircraft storage; light manufacturing; warehouses not classified as low or high hazard; school shop areas; leather enameling or japanning operations; livestock shelters; lumber yards; motor vehicle repair shops; petroleum warehouses for storage of lubricating oils with a flash point of 200°F. or higher; photo engraving operations; public garages; stables; and upholstery and mattress manufacturing.

FIRE CLASSIFICATION	DESCRIPTION OF FUEL LOAD	TYPICAL EXAMPLES
High Hazard	Buildings and structures used for the storage, manufacture or processing of; highly combustible or explosive products or materials which are likely to burn with extreme rapidity or which may produce poisonous fumes or explosions; highly corrosive, toxic or noxious alkalies, acids or other liquids or chemicals producing flame, fumes, poisonous, irritant or corrosive gases; materials producing explosive mixtures or dusts or which result in the division of matter into fine particles subject to spontaneous ignition.	Woodworking; aircraft servicing; warehouses with material piled 15 feet or higher in solid piles or 12 feet or higher in piles with horizontal channels; ammunition, explosive and firework manufacture; artificial flowers and synthetic leather manufacture; acetylene gas and gases under pressure of 15 pounds or more and in quantities of greater than 2500 cubic feet; celluloid and celluloid products; cereal; feed, flour and grist mills; cotton batting and waste processes; cotton apparel making; dry cleaning establishments using or storing more than 3 gallons of gasoline or flammable liquids with a flash point under 100° F. or more than 60 gallons of flammable liquids with a flash point between 100° F. and 140° F.; feather renovating; fruit ripening processes; grain elevators; hydrogenation processes; industries employing solids or substances which ignite or produce flammable gases on contact with water; storage of kerosene, fuel, lubricating oils and combustible liquids with a flash point under 200° F.; match manufacture and storage; metal enamaling and japanning; nitrocellulose film exchanges and laboratories; paint and varnish manufacture; petroleum manufacture; processing of paper or cardboard in loose form; pyroxylin product storage and manufacture; and smoke houses.

[Note to Revisor: Please correct the spelling of the word "suppression" in the title of s. Ind 51.23 (8) with these changes.]

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EFFECTIVE DATE

Pursuant to s. 227.026 (1) (intro), these rules will take effect on the first date of the month following publication in the Wisconsin Administrative Register.

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[Note to Revisor: Effective January 1, 1984, chs. Ind 50-64 will be re-prefixed to be chs. ILHR 50-64. Please insert the appropriate "ILHR" prefix where the "Ind" prefix appears in these rules.]