Chapter Ind 54

FACTORIES, OFFICE AND MERCANTILE BUILDINGS

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Ind 54.001 Scope. This classification includes all factories and workshops (including all places where manual labor is employed), office buildings, telegraph and telephone offices, mercantile establishments where commodities are bought or sold, taverns, warehouses, railroad stations, exhibition buildings, and places where not more than 100 persons assemble for recreation, entertainment, worship, or dining purposes.

Ind 54.01 Construction, height and allowable area. (1) Buildings in this classification shall be of the type of construction and shall not exceed the number of stories as specified in this section. The floor area of any such building shall not exceed that permitted for the corresponding type of construction and number of stories shown in table 54.01.

Note: See section Ind 51.03 for standards of classes of construction.

(2) ALLOWABLE INCREASE OF FLOOR AREAS. (a) When the entire building is protected by an approved automatic sprinkler system, the areas in Table 54.01 may be increased by 150% for one-story buildings and 75% for buildings of more than one story. (See example below.)

(b) There shall be no area restriction in one-story buildings satisfying one of the following conditions:

1. Construction meets the requirements for Type No. 3 or Type No. 4 and is protected by an approved automatic sprinkler system.

2. Construction meets the requirements for Type No. 5 or 6 of totally noncombustible construction and is protected by an approved automatic sprinkler system.

3. Construction of floors, walls, roof and structural framing is of noncombustible material and the contents of building are noncombustible.

TABLE 54.01
ALLOWABLE FLOOR AREAS (Square Feet)
(Maximum gross floor area per floor)

Class of Construction	Building Frontage Street Exposure	Number of Stories								
		1	2	3	4	5	6	7	8	Over 8
1. Fire-Resistive Type A	1 2 3	NO RESTRICTION								
2. Fire-Resistive Type B	1 2 3	NO RE-STRIC-TION	20,000 25,500 31,000	17,000 22,000 27,000	14,000 18,500 23,000	11,000 15,500 20,000	9,000 13,000 17,000	7,000 11,000 15,000	6,000 10,000 14,000	N.P.
3. Metal Frame Protected	1 2 3	21,000 26,500 32,000	18,000 23,000 28,000	15,000 19,500 24,000	12,000 16,000 20,000	N.P.				
4. Heavy Timber	1 2 3	17,000 22,000 27,000	14,000 19,000 24,000	11,000 16,000 21,000	9,000 13,500 18,000	N.P.				
5. Exterior Masonry	1 2 3	14,000 18,000 22,000	11,500 15,000 19,000	9,000 12,500 16,000	7,000 10,000 13,000	N.P.				
6. Metal Frame Unprotected	1 2 3	14,000 18,000 22,000	11,500 15,000 19,000	9,000 12,500 16,000	N.P.					
7. Wood Frame Protected	1 2 3	12,500 16,000 19,000	7,500 10,000 12,000	N.P.						
8. Wood Frame Unprotected	1 2 3	10,000 12,000 14,000	5,000 6,000 7,000	N.P.						

Note: N.P. means "not permitted."

(c) Buildings with no area limitations shall have a continuous all-weather, hard-surfaced area 30 feet or more in width for a distance of at least 50% of the perimeter of the building. The said hard-surfaced area shall be located so as to provide an unobstructed space for a distance of not more than 50 feet from the building.

NOTE 1: See section Ind 51.23 for approved automatic sprinkler system.

NOTE 2: Example

	(from table 54.01)		*(if sprinklered)*		*(total allowable)*
1. One story	10,000 sq. ft.	+	(1.5 X 10,000)	=	25,000 sq. ft.
2. Two or more stories	10,000 sq. ft.	+	(.75 X 10,000)	=	17,500 sq. ft.

(3) No building shall be limited in area when divided into sections which do not exceed the maximum areas tabulated in this section by fire division walls. Such fire division walls shall be as specified in section Ind 51.02 (13). All openings in such walls shall be protected by fire-resistive doors as specified in section Ind 51.047. Such doors may normally remain open if held in that position by fusible links.

History: 1-2-56; am. (2) and (3), Register, September, 1959, No. 45, eff. 10-1-59; am. (3), Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (3), eff. 8-1-71 and exp. 1-1-72; cr. (3) eff. 1-1-72, Register, July, 1971, No. 187; r. and recr. (1) and (2), Register, June, 1972, No. 198, eff. 1-1-73; r. and recr. (2) and (3), Register, September, 1973, No. 213, eff. 10-1-73.

Ind 54.02 Number and location of exits. (1) Every building and every floor level thereof shall have at least 2 exits. One exit will be allowed in the following exceptions:

(a) Floor levels used entirely for storage in buildings 2 stories or less in height and not over 3,000 square feet gross area per floor.

(b) Interior balconies or mezzanine floors not over 3,000 square feet gross area used entirely for storage.

(c) Office areas (suites) having a floor area of not more than 1,800 square feet net area, provided that there are 2 directions for exiting from the suite entrance door.

(d) Retail establishments not over 750 square feet net area, provided that there are 2 directions for exiting from the store entrance door.

(2) Additional exits shall be provided so that no part of any factory or mercantile building having contents which are liable to burn with extreme rapidity or from which poisonous fumes may be liberated or explosions occur in case of fire, will be more than 75 feet distant from an exit. In other buildings in this classification this distance may be increased to 100 feet and where approved sprinklers are provided throughout the building, a further increase to 150 feet will be permitted. All of the above distances are to be measured along public passageways and aisles.

(3) Exits in all buildings of this classification shall be so located and distributed so as to afford the best possible egress.

History: 1-2-56; cr. (1) (c), Register, September, 1959, No. 45, eff. 10-1-59; am. (1) (b), Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (1) (b) eff. 8-1-71 and exp. 1-1-72, and cr. (1) (b) eff. 1-1-72, Register, July, 1971, No. 187; am. (1), Register, September, 1973, No. 213, eff. 10-1-73.

Ind 54.03 Type of exits. (1) At least one-half of the exits required in accordance with section Ind 54.02 shall be stairways or standard exits to grade as specified in sections Ind 51.15-51.18. The other exits shall be either stairways, standard exits, or horizontal exits as specified in section Ind 51.19, or fire escapes as specified in section Ind 51.20. A fire escape will not be accepted as a required exit for any building level more than 5 stories or 55 feet above grade. An outside wooden stairway may be used as an exit for a 2-story building.

(2) Every building which will accommodate more than 50 persons above the second story shall have at least 2 stairways.

(3) Wherever stairways are required under this classification, ramps with a slope not greater than one foot in 6 feet may be substituted. Ramps shall comply with all the requirements for stairways as to construction, enclosures, width, landing and lighting, and shall be surfaced with an approved non-slip material. Handrails shall not be required where the slope of the ramp is less than 1 foot in 10 feet.

History: 1-2-56; am. (1), Register, December, 1974, No. 228, eff. 1-1-75.

Ind 54.04 Required exit width. (1) The total required exit width from a building level shall be in accordance with the requirements of subsections Ind 51.15 (6) and Ind 51.16 (3).

(2) Standard fire escapes (section Ind 51.20) may be substituted for stairways to the extent of not more than ⅓ of the required total width, subject to the provision of section Ind 54.02.

(3) Horizontal exits in accordance with the requirements of section Ind 51.19 may provide up to one-half of the required exit widths for any floor, subject to the provisions of section Ind 54.02.

History: 1-2-56; am. (1) (a) and (b) and (3) (a) and (b), Register, June, 1972, No. 198, eff. 1-1-73; r. and recr. (1) and (3), r. (4), Register, December, 1974, No. 228, eff. 1-1-75.

Ind 54.05 Capacity of buildings. (1) In calculating the aggregate width of exits, the capacity of the buildings shall be established as follows:

(a) Stores, first floor and basement ---------- 30 sq. ft. per person

(b) Stores, second floor and above ---------- 60 sq. ft. per person

(c) Dining rooms, cafes, taverns, etc.---------- 10 sq. ft. per person

(d) Places of seated assemblage---------- 7 sq. ft. per person

(e) Warehouses ---------- 300 sq. ft. per person

(f) Factories and offices ---------- 75 sq. ft. per person

(2) The above figures are based on the net area of each occupied space. Where dining rooms, cafes, dance halls and places of seated assemblage accommodate more than 100 persons, see section Ind 55.01.

(3) In other occupancies not specified above, the capacity shall be determined by the actual number of persons liable to be accommodated therein and no greater number of persons will be permitted therein.

Ind 54.06 Exit doors. (1) Every door which serves as an exit from a room accommodating more than 10 persons, or which is an exit from a public passageway or stairway shall be a standard exit door as specified in section Ind 51.15, except that such exit door need not swing outward if it accommodates less than 25 persons, is not located at the foot of a stairway, or is not more than 4 risers above the outside grade.

(2) Every exit doorway from each floor, other than the principal entrance on the first floor, shall be indicated by an approved illuminated sign over the door bearing the word EXIT or OUT in plain letters not less than 5 inches in height.

Ind 54.07 Passageways. Where there is not direct access to outside exit doors, safe and continuous passageways, aisles or corridors leading directly to every exit shall be maintained at all times on all floors of all buildings. Every passageway, aisle or corridor shall conform in width to the rule for width of stairways as specified in section Ind 54.04. Widths shall be measured in the clear, at their narrowest points produced by any projection, radiator, pipe or other object and the required width shall be maintained clear and unobstructed at all times.

Ind 54.08 Enclosure of stairways and shafts. (1) All stairways including landings, ramps and elevator shafts, shall be enclosed as shown in table 51.03-A.

(2) All doors opening into such enclosures shall be as specified in section Ind 51.047, and all windows shall be of wired glass and metal frames and sash.

(3) *Exception:* Monumental stairs leading from the street floor to the second floor or to a basement used for commercial purposes need not be enclosed, provided they are effectively cut off at the second floor (and basement) by partitions having fire-resistance as specified above.

Note: **Elevators and Elevator Enclosures:** For requirements governing the installation and operation of elevators, and the construction and protection of elevator shaftways, see the elevator code issued by the department of industry, labor and human relations, which code applies to all public buildings and places of employment.

History: 1-2-56; am. (1) (a), (b), (c), (d) and (2), Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (1) (a), (b), (c), (d) and (2) eff. 8-1-71 and exp. 1-1-72; cr. (1) (a), (b), (c), (d) and (2) eff. 1-1-72, Register, July, 1971, No. 187; r. and recr. (1), Register, June, 1972, No. 198, eff. 1-1-73.

Ind 54.09 Opening to roof. History: 1-2-56; r. Register, December, 1975, No. 240, eff. 1-1-76.

Ind 54.10 Trap doors and floor openings. Every opening through any floor or through any roof used by the public or by employes shall be guarded by a substantial enclosure or rail not less than 3 feet 6 inches high. Floor openings in buildings of more than 2 stories, unless enclosed with fire-resistive enclosures as specified in section Ind 54.08

shall be protected by fire-resistive doors as specified in section Ind 51.047.

History: 1-2-56; am. Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. eff. 8-1-71 and exp. 1-1-72; cr. eff. 1-1-72, Register, July, 1971, No. 187.

Ind 54.11 Lighting. (1) All stairways, fire escapes and exits and the passageways leading thereto when used at night shall be properly illuminated to facilitate egress. The intensity of illumination shall be not less than 2.5 foot candles.

(2) All gas jets or gas lights in factories or workshops where combustible material is used, shall be properly enclosed by globes or wire cages, or otherwise properly guarded.

Ind 54.12 Sanitary facilities. (1) TOILET ROOMS. The occupancies included under the scope of this chapter shall be provided with toilet rooms as outlined in this section.

(a) *Factories, office and mercantile buildings.* All factories, office and mercantile buildings shall be provided with separate toilet rooms for each sex, except as follows:

1. Where not more than 5 employes or 25 patrons are accommodated, one toilet room, shared in common, may be provided if the door of the toilet room is equipped with a lock to ensure privacy.

2. Separate toilet rooms for the employes and the general public need not be provided if the toilet rooms are accessible to both employes and the general public.

3. Toilet facilities need not be provided in buildings and structures which provide service to people in automobiles, such as drive-in bank teller booths, photography and film service booths, or parking lot attendant booths, but not including drive-in restaurants, provided that a written statement is submitted to the department showing proof that convenient toilet facilities are available during all periods of operation. The requirement for toilet facilities is also waived for mobile crews and for unattended buildings, provided the employes have access to available toilet facilities.

(b) *Shopping centers.* In shopping centers, separate toilet rooms for each sex shall be provided for use by the general public. The toilet rooms may be located in the public mall or in the individual stores. Separate toilet rooms for each sex shall be provided for the employes in each store. In stores which accommodate not more than 5 employes and 25 patrons, one toilet room to accommodate both sexes with be acceptable. A store which has a net area of 750 square feet or less is not required to be provided with toilet rooms for the employes if the employes have access to the public toilet rooms located in the mall.

Note #1: The department recommends that public toilet rooms in the mall be conveniently located for patron use and that the travel distance between sets of public toilet rooms be less than 400 feet.

Note #2: See sections Ind 54.12 (1) (d) and Ind 55.32 for requirements for toilet rooms for other use groups which may also be included in shopping centers.

(c) *Places of worship.* Places of worship which are included under the scope of this chapter shall be provided with separate toilet rooms for each sex.

(d) *Places for entertainment, recreation and seated dining.* Restaurants, taverns, and places for entertainment and recreation which are included under the scope of this chapter shall be provided with separate toilet rooms for each sex. Separate toilet rooms for employes and the general public are not required.

Note: See chapter H 96, rules of the department of health and social services, for supplementary requirements for toilet room facilities in restaurants.

(e) *Garages, parking ramps, service stations and filling stations.* Toilet rooms shall be provided in accordance with the requirements of this subsection.

1. *Garages.* Separate toilet rooms for each sex shall be provided in all service and repair garages, body shops, automobile tire and battery shops, and buildings of similar use, except that a single toilet room, shared in common, may be provided in buildings which accommodate not more than 5 employes or 25 patrons. Separate toilet rooms for employes and patrons need not be provided if toilet rooms are accessible to both employes and patrons.

2. *Service stations and filling stations.* Separate toilet rooms for each sex shall be provided in service stations and filling stations, including self-service stations. Separate toilet rooms for employes and patrons need not be provided if toilet rooms are accessible to both employes and patrons.

3. *Parking ramps.* Toilet rooms need not be provided in unattended parking ramps.

(2) SANITARY FIXTURES. The number of fixtures required for the total number of persons of each sex shall be determined in accordance with the ratios established in Table 54.12. The number of fixtures required for the general public shall be added to the number of fixtures required for the employes in all buildings, except in buildings which accommodate not more than 5 employes or 25 patrons or in filling stations and service stations. The total number of persons will be considered equally divided between men and women unless a different ratio is approved by the department. The requirements of this section do not apply to the buildings exempt from toilet rooms under Ind 54.12 (1).

History: 1-2-56; am. (3) (a) and (b), and (6), Register, September, 1959, No. 45, eff. 10-1-59; r. and recr. Register, December, 1976, No. 252, eff. 1-1-77.

Ind 54.13 Change rooms and lunchrooms. (1) CHANGE ROOMS. Change rooms equipped with storage facilities for street clothes shall be provided where employes are required to wear protective clothing due to the nature of the employment and where employes are exposed to toxic materials and industrial poisons. Separate storage facilities for street clothes and work clothes shall be provided for employes who work with industrial poisons.

Note: See also chapter H 96, rules of the department of health and social services, for requirements for dressing rooms and lockers in restaurants.

NUMBER OF FIXTURES REQUIRED FOR EMPLOYES AND PATRONS

EMPLOYES[1]

Type of Occupancy	Type of Fixture: Water Closets (WC) Males (M)	Water Closets (WC) Females (F)	Urinals (U) Males (M)	Lavatories (L)	Showers (S)[2]	Drinking Facilities (DF)
Places of employment (employes/shift)						
0- 5 employes	1		0	One (L) for each 2 (WC) and/or (U), or fraction	One (S) for each 10 employes of each sex, or fraction	One (DF) for each 100 persons, or fraction
3- 9 employes of each sex	1	1	0			
10- 15 employes of each sex	1	1	1			
16- 35 employes of each sex	1	2	1			
36- 55 employes of each sex	2	3	1			
56- 80 employes of each sex	2	4	2			
81-110 employes of each sex	3	5	2			
111-150 employes of each sex	4	6	2			
Over 150 employes of each sex	One additional fixture for each additional 40 employes of each sex; 2/3 of the additional water closets for males may be urinals.					

GENERAL PUBLIC[1]

All public buildings, except restaurants and taverns						
0- 25 persons of each sex	1	1	0	One (L) for each 2 (WC) and/or (U), or fraction	0	One (DF) for each 150 persons up to 600
26-100 persons of each sex	1	1	0			
101-200 persons of each sex	1	2	1			
201-300 persons of each sex	1	3	2			
301-400 persons of each sex	2	4	2			
401-500 persons of each sex	2	5	3			
501-600 persons of each sex	2	6	4			
Over 600 persons of each sex	One (WC) for each additional 600 (M), or fraction	One (WC) for each additional 275 (F), or fraction	One (U) for each additional 500 (M), or fraction			One additional (DF) for each additional 3000 persons
Taverns and restaurants	One (WC) for each 75 (M), or fraction	One (WC) for each 30 (F), or fraction	One (U) for each 50 (M), or fraction[3]		0	0

EMPLOYES AND THE GENERAL PUBLIC

Public buildings & places of employment 0-25 patrons and 0-5 employes/shift	1		0	1	0	1
Filling stations and service stations with not more than 5 employes/shift	1	1	0	1	0	1

[1]Requirements for the general public must be added to the number of fixtures required for employes.

[2]Showers shall be provided in public pool facilities and where occupational hazards, such as poisons, infectious or irritating materials are present.

[3]Urinal may be omitted in restaurants which accommodate less than 25 males and do not serve alcoholic beverages.

Note #1: See also rules of the department of health and social services for sanitary fixtures for public swimming places, mobile home parks, camping grounds, camping resorts, recreational camps and educational camps.

Note #2: See Wis. Adm. Code Ch. Ind 1000-2000--Wis. Safety and Health Code, for additional washing facilities required in places of employment where environmental hazards are present.

(2) LUNCHROOMS. A space for eating lunches shall be provided in all places of employment where there is exposure to injurious dusts, toxic material and industrial poisons. Such space shall be physically separate from any location where there is exposure to toxic materials. Toilet rooms shall not be permitted to serve as lunchrooms.

History: Cr. Register, December, 1976, No. 252, eff. 1-1-77.

Ind 54.14 Isolation of hazards. (1) All heating boilers and furnaces, power boilers, fuel rooms, storage vaults for paints, oils, and similar combustibles and other similar hazards in a building shall be isolated from the rest of the building by at least a 2-hour fire-resistive enclosure as specified in section Ind 51.04; except that in buildings not more than 2 stories in height and having a floor area of not more than 3,000 square feet per floor, a 1-hour fire-resistive enclosure as specified in section Ind 51.04, or better, shall be provided.

(2) All openings shall be protected with self-closing fire-resistive doors as specified in section Ind 51.047.

(3) Space heaters, suspended furnaces, and direct-fired unit heaters, fired with various fuels, may be used without an enclosure where approved by the department of industry, labor and human relations. Where suspended furnaces and direct fired unit heaters are used without an enclosure, all such units shall be located at least 7 feet above the floor.

History: 1-2-56; am. (1) and (2), Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (1) and (2) eff. 8-1-71 and exp. 1-1-72; cr. (1) and (2) eff. 1-1-72, Register, July, 1971, No. 187; renum. from 54.13, Register, December, 1976, No. 252, eff. 1-1-77.

Ind 54.15 Standpipes. (1) FIRE DEPARTMENT STANDPIPES. Fire department standpipes shall be provided in all buildings exceeding 60 feet in height.

(2) FIRST-AID STANDPIPES. First-aid standpipes shall be provided in all buildings 3 stories or more in height in which the floor area of each story is more than 3,000 square feet, unless the floor area is divided with noncombustible 0-hour or 3/4-hour rated partitions into 3,000 square foot areas, or unless an approved automatic sprinkler system is installed.

History: 1-2-56; renum. from 54.14 and r. and recr. Register, December, 1976, No. 252, eff. 1-1-77.

Ind 54.16 Automatic sprinklers. (1) A complete automatic sprinkler system, as specified in section Ind 51.23, shall be provided in every building of this classification where more than 50 persons are employed or accommodated above the third story except as provided below:

(a) Office buildings.

(b) In 3 story buildings other than office buildings with more than 50 persons on the third floor, only basements and sub-basements must be sprinklered.

(c) An office building in which one or more floors are used for mercantile purposes, only the mercantile portion must be sprinklered.

(d) Buildings of Type No. 1 and No. 2 construction whose contents are not readily combustible.

History: 1-2-56; r. and recr., Register, December, 1970, No. 180, eff. 1-1-71; am. (1) (d), Register, June, 1972, No. 198, eff. 1-1-73; renum. from 54.15, Register, December, 1976, No. 252, eff. 1-1-77.

Ind 54.17 Fire alarm. A fire alarm system complying with section Ind 51.24 shall be provided in every factory or workshop where more than 10 persons are employed above the second story except buildings which are provided with a complete automatic sprinkler system and except Type No. 1 and No. 2 buildings whose contents are practically noncombustible.

History: 1-2-56; am. Register, June, 1972, No. 198, eff. 1-1-73; renum. from 54.16, Register, December, 1976, No. 252, eff. 1-1-77.

Ind 54.18 Floor load signs. (1) In every factory, workshop, warehouse, or other building where material is piled, notices of a permanent character shall be painted or otherwise prominently displayed, stating the live load in pounds per square foot which the floor is designed to carry. Such notices shall be placed in full view, on each floor.

(2) Where floors are always used for the storage of some particular material, the walls shall be marked to the height to which the material shall be piled without exceeding the safe load.

History: 1-2-56; renum. from 54.17, Register, December, 1976, No. 252, eff. 1-1-77.

Ind 54.19 Signs indicating number of persons. In all buildings of this classification where 50 or more persons are accommodated on any floor above the second, notices shall be prominently displayed stating the maximum number of persons on each floor for whom stairways and other exits have been provided according to sections Ind 54.02—Ind 54.06. Such notices shall be placed in full view, on each floor.

History: 1-2-56; renum. from 54.18, Register, December, 1976, No. 252, eff. 1-1-77.

Ind 54.20 No smoking signs. Smoking shall not be permitted in retail establishments where flammable materials are handled or sold. Suitable signs bearing the words "No Smoking" shall be erected in all places where such hazard exists.

History: 1-2-56; renum. from 54.19, Register, December, 1976, No. 252, eff. 1-1-77.

Ind 54.21 Tents. All tents used for sales or storage purposes shall conform to the requirements specified for tents in sections Ind 55.58—Ind 55.63, inclusive of this code.

History: Cr. Register, September, 1959, No. 45, eff. 10-1-59; renum. from 54.20, Register, December, 1976, No. 252, eff. 1-1-77.

HAZARDOUS OCCUPANCIES

Ind 54.50 Garages. (1) DEFINITIONS. (a) A garage is a building, or part of a building, which accommodates or houses self-propelled vehicles. For the purpose of this code the term vehicle includes land, air and water vehicles.

(b) A private garage is one used in connection with a private residence for the purpose of housing self-propelled vehicles owned by the occupant of the residence and used only for personal or family service.

(2) CONSTRUCTION REQUIREMENTS. (a) All garages, except private garages, which are more than 500 square feet in area, shall have walls and roof of types No. 1 through No. 6 construction as specified in section Ind 51.03, and all floors of vehicle storage rooms, salesrooms and repair shops shall be of not less than 4-hour fire-resistive construction as specified in section Ind 51.04.

Exception: 1. A garage not more than one story in height and 2,000 square feet in area may have walls and roof of type No. 7 or No. 8 construction if located at least 100 feet from any other building or boundary line between premises.

2. A hangar for the storage of not more than one airplane, or a boathouse for the storage of not more than one motor boat, may be of type No. 7 or No. 8 construction if located at least 15 feet from any property line or other building.

Note: Section 167.19, Wis. Stats., permits retail dealer's buildings for the storage of farm tractors, trucks and motorized farm machinery to be metal covered, pole type or frame construction. Buildings constructed of other than metal or concrete may not be located closer than 30 feet to any other building. Buildings in excess of 50 feet in length require more than one door. The statute requires that motor fuel and storage batteries be removed from the vehicles and prohibits vehicle overhaul or repair in the building.

(b) All walls, or parts of walls, nearer than 5 feet to a boundary line between premises or to any other building shall be unpierced. All walls, or parts of walls, nearer than 10 feet, but not nearer than 5 feet, to a boundary line between premises or to any other building shall have all openings therein protected by means of fire-resistive doors and windows as specified in sections Ind 51.047 and 51.048.

(c) Where a garage which is more than 500 square feet in area is built in connection with a building used for other purposes, it shall be separated therefrom by means of 4-hour fire-resistive walls as specified in section Ind 51.04 and unpierced 4-hour fire-resistive floors above and below as specified in section Ind 51.04. All openings in the walls to adjoining parts of the building shall be protected by means of self-closing fire-resistive doors as specified in section Ind 51.047. Stairways from garages leading to upper stories shall be separated from the garage area with walls of 4-hour fire-resistive construction as specified in section Ind 51.04 with all openings protected by means of self-closing fire-resistive doors as specified in section Ind 51.047.

(d) Where a garage which is less than 500 square feet in area is built in connection with a public building or place of employment under this code, the garage shall have walls and ceilings of not less than 1-hour fire-resistive construction as specified in section Ind 51.04, and the openings to adjoining parts of the building shall be protected by means of fire-resistive doors as specified in section Ind 51.047.

(3) FIRE PROTECTION. Boilers, furnaces and all open flame equipment within garages and service stations shall be effectively separated from

other areas by not less than 2-hour fire-resistive walls, floors and ceilings as specified in section Ind 51.04. Such enclosures in basements shall have no openings into other basement areas. All stairways leading to such basement enclosures from the first floor shall be enclosed on the first floor with not less than 2-hour fire-resistive construction as specified in section Ind 51.04, and the opening thereto protected with a fire-resistive door as specified in section Ind 51.047.

(a) Suspended furnaces and direct fired unit heaters fired with liquid fuel or gas may be used without an enclosure where approved by the department of industry, labor and human relations. Where approved, the equipment and installation shall satisfy requirements of section Ind 64.22.

(b) In garages or service stations which are heated by a suspended furnace located in a utility room or storage room, the enclosing walls, floor and ceiling shall be of 2-hour fire-resistive construction unless one side of the room is left open.

(4) FLOOR PITS. There shall be no pits or other depressions in the floor of any garage area, except that this requirement shall not apply to the shallow depressions formed to secure floor drainage, nor to catch basins installed in compliance with the provisions of the plumbing code issued by the state board of health nor to floor openings for access to regular basements.

(a) This will permit service openings in the floors of garages or service stations provided that the area below can be classed as regular basements and are ventilated in accordance with the requirements of the building, heating, ventilating and air conditioning code.

History: 1-2-56; r. and recr, (2) (c), Register, September, 1959, No. 45, eff. 10-1-59; am. Register, January, 1961, No. 61, eff. 2-1-61; am. (3) (a), Register, December, 1967, No. 144, eff. 1-1-68; am. (2) (a) intro. par., (b), (c), (d) and (3) intro. par., Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (2) (a) intro. par., (2) (b), (c), (d) and (3) intro. par., eff. 8-1-71, exp. 1-1-72; cr. (2) (a) intro. par., (2) (b), (c), (d) and (3) intro. par., eff. 1-1-72, Register, July, 1971, No. 187; am. (2) (a), Register, June, 1972, No. 198, eff. 1-1-73; am. (2) (b) and (3) (a), Register, December, 1975, No. 240, eff. 1-1-76; renum. from 57.50 and am. Register, December, 1976, No. 252, eff. 1-1-77.

Ind 54.51 Filling stations; buildings and structures. (1) DEFINITIONS. (a) By filling station is meant one or more pumps, tanks, and other pieces of equipment used in the storage and dispensing of liquid fuels and arranged for the sale of such liquid fuels to the public.

(b) By dispensing area is meant any area within 15 feet of any pump or other dispensing equipment.

(c) By basement or open space under a floor or dispensing area is meant any space that does not have an outlet at its lowest level, at or above grade.

(2) CONSTRUCTION. (a) All buildings having a service space of not more than 500 square feet in area, designed to accommodate motor-driven vehicles, and all other buildings erected within 15 feet of the dispensing equipment, shall be of types No. 1 through No. 6 construction as specified in section Ind 51.03, except where canopies are

provided over the dispensing equipment such canopies shall be of noncombustible construction throughout.

1. Pumps or other dispensing equipment serving liquid fuel to the public, which are located within or under any occupied part of any building or structure, shall be installed in compliance with the provisions of the flammable liquids code.

(b) Buildings not more than one story in height and not exceeding 500 square feet in area may be of type No. 7 or No. 8 construction if located at least 15 feet from dispensing equipment and 10 feet from the boundary lines between premises and from other buildings on the same premises.

(c) Buildings more than 500 square feet in area used as office buildings exclusively, or in connection with other nonhazardous occupancies, may be of type No. 7 or No. 8 construction if not more than one story in height and located at least 30 feet from boundary lines between premises, from other buildings on the same premises and from the dispensing equipment.

(d) All walls, or parts of walls, in buildings under paragraph (a) which are nearer than 5 feet to a boundary line between premises or to any other building shall be unpierced. All walls, or parts of walls nearer than 10 feet, but not nearer than 5 feet, to a boundary line between premises or to any other building shall have all openings therein protected by means of fire-resistive doors and windows as specified in sections Ind 51.047 and 51.048.

(e) The main floor level of any building erected within 15 feet of equipment used to dispense liquid fuel shall not be below the level of the driveway or grade at such equipment.

(f) There shall be no basement or other open space under the floor of the dispensing area outside of the building. There shall be no basement or other open space under the floor of any filling station building, unless:

1. The main floor level is at least 6 inches above the driveway or grade at the dispensing equipment, and

2. There is no outside door, window or other wall opening to such under floor space, except fuel chutes or other similar vertical openings having a tight-fitting cover, with the bottom of such opening at least 6 inches above the driveway or grade at the dispensing equipment.

3. The floor and enclosure of the underfloor space is of 4-hour fire-resistive construction as specified in section Ind 51.04.

4. The under floor space is effectively vented by gravity means.

Note: For requirements applying to floor pits, see section Ind 54.50.

History: 1-2-56; am. (2) (a); cr. (2) (a) 1., Register, September, 1959, No. 45, eff. 10-1-59; am. (2) (d) and (2) (f) 3., Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (2) (d) and (2) (f) 3., eff. 8-1-71, exp. 1-1-72; cr. (2) (d) and (2) (f) 3. eff. 1-1-72, Register, July, 1971, No. 187; am. (2) (a), (b), (c), Register, June, 1972, No. 198, eff. 1-1-73; am. (2) (d), Register, December, 1975, No. 240, eff. 1-1-76; renum. from 57.51, Register, December, 1976, No. 252, eff. 1-1-77.

Ind 54.52 Automobile tire or battery shops. (1) Any building, or part of a building, in which tires are repaired or fitted to vehicles shall be constructed, equipped and maintained as a garage under section Ind 54.50.

(2) Any building or part of a building, in which electric storage batteries are charged, repaired, or are installed in vehicles shall be constructed, equipped and maintained as a garage under section Ind 54.50.

History: 1-2-56; renum. from 57.52 and am. Register, December, 1976, No. 252, eff. 1-1-77.

Ind 54.53 Automobile parking decks. (1) DEFINITION. For the purpose of this code, a parking deck is an unenclosed or partially enclosed structure used for the parking or storage of self-propelled vehicles, which are driven into the structure and are parked under their own power with no facilities for the repairing of such vehicles.

(2) CONSTRUCTION REQUIREMENTS. (a) Parking decks may be erected without enclosing walls except that unpierced enclosing walls of not less than 2-hour fire-resistive construction, as specified in section Ind 51.04, shall be provided on all sides which are located less than 10 feet from the boundary line between premises or from any other building.

(b) Parking decks of 4-hour fire-resistive construction shall not be limited in height or in floor area.

(c) Parking decks having floor and supporting members of 2-hour fire-resistive construction or better shall not exceed 75 feet in height or 40,000 square feet in area. This area may be increased to 50,000 square feet where the structure faces 2 streets and to 60,000 square feet where the structure faces 3 or more streets.

(d) Parking decks of unprotected incombustible construction shall not exceed 50 feet in height or 20,000 square feet in area. This area may be increased to 25,000 square feet where the structure faces 2 streets and to 30,000 square feet where it faces 3 or more streets.

(e) A continuous wheel guard not less than 10 inches in height shall be provided on all sides of the structure on all floors.

(f) A guard rail not less than 3 feet 6 inches in height and having an intermediate rail at mid-height and a toeboard at least 6 inches high at the base, or the equivalent, shall be provided on all open sides of the structure on each floor.

History: Cr. Register, June, 1956, No. 6, eff. 7-1-56; cr. (2) (g), Register, August, 1957, No. 20, eff. 9-1-57; am. Register, December, 1962, No. 84, eff. 1-1-63; am. (2) (a), Register, February, 1971, No. 182, eff. 7-1-71; r. and recr. (2) (a) eff. 8-1-71 and exp. 1-1-72; cr. (2) (a) eff. 1-1-72, Register, July, 1971, No. 187; r. (2) (g), Register, December, 1975, No. 240, eff. 1-1-76; renum. from 57.53, Register, December, 1976, No. 252, eff. 1-1-77.