

(2) Every vertical warm air duct, or group of ducts, in all buildings included in the theater, school and hotel classifications shall be enclosed with, or constructed of, incombustible material at least 2 inches thick, lined with metal or smoothly finished on the inside; except that frame buildings not more than 2 stories in height may have metal ducts if protected as specified in the first paragraph of this order.

Ind 52.15 Registers. (1) All register boxes shall be of metal and shall either be of double construction or be covered with asbestos not less than $\frac{1}{8}$ inch thick. *Exception:*

(a) Asbestos paper weighing not less than 12 pounds per square may be used as covering on forced air installations.

Ind 52.16 Floor protection. (1) All stoves and ranges used for cooking, heating or laundry purposes using solid or liquid fuel, and which are more than 16 square feet in horizontal area or which have a flame at the bottom shall be placed on a fire-resistive floor projecting at least 2 feet on each side. If such floor rests on or is in contact with any combustible material, then the fire-resistive floor layer shall be at least 5 inches thick and shall be hollow, with air spaces running horizontally through the same. The air spaces shall be open at both ends and shall be so placed that air can circulate through them; the horizontal area of the air spaces shall equal at least one-half the horizontal area of the slab.

(2) The air spaces may be secured by using hollow tile placed end to end, or by imbedding wrought or sheet iron pipes in a layer of concrete. The air spaces should parallel the short dimension of the slab.

(3) If the stove or range is raised at least 6 inches above the floor and such air space is not enclosed, then the fire-resistant floor layer may be reduced to not less than 2 inch solid thickness, without air spaces, provided it is covered with sheet metal.

(4) All stoves and ranges using solid or liquid fuel and which are not more than 16 square feet in horizontal area and not having a flame at the bottom shall, if placed on a combustible floor, be raised at least 6 inches above the floor, and such air space shall not be enclosed. Such floor shall be protected with a stove board of sheet metal or asbestos, projecting at least one foot on all sides.

(5) Gas ranges, domestic hot water heaters and hot plates shall be supported at least 6 inches above any wood floor or other combustible material and, if less than 12 inches above the floor, the wood shall be protected by a metal shield, or such equipment may rest on a masonry support.

(a) The above dimension of 6 inches may be reduced to 3 $\frac{1}{2}$ inches if the bottom is suitably protected with a metal shield.

Ind 52.17 Wall and ceiling protection. (1) All stoves and ranges used for cooking or laundry purposes and all domestic hot water heaters shall be placed at least 24 inches away from any combustible wall, partition or ceiling, except that such distance may be reduced to 12 inches if the wall, partition or ceiling is protected with at least $\frac{1}{4}$ inch asbestos board covered with sheet metal, or with an equivalent protection.

(2) The above distances may be reduced one-half in the case of stoves and ranges less than 16 square feet in area, and also in the

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case of gas ranges of greater area if proper insulation is incorporated in the back of the range.

Ind 52.18 Gas vents. All gas ranges, except those for domestic use, hot water heaters, and other gas fired equipment shall be provided with vent pipes conforming to the requirements for smoke pipes as specified in section Ind 52.12.

Ind 52.19 Gas and oil lamps; gas service. (1) Gas and oil lamps shall not be used where electricity is available, except in private apartments.

(2) Gas and oil lamps shall be placed at least 6 feet above the floor level, at least 6 inches from any combustible partition or wall, and at least 2 feet (measured from top of flame) below any combustible ceiling unless properly protected by a metal shield with at least 2 inches of air space above. Swinging brackets shall be provided with a guard or stop so that the light cannot come nearer to the partition or wall than one foot. In aisles and public passageways, every such light shall be protected by an incombustible guard unless the light is at least 7 feet above the floor. Gas and oil lights shall be kept at least 2 feet from any drape or window curtain.

(3) Every gas supply main shall have a service cock outside of the building, so placed and maintained that it can be shut off at any time without entering the building.

Ind 52.20 Electrical work. All electrical work shall conform to the requirements of the Wisconsin state electrical code of the industrial commission.

Note. For the design requirements for transformer vaults, see Chapter E-450 of the Wisconsin state electrical code.

History: 1-2-56; am. Register, January, 1961, No. 61, eff. 2-1-61.

Ind 52.21 Location and maintenance of exits. Every exit mentioned in sections Ind 51.14 to Ind 51.19, inclusive, shall lead to a street, alley or open court connected with a street. All such exits and all passageways leading to and from the same, shall be kept in good repair and unobstructed at all times.

Ind 52.22 Television and radio receiving antenna. (1) The requirements of this section shall apply to the outdoor portion of all apparatus, more than 12 feet in height, used for receiving television or radio waves.

(2) All television and radio antenna systems, including the supporting tower or mast, shall be constructed of galvanized steel or other corrosive-resistant incombustible material. Where approved by the industrial commission, towers constructed of wood or wood poles set in the ground may be used to support antenna systems but no wood tower or wood pole may be mounted on the roof of any building or structure.

(3) The antenna and tower shall be designed to support the dead load of the structure plus an ice load at least $\frac{1}{2}$ inch in radial thickness. The ice load shall be computed only upon the wires, cables, messengers and antenna.

(a) The tower or mast shall be braced or guyed and anchored to resist a horizontal wind pressure of not less than 30 pounds for every square foot (net area) of exposed surface. Guy wires shall not be anchored to a chimney or to any roof ventilator or vent pipe.

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Chapter Ind 55

THEATERS AND ASSEMBLY HALLS

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Ind 55.001 **Theaters.** In the theater classification, are included all buildings or parts of buildings, containing an assembly hall, having a stage which may be equipped with curtains or permanent or movable scenery, or which is otherwise adaptable to the showing of plays, operas, motion pictures or similar forms of entertainment.

Ind 55.01 **Assembly halls.** (1) In the assembly hall classification, are included all buildings, or parts of buildings, other than theaters, which will accommodate more than 100 persons for entertainment, recreation, instruction, worship or dining purposes.

(a) Every assembly hall which will accommodate not more than 100 persons shall conform to the requirements of Chapter Ind 54, covering factories, office and mercantile buildings.

Ind 55.02 **Class of construction.** (1) The capacities of buildings or parts of buildings in this classification for the various types of construction shall not exceed, and shall comply, with the following requirements:

MAXIMUM CAPACITIES

Type of Construction	With Stage	Without Stage
Fire Resistant	No limit	No limit
Mill	750	1,500
Ordinary	500	1,000
Frame	300	750

(a) *Exception.* The fire protection for structural steel supporting the roof may be omitted in one-story buildings in this classification provided the roof and its supports are of incombustible or mill construction throughout.

(2) Frame construction. Where a building of this classification is erected of frame construction, the following restrictions shall apply:

(a) Not more than one story in height without a balcony, and with no basement except a heating and fuel room enclosed with fire-resistive construction as specified in section Ind 55.29, with all interior openings protected with self-closing fire-resistive doors as specified in section Ind 51.09.

(b) Located at least 20 feet from any other building or adjoining property line.

(c) Is not built in connection with a building used for any other purpose.

(d) Is provided with foundation walls and piers of masonry construction.

(e) Where motion picture booths are required, they shall be enclosed with 2-hour fire-resistive construction.

Exception: In places of worship, a full basement and a balcony seating not more than 30 persons may be provided.

(3) Balconies accommodating more than 100. In any theater or assembly hall, balconies which accommodate more than 100 persons shall be of fire-resistive construction as specified in section Ind 51.001.

History: 1-2-56; (1); (1) (a); (2); (2) (a); (2) (b); (2) (c); (2) (d); (2) (e); (2) (f); (3); am. Register, June, 1956; No. 6, eff. 7-1-56; am. (1) (a), Register, August, 1957, No. 20, eff. 9-1-57; am. Register, January, 1961, No. 61, eff. 2-1-61.

Ind 55.03 Height above grade. (1) THEATERS. The height of the sills of the principal entrance doors to any theater, as defined in section Ind 55.001, shall be not more than 18 inches above the outside grade at that point. The floor level at the highest row of seats on the main floor shall not be more than 6 feet above the outside grade at the main entrance; the floor level at the lowest row of seats on the main floor shall be not more than 6 feet below, or above, the grade at the nearest exit.

(2) ASSEMBLY HALLS AND ROOF GARDENS ABOVE FIRST STORY. Where assembly halls are provided above the first story, the following limitation of occupancy, type of construction and exit facilities shall apply:

Type of Construction	Maximum No. of Occupants	Height Above Grade
Fire-resistive	No limit	No limit*
Mill, or Ordinary	400	2nd story or 22 feet
Mill, or Ordinary	200	3rd story or 35 feet

*One smokeproof stair tower from the level of the assembly hall leading directly to the exterior at street grade shall be provided for every 750 persons capacity, or fraction thereof. These stairways shall be at least 44 inches wide and shall be in addition to other required stairways in the building.

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(3) **BASEMENT ASSEMBLY HALL.** An assembly hall may be placed in the basement of a fire-resistive building if the capacity does not exceed 2,500 persons or in the basement of a building of mill or ordinary construction if the capacity does not exceed 400 persons.

History: 1-2-56; r. and recr. Register, September, 1959, No. 45, eff. 10-1-59.

Ind 55.04 Exposure and courts. (1) Every theater or assembly hall which accommodates more than 600 persons shall have at least 3 walls abutting on streets, alleys, or open courts.

(2) The wall containing the main entrance to any theater or assembly hall shall abut on a street. The lobby or passageway leading from the main entrance doors to the foyer or auditorium shall be direct and unobstructed and of a minimum width equal to the sum of the widths of the main entrance doors. There shall be no openings from other occupancies to such a corridor or passageway.

(3) The width of every exit court shall be at least 6 feet for an occupancy not exceeding 500 persons, and shall be increased at the rate of one foot per each 500 persons additional. Every such court shall lead to a public thoroughfare, either directly, or through a passageway of equal width, not less than 8 feet high enclosed with unpierced 4-hour fire-resistive walls, ceiling and floor as specified in sections Ind 51.05 and Ind 51.06. The floor and ceiling shall be designed for a live load of not less than 150 pounds per square foot. No such court, or passageway shall be used for storage or any other purpose whatsoever.

Ind 55.05 Separation from other occupancies. (1) Every theater and assembly hall shall be separated from any other occupancy by an absolute occupancy separation as specified in section Ind 51.08, except that a special occupancy separation as specified in section Ind 51.08 may be used between an assembly hall accommodating not more than 750 persons and any other non-hazardous occupancy. Where a special occupancy separation is permitted in this section, a single fire-resistive door may be used for the protection of openings.

(2) For assembly halls of unlimited capacity located on upper floors of fire-resistive buildings which are served by elevators, the elevator openings may be permitted under the requirements for special occupancy separation specified in section Ind 51.08, but otherwise, absolute occupancy separation is required.

(3) Where a garage which is more than 500 square feet in area, chemical laboratory or other occupancy where flammable or explosive liquids or gases are used or stored is built in connection with a building used for a theater or assembly hall, it shall be separated therefrom by means of 4-hour fire-resistive walls as specified in section Ind 51.05 and unpierced 4-hour fire-resistive floors above and below as specified in section Ind 51.06. All openings in the wall to adjoining parts of the building shall be protected by means of self-closing fire-resistive doors as specified in section Ind 51.09.

History: 1-2-56; am. Register, January, 1961, No. 61, eff. 2-1-61.

Ind 55.06 Capacity. (1) The following table includes various types of occupancy within the scope of this section, together with the method to be used in determining the capacity.

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(2) No greater number of persons than the number thus established shall be permitted in any theater or assembly hall.

Use or Occupancy	Basis of Capacity
(a) Arenas and Field Houses -----	4 sq. ft. per person. Use seated areas only.
(b) Assembly Halls, with stage -----	7 sq. ft. per person.
(c) Banquet Halls -----	10 sq. ft. per person.
(d) Churches (Auditoriums) -----	7 sq. ft. per person.
(e) Churches (Dining Rooms) -----	10 sq. ft. per person.
(f) Dance Halls -----	10 sq. ft. per person.
(g) Dining Rooms -----	10 sq. ft. per person.
(h) Gymnasiums -----	6 sq. ft. per person for seated space. 15 sq. ft. per person for unseated space.
(i) Lecture Halls -----	7 sq. ft. per person.
(j) Lodge Halls -----	6 sq. ft. per person for seated space. 15 sq. ft. per person for unseated space.
(k) School Auditoriums -----	7 sq. ft. per person.
(l) Skating Rinks -----	15 sq. ft. per person.
(m) Theaters -----	7 sq. ft. per person.
(n) Theater Lobbies -----	7 sq. ft. per person.

(3) The capacity of theaters and theater lobbies must be combined to determine the theater capacity.

Ind 55.07 Number and location of exits. (1) Every floor and balcony of a theater and assembly hall shall be provided with not less than 2 exits, placed as far apart as practicable and so located that if any exit is blocked, some other exit will still be available from every part.

Exception: In places of worship, only one exit will be required from a balcony seating not more than 30 persons.

(2) Where more than 600 persons are accommodated, there shall be at least 3 exits and where more than 1,000 persons are accommodated, there shall be at least 4 exits.

(3) Exits shall be distributed on all sides which adjoin streets, alleys or open courts.

Ind 55.08 Type of exits. (1) The required exits from any part of a theater or assembly hall shall be exit doorways, stairways or ramps.

(2) All exits to grade from a higher or lower level shall be stairways or approved ramps. In all theaters and in assembly halls having a capacity of more than 400 persons, where the exit rise is not more than 3 feet approved ramps shall be used. By approved ramp is meant an incline located inside the building and having a slope of not more than one foot of rise in 8 feet.

(3) Stairway exits shall be interior stairways, or smokeproof towers as specified in section Ind 51.17; except that "B" type fire escapes may be used as exits from balconies for not more than one-half the required exit width, if located against blank walls.

Ind 55.09 Stairways. (1) Every stairway in a theater or assembly hall except stairways from the main floor to the first balcony shall be enclosed as specified in sections Ind 51.17 and Ind 51.18. No storage closet shall be placed under any stairway, platform, or landing.

(a) A room may be placed under a stairway or stair landing of two-hour fire-resistive construction or better provided such room does not have combustible material or hazardous equipment stored or operated therein. All such rooms shall have a ceiling height of not less than 7 feet and the door thereto shall be a self-closing solid flush type wood door 1½ inches in thickness or better.

(2) Stairways and steps which have more than 3 risers shall have handrails on both sides.

(3) Every stairway used by the public in a theater or assembly hall shall have a uniform rise of not more than 7½ inches and a uniform tread of not less than 10 inches, measuring from tread to tread and from riser to riser. No winders shall be used and there shall be not less than 3 nor more than 16 risers in any run.

Note. See section Ind 51.16 for general stairway requirements.

History: 1-2-56; am. Register, January, 1961, No. 61, eff. 2-1-61.

Ind 55.10 Exit doorways and doors. (1) Every required single exit doorway shall contain a standard exit door as specified in section Ind 51.15. For double doors, with or without mullions, the width of each door may be reduced to 2 feet 6 inches.

(2) No single door or leaf of a double door, shall be more than 3 feet 6 inches wide, and no 2 doors shall be hinged together.

(3) No rolling, sliding or revolving door shall be counted as an exit from any theater or assembly hall, nor shall any such door be permitted where it would be liable to be used by the public as an exit.

(4) Sills at all exit doorways shall be level and flush with adjacent inside floors and ramps. Where an aisle or passageway leads to an exit from either side of the exit doorway there shall be a level floor space at the doorway subtending the width of the aisle and the doorway.

Ind 55.11 Exit lights. (1) In every theater and assembly hall, except church auditoriums, exit lights shall be provided immediately over all exit doorways, and in such other places as may be necessary to direct the occupants to exit doorways and to a street, alley or exit court. The installation of such exit lights shall comply in all respects with the provisions of the Wisconsin state electrical code.

(2) Every light over an exit doorway shall be a red illuminated sign bearing the word EXIT or OUT in plain letters not less than 5 inches in height.

(3) All exit lights shall remain lighted during each occupancy and until the occupants have left the building.

Ind 55.12 Width of exits. (1) The total width of exits from every theater and assembly hall, and from every part thereof, shall not be less than the following: Buildings of fire-resistive construction, 36 inches per 100 persons. Buildings of ordinary construction, 40 inches per 100 persons. Buildings of frame construction, 44 inches per 100 persons.

(2) In theaters, the width of the front entrance shall be not less than ¼ of the total required exit width.

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Ind 55.13 Seating. (1) All seats, chairs and benches shall be placed not less than 32 inches back to back measured horizontally, except that for grandstands and bleachers without back rests this dimension may be reduced to 22 inches. For benches without arms, grandstands, and bleacher seats, the seating capacity shall be established by allowing one sitting or seat to each 18 inches of length. (See section Ind 55.54).

(2) All seats, chairs, and benches, except chairs in boxes or loggias, shall be securely fastened to the floor; or if the floor is level, the seats or chairs may be fastened together in groups of 3 or more. Loose chairs or seats shall not be used unless a special permit is secured from the industrial commission.

(3) There shall not be more than 12 seats in a row between aisles, nor more than 6 seats in a row which has an aisle on one side only except that for grandstands or bleachers without back rests and with a railing along the front, these figures may be doubled. No aisles will be required for such grandstands or bleachers where the seats extend to the floor or ground without a railing along the front.

(a) The number of seats in a row may be increased to 100 where self-raising seats are provided which leave an unobstructed passageway between rows of not less than 18 inches in width leading to a side aisle on each side of the auditorium in which exit doorways are located at not more than 20 feet intervals to an exit corridor or exit court.

(4) No seat bench or platform on which seats are placed shall be more than 22 inches in height of riser.

(5) No seat bench, or other platform or floor area on which seats are placed, or the top seat of any bleachers shall be nearer to the ceiling than 8 feet, nor nearer to the bottom of any truss or girder than 6 feet 4 inches.

(6) The requirements of this section do not apply to restaurants, dining or dance halls.

History: 1-2-56; am. Register, January, 1961, No. 61, eff. 2-1-61.

Ind 55.14 Width of aisles. (1) Aisles having seats on both sides shall not be less than 2 feet 10 inches wide at the beginning and shall increase in width toward the exits at the rate of $\frac{1}{4}$ inch per foot of run; or the aisle may have a uniform width not less than the average width of the foregoing calculation. No wall aisle shall be less than 3 feet wide and no other straight aisle shall be less than 3 feet 6 inches wide.

(2) There shall be a cross aisle leading to each required side exit. Cross aisles shall not be less than 6 feet 8 inches back to back of adjacent rows of seats.

Ind 55.15 Lobbies and foyers. The width of lobbies and foyers shall be determined on the same basis as required for exits in section Ind 55.12, but shall in no case be less than 5 feet wide, and shall be so designed and apportioned as to prevent congestion and confusion. Lobbies and foyers which serve as means of egress shall be at least equal in combined width to the required width of the stairways, passageways, aisles or exit doorways leading to them.

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Ind 55.16 Inclines and aisle steps. (1) To overcome any difference in level between courts, corridors, lobbies, passageways or aisles required, or used, in egress from a theater or an assembly hall, approved ramps as specified in section Ind 55.08 shall be employed where the difference in elevation does not exceed 3 feet, except that this requirement need not apply to balconies.

(2) Steps in balcony aisles shall extend the full width of the aisle and shall have a uniform rise and run as specified in section Ind 55.09. No handrails will be required.

Ind 55.17 Obstruction. (1) All lobbies, aisles, passageways and doorways shall be kept free from furniture, drapes, display equipment, merchandise, vending machines and other obstructions, and no person except an employee shall be allowed to stand in, or occupy, any of the aisles, passageways, corridors or lobbies during any performance or public gathering. Except that patrons may be allowed to wait in a lobby or similar space if such use does not encroach upon the required clear width of the exits. Such waiting shall be restricted to areas separated from the required exit ways by fixed railings not less than 42 inches high. In entrance lobbies only, the exit space may be divided by railings not less than 36 inches high set up in the direction of travel in an approved manner for the regulation of ingress and egress.

(2) A booth or counter for the sale of package merchandise may be placed in the lobby or foyer of a theater where there is sufficient

Chapter Ind 56

SCHOOLS AND OTHER PLACES OF INSTRUCTION

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Ind 56.03	First floor fire-resistive	Ind 56.13	Assembly rooms
Ind 56.04	Subdivisions and fire stops	Ind 56.14	Seats, desks and aisles
Ind 56.05	Exposure and courts	Ind 56.15	Heating plants
Ind 56.06	Number, location and type of exits	Ind 56.16	Sanitary equipment
Ind 56.07	Total width of exits	Ind 56.17	Lighting
Ind 56.08	Exit doors	Ind 56.18	Fire extinguishers
Ind 56.09	Passageways	Ind 56.19	Fire alarms

Ind 56.001 Scope. The requirements of this chapter, sections Ind 56.001 to Ind 56.19, inclusive, shall apply to all public, parochial and private schools, universities, colleges, academies, seminaries, libraries, museums and art galleries; including all buildings or parts of buildings used for the purpose of acquiring knowledge.

Ind 56.01 Maximum height. (1) No building which accommodates pupils below senior or junior high school grades shall be more than 3 stories high, nor shall the topmost floor level be more than 35 feet above the grade at any outside exit door.

(2) No building which is used as a senior or junior high school shall be more than 4 stories high, nor shall the topmost floor level be more than 48 feet above the grade at any outside exit door.

Ind 56.02 Class of construction. (1) Every building not more than one story in height may be of frame construction as specified in section Ind 51.03.

(2) Every building which is more than one story, but not more than 2 stories in height, shall be of ordinary construction as specified in section Ind 51.02, or better, except as provided in section Ind 56.03.

(3) Every building which is more than 2 stories in height shall be of fire-resistive construction as specified in section Ind 51.001 except that in a 3 story building ordinary construction, as specified in section Ind 51.02, may be used above the third floor level.

Ind 56.03 First floor fire-resistive. In all 2 story buildings having more than 4 class, study, or recitation rooms of ordinary size (750 square feet in area) on any floor, the first floor shall be of at least 2-hour fire-resistive construction as specified in section Ind 51.06 unless all of the stairways and corridors throughout the building, including stairs, walls, ceilings and floors are of at least 2-hour fire-resistive construction as specified in sections Ind 51.04 to Ind 51.07 inclusive. In all other 2 story buildings, the basement ceiling shall be of one-hour fire-resistive construction as specified in section Ind 51.06, or better.

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Ind 56.04 Subdivisions and fire stops. Every building of this classification which is built in connection with a building of a lower grade of construction shall be separated from such other building by walls of 4-hour fire-resistive construction as specified in section Ind 51.05, and all communicating openings shall be protected by fire-resistive doors as specified in section Ind 51.09 or equal. If such openings are used as a means of egress, they shall be kept normally open during the occupancy of the building.

Ind 56.05 Exposure and courts. No wall containing windows or vision area which light a class, study, recitation room or reading room shall be less than 20 feet away from any opposite building, structure, or lot line or opposite court wall.

History: 1-2-56; am. Register, January, 1961, No. 61, eff. 2-1-61.

Ind 56.06 Number, location and type of exits. (1) The number and location of exits shall be such that in case any exit is blocked at any point some other exit will still be accessible through public passageways, from every room used by the public or by the occupants generally. Except that in a high school, university, college, library or museum building not more than 2 classrooms of ordinary size (900 square feet area) may be placed between an exit and the end of the building, provided that the exit doors from such classrooms are not more than 10 feet beyond the exit.

(a) Exits shall be so distributed that the entrance to any room used for educational purposes will not be more than 100 feet distant from an exit measuring along public passageways.

(2) In buildings of more than one story, there shall be at least 2 stairway exits, each leading directly out of doors. The remaining exits shall be either such stairways or horizontal exits as specified in section Ind 51.19. Where such stairways lead to the basement they shall be enclosed below the first floor as specified in section Ind 51.18.

(3) In buildings of more than 2 stories, all stairways shall be enclosed as specified in sections Ind 51.17-Ind 51.18.

(4) Fire escapes may only be used as exits from the temporary end of incomplete or unit type buildings, as approved in writing by the industrial commission. Such fire escapes shall be of the "B" type where more than 100 persons can be accommodated above the first story.

(5) Handrails shall be provided on both sides of all exit stairs used by pupils.

(6) No storage closet or storage space shall be placed under any stairway, platform or landing. A room may be placed under a stairway or stair landing of two-hour fire resistive construction or better provided such room does not have any combustible material or hazardous equipment, stored or operated therein. All such rooms shall have a ceiling height of not less than 7 feet and the door thereto shall be a self-closing solid flush type wood door 1¾ inches in thickness or better.

History: 1-2-56; am. (1), cr. (1) (a), Register, September, 1959, No. 45, eff. 10-1-59; am. Register, January, 1961, No. 61, eff. 2-1-61.

Ind 56.07 Total width of exits. (1) The total width of exits from any floor shall be not less than the following rates, based on the total capacity of such floor and of the floors above.

(a) Fire-resistive buildings, 30 inches per 100 persons.

(b) Ordinary or frame buildings, 40 inches per 100 persons.

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(2) Where permitted under section Ind 56.06, standard fire escapes may be used for not to exceed one-third of the above total widths.

(3) The capacity of a school building shall be established by the actual number of fixed seats in rooms where such are used or by the number of persons which may be accommodated. (See section Ind 56.11). The capacity of a library, museum, or art gallery shall be established on the basis of 100 square feet of total floor area of the building, exclusive of stairways and elevators, to each person, except that for library reading rooms this area shall be reduced to 20 square feet per person for the space so occupied.

Ind 56.08 Exit doors. Exit doors shall comply with the requirements of section Ind 51.15, except that in elementary schools the width may be reduced to 3 feet. The aggregate width of exit doors shall be as required in Ind 56.07. No single door or leaf of a double door shall be more than 42 inches wide.

Ind 56.09 Passageways. (1) Corridors and passageways shall be so designed as to prevent congestion and confusion and shall be provided with windows and artificial light so as to maintain a light intensity throughout of not less than 2.5 foot candles at the floor line whenever the building is occupied.

(2) The minimum unobstructed width of corridors and passageways which are used by the public or by the occupants generally, shall be determined in the same manner as specified for stairways in section Ind 56.07, but in no case shall this width be less than 4 feet. Corridors and passageways serving as a means of egress shall be at least equal in combined width to the required width of the stairways or passageways leading to them.

Ind 56.10 Access to attic and roof. Every building more than one story in height shall have permanent means of access to the roof and attic space from inside the building. Where a scuttle opening is provided, the opening shall be not less than 20 x 30 inches, with a permanent enclosure for a stairway or ladder leading thereto.

Ind 56.11 Floor space and ceiling height. (1) All class and recitation rooms shall have a minimum floor space of 23 square feet per person. Rooms used only for study purposes shall have a minimum floor space of 15 square feet per person.

(2) In colleges or universities, classrooms seated with tablet arm chairs or seats without desks shall have a minimum floor space of 10 square feet per person.

(3) All rooms used for educational purposes shall not be less than 9 feet high in the clear except that school buildings which have a sloping ceiling may have a ceiling height of not less than 8 feet on the low side of the classroom provided the average ceiling height is not less than 9 feet in the clear. Beams, girders, or other structural members spaced not less than 4 feet on centers which support the ceiling construction shall not be less than 7 feet 6 inches above the floor. Toilet rooms, service rooms, store rooms and similar spaces shall not be less than 7 feet 6 inches in the clear.

History: 1-2-56; am. (3), Register, September, 1959; No. 45, eff. 10-1-59; am. Register, January, 1961, No. 61, eff. 2-1-61.

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Ind 56.12 Basement rooms. No class, recitation, study, laboratory, domestic science or library room shall have its floor more than 2 feet below the adjoining grade. Industrial arts rooms, shops, toilet rooms and other rooms used by pupils (not including play rooms) shall have floors not more than 4 feet below grade. The walls and floor where exposed to soil shall be waterproof and damp-proof.

Ind 56.13 Assembly rooms. A room which seats, or which can accommodate, 100 or more persons shall conform to the requirements of Chapter 55 (Theaters and Assembly Halls) of this code except that the minimum width of any exit doorway used exclusively by elementary school children may be 3 feet; but in any case the aggregate width of such doorways shall be in accordance with Chapter 55.

Ind 56.14 Seats, desks and aisles. (1) Seats, chairs and desks in class, recitation, or study rooms seating more than 50 persons shall be securely fastened to the floor; or seats shall be fastened together in groups of 4 or more, or in groups of 2 seats and 2 desks. Except that this requirement shall not apply to desks and chairs used by teachers, or to chairs, tables and equipment used in kindergarten rooms.

(2) Class, recitation and study rooms shall have aisles along all walls.

(3) In elementary school rooms, the intermediate aisles shall be not less than 18 inches and the wall aisles not less than 30 inches in width.

(4) In high school rooms, and in all other class, recitation and study rooms, the intermediate aisles shall be not less than 20 inches and wall aisles not less than 30 inches in width.

(5) Where rooms are used for assembly purposes, seats and aisles shall conform to the requirements of sections Ind 55.13-Ind 55.17 of this code.

Ind 56.15 Heating plants. (1) In every building more than one story in height, all heating plants and fuel rooms shall be enclosed with not less than 4-hour fire-resistive construction as specified in sections Ind 51.05 and Ind 51.06. All openings shall be protected with self-closing fire-resistive doors as specified in section Ind 51.09.

(2) In one story buildings all heating plants and fuel rooms shall be enclosed with not less than 2-hour fire-resistive construction as specified in sections Ind 51.05 and Ind 51.06, except that this requirement shall not apply to buildings where jacketed stoves or school room heaters are permitted. All openings shall be protected by self-closing fire-resistive doors as specified in section Ind 51.09.

Ind 56.16 Sanitary equipment. (1) **TOILETS.** School buildings shall have the following toilet equipment:

(a) In high schools, one water closet for every 30 females or fraction.

(b) One water closet for every 60 males or fraction and one urinal for every 30 males or fraction.

(c) In junior high and elementary schools, one water closet for every 25 females or fraction, one water closet for every 50 males or fraction and one urinal for every 25 males or fraction.

(2) **DRINKING WATER.** One drinking fountain shall be installed in each story and basement, for each 6000 square feet of classroom

floor area, or fraction. Drinking fountains shall not be installed in toilet rooms.

(3) **WASHING FACILITIES.** Lavatories shall be provided in connection with toilet rooms in the ratio of one lavatory for every 60 persons of each sex in high schools and one lavatory for every 50 persons of each sex in junior high schools and elementary schools.

(4) **CLOAKROOMS AND WARDROBES.** In every school building, there shall be provisions for the placing and storage of the wraps of occupants. Such provisions shall consist of wardrobes, open front wardrobes, lockers or cloak rooms constructed and arranged in a manner to insure and facilitate the ventilation and sanitation of the contents. Ventilation shall conform to the provisions of section Ind 58.47 of the heating, ventilation and air conditioning code.

(a) This prohibits the use of corridors and vestibules for cloak room purposes unless ventilated lockers, wardrobes, or open front wardrobes are provided. Open hooks and hangers in the corridors will not be approved.

Note: Heating and ventilation. For heating and ventilation in schools, libraries, etc., see the heating, ventilation and air conditioning code issued by the industrial commission which code applies to all public buildings and places of employment.

History: 1-2-56; am. (2), (3), (4) and (4) (a), Register, September, 1959, No. 45, eff. 10-1-59.

Ind 56.17 Artificial lighting. (1) Every class, study or recitation room shall be equipped with sufficient electrical lighting units to maintain the illumination required by the school lighting code.

(2) All other rooms and spaces in school buildings shall be equipped with means for supplying electric illumination in the quantity required for the purpose for which the room or space is used. All electrical work shall be installed to conform to the requirements of the Wisconsin state electrical code.

History: 1-2-56; am. Register, January, 1961, No. 61, eff. 2-1-61.

Ind 56.18 Fire extinguishers. In every building, standard fire extinguishers, as specified in section Ind 51.22, shall be provided in the proportion of one extinguisher to each 2500 square feet, or fraction, of floor area, but there shall be at least one fire extinguisher on each floor including basement. In addition to the fire extinguishers for general protection there shall be at least one extinguisher of appropriate type and size in each laboratory, shop or other vocational room. Every fire extinguisher shall be prominently exposed to view and always accessible.

Ind 56.19 Fire alarms. (1) Every building 2 or more stories in height and every one-story building with 6 or more classrooms and an assembly hall or gymnasium accommodating more than 100 persons shall be provided with a proper alarm system complying with section Ind 51.24. *Exception:*

(a) A hand operated alarm if permanently installed and so arranged that it can be operated from any story, including the basement, may be used in school buildings not more than 2 stories in height and having not more than 2 standard size classrooms on the second floor.

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(a) A presignal fire alarm system may be installed in hospitals or hotels when not less than 4 employees are on duty at all times to respond to fire alarms.

(b) Where presignal systems are installed, it is recommended that the fire department be called immediately after the pre-alarm signal is received.

(3) This order applies to buildings now in existence and to buildings hereafter constructed.

History: 1-2-56; am. Register, October, 1958, No. 34, eff. 11-1-58.

Ind 57.23 Scuttle. Every building more than one story in height which accommodates more than 4 families, or 30 persons, shall have a permanent means of access to the roof from the inside. The opening shall be not less than 20 x 30 inches and there shall be a permanent ladder or stairway leading thereto.

Ind 57.24 Directions for escape. (1) In every room liable to be used by transients, a notice shall be conspicuously posted giving complete and plain directions for reaching at least 2 exits.

(2) In addition to this, a red exit light shall be provided over each exit on every floor.

Ind 57.25 Row house. (1) **DEFINITION.** A row house is a place of abode not more than 2 stories in height, arranged to accommodate 3 or more attached row dwelling units in which each dwelling unit is separated from the adjoining unit by an unpierced vertical occupancy separation of not less than one-hour fire-resistive construction, extending from the basement or lowest floor to the under side of the roof boards.

(2) **REQUIREMENTS.** (a) Each dwelling unit shall have separate entrances and exits leading directly to the outside.

(b) Heating ducts may be installed in the space between studs in the occupancy separation wall provided all such ducts are covered with ¼ inch corrugated asbestos or the equivalent protection. Heating ducts shall not be installed back to back in the occupancy separation wall.

(c) Where each living unit has a separate heating system, the requirements of sections Ind 57.20 and Ind 57.22 need not be complied with.

(d) Each living unit shall have access to the attic from the inside by means of an opening not less than 20 x 30 inches located above the stair landing on the second floor, but the other provisions of section Ind 57.23 need not be complied with.

HAZARDOUS OCCUPANCIES

Ind 57.50 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.

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(2) CONSTRUCTION REQUIREMENTS. (a) All garages, except private garages, which are more than 500 square feet in area shall have walls and roof of ordinary construction, as specified in section Ind 51.02, or better, 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 51.06.

Exception. 1. A garage not more than one story in height and 2,000 square feet in area may have walls and roof of frame 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 boat house for the storage of not more than one motor boat may be of frame construction if located at least 15 feet from any property line or other 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 51.09 and Ind 51.10.

(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 51.05 and unpierced 4-hour fire-resistive floors above and below as specified in section Ind 51.06. 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 51.09. 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 51.05 with all openings protected by means of self-closing fire-resistive doors as specified in section Ind 51.09.

(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 ceiling of not less than one-hour fire-resistive construction as specified in sections Ind 51.05 and Ind 51.06, and the openings to adjoining parts of the building shall be protected by means of fire-resistive doors as specified in section Ind 51.09.

(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 sections Ind 51.05 and Ind 51.06. 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 sections Ind 51.05 and Ind 51.06, and the opening thereto protected with a fire-resistive door as specified in section Ind 51.09.

(a) Suspended furnaces and direct fired unit heaters fired with liquid fuel or gas may be used without an enclosure where approved by the industrial commission. Where suspended furnaces or direct fired unit heaters are used without an enclosure, all such units shall be located at least 8 feet above the floor.

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(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.

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.

Ind 57.51 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 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 ordinary construction as specified in section Ind 51.02, or better, except where canopies are provided over the dispensing equipment, such canopies shall be of incombustible 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 frame 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 non-hazardous occupancies may be of frame 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 (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 51.09 and Ind 51.10.

(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

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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 under floor space is of 4-hour fire-resistive construction as specified in sections Ind 51.05 and Ind 51.06.

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

Note: For requirements applying to floor pits, see section Ind 57.50.

History: 1-2-56; am. (2) (a); cr. (2) (a) 1., Register, September, 1959, No. 45, eff. 10-1-59.

Ind 57.52 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 57.50.

(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 57.50.

Ind 57.53 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 51.05, 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 more than 50 feet in height shall have floors and supporting members of 2-hour fire-resistive construction or better. Such structures shall not exceed 75 feet in height or 30,000 square feet in area.

(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.

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(g) All parking decks and parts thereof shall be designed and constructed to support the following minimum superimposed live loads in pounds per square foot of horizontal area, in addition to the dead load:

	<i>Pounds Per Square Foot</i>
<i>Passenger Cars Only</i>	
Top floor -----	80
First floor -----	80
Intermediate floors -----	50
Ramps -----	80

Busses and Trucks

All floor and ramp areas ----- 8000 pound axle load in any possible position or 80 pounds per square foot, whichever produces the greater stress.

History: Cr. Register, June, 1956, No. 6, eff. 7-1-56; cr. (2) (g), Register, August, 1957, No. 20, eff. 9-1-57.