

State of Connecticut

**DEPARTMENT OF STATE POLICE
OFFICE OF THE STATE FIRE MARSHAL**



FIRE SAFETY CODE

Prepared in accordance with the provisions
of Sections 3665 to 3668, Inc. of the 1949
Revision of the General Statutes.

Headquarters
DEPARTMENT OF STATE POLICE
Hartford

Revised to January 1, 1956

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FOREWORD

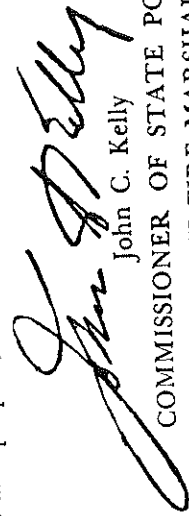
The Connecticut Fire Safety Code, the establishment of which was authorized by the 1947 General Assembly, has been published in progressive installments since September, 1947. This edition is a compilation of all regulations and amendments as of this date, and includes general requirements for places of assembly, hotels, hospitals, convalescent homes, new schools, existing school buildings, boarding homes, rooming houses, and child day care centers.

The purpose of this Code as designated by statute is to provide for reasonable safety from fire, smoke and panic therefrom, and every effort has been made to write just and reasonable regulations avoiding provisions involving expenditures not essential to the objective of life safety.

Acknowledgment is made of the invaluable assistance in the preparation of this volume rendered the State Police Department by State agencies and organizations listed below, representatives of these organizations, and other civic-minded individuals who have made extensive contributions of their knowledge and personal time without compensation:

Connecticut Building Officials' Association, Connecticut Chapter, American Institute of Architects, Connecticut Fire Chiefs' Association, Connecticut Fire Marshals' Association, Connecticut Hospital Association, Connecticut Hotel Association, Connecticut Society of Professional Engineers, and Connecticut State Departments of Education, Public Works, Health, and Welfare.

To those who may be affected by the Connecticut Fire Safety Code and to all Fire Marshals, Building Inspectors and officials who will be concerned in the enforcement of its provisions, I express the confident hope that a mutual understanding of our purpose will result in a cooperative effort to safeguard the welfare of our people and to reduce substantially the loss of life and property in the State of Connecticut.


John C. Kelly
COMMISSIONER OF STATE POLICE
and STATE FIRE MARSHAL

LAWS CONCERNING THE ESTABLISHMENT OF A CONNECTICUT FIRE SAFETY CODE

Sec. 3664. Commissioner to serve as state fire marshal. For the purpose of this chapter and any other statutes related to fire prevention and safety the commissioner of state police shall serve as the state fire marshal. He may delegate to any member of the state police department such powers as he deems expedient for the proper administration of this chapter and any other statute related to fire prevention and safety.

Sec. 3665. Fire safety code. The state fire marshal shall establish a fire safety code and at any time may amend the same. The regulations in said code shall provide for reasonable safety from fire, smoke and panic therefrom, in all buildings except in private dwellings occupied by one or two families, and upon all premises except those used for manufacturing.

Sec. 3666. Code to specify minimum requirements. Said code shall specify reasonable minimum requirements for fire safety in new and existing buildings and facilities. Regulations may be in accordance with the size, type of construction and nature of use or occupancy of such buildings or facilities. No regulation made in accordance with sections 3665 to 3667, inclusive, shall be inconsistent with the provisions of the statutes nor impair the rights of municipalities to enact ordinances and make orders with respect to buildings as provided in section 4087 and section 4088, so far as such ordinances or orders specify requirements equal to, additional to or more stringent than the regulations issued under the authority of sections 3665 to 3667, inclusive.

Sec. 3667. Publication of code. Said code and all amendments thereto shall be registered with the secretary of the state and published in accordance with section 282, and in addition thereto a copy shall be provided each local fire marshal, fire chief and building inspector, and such other governmental officials as request the same.

Sec. 3668. Penalty for violation of code. Any person who violates any provision of the fire safety code shall be fined not more than two hundred dollars or imprisoned not more than three months or both.

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THE STATE FIRE MARSHAL

Fire Safety Code

The following regulations, Sections 172-1-1 to 172-1-25, made by the State Fire Marshal, were filed with the Secretary of State on September 23, 1947, were approved by the Attorney General on September 23, 1947, were published in the Connecticut Law Journal on September 29, 1947, and were in effect as of that date unless otherwise indicated.

GENERAL PROVISIONS

SEC. 172-1-1. CODE ESTABLISHED

In accordance with the provisions of Public Act No. 419 of the Public Acts of 1947 (Sec. 3664-3679 of the General Statutes, 1949 Revision) a Fire Safety Code is herewith established.

SEC. 172-1-2.* GENERAL APPLICATION

This Code shall specify reasonable minimum requirements for fire safety in new and existing buildings and facilities, except in private dwellings occupied by one or two families,

* As Amended December 15, 1953
January 11, 1955

premises used for manufacturing, or places requiring special state license used for the exhibition of motion pictures. It should be noted, however, that municipalities may enact ordinances and orders relating to fire safety provided they specify requirements equal to, additional to or more stringent than those contained in this Code.

SEC. 172-1-3. ARRANGEMENT OF CODE

Specific types of occupancies and general subjects are regulated under Article captions, and to further facilitate reference each section is titled and in numerical order.

SEC. 172-1-4. INTERPRETATIONS

a. The titles or headings of Articles contained in this Code shall be deemed to be a part of such Articles. The titles or headings of sections, however, shall not be considered a part thereof.

b. Where in this Code such terms as "proper," "adequate," "sufficient," "ample," "suitable," "substantial," "necessary," "dangerous" and the like, or derivatives thereof are used, they shall be understood to mean proper, adequate, etc. to the satisfaction or in the opinion of the authority having enforcement jurisdiction; and such terms as "where practicable," "where required," "as far as possible," shall have a like significance.

c. Where the term "approved" is used in this Code, it shall be understood to mean "in accordance with the specific provisions related to the particular subject as are contained in this Code, or as approved in particular by the State Fire Marshal."

SEC. 172-1-5.* DEFINITIONS

Unless otherwise expressly stated, the following terms shall for the purpose of this Code, have the meanings indicated in this section.

Ambulatory. The term "ambulatory" when used in relation to a person, shall mean one who, without the aid of

another, is physically and mentally capable of walking a normal path to safety, including the ascent and descent of stairs.

Area of refuge. The term "area of refuge" shall mean a ground area, reasonably accessible from a building, of sufficient size and in safe condition for refuge by all building occupants at a safe distance from such building. When used in relation to areas within buildings this term shall mean an area beyond a fire wall or smoke barrier of sufficient size to offer refuge to all occupants on the same floor of the building.

Basement. The term "basement" shall mean that portion of a building, the floor of which is at least 2 feet below the lowest adjacent grade or sidewalk.

Bed patient. The term "bed patient" shall mean a hospital patient who is not ambulatory as defined in this section.

*Boarding Home.*** The term "boarding home" shall mean a building used as a place for the boarding and care of five or more ambulatory persons, and shall include homes for the aged, and institutions receiving State aid or maintained by municipalities; but shall not include such places as are defined under the term "hospital," "convalescent home," "rooming house" or private dwellings for the lodging and care of one's relatives.

*Child Day Care Center.**** The term "Child Day Care Center" shall mean a room or group of rooms or spaces within a building used as a place for the care, guidance and/or supervision of a total of five or more children not of common parentage, which term shall include all such places known as day nurseries, nursery schools, kindergarten schools, play schools and pre-schools.

*Classroom.** The term "classroom" shall mean a room used by a group of students to receive instructions or pursue studies.

Combustible. The term "combustible" shall mean that which is not within the category of "noncombustible," as defined in this section.

* Adopted December 15, 1953

** Adopted April 27, 1954

*** Adopted January 11, 1955

* As Amended June 28, 1949

January 11, 1955

Convalescent Home. The term "convalescent home" shall mean a building used as a place for the lodging, care and treatment of five or more persons suffering from abnormal physical conditions, requiring license by the State Department of Health as a "Chronic and Convalescent Home." This shall include places used for the lodging and long-term care of the infirm and those receiving chronic or convalescent care, but shall not include such places as are defined under the term "hospital" which are equipped for general medical or surgical treatment and are used for short-term care, the lodging and care of one's immediate family within his private dwelling or buildings used for the housing of insane persons or those confined in state prisons, jails or other public penal institutions.

Exit. The term "exit" shall have the same meaning as "means of egress," as defined in this section.

Fire door. The term "fire door" shall mean a door and its assembly with jamb, so constructed and assembled in place as to have a fire-resistant rating of at least two hours.

Fire wall. The term "fire wall" shall mean a wall of brick or reinforced concrete which subdivides a building or separates buildings to restrict the spread of fire, and which starts at the foundation and extends continuously through all stories to and above the roof, except where the roof is fireproof or semi-fireproof and the wall is carried up tightly against the underside of the roof slab.

Horizontal exit. The term "horizontal exit" shall mean a doorway through or around a fire wall protected by a fire door, which door shall not be held in an open position by a device which will require more than one movement of normal strength to close. This term shall also include a bridge connecting two buildings whose outside walls are of masonry construction.

Hospital. The term "hospital" shall mean a building used as a place for the lodging, care and general medical or surgical treatment of five or more persons. A hospital shall

not include a place used for the lodging or care of members of one's immediate family within his private dwelling, or buildings used for the housing of insane persons, or those confined in state prisons, jails or other public penal institutions.

Hotel. The term "hotel" shall mean a building or portion of a building used as a place where sleeping accommodations are furnished for hire or other consideration, with or without board, for 25 or more guests or employees of the management, or in which 13 or more sleeping rooms are maintained for such guests or employees. The term "hotel" shall include all clubs, schools, dormitories or other buildings which have similar sleeping accommodations, but shall not include apartment houses, hospitals, penal institutions or buildings housing the insane. Members of the management's family shall not be considered as guests or employees.

Liquefied petroleum gas. The term "liquefied petroleum gas" and its symbol, "LP-Gas," as used in this Code, shall mean and include any material which is composed predominantly of any of the following hydrocarbons, or mixtures of them: propane, propylene, butanes (normal butane or iso-butane), and butylenes.

Means of egress. The term "means of egress" shall mean wall openings or other passageways considered as means of egress required by this Code.

Noncombustible. The term "noncombustible," when used in relation to any material thing, shall mean that which will not readily ignite and burn when subject to fire.

The term "noncombustible," when used in relation to buildings in general, shall mean that type of structure which is constructed completely of masonry, metal and/or other noncombustible material. A building shall be termed "noncombustible" whether or not wood flooring has been laid over solid or slab masonry, whether or not door and window assemblies are of wood, and whether or not roofing over room enclosures which are at least 20 feet in height is of combustible material, provided such roofing is supported by steel and covered on the outside by fire-resistant material.

The barrier may have wired-glass panels, each not to exceed 6 square feet.

Sprinklered. The term "sprinklered" shall mean "to be completely protected by an approved system of automatic sprinklers installed and maintained in accordance with proper standards."

Story. The term "story" shall mean that part of a building between a floor and the floor next above; and shall apply to the basement and other floor areas below. The first story shall be that story which is of such height above grade that it does not come within the definition of a basement or shall be that story located immediately above a basement. The second story shall mean the story located immediately above the first story, and upper stories shall be in numerical sequence accordingly. Stories below the basement shall be designated as "below", and shall be in numerical sequence accordingly. A one-story building shall mean a building with one story only, or a building containing a basement and one story above.

Winding stairs. The term "winding stairs" shall mean a flight of two or more steps which, in changing direction, does so by benefit of variance in the width along each tread. This term shall not include such stairs as have treads of uniform width throughout and change direction by benefit of intermediate landings or platforms.

SEC. 172-1-6.* APPLICATION TO NEW OR EXISTING STRUCTURES.

Unless otherwise expressly provided, all regulations contained in this Code shall apply to all existing and new structures. When a change of use or type of occupancy is made in an existing building, such building shall conform to the requirements for new structures as related to the proposed use or type of occupancy.

SEC. 172-1-7.* CONFORMITY REQUIRED.

No person shall construct or cause to be constructed a new building, and no person shall alter or cause to be altered an existing building, except in conformity with the provisions of this Code. All existing buildings shall be maintained, or reconstructed and maintained, in conformity with this Code. Exemptions from compliance may be allowed by the State Fire Marshal where conformity is found impracticable, and where existing conditions are adjudged by him to provide equal and adequate safety from fire, smoke and panic therefrom.

*As Amended January 19, 1948

*Occupancy.** The term "occupancy" shall mean the use of space or rooms within a building by a person or group of persons.

*Place of Assembly.*** The term "place of assembly" shall mean a room or space within a building in which more than 75 persons assemble for religious, recreational, educational, political, fraternal, social or amusement purposes, or for the consumption of food or drink, except school classrooms, libraries, courtrooms, places requiring special state license used for the exhibition of motion pictures, or any portion of a private dwelling. Such room or space shall include adjacent rooms with intervening partitions, open or capable of being opened so as to allow for occupancy with a common purpose.

*Rooming Houses.**** The term "rooming house" shall mean any building which is used in whole or in part as a place where sleeping accommodations are furnished for hire or other consideration, with or without board, for not more than 24 guests or employees of the management or in which 12 or less sleeping rooms are maintained for such guests or employees. This term shall include all tourist homes and lodging houses which have accommodations as aforesaid but shall not include private dwellings which accommodate not more than four habitual guests or employees, or an apartment house, hospital, or convalescent home or boarding home, as defined in this Code. Members of the management's family shall not be considered as guests or employees.

*Schools.** The term "school" shall mean a room or group of rooms or spaces within a building used as a place for group instruction or study in any branch or branches of knowledge.

Smoke Barrier. The term "smoke barrier" shall mean a partition with a fire-resistant rating of not less than one-half hour, equipped with a door and jamb of the same rating and hung so as to be reasonably smoke and gas tight when closed. The door shall not be fastened in an open position by a device which will require more than one movement of normal strength to swing such door to a closed position. Such barrier shall be located to provide ample area of refuge on each side of such partition for all occupants of the story served by the barrier.

* Adopted December 15, 1953

** As Amended December 15, 1953

*** As Amended August 10, 1954

January 11, 1955

ARTICLE I

PLACES OF ASSEMBLY

SEC. 172-1-8. GENERAL

a. The regulations contained in this Article shall apply to all places of assembly as defined in Section 172-1-5, except only such places as are expressly exempt in accordance with the provisions of this Code.

b. Fire-escapes and other outdoor stairways, heating and ventilating facilities, and the use of electric wiring and appliances, shall be governed by special articles related thereto.

SEC. 172-1-9. EGRESS FACILITIES REQUIRED

All places of assembly shall be provided with approved egress facilities as determined under the provisions of Section 172-1-13, where practicable.

SEC. 172-1-10. MAXIMUM OCCUPANCY

No place of assembly shall have occupancy in excess of that for which adequate floor area is available or egress facilities provided in accordance with the provisions of Sections 172-1-13a to 172-1-13c inclusive, provided additional occupancy of standing patrons will be allowed in seated places of assembly in accordance with the provisions of Section 172-1-11 of this Code.

SEC. 172-1-11. STANDING CONDITIONS

Standing patrons may be allowed in places of assembly at the rate of one person for each 5 square feet of area available for standing; provided that aisle area, except rear cross aisles, shall not be considered in determining the number of standing patrons allowed.

SEC. 172-1-12. ADMISSIONS RESTRICTED AND SUPERVISED

Admissions to all places of assembly shall be supervised by the responsible management, or by such person or persons delegated with such responsibility by said management and such responsible person shall not allow admissions in excess of the maximum occupancy as provided in Section 172-1-10 of this Code.

SEC. 172-1-13. EGRESS FACILITIES DETERMINED

a. Each place of assembly shall have at least two approved ways of egress, remote from each other. Additional approved egress passages distributed as uniformly as practicable to effect a rapid discharge of occupants shall be provided on the basis of unobstructed horizontal width of such egress facilities for each 100 persons, or fraction thereof, to be accommodated under conditions of possible occupancy, as determined under the provisions of Sections 172-1-13b and 172-1-13c of this Code and in accordance with the following schedule:

(1) Places of assembly in sprinklered buildings constructed entirely of noncombustible materials, 20 inches for each 100 persons.

(2) Places in non-sprinklered buildings constructed entirely of noncombustible materials, 22 inches for each 100 persons.

(3) Places in sprinklered buildings constructed wholly or in part of combustible materials, 24 inches for each 100 persons.

(4) Places in non-sprinklered buildings constructed wholly or in part of combustible materials, 36 inches for each 100 persons.

b. In determining required egress facilities in places of assembly without fixed seating, possible occupancy shall be computed at the rate of one person for each 6 square feet of floor area within the room or combination of rooms under consideration, excluding only such stages and other permanent structures and areas as are not intended for patron occupancy. The rate to be used in places used for the consumption of food and drink shall be one person for each 10 square feet of such floor area.

c. In determining required egress facilities in places of assembly having fixed seating, possible occupancy shall be in accordance with the number of individual seats provided and at the rate of 18 inches in width for each person in bench or bleacher type seating, provided the total seating shall not exceed one person for each 6 square feet of floor area.

d. The entrance openings and passages to a place of assembly measured at the point of their least unobstructed width to the outside, shall be considered as approved width of egress.

e. Elevators, revolving doors and window openings shall not be considered in the computation of approved egress facilities.

SEC. 172-1-14. EGRESS PASSAGEWAYS

a. The distance of travel from any point within such place of assembly to an approved egress opening therefrom shall not exceed 100 feet.

b. Each egress doorway from a place of assembly shall be at the assembly floor level in new structures, and as near there to as practicable in all existing structures.

c.* All new doorways and connecting passageways to the outside, to be considered as means of egress, shall be at least 36 inches in width and at least 78 inches in height, and of such greater width as conditions require, except that each leaf of a double or mullioned door may be not less than 30 inches wide.

* As Amended June 28, 1948

September 29, 1947

d. All approved means of egress from a place of assembly shall open directly into the open air or to an inside passageway enclosed by material with a fire-resistant rating of not less than 30 minutes, or an approved interior stairway, or a combination of both, leading to the open air, provided one such passageway from each place of assembly may be through an open space or lobby with ample egress openings to the outside. Such enclosed passageway shall be equal in width to the most distant exit opening served thereby and increased by two-thirds of the width of any additional exits entering thereon, such increase to be made in the direction of exit travel.

e. Doorways leading from a place of assembly through a room or rooms of the same tenancy may be considered as approved means of egress, provided such room or rooms lead to the outside by means of doorways, approved passageways or stairways, or a combination of both, which are completely separate from other approved means of egress from such place of assembly. Provision shall be made for a clear and unobstructed passage through such room or rooms to the outside.

f. Walks of ample width and safe for pedestrian travel shall be provided from each outside egress opening to a public street or a suitable area of refuge.

g.* All egress openings and passageways leading from places of assembly shall be kept free from obstructions or encumbrances at all times and shall not be through a room used as a kitchen, bathroom or for any other purpose that may obstruct free passage.

SEC. 172-1-15. VERTICAL OPENINGS

a. Every existing interior stairway constituting part of an entrance or egress passage from a place of assembly shall be enclosed or be segregated from other portions of the building by materials with a fire-resistant rating of not less than 30 minutes. Partitioning at floor levels with materials of the same rating affecting a closure of such stairway opening between the floors of the second and third stories, and at each floor level above, shall constitute a proper enclosure in such buildings, provided that the basement and other stories below are segregated from the first story in the same manner. Where interior stairways constitute the entire means of egress, at least one such stairway, and additional stairways where necessary, shall lead directly to the outdoors or to an enclosed passageway leading to the outdoors constructed to resist fire to the same degree. One such stairway, where necessary, may be allowed to lead through an open space or lobby with ample egress openings to the outside. All other vertical openings exposing such place of assembly shall be enclosed throughout by material with a fire-resistant rating of not less than 30 minutes.

* As Amended June 28, 1948

b. All vertical openings, including stairways and passages to the outdoors, leading from a place of assembly in new buildings, shall be enclosed by material with a fire-resistant rating of at least 2 hours, provided that an enclosure shall not be required for a flight of stairs from the main entrance floor to the floor next above when such stairs are not a part of an approved means of egress, nor for a flight of stairs in a building constructed entirely of noncombustible materials when such stairs connect only one story with one other story immediately above or below it. The above allowances for open stairways between one story and one other story shall also apply to existing structures under like conditions.

SEC. 172-1-16. EGRESS DOORS

a. All egress doors opening from a place of assembly or in a passageway leading therefrom to the outside of the building shall be so hung as to open in the direction of exit travel, but this requirement shall not be construed to prohibit entrance doors swinging both inward and outward.

b. Egress doors into stairway enclosures, all doors serving other vertical openings, and doors in side wall openings of enclosed egress passages, shall be equipped with suitable self-closing doors.

c.* Doors in walls or partitions required to be fire-resistant for one-half hour shall be equally fire resistant, and doors in walls or partitions required to be of greater resistance shall be resistant to fire for not less than one hour.

d.* A door in a partition required to be fire-resistant may contain wired glass, provided such glass shall not exceed 6 square feet.

** (e) All egress doors leading from a place of assembly with a possible occupancy of 500 or more persons, and all such doors in all new places of assembly shall be equipped with panic hardware which will release when normal pressure is applied to the releasing device in the direction of exit travel. Such releasing device may be a bar or panel extending not less than two-thirds of the width of the doors and placed not less than 30 nor more than 44 inches above the floor.

f. All egress doors leading from a place of assembly with a maximum occupancy of less than 500 may be equipped with panic hardware as required under Section 172-1-16. Such egress doors not equipped with panic hardware shall be equipped with hardware which will insure opening of such door by a single motion in the turning of a knob or pressure of a latch with normal strength. No such door shall be equipped with a lock, latch, bolt or other fastening

* As Amended June 28, 1948

** As Amended August 10, 1954
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device which will allow for locking such door against opening from the place of assembly while occupied, or which will require a second operation or motion to open such door for egress purposes.

SEC. 172-1-17. STAIRS AND STAIRWAYS

a. All stairways in places of assembly and in passages leading therefrom shall have suitable handrails on both sides, except such stairs as are only 3 feet in width, which stairs shall have one such handrail.

b. All existing stairways in approved egress passages shall be provided with landings at least 30 inches in depth between the nosing of the top or bottom stair and the next parallel partition or door. All new stairways shall have such landings at least 36 inches in depth.

c. Winding stairs shall not be allowed in approved ways of egress.

d. Stair treads in approved inside egress passages in existing structures shall be not less than 8 inches wide, exclusive of nosing, and risers shall not exceed $8\frac{1}{2}$ inches in height. In new buildings such stair treads shall be not less than $9\frac{1}{2}$ inches wide, excluding the nosing, and risers shall not exceed $7\frac{3}{4}$ inches in height. Treads and risers shall be of uniform width and height in each individual stairway.

* SEC. 172-1-18. AISLES AND SEATING

a. In each place of assembly where seating is provided, except where assembly is seated at tables, such seating shall be arranged in an orderly manner with ample provisions made for aisles leading to exits, and no aisle forming a part of the egress system of such place of assembly shall be obstructed or encumbered. No longitudinal aisle serving seats on one side shall be less than 30 inches in width, and no such aisle serving seats on both sides shall be less than 36 inches in width and shall be adequately increased according to the number of seats served thereby. Ample front, rear or through-section cross aisles at least 36 inches in width shall be provided where necessary for access to exit openings. Rows of seats between aisles shall have not more than 14 seats. Rows of seats opening onto an aisle at one end only shall have not more than seven seats.

b. The spacing of rows of seats from back to back shall be not less than 30 inches. There shall be a space of not less than 12 inches between the back of one seat and the front of the seat immediately behind it as measured between plumb lines. In every place of public assembly used principally for the presentation of theatrical performances or exhibitions, all seats in each row shall be fastened together and secured firmly to the floor.

* As Amended August 2, 1955

c. Tables arranged for dining or other purposes in places of assembly shall be so located in respect to exit openings and so spaced apart that sufficient means of access to exit openings is provided. Aisles in the direction of exits shall be at least 3 feet in width. Suitable access to aisles shall be provided from all tables.

SEC. 172-1-19.* EXIT SIGNS

a. Signs bearing the word "Exit" shall be placed at each exit doorway of a place of assembly and at the doorway in any passageway or stairway leading therefrom. Where an exit and its sign are not visible from every point in the passageway or from the assembly floor area served, an adequate number of directional signs shall be provided bearing the term "Exit" and an arrow pointing in the direction of such exit.

b. Exit and directional signs shall bear letters at least $4\frac{1}{2}$ inches in height with strokes not less than $\frac{3}{4}$ inch in width, and shall be of greater height and width when necessary for legibility.

c. Exit signs shall be clearly legible and properly illuminated during occupancy of the place of assembly.

d. Exit signs shall be maintained clearly legible by electric illumination or other adequate means for at least 30 minutes when the normal building illumination fails.

SEC. 172-1-20.** EMERGENCY LIGHTING

a. Adequate artificial lighting shall be provided for the lighting of all places of assembly, corridors, passageways, stairways, ramps, fire-escapes and other means of egress leading direct to the outside.

b. An automatic, independent, secondary source of power for illumination shall be provided for the reasonable lighting of all places of assembly, and the corridors, passageways, stairways, ramps, fire-escapes, and other means of egress direct to the outside from such places of assembly. This secondary lighting system shall be termed herein as emergency lighting.

*** c. Emergency lighting shall not be required for places of assembly which are used exclusively for religious purposes, for places of assembly which are not used in the night season, or for places of assembly other than eating and drinking establishments which do not exceed 1500 square feet of floor area, and so located that at least one exit is direct to the outside and within 5 feet of grade.

* As Amended June 28, 1948

** As Amended April 27, 1954

*** As Amended August 2, 1955

d. Acceptable types of emergency lighting systems are as follows:

TYPE A—A self-contained unit with attached heads, powered by dry cell batteries, wired to circuits supplying energy for normal lighting in the areas being protected.

TYPE B—A self-contained unit with a storage battery of 12 volts or less with an automatic charger, attached heads and wired to circuits supplying energy for normal lighting in the areas being protected.

TYPE C—A self-contained unit of storage batteries of 24, 36 or 48 volts operating completely with relays and automatic charger for remote lighting.

TYPE D—A centrally located storage battery of 120 volts complete with automatic transfer switch.

TYPE E—An automatically started engine generator set, of the correct capacity for generating the energy required for the full emergency illuminating load.

e. Wiring of all emergency lighting systems shall be so arranged as to throw on the emergency lighting automatically which protects the places of assembly and all exit passageways, corridors, stairways, ramps, fire-escapes and all other means of egress direct to the outside from such places of assembly when the artificial lighting for any such areas fails.

f. All wiring for emergency lighting shall be in separate raceways independent of all other wiring and shall comply in every respect with proper and accepted standards.

g. All emergency lighting systems shall be designed and maintained to provide not less than 30 minutes of reasonable illumination at all locations required to be lighted under this section. Equipment for such power shall include a volt meter or hydrometer and a switch so arranged and located as to be reasonably convenient and reliable for the testing of available power.

h. *Battery systems of over 50 volts*—In such systems the battery and charging equipment shall be housed in a separate room of noncombustible construction adequately vented directly to the out-of-doors and secure against unauthorized entry.

i. *Motor generator sets*—Motor generator sets shall be housed in a separate masonry enclosure of two-hour fire-resistant construction with a Class B type door secured against unauthorized entry. Frames of doors shall be

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kalamein, steel buck or structural steel. The door sill shall be six inches above the floor. The room shall be adequately ventilated directly to the out-of-doors and the exhaust from the motor shall be installed in accordance with accepted safe practices.

SEC. 172-1-21.* EXTINGUISHING EQUIPMENT REQUIRED

Places of assembly shall be provided with proper fire extinguishing equipment adequate for the area involved and suitably located. The term "extinguishing equipment" as used in this section shall not include automatic sprinklers. (See Section 172-1-23.)

SEC. 172-1-22.* DECORATIVE AND ACOUSTICAL MATERIAL

All combustible decorative and acoustical material, including curtains, streamers, cloth, cotton batting, straw, vines, leaves, trees and moss, but not including floor coverings, shall be rendered and maintained flame resistant. This regulation shall not be construed to prohibit the use of wall or ceiling coverings affixed directly to the wall or ceiling, provided the surface will not be readily flammable and will not carry or communicate fire.

SEC. 172-1-23.* SPRINKLERS REQUIRED

All new buildings, other than those of noncombustible construction, containing places of assembly above the second story and existing buildings converted to such use, shall be protected by a system of automatic sprinklers installed and maintained in accordance with proper standards, provided adequate water service is available.

SEC. 172-1-24.* LOCATION OF PLACES OF ASSEMBLY

No place of assembly shall hereafter be constructed above the second story except in a sprinklered or noncombustible building.

SEC. 172-1-25. HOUSEKEEPING

All places of assembly, egress passages therefrom, and adjacent rooms and spaces not segregated from such place of assembly or passage by closed fire-resistant construction, shall be kept clean and in tidy condition, and free from combustible debris. No such premises shall contain storage of flammable liquids or liquefied petroleum gas, and no cooking or use of open flame or smoking shall be allowed without adequate provisions for protection of the premises and occupants against fire.

* As Amended June 28, 1948
April 27, 1954

ARTICLE II

HOTELS

The following regulations, Sections 172-1-26 to 172-1-67, made by the State Fire Marshal, were filed with the Secretary of the State on December 30, 1947, were approved by the Attorney General on December 30, 1947, were published in the Connecticut Law Journal on January 19, 1948 and were in effect as of that date unless otherwise indicated.

SEC. 172-1-26. GENERAL

a. The regulations contained in this Article shall apply to all hotels, as defined in Section 5, except such places as are expressly exempt in accordance with the provisions of this Code.

b. Fire-escapes and other outdoor stairways, heating, cooking and ventilating facilities and the use of electric wiring and appliances shall be covered by special Articles related thereto.

SEC. 172-1-27. EGRESS FACILITIES REQUIRED

a. All hotels shall be provided with approved egress facilities as required under the provisions of this Code.

b. No less than two approved means of egress shall be provided from every story of every building.

c. Exits from each floor shall be so arranged that it will not be necessary to travel more than 75 feet from the door of any guest room, or from any point in a building or section not divided into rooms to reach the nearest approved means of egress from that story. In noncombustible buildings which are sprinklered this distance may be 100 feet, and in noncombustible buildings which are not sprinklered this distance may be 90 feet.

d. Exits shall be located remote from each other, providing the best practicable means of egress for all guests in the event fire renders one exit impassable.

SEC. 172-1-28. EGRESS PASSAGEWAYS

a. Access to all interior and outside stairways, to fire-escapes and other exits considered as approved means of egress, shall be unobstructed and shall not be through a room used as a bedroom, bathroom or kitchen, or for any

other purpose that may obstruct free passage, nor shall access be veiled from open view by ornamentation, curtains or other appurtenances.

b. All corridors and passageways in new buildings considered as approved means of egress, shall be at least 42 inches in width and 78 inches in height, and of such greater width as conditions require. All corridors and passageways now existing shall be at least 28 inches in width and at least 74 inches in height in order to be considered as approved means of egress.

c. All doorways which are of themselves, or are a part of, approved means of egress, shall be at floor level in new structures, and as near thereto as practicable in existing structures. Windows shall not be considered as approved means of egress.

d. Passageways from inside stairways to the outside shall have the same fire-resistant quality as required of the connecting stairways in accordance with Sections 172-1-30a and 172-1-32b of this Code.

e. All approved egress passageways shall at all times provide free, unobstructed and safe passage to the street or to a ground area of refuge.

SEC. 172-1-29. TRANSOMS

Transoms and other openings in corridors or passageways shall not be allowed in new construction. Existing transoms and like openings in corridors and passageways shall be permanently sealed and made fire-resistant equal to the general side wall construction, except that existing transoms over sleeping room doors may be allowed, provided they are constructed to resist fire to the same degree as the related door and are equipped with proper closing devices to allow instant closing by persons inside the room. Notice shall be posted adjacent to all such transoms reading "Close transom in case of fire."

SEC. 172-1-30. STAIRWAYS AND OTHER VERTICAL OPENINGS

a. Every existing interior stairway constituting approved egress passage from any story of a hotel shall be enclosed or be segregated from other portions of the building by material with a fire-resistant rating of not less than 30 minutes. Partitioning at floor levels with materials of the same rating effecting a closure of such stairway opening between floors shall constitute a proper enclosure in such building; provided that the basement and other stories below are segregated from the first story in the same manner; provided that such partitioning and segregation shall not be required in sprinklered, noncombustible buildings connecting three adjacent stories; and provided that partitions

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or segregation shall not be required for a flight of stairs connecting two adjacent stories in a noncombustible building which is not sprinklered. At least one such stairway, and additional stairways where necessary, shall lead directly to the outdoors or to an enclosed passageway leading to the outdoors, constructed to resist fire to the same degree. One stairway, where necessary, may be allowed to lead through an open space or lobby with ample egress openings to the outside. All other vertical openings throughout such building shall be enclosed by material with a fire-resistant rating of not less than 30 minutes. (See Section 172-1-32b for new construction requirements.)

b. * Elevators will not be considered as approved means of egress, and all elevator shafts shall be enclosed by noncombustible materials with a fire-resistant rating of not less than two hours. No opening shall be allowed through the side wall enclosures for ventilating or other purposes. All doors serving elevators shall be of closed or solid construction and such doorways shall be made smoke-tight when doors are closed. Such doors, lintels and panels above shall be constructed to resist fire for two hours, but such doors may have wired glass not to exceed 6 square feet.

c. All stairways in approved egress passages shall have suitable handrails on both sides, except such stairs as are less than 3 feet in width, which stairs shall have one such handrail.

d. Stairways in approved egress passages in existing hotels shall be not less than 28 inches in width and in new buildings, additions to existing buildings, or buildings hereafter converted for the purpose of a hotel, such stairways shall be not less than 42 inches in width.

e. Existing stairways in approved egress passages shall be provided with landings at least 30 inches in depth between the nosing of the top or bottom stair and the next parallel partition or door. New stairways shall have such landings at least 36 inches in depth.

f. Stair treads in approved inside egress passages in existing structures shall be not less than 8 inches wide, exclusive of nosing, and risers shall not exceed 8½ inches in height. In new buildings such stair treads shall be not less than 9½ inches wide, exclusive of nosing, and risers shall not exceed 7¾ inches in height. Treads and risers shall be of uniform width and height in each individual stairway.

g.* In new buildings winding stairs with treads less than 9½ inches in width at any point shall not be considered as means of egress.

* As Amended June 28, 1948

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Sec. 172-1-31. Egress Doors

a. Doors in approved egress passages into stairways and to the outside shall be so hung as to open in the direction of exit travel, but this requirement shall not be construed to prohibit ground floor entrance doors swinging both inward and outward. Such doors shall not be so hung as to obstruct egress passage.

b. Doors into required stairway enclosures, all doors serving other vertical openings, and doors in side wall openings in enclosed egress passages, except doors to the outside, shall be equipped with suitable self-closing devices, maintained in operating condition. Such doors shall not be equipped with devices intended for holding such doors in an open position.

c. Doors and jambs in walls or partitions required to be fire-resistant shall be equally fire-resistant, and shall be constructed and maintained close fitting and reasonably smoke tight.

d. Doors in a partition required to be fire-resistant may contain a single wired-glass panel where necessary, provided such glass shall not exceed 5 square feet.

e.* Doors in existing approved egress passages shall be not less than 28 inches in width. When serving approved egress passages, new doors in existing structures and all doors in new structures shall be not less than 36 inches in width and 78 inches in height, except that each leaf of a double or mullioned door may be not less than 30 inches wide.

f. Egress doors leading to the outside or into an enclosed passageway leading to the outside, except doors on the ground floor normally used for entrance, shall be equipped with panic hardware which will release when normal pressure is applied to the releasing device in the direction of exit travel. Such releasing device may be a bar or panel extending not less than two-thirds of the width of the door and placed not less than 30 inches nor more than 44 inches above the floor.

g. Revolving doors shall not be considered as approved means of egress.

Sec. 172-1-32. CONSTRUCTION

a. Every hotel hereafter constructed, every addition hereafter made to any hotel, and every building hereafter converted for the purposes of a hotel, shall be of noncombustible construction if more than three stories above the basement of any portion of such hotel building is used or intended for use by guests or hotel employees. Additions to hotels

* As Amended June 28, 1948

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of such height shall be segregated from existing combustible construction by fire walls with openings protected by fire doors.

b. All vertical openings, including stairways and passageways to the outdoors, in all new buildings, additions to existing buildings or buildings hereafter converted for the purpose of a hotel shall be enclosed by material with a fire-resistant rating of at least two hours, except that an enclosure shall not be required for a flight of stairs in a noncombustible building when such stairs connect only one story with one other story immediately above or below it, and provided that at least one passageway for each floor of such hotel shall lead directly to the outdoors by stairways or passageways, or a combination of both, enclosed completely by fire-resistant material of such rating. Outside stairways shall not be allowed as approved means of egress from new hotels, in accordance with Section 172-1-43 of this Code.

SEC. 172-1-33. HAZARDOUS OCCUPANCIES

No combustible building shall contain a Class 1, 2 or 3 dry cleaning establishment as defined in special regulations governing same, or other commercial occupancy using flammable liquids or any other storage of materials or equipment of high hazard unless such occupancy is completely segregated from the hotel premises by unpierced walls with a fire-resistant rating of not less than two hours and by ceilings and floors of material with the same fire-resistant rating.

SEC. 172-1-34. FIRE WALLS AND SMOKE BARRIERS

The installation of fire walls or smoke barriers, or both, additional to those specifically required in this Code, may be ordered by the Building Inspector having jurisdiction or State Fire Marshal, upon certification of the proper inspecting authority that same is necessary as a minimum requirement for safety.

SEC. 172-1-35. FIRE-STOPPING

Exterior walls of frame construction and interior stud partitions shall be fire-stopped at each floor level by a 2-inch thick plate or masonry filling, completely closing any possible vertical opening from one story to another, except that existing buildings shall be required to have such fire-stopping at the ceiling level of the basement and second story and each story above the second, but will not be required to fire-stop at the ceiling of the first story.

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SEC. 172-1-36. EXIT SIGNS

a. Signs bearing the word "Exit" shall be placed at each approved egress doorway and so installed as to be legible from the direction of travel thereto. Where such doorways and signs are not readily discernible from guest room doorways, an adequate number of additional signs shall be provided bearing the term "Exit," and an arrow pointing in the direction of such exit.

b. Exit signs shall bear letters at least $4\frac{1}{2}$ inches in height with strokes not less than $\frac{3}{4}$ -inch in width.

c. All exit and directional signs shall be maintained clearly legible by electric illumination or other adequate means when natural light fails.

d. Exit signs shall not be required at the normal ground floor entrances to hotel premises.

e. Passageways, including doors and stairways, which do not provide free and unobstructed passage to the street or to an outside ground area of refuge, but which are so located and arranged as to be likely mistaken as exits shall be legibly marked "Not an Exit" with letters of the same size as required for "Exit" signs.

SEC. 172-1-37.* EMERGENCY LIGHTING

a. Adequate artificial lighting shall be provided for the lighting of all corridors, passageways, stairways, ramps, fire-escapes and other means of egress leading direct to the outside.

b. An automatic, independent, secondary source of power for illumination shall be provided for the reasonable lighting of all corridors, passageways, stairways, ramps, fire-escapes and other means of egress direct to the outside. This secondary lighting system shall be termed herein as emergency lighting.

c. Acceptable types of emergency lighting systems are as follows:

TYPE A—A self-contained unit with attached heads, powered by dry cell batteries, wired to circuits supplying energy for normal lighting in the areas being protected.

TYPE B—A self-contained unit with a storage battery of 12 volts or less with an automatic charger, attached heads and wired to circuits supplying energy for normal lighting in the areas being protected.

TYPE C—A self-contained unit of storage batteries of 24, 36 or 48 volts operating completely with relays and automatic charger for remote lighting.

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TYPE D—A centrally located storage battery of 120 volts complete with automatic transfer switch.

TYPE E—An automatically started engine generator set, of the correct capacity for generating the energy required for the full emergency illuminating load.

d. Wiring of all emergency lighting systems shall be so arranged as to throw on the emergency lighting automatically which protects the corridors, passageways, stairways, ramps, fire-escapes and all other means of egress direct to the outside when the artificial lighting for any such areas fails.

e. All wiring for emergency lighting shall be in separate raceways independent of all other wiring and shall comply in every respect with proper and accepted standards.

f. All emergency lighting systems shall be designed and maintained to provide not less than 30 minutes of reasonable illumination of all locations required to be lighted under this section. Equipment for such power shall include a volt meter or hydrometer and a switch so arranged and located as to be reasonably convenient and reliable for the testing of available power.

g. *Battery systems of over 50 volts*—In such systems the battery and charging equipment shall be housed in a separate room of noncombustible construction adequately vented directly to the out-of-doors and secure against unauthorized entry.

h. *Motor generator sets*—Motor generator sets shall be housed in a separate masonry enclosure of two-hour fire-resistant construction with a Class B type door secured against unauthorized entry. Frames of doors shall be kalamein, steel buck or structural steel. The door sill shall be 6 inches above the floor. The room shall be adequately ventilated directly to the out-of-doors and the exhaust from the motor shall be installed in accordance with accepted safe practices.

SEC. 172-1-38.* EXTINGUISHING EQUIPMENT REQUIRED

All hotels shall be provided with proper fire extinguishing equipment adequate for the area involved and suitably located. The term "extinguishing equipment" as used in this section shall not include automatic sprinklers. (See Sec. 172-1-39.)

* As Amended June 28, 1948
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SEC. 172-1-39.* SPRINKLERS REQUIRED

a. All new hotels, every addition hereafter made to a hotel, and every building hereafter converted for the purposes of a hotel, which are more than two stories in height above the basement and which are not constructed of noncombustible materials, shall be protected by an approved system of automatic sprinklers installed and maintained in accordance with proper standards, provided adequate water service is available. An attic or space immediately below a roof shall not be considered as a story in the application of this section.

b. All existing hotels constructed wholly or in part of combustible materials, which have sleeping accommodations for guests or employees above the third story, shall be completely protected by an approved system of automatic sprinklers.

SEC. 172-1-40.* DECORATIVE AND ACOUSTICAL MATERIAL

All combustible decorative and acoustical material, including curtains, streamers and other paper and decorative materials, but not including floor coverings, located in all corridors, passageways, and in lobbies and other rooms or spaces for general guest or public use, shall be rendered and maintained flame resistant. This regulation shall not be construed to prohibit the use of wall or ceiling coverings affixed directly to the wall or ceiling, provided the surface will not be readily flammable and will not carry or communicate fire.

SEC. 172-1-41. ALARMS

An alarm system shall be provided with sounding devices of such character and so located as to arouse all occupants of the building or section thereof endangered by fire. Adequate switches or other alarm sending devices shall be suitably located on each floor, convenient for operation by all occupants, arranged so as to give alarm to the supervisor or automatically to all occupants of such places as are not under constant and immediate supervision. Each switch or alarm sending device shall be distinctly marked "Fire alarm," and no person shall use same for any other purpose. Inter-hotel telephones shall not be considered as required alarm sending devices. (See Section 172-1-66 for other alarm devices required.)

SEC. 172-1-42. HOUSEKEEPING

All hotel premises and other occupancies within buildings containing hotels shall be kept clean and in tidy condition, and free from accumulation of combustible debris or other waste material.

* As Amended June 28, 1948
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be at least the full width of the doorway it serves, and its depth shall be not less than the width of the widest outside stairway which leads directly to or from it. Such landings or platforms shall be so designed and constructed that exit doors, when open, will not decrease the required unobstructed width of the platform or stairs. When same are constructed of iron grill or are perforated in any form, openings shall not exceed one inch in width or diameter for existing landings or platforms and $\frac{3}{4}$ of an inch for new construction.

SEC. 172-1-48. LEAD TO GROUND

a. Outside stairways considered as approved means of egress shall lead to the street or ground level and to a ground area of refuge, and the last step in descent to the ground shall not exceed the height of other steps immediately above. Where it is impracticable to have permanent construction of stairs to the ground, the lower section thereof may be a counterbalanced swinging stair which shall meet all requirements of this Code for outside stairs, including railings. Counterweights shall be affixed permanently to the swinging stair construction without the use of cables, and shall provide for positive and easy lowering of same to the ground by persons descending, without the unfastening of a latch or lock of any kind. The path to the ground for swinging stairs shall be unobstructed at all times. No temporary or portable object (i. e., an awning or a parked vehicle) shall be allowed in its path for possible obstruction.

b. A ladder of any type affixed in any manner shall not be used or considered as an approved means of egress. No ladder shall be used as any portion of an approved means of egress.

SEC. 172-1-49. RAILINGS

All new outside stairs shall be provided with handrails on both sides 33 inches above the forward edge of the tread, except that on elementary schools or other places attended by small children, this height shall be 27 inches. All existing outside stairways shall be provided with handrails on both sides not less than 27 inches nor more than 36 inches above the forward edge of the stair tread.

SEC. 172-1-50. TREADS

a. Treads on existing outside stairways shall be not less than 8 inches wide and on new stairways not less than $9\frac{1}{2}$ inches, both exclusive of nosing.

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ARTICLE III

OUTSIDE STAIRWAYS

SEC. 172-1-43. USE ON NEW BUILDINGS

The use of outside stairways as approved means of egress shall not be allowed on new structures regulated by this Code, except as normal entrances to the first and second stories of apartment or lodging houses.

SEC. 172-1-44. USE ON EXISTING BUILDINGS

a. Outside stairways may be used as approved means of egress on existing buildings only wherever enclosed inside stairways of the required qualifications are found impracticable.

b. Outside stairways shall not constitute more than 60 per cent of the width of approved egress passage from any location within a building.

SEC. 172-1-45. WINDING STAIRS

Winding stairs, as defined in Section 172-1-5, shall not be used or allowed to continue in use as any portion of approved egress passage.

SEC. 172-1-46. CONSTRUCTION

a. Outside stairways as approved egress passages shall be constructed completely of iron or other noncombustible material, except existing stairways and those erected on existing buildings, which serve the first and second floors only of convalescent homes, apartment houses and lodging houses.

b. An outside stairway constituting an approved means of egress shall be designed, constructed and maintained to sustain a live load of 100 pounds per square foot on platforms and landings, and a concentrated load of 400 pounds on stair treads.

c. Supporting members for platforms, landings and stairs, which are in tension and are fastened directly to the building shall pass through the wall and be securely fastened on the opposite side, or they shall be securely fastened to the framework of the building. Wherever practicable, all outside stairways shall be self-supporting.

SEC. 172-1-47. PLATFORMS OR LANDINGS

On an outside stairway, each landing or platform adjacent to an exit doorway of the building shall be as near the sill level of such doorway as is practicable, but not more than 8 inches below. Each such landing or platform shall

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b. When treads are constructed of iron grill or are perforated in any form, openings shall not exceed one inch in width or diameter for existing stairways and $\frac{3}{4}$ of an inch for new stairways.

c. Where the tread or platform surface is such as to involve danger of slipping, suitable nonslip surface shall be provided.

d. Treads shall include an additional width of one inch as nosing when stairs are constructed with risers.

SEC. 172-1-51. RISE OF STAIRS

The rise of stairs on existing stairways shall be not more than $8\frac{1}{2}$ inches, and on new stairways not more than $7\frac{3}{4}$ inches.

SEC. 172-1-52. HEIGHT OF STAIR RUNS

The maximum vertical distance between platforms or landings in any flight of existing stairs shall not exceed 15 feet, and in new construction shall not exceed 12 feet.

SEC. 172-1-53. WIDTH OF STAIRWAYS

a. The required width of outside stairways shall vary according to the use and occupancy of the building being served and, except for egress stairways from places housing the ill, infirm or children under four years of age, their width shall be regulated for single or double units or files in accordance with the number of persons to be served. A single file is considered as requiring 24 inches of width between the handrails, and a double file 42 inches.

b. *Apartments and lodging houses.* Outside stairways serving apartment buildings and lodgings houses shall be not less than 24 inches in width, and not less than 42 inches in width when serving above the third story on non-sprinklered, combustible buildings.

c. *Hotels.* Outside stairways from hotels shall be not less than 24 inches in width, and not less than 42 inches in width when serving above the second story on non-sprinklered, combustible buildings.

d. *Mercantile establishments.* Outside stairways serving mercantile establishments shall be not less than 24 inches in width, and not less than 42 inches when serving above the second story in non-sprinklered, combustible buildings, or when serving a possible occupancy in excess of 500 persons, except that existing iron stairways at least 36 inches in width shall be allowed for service from the second story with a possible occupancy of not more than 500 for that floor and above.

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e. *Offices.* Outside stairways serving offices shall not be less than 24 inches in width. Stairways in non-sprinklered, combustible buildings serving floors with a total possible occupancy in excess of 100, and stairways in buildings of other construction with a total occupancy of 300 or more, shall be not less than 42 inches in width.

f. *Places of assembly.* Outside stairways leading from places of assembly shall be at least 24 inches wide when serving exit doorways with a total width not greater than 36 inches. When serving exits of greater width, new stairways shall be at least 42 inches in width and existing stairways at least 36 inches.

g. *Places for housing of ill, infirm and children.* Outside stairways for hospitals, convalescent homes and all other places regulated in this Code for the housing or care of the ill, infirm and children under four years of age shall be at least 36 inches in width.

h. *Schools.* Outside stairways serving all school premises shall be not less than 24 inches when serving exit doorways with a total width not greater than 36 inches. When serving exits of greater width, new stairways shall be at least 42 inches in width and existing stairways at least 36 inches.

SEC. 172-1-54. PROTECTION OF OUTSIDE STAIRWAYS

Outside stairways as approved egress passages shall be protected against fire in the building being served or adjacent buildings, by blank or closed side walls directly under same and for a distance of 6 feet in all other directions. Windows may be allowed within this area provided they are stationary and glazed with wired glass. Exception will be allowed from this requirement when all stairs are at least 3 feet distant from the side walls and there are no such wall openings within 6 feet of exit landings or platforms. Fire and smoke barriers under existing stairways, platforms, or landings, extending 2 feet beyond each exposed side, shall also exempt outside stairways from the above closed side wall requirement.

SEC. 172-1-55. SLIDE OR CHUTE ESCAPES

Slides or chutes as approved means of egress shall not be allowed except by special approval of the State Fire Marshal for specific installations.

SEC. 172-1-56. MAINTENANCE

Outside stairways considered as approved egress passages, and access therefrom to a ground area of refuge, shall be maintained in safe condition for their intended use at all

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times. No person shall place an obstruction upon or within such stairways or entrances thereto or combustible debris or other waste material under or adjacent to same.

ARTICLE IV HEATING AND COOKING FACILITIES

SEC. 172-1-57.* ENCLOSURES FOR NEW BUILDINGS

In new buildings containing places of assembly, hospitals, convalescent homes and hotels, central heating plants and steam boilers shall be within rooms or compartments segregated from the rest of the building by noncombustible walls, ceiling and floor with a fire-resistant rating of not less than two hours, providing a reasonably smoke-tight enclosure. In all other buildings regulated by this Code, such central heating plants and steam boilers shall be mounted on the ground or on floors of noncombustible construction with noncombustible flooring and surface finish.

SEC. 172-1-58.* ENCLOSURES AND PROTECTION FOR EXISTING BUILDINGS

In existing buildings containing places of assembly, hospitals, convalescent homes, hotels and buildings converted to such use, central heating plants and steam boilers shall be within rooms or compartments segregated from the rest of the building by noncombustible walls, ceiling and floor, with a fire-resistant rating of not less than 30 minutes, providing a reasonably smoke-tight enclosure. In all other existing buildings regulated by this Code, such central heating plants and steam boilers shall be mounted on the ground or on floors of noncombustible construction with noncombustible flooring and surface finish.

SEC. 172-1-59. ENCLOSURE DOORS

Doorways and other openings through required furnace enclosures shall be closed by doors and jams of the same fire-resistant quality as is required of the enclosure, so hung as to be reasonably smoke-tight and equipped with adequate self-closing devices.

SEC. 172-1-60. OIL BURNERS

a. Only such oil burners as are approved for make and type by the Commissioner of State Police in accordance with Section 3682 of the General Statutes, 1949 Revision, having a fuel container with a capacity of more than 20 gallons connected directly therewith, which appear on the published list of approved burners by name of submitter and model, shall be used for obtaining warmth in buildings.

b. Such oil burners shall be installed and maintained in accordance with the pertinent requirements appearing on

the State Police list of approvals, and otherwise in accordance with local ordinances and the manufacturer's instructions and recommendations.

c. Fuel oil storage shall be in accordance with the regulations of the State Police Commissioner on the storage and transportation of flammable liquids.

d. Oil-burning floor furnaces or wall heaters, self-contained heating units suspended from the floor of the space being heated, with means for observing flame and lighting same from such space, shall not be used in buildings regulated by this Code, except for heating the first story of buildings containing not more than six dwelling units and no other occupancy or first-story mercantile establishment in buildings containing not more than four dwelling units with no other occupancy.

e. Oil burners shall be equipped with proper devices for automatic lighting, controls for oil flow and temperature, and other proper safety devices.

SEC. 172-1-61.* SPACE HEATERS

Space heaters or above-the-floor devices for direct heating of the space in and adjacent to that in which the device is located, without external heating pipes or ducts, shall not be used in buildings regulated by this Code, excepting apartment and lodging houses, the first story of existing mercantile and office establishments having a total possible occupancy of not more than 75 persons.

SEC. 172-1-62. AIR VENTS

Furnace rooms or enclosures shall be provided with an air vent to the outside sufficient for proper combustion and exhaust. Additional openings and/or a separate vent by duct to the close proximity of oil burners when used, may be required to provide air for proper combustion. Such air vents shall be maintained in an open position by louvers or controlled for automatic openings by fusible links or other approved devices, at a temperature of 165 degrees Fahrenheit or less within the enclosure.

SEC. 172-1-63. CHIMNEYS AND FLUES

Furnaces and other fired units shall be vented by smoke pipes to a chimney constructed of brick, solid block masonry or reinforced concrete, with suitable flue lining, properly erected and maintained in safe condition.

SEC. 172-1-64. COOKING APPLIANCES

a. Cooking appliances, to include laundry stoves and water heaters, shall be suitably installed in accordance with safe practices.

- b. All such cooking devices shall be installed upon flooring with a fire-resistant surface. Such a surface may be required to extend beyond such equipment or for the entire room enclosure when deemed necessary.

SEC. 172-1-65. EXTINGUISHING EQUIPMENT REQUIRED

All rooms and enclosures containing heating and cooking appliances shall be provided with proper fire extinguishing equipment, manually operated, adequate for the conditions involved and suitably located. Such fire extinguishers shall not be placed in close proximity to fired units or in any other position affecting their availability in the event of fire at a high hazard location. Additional extinguishing devices of the automatic type are not prohibited.

SEC. 172-1-66.* ALARM DEVICES

a. Rooms or enclosures containing central heating furnaces in combustible and/or non-sprinklered buildings shall be equipped with automatic alarm systems, controlled by heat-actuated devices properly located in close proximity to fired units and arranged to operate such alarm at a temperature not to exceed 165 degrees Fahrenheit. Such system shall include sounding devices so arranged as to give alarm to occupants of the building.

b. Alarm devices as required in subsection (a) shall be provided for rooms or enclosures containing cooking appliances, laundry stoves and water heaters, in all combustible and/or non-sprinklered buildings, except apartment and lodging houses. The requirements of this section shall not apply to installations of hot plates, coffee urns, toasters, warmers and similar portable equipment.

SEC. 172-1-67. LIQUEFIED PETROLEUM GAS

a.* *General.* Liquefied petroleum gas may only be used for warmth in buildings, water heating, refrigeration and cooking when all pertinent regulations herein are fully complied with.

b. *Odorization.* All LP-Gas used for warmth in dwellings, for cooking or other purposes shall be effectively odorized.

c. *Construction and safety devices.* No container for LP-Gas shall be used except those constructed and loaded in accordance with the specifications of the Interstate Commerce Commission for containers in interstate traffic, or fabricated in accordance with accepted standards of safety. All such containers shall be provided with safety devices as required by said Commission or by such standards.

* As Amended June 28, 1948
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- d. *Installation and testing.* All installations for use of LP-Gas shall be in accordance with the accepted standards of safety, and all new installations shall be tested for leaks by the installer after assembly, but such tests shall not be made with flame.

e.* *Location.* Containers for LP-Gas and first-stage regulating equipment shall be located outside of buildings or in separate structures especially provided for this purpose only. Each individual container for use or storage of LP-Gas shall be located with respect to the nearest building or portion thereof regulated by this Code, and in respect to other containers in accordance with the following table:

Water Capacity Per Container	Distance from Bldg.	Dist. Bet. Containers
Less than 125 gallons	None	None
125 to 500 gallons	10 feet	3 feet
501 to 1200 gallons	25 feet	3 feet
Over 1200 gallons	50 feet	5 feet

No container shall be installed or kept within 5 feet on the same level with a building opening, nor at any distance directly above a building opening, nor in any other hazardous location. Where installations are made within 5 feet of alleys or other vehicle passageways, such installations shall be suitably protected from damage by vehicles.

f.* *Buried Containers.* Only such containers as are especially fabricated for such purpose in accordance with accepted standards of safety, shall be buried below ground. Underground containers shall be so placed that the top of the container is below the established frost line and in no case less than 2 feet below the surface of the ground. When necessary to prevent floating, containers shall be securely anchored or weighted.

g. *Mounting.* All containers shall be mounted on foundations of masonry or other firm construction, or securely fastened to prevent leakage of the line in case of ground settling. Dependence shall not be placed in flexible tubing or in piped connections for security in the mounting or fastening of containers.

h. *Protection.* The cylinder valves, manifold and regulator assembly for each LP-Gas system shall be protected by a ventilated metal or fire-resistant covering which shall be securely fastened in place.

i.* *Changing and Charging.* The changing or charging of LP-Gas containers shall not be done within 10 feet of open flame or any electric or other device which may cause sparks and ignition, unless completely segregated by a reasonably gas-tight structure.

* As Amended June 28, 1948

j. *Flammable material.* Readily ignitable material, such as weeds and long grass shall be removed for a distance of 10 feet from any such container.

k. *Enclosures.* All containers with a water capacity of 501 gallons shall be enclosed by a suitable nonflammable fence at least 5 feet in height with a locked gate. Such fence shall be located at least 5 feet in all directions from such containers and apertures, and shall bear signs legible from all directions bearing the word "Danger" in letters at least 4 inches in height with strokes at least 1 inch in width. The surface of the ground inside such enclosures, and beyond for a distance of 5 feet shall be paved or otherwise treated to prevent the growth of vegetation, and shall be kept free of all flammable materials at all times.

l.* *Equipment Specifications.* All shut-off valves and accessory equipment shall be of a type substantial for use with liquefied petroleum gases and capable of withstanding the maximum pressure to which they may be subjected.

ARTICLE V

HOSPITALS

The following regulations, Sections 172-1-68 to 172-1-134 were made by the State Fire Marshal, filed with the Secretary of the State on June 9, 1948, approved by the Attorney General June 16, 1948 published in the Connecticut Law Journal on June 28, 1948 and were effective as of that date unless otherwise indicated.

SEC. 172-1-68. GENERAL

a. The regulations contained in this article shall apply to all hospitals as defined in Section 172-1-5, except such places as are expressly exempt in accordance with the provisions of this Code.

b. Fire-escapes and other outdoor stairways, heating, cooking and ventilating facilities and the use of electric wiring and appliances shall be covered by special related articles. (See also General Provisions of Code.)

SEC. 172-1-69. CONSTRUCTION

a. Every hospital hereafter constructed and every addition hereafter made to a hospital shall be of noncombustible materials if more than one story in height above the basement.

* As Amended June 28, 1948

b. Every building hereafter converted for the purpose of a hospital which has more than two stories above the basement shall be constructed of noncombustible materials. An attic or space immediately below a roof shall not be considered as a story in the application of this section.

SEC. 172-1-70. USE OF COMBUSTIBLE BUILDINGS

In existing combustible buildings, only the first story may be used to house patients, except that in buildings completely sprinklered the second and third stories may be so used.

SEC. 172-1-71. ADJACENT BUILDINGS

No hospital shall be located within 10 feet of another building of combustible construction unless the exposed walls and doors of such hospital are of material rated fire resistant for one-half hour, and all exposed windows are of wired glass, or unless the exposed face of such hospital building is protected by an adequate sprinkler system.

SEC. 172-1-72. OTHER OCCUPANCY

Hospital buildings shall not contain an occupancy which is not within immediate control of the hospital management, or which is not incident to administrative convenience or necessity or pertinent to public health.

SEC. 172-1-73. ROOFING

Roofs of hospitals shall be covered with roofing which is not readily flammable and does not carry or communicate fire.

SEC. 172-1-74. MAXIMUM POSSIBLE OCCUPANCY

The number of patients housed in each room or compartment shall not exceed the rate of one for each 75 square feet therein and/or one child in a junior size bed for each 40 square feet and/or one infant in a bassinet for each 24 square feet. The total patient occupancy for each story as determined in this manner shall be termed as the maximum possible occupancy.

SEC. 172-1-75. EGRESS FACILITIES REQUIRED

a. Exits shall be located remote from each other, providing the best practicable means of egress for all patients in the event fire renders one exit impassable.

b. Each story of every building used as a hospital shall have at least two means of egress to the outside. Each patient-occupied room shall have at least one doorway opening directly to the outside or to a corridor leading directly, or by stairway, to the outside, or an opening without a door into one adjacent room which leads to the outside in the same manner.

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c. Means of egress in addition to the minimum of two required from each story under Sec. 172-2-75b shall be required when the maximum possible occupancy exceeds 80 patients. There shall be at least one additional means of egress for each 40 additional patients, located to give adequate passage from all areas, each by separate stairways and/or passages to the outside. Exits shall be of such number and so arranged that it will not be necessary to travel more than 100 feet from the door of a patient-occupied room to reach the nearest approved means of egress from that story.

SEC. 172-1-76. EGRESS PASSAGEWAYS

a. Corridors and passageways from patient-occupied rooms leading to egress stairways and thence to the outside, to the outside from the first story and to areas of refuge, shall be not less than 72 inches in width in new buildings or additions to existing buildings, and not less than 36 inches in existing buildings, and shall be of such greater width as is necessary for free passage of beds with patients to the outside or to an approved area of refuge.

b. Corridors and passageways considered as approved means of egress shall be at least 78 inches in height.

c. Access to all interior and outside stairways, to fire-escapes and other exits considered as approved means of egress, shall be unobstructed, and shall not be through a bathroom or kitchen or a room used for any other purpose that may obstruct free passage, nor shall access be veiled from open view by ornamentation, curtains or other appurtenances.

d. Passageways from inside stairways to the outside shall have the same fire-resistant quality as required of the connecting stairways in accordance with Sections 172-1-78b and 172-1-78c of this Code.

e. All egress passageways shall at all times provide unobstructed and safe passage to a suitable area of refuge.

f. In non-sprinklered combustible buildings at least one means of egress shall be provided from each patient-occupied room of the first story to an outside area of refuge by means of platform, bridge or ramp, to allow free passage of beds with patients. Such means of egress shall be directly to the outside from each patient-occupied room or to a corridor leading to the outside or an opening without a door into one adjacent room which leads to the outside. Ramp grades shall not exceed one foot in 10 if more than 12 feet in length. Such platforms, bridges or ramps shall be at least 4 feet in width and shall have a wheel or a caster guard at each side at least 6 inches in height.

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SEC. 172-1-77. TRANSOMS

Transoms and other similar openings in corridors or passageways shall not be allowed in new construction. Existing transoms and like openings in corridors and passageways shall be permanently sealed and made fire-resistant equal to the related door construction.

SEC. 172-1-78. STAIRWAYS AND OTHER VERTICAL OPENINGS

a. In all buildings at least one passageway from each story shall lead directly to the outdoors or through an enclosed stairway or enclosed passageway or a combination of such a stairway and passageway which lead to the outdoors. One other enclosed stairway, where necessary, may be allowed to lead into an open space or lobby which has ample egress openings to the outside.

b. In combustible buildings interior stairways constituting approved egress passages shall be enclosed or be segregated from other portions of the building by material with a fire-resistant rating of not less than one-half hour. Partitioning at floor levels with materials of the same rating effecting a closure of such stairway opening between floors shall constitute a proper enclosure in such buildings. All other vertical openings throughout such buildings shall be enclosed by material with a fire-resistant rating of one-half hour.

c. In noncombustible buildings all interior stairways constituting approved egress passages and all other vertical openings shall be enclosed as required under section 172-1-78b for combustible buildings, except that all such enclosures shall have a fire-resistant rating of not less than two hours.

d. Elevators shall not be considered as means of egress, and all elevator shafts shall be enclosed by noncombustible materials with a fire-resistant rating of not less than two hours. No opening shall be allowed through the side wall enclosures for ventilating or other purposes. All doors servicing elevators shall be of closed or solid construction, reasonably smoke-tight when doors are closed. Such doors, lintels and panels above shall be constructed to resist fire for two hours, but where necessary such doors may have wired-glass not to exceed 6 square feet.

e. All stairways in egress passages shall have suitable handrails on both sides.

f. Stairways in egress passages in existing buildings shall be not less than 36 inches in width, and in new buildings and additions to existing buildings such stairways shall be not less than 44 inches in width.

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g. Existing stairways in egress passages shall be provided with landings at least 30 inches in depth between the nosing of the top or bottom stair and the next parallel partition or door. New stairways shall have such landings at least 44 inches in depth.

h. Stair treads in inside egress passages in existing structures shall be not less than 8 inches wide exclusive of nosing, and risers shall not exceed $8\frac{1}{2}$ inches in height. In new buildings such stair treads shall be not less than $9\frac{1}{2}$ inches wide, exclusive of nosing, and risers shall not exceed $7\frac{3}{4}$ inches in height. Treads and risers shall be of uniform width and height in each individual stairway.

SEC. 172-1-79. DOORS AND DOORWAYS

a. All doorways which are of themselves, or are a part of means of egress, shall be at floor level in new structures and as near thereto as practicable in existing structures. Windows shall not be considered as means of egress.

b. All egress doors to the outside or into stairways or passages leading to the outside shall open out or in the direction of egress travel, but this regulation shall not be construed to prevent ground floor entrance doors swinging both inward and outward, or as requiring doors from patient-occupied rooms to open into corridors. Such doors shall not be so hung as to obstruct egress passage. There shall be no obstruction at any time to the opening or closing of egress doors or doors from patient-occupied rooms into corridors.

c. All doorways from patient-occupied rooms and in egress passages to areas of refuge and to the outside shall be at least 74 inches in height in existing buildings and 78 inches for new construction, and of such greater height as will allow for free passage of beds and attached medical equipment where required.

d. Egress doors for the passage of beds as required in Section 172-1-76f, from patient-occupied rooms to areas of refuge as required in Section 172-1-80, from patient-occupied rooms into corridors in new buildings and in additions to existing buildings, into corridors from ward rooms occupied by three or more patients, shall be at least 42 inches in width and of sufficient additional width to allow for free passage of beds with patients. Egress doors designated for use and used only by ambulatory patients and employees shall be at least 30 inches in width. All other egress doors from patient-occupied rooms and to the outside shall be at least 36 inches in width.

e. Egress doors into stairway enclosures, doors in side wall openings of enclosed egress passages and all doors serving stair-

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ways and other vertical openings shall be equipped with self-closing devices designed, installed and maintained to automatically close such doors when not in use. Such doors shall be so hung as to allow for convenient manual opening and closing at all times.

f. Doors and jambs in walls and partitions required to be fire-resistant, except doors in outside walls, shall have a fire resistant rating of not less than one-half hour, and shall be constructed and maintained close fitting and reasonably smoke-tight.

g. A door in a partition required to be fire-resistant may contain wired-glass when necessary, provided such glass shall not exceed 6 square feet.

h. All egress doors from patient-occupied rooms and to the outside shall be equipped with hardware which will ensure opening of such doors by a single motion, such as in the turning of a knob or pressure of a latch with normal strength, or equipped with panic hardware which will release when normal pressure is applied to the releasing device in the direction of exit travel. No such door shall be equipped with a lock, latch, bolt or other fastening device which will allow for locking such door against opening from within, or which will require a second operation or motion to open such door for egress purposes, except those from rooms especially designated and equipped for the care of psychiatric patients.

i. Revolving doors shall not be considered as approved means of egress.

j. All doorways entering upon common use corridors or egress passages shall be protected by a substantial door so constructed as to provide a reasonably smoke and gas-tight closure.

k. No egress doors from patient-occupied rooms or to the outside, or other doors entering upon common use corridors or egress passages, shall be held in an open position at any time by an under-door wedge or be fastened in an open position by a device which will require more than one movement of normal strength to swing such door to a closed position. No such wedge or door holding device shall be placed in close proximity to such a door or allowed to remain in such a position.

SEC. 172-1-80. FIRE WALLS AND SMOKE BARRIERS

Hospitals shall have fire walls or smoke barriers through each patient-occupied story which is not ramped to the outside for bed passage, and which has a maximum occupancy in excess of 24 bed patients. Such walls or barriers shall be located so as to provide ample area of refuge within the building on each side of such wall or barrier, for all beds with patients located in each story.

SEC. 172-1-81. FIRE-STOPPING

Exterior walls of frame construction and interior stud partitions shall be fire-stopped at each floor level by a 2-inch

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thick plate or masonry filling, completely closing any possible vertical opening from one story to another.

Sec. 172-1-82. CLOSETS AND STOREROOMS

All closets or compartments which are used for the storage of cleaning or polishing compounds or implements shall be flame resistant for at least one-half hour from within such closet or compartment including the door thereof, or shall be equipped with proper and adequate automatic fire extinguishing equipment and alarm devices.

Sec. 172-1-83. INCINERATORS

Incinerators within buildings or a part thereof shall be constructed in accordance with accepted good practice. Those within buildings shall be loaded and fired from a vestibule or compartment segregated from the rest of the building by construction with a fire-resistant rating of two hours, having a fire door equipped with a suitable self-closing device.

Sec. 172-1-84. EXIT SIGNS

a. Signs bearing the word "Exit" shall be placed at each egress doorway, except at doors of patient-occupied rooms entering upon common use corridors or passageways, and shall be so installed as to be legible from the direction of travel thereto. Where such doorways and signs are not readily discernible from patient-room doorways an adequate number of additional signs shall be provided bearing the term "Exit" and an arrow pointing in the direction of such exit.

b. Exit signs shall bear letters at least $4\frac{1}{2}$ inches in height with strokes not less than $\frac{3}{4}$ inch in width.

c. All exit and directional signs shall be maintained clearly legible by electric illumination or other adequate means when natural light fails.

Sec. 172-1-85.* EMERGENCY LIGHTING

a. Adequate artificial lighting shall be provided for the lighting of all corridors, passageways, stairways, ramps, fire-escapes and other means of egress leading direct to the outside.

b. An automatic, independent, secondary source of power for illumination shall be provided for the reasonable lighting of all corridors, passageways, stairways, ramps, fire-escapes and other means of egress leading directly to the outside from hospitals housing 25 or more patients. This secondary lighting system shall be termed herein as emergency lighting.

c. Acceptable types of emergency lighting systems are as follows:

TYPE A—A self-contained unit with attached heads, powered by dry cell batteries, wired to circuits supplying energy for normal lighting in the areas being protected.

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TYPE B—A self-contained unit with a storage battery of 12 volts or less with an automatic charger, attached heads and wired to circuits supplying energy for normal lighting in the areas being protected.

TYPE C—A self-contained unit of storage batteries of 24, 36 or 48 volts operating completely with relays and automatic charger for remote lighting.

TYPE D—A centrally located storage battery of 120 volts complete with automatic transfer switch.

TYPE E—An automatically started engine generator set, of the correct capacity for generating the energy required for the full emergency illuminating load.

d. Wiring of all emergency lighting systems shall be so arranged as to throw on the emergency lighting automatically which protects the corridors, passageways, stairways, ramps, fire-escapes and all other means of egress direct to the outside when the artificial lighting for any such areas fails.

e. All wiring for emergency lighting shall be in separate raceways independent of all other wiring and shall comply in every respect with proper and accepted standards.

f. All emergency lighting systems shall be designed and maintained to provide not less than 30 minutes of reasonable illumination at all locations required to be lighted under this section. Equipment for such power shall include a voltmeter or hydrometer and a switch so arranged and located as to be reasonably convenient and reliable for the testing of available power.

g. *Battery systems of over 50 volts*—In such systems the battery and charging equipment shall be housed in a separate room of noncombustible construction adequately vented directly to the out-of-doors and secure against unauthorized entry.

h. *Motor generator sets*—Motor generator sets shall be housed in a separate masonry enclosure of two-hour fire-resistant construction with a Class B type door secured against unauthorized entry. Frames of doors shall be kalamain, steel buck or structural steel. The door sill shall be 6 inches above the floor. The room shall be adequately ventilated directly to the out-of-doors and the exhaust from the motor shall be installed in accordance with accepted safe practices.

Sec. 172-1-86. OXYGEN

a. Cylinders containing compressed oxygen shall not be stored within 10 feet of a desk, table, smoking stand, heating unit or any other fixture or article of furniture which may

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contain an ash tray or other source of ignition, except while being administered to a patient.

b. Oxygen cylinders shall be secured at all times against falling or damage by collision.

c. Oxygen shall not be stored in the same room with ether, ethylene or ethyl chloride.

d. Smoking shall not be permitted within a room in which compressed oxygen is used or stored.

SEC. 172-1-87. NITROUS OXIDE

Nitrous oxide shall not be stored in the same room with ether, ethylene or ethyl chloride.

SEC. 172-1-88. FLAMMABLE AND EXPLOSIVE COMPOUNDS
Ether and other flammable or explosive compounds or materials shall be stored in suitable buildings, rooms or compartments used for no other purpose, which rooms or compartments shall be reasonably gas-tight and lighted by electricity employing an incandescent lamp in a vapor-proof globe controlled by a switch outside the room. Oxygen and nitrous oxide shall not be stored with flammable compounds or materials.

SEC. 172-1-89. X-RAY FILM

Nitro-cellulose film shall not be used or stored in a hospital except in an approved noncombustible vault or under other specifically approved conditions.

SEC. 172-1-90. OPERATING ROOM

Operating rooms shall be properly located and segregated from patient-occupied rooms and public use corridors by a vestibule or the equivalent of two flame-resistant and reasonably gas-tight partitions. Smoking shall not be allowed within such operating rooms or the adjoining vestibules or compartments, and all reasonable precautions shall be taken against fire or explosions within such rooms.

SEC. 172-1-91. LABORATORY AND PHARMACY

Laboratories and pharmacies shall be suitably located and shall be segregated from adjacent areas vertically and horizontally by construction with a fire-resistant rating of not less than one hour. Explosive and flammable compounds or materials kept therein shall be in closed containers properly marked as explosive or flammable, and such storage shall not exceed that quantity necessary for efficient operation.

SEC. 172-1-92. EXTINGUISHING EQUIPMENT REQUIRED

All hospitals shall be provided with proper fire extinguishing equipment adequate for the conditions involved and suitably located.

SEC. 172-1-93. * SPRINKLERS REQUIRED

Hospitals of combustible construction which are occupied by bed patients above the first story shall be protected by a system of automatic sprinklers installed and maintained in accordance with proper standards. (See Section 172-1-70).

*As Amended August 10, 1954

SEC. 172-1-94. DECORATIVE AND ACOUSTICAL MATERIAL

All combustible decorative and acoustical material, including textile floor coverings and curtains located in corridors, passageways and in lobbies and other rooms or spaces for general patient or public use, shall be rendered and maintained flame-resistant.

SEC. 172-1-95. WALL AND CEILING SURFACES

The wall and ceiling surfaces of all corridors, egress passages and stairway enclosures shall be of such material or so treated that they will not be readily flammable and will not carry or communicate fire.

SEC. 172-1-96. BED CASTERS

All beds and such equipment affixed to patients as is necessary to sustain life shall be equipped with roller casters at each floor contact, which casters shall be at least 2 inches in outside diameter and free wheeling.

SEC. 172-1-97. HAZARDOUS OCCUPANCIES

No motor vehicle, or other device or material which may originate or communicate fire, not necessary for patient treatment or care or building maintenance, shall be stored or used within a hospital. All such devices and materials necessary for use within hospitals shall be used and stored with reasonable regard for safety from fire.

SEC. 172-1-98. ALARMS

a. An alarm system shall be provided with suitable signaling devices of such character and so located as to be visible or audible throughout the corridors and non-patient areas of the hospital and in hospital living quarters of employees. Adequate switches or other alarm-sending devices shall be suitably located on each floor, convenient for operation by occupants and arranged so as to give immediate alarm throughout the building, or signal a supervisor who shall actuate the necessary alarm. Telephone or public address systems may be considered as suitable alarm devices.

b. A telephone or other suitable alarm-sending device shall be provided as a means of communicating an alarm of fire to the fire department. Pay station telephones will not be approved for this purpose. (See Sections 172-1-66 and 172-1-82 for other alarm devices required.)

SEC. 172-1-99. ATTENDANTS REQUIRED

a. Each hospital housing 15 or less patients shall have at least one attendant on duty therein at all times. At least one other stand-by attendant shall be available for emergency service within 200 feet of such home and within hearing of all emergency alarms required for such building. Additional on-duty attendants with an equivalent number of stand-by attendants shall be required for each building at the rate of one additional for more than 15 and not more than 29, and one additional for each 15 patients or part in

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excess thereof. Such additional on-duty attendants shall only be required at the rate of one for each 50 patients in excess of 50 where an inspection is made hourly throughout the premises by a special watchman service.

b. Attendants as required herein shall be at least 18 years of age and capable of performing the required duties of evacuation. No person other than the management or a person under management control shall be considered as an attendant.

SEC 172-1-100. EVACUATION PLAN AND DRILLS

Each hospital shall formulate a plan for the protection of all patients in the event of fire and their evacuation to areas of refuge or from the building when necessary. All employees shall be instructed and kept informed respecting their duties under the plan.

SEC. 172-1-101. SMOKING

Smoking in hospitals shall be permitted only where proper facilities are provided and proper precautions have been taken against fire. (See Section 172-1-86d.)

SEC. 172-1-102. HOUSEKEEPING

All hospital premises and other occupancies within buildings containing hospitals shall be kept clean and in tidy condition, and free from accumulation of combustible debris or other waste material.

ARTICLE VI

CONVALESCENT HOMES

SEC. 172-1-103. GENERAL

a. The regulations contained in this article shall apply to all convalescent homes as defined in Section 172-1-5, except such places as are expressly exempt in accordance with the provisions of this Code.

b. Fire-escapes and other outdoor stairways, heating, cooking and ventilating facilities and the use of electric wiring and appliances shall be covered by special related articles. (See also General Provisions of Code.)

SEC. 172-1-104. CONSTRUCTION

a. Every convalescent home hereafter constructed and every addition hereafter made to a convalescent home shall be of noncombustible materials if more than one story in height above the basement.

b. Every building hereafter converted for the purpose of a convalescent home which has more than two stories above the basement shall be constructed of noncombustible materials. An attic or space immediately below a roof shall not be considered as a story in the application of this section.

SEC. 172-1-105. USE OF COMBUSTIBLE BUILDINGS

In existing combustible buildings, only the first story may be used for bed patients, except that in buildings completely sprinklered the second story may be so used for bed patients.

SEC. 172-1-106. ADJACENT BUILDINGS

No convalescent home shall be located within 10 feet of another building of combustible construction unless the exposed walls and doors of such convalescent home are of material rated fire-resistant for one-half hour, and all exposed windows are of wired glass, or unless the exposed face of such convalescent home building is protected by an adequate sprinkler system.

SEC. 172-1-107. OTHER OCCUPANCY

Convalescent home buildings shall not contain an occupancy which is not within immediate control of the convalescent home management, or which is not incident to administrative convenience or necessity or pertinent to public health.

SEC. 172-1-108. ROOFING

Roofs of convalescent homes shall be covered with roofing which is not readily flammable.

SEC. 172-1-109. MAXIMUM POSSIBLE OCCUPANCY

The number of patients housed in each room or compartment shall not exceed the rate of one for each 75 square feet therein and/or one child in a junior size bed for each 40 square feet and/or one infant in a bassinnet for each 24 square feet. The total patient occupancy for each story as determined in this manner shall be termed as the maximum possible occupancy.

SEC. 172-1-110. EGRESS FACILITIES REQUIRED

a. Exits shall be located remote from each other, providing the best practicable means of egress for all patients in the event fire renders one exit impassable.

b. Each story of every building used as a convalescent home shall have at least two means of egress to the outside. Each patient-occupied room shall have at least one doorway opening directly to the outside or to a corridor leading directly, or by stairway, to the outside, or an opening without a door into one adjacent room which leads to the outside in the same manner.

c. Means of egress in addition to the minimum of two required from each story under Section 172-1-110b shall be required when the maximum possible occupancy exceeds 80 patients. There shall be at least one additional means of egress for each 40 additional patients, located to give adequate passage from all areas, each by separate stairways and/or passages to the outside. Exits shall be of such number and so arranged that it will not be necessary to travel more than 100 feet from the door of a patient-occupied room to reach the nearest approved means of egress from that story.

SEC. 172-1-111. EGRESS PASSAGEWAYS

a. Corridors and passageways from patient-occupied rooms leading to egress stairways and thence to the outside, to the outside from the first story and to areas of refuge, shall be not less than 72 inches in width in new buildings or additions to existing buildings, and not less than 36 inches in existing buildings, and shall be of such greater width as is necessary for free passage of beds with patients to the outside or to an approved area of refuge.

b. Corridors and passageways considered as approved means of egress shall be at least 78 inches in height.

c. Access to all interior and outside stairways, to fire-escapes and other exits considered as approved means of egress, shall be unobstructed, and shall not be through a bathroom or kitchen or a room used for any other purpose that may obstruct free passage, nor shall access be veiled from open view by ornamentation, curtains or other appurtenances.

d. Passageways from inside stairways to the outside shall have the same fire-resistant quality as required of the connecting stairways in accordance with Sections 172-1-113b and 172-1-113c of this Code.

e. All egress passageways shall at all times provide unobstructed and safe passage to a suitable area of refuge.

f. In non-sprinklered combustible buildings at least one means of egress shall be provided from each patient-occupied room of the first story to an outside area of refuge by means of platform, bridge or ramp, to allow free passage of beds with patients. Such means of egress shall be directly to the outside from each patient-occupied room or to a corridor leading to the outside or an opening without a door into one adjacent room which leads to the outside. Ramp grades shall not exceed one foot in 10, if more than 12 feet in length. Such platforms, bridges or ramps shall be at least 4 feet in width and shall have a wheel or caster guard at each side at least 6 inches in height.

SEC. 172-1-112. TRANSOMS

Transoms and other similar openings in corridors or passageways shall not be allowed in new construction. Existing transoms and like openings in corridors and passageways shall be permanently sealed and made fire-resistant equal to the related door construction.

SEC. 172-1-113. STAIRWAYS AND OTHER VERTICAL OPENINGS

a. In all buildings at least one passageway from each story shall lead directly to the outdoors or through an enclosed stairway or enclosed passageway or a combination of such a stair-

way and passageway which lead to the outdoors. One other enclosed stairway, where necessary, may be allowed to lead into an open space or lobby which has ample egress openings to the outside.

b. In combustible buildings interior stairways constituting approved egress passages shall be enclosed or be segregated from other portions of the building by material with a fire-resistant rating of not less than one-half hour. Partitioning at floor levels with materials of the same rating effecting a closure of such stairway opening between floors shall constitute a proper enclosure in such buildings. All other vertical openings throughout such buildings shall be enclosed by material with a fire-resistant rating of one-half hour.

c. In noncombustible buildings all interior stairways constituting approved egress passages and all other vertical openings shall be enclosed as required under section 172-1-113b for combustible buildings, except that all such enclosures shall have a fire-resistant rating of not less than two hours.

d. Elevators shall not be considered as means of egress, and all elevator shafts shall be enclosed by noncombustible materials with a fire-resistant rating of not less than two hours. No opening shall be allowed through the side wall enclosures for ventilating or other purposes. All doors servicing elevators shall be of closed or solid construction, reasonably smoke-tight when doors are closed. Such doors, lintels and panels above shall be constructed to resist fire for two hours, but where necessary such doors may have wired-glass not to exceed 6 square feet.

e. All stairways in egress passages shall have suitable handrails on both sides.

f. Stairways in egress passages in existing buildings shall be not less than 36 inches in width, and in new buildings and additions to existing buildings such stairways shall be not less than 44 inches in width.

g. Existing stairways in egress passages shall be provided with landings at least 30 inches in depth between the nosing of the top or bottom stair and the next parallel partition or door. New stairways shall have such landings at least 44 inches in depth.

h. Stair treads in inside egress passages in existing structures shall be not less than 8 inches wide exclusive of nosing, and risers shall not exceed 8 1/2 inches in height. In new buildings such stair treads shall be not less than 9 1/2 inches wide, exclusive of nosing, and risers shall not exceed 7 3/4 inches in height. Treads and risers shall be of uniform width and height in each individual stairway.

SEC. 172-1-114. DOORS AND DOORWAYS

a. All doorways which are of themselves, or are a part of means of egress, shall be at floor level in new structures and as near thereto as practicable in existing structures. Windows shall not be considered as means of egress.

b. All egress doors to the outside or into stairways or passages leading to the outside shall open out or in the direction of egress travel, but this regulation shall not be construed to prevent ground floor entrance doors swinging both inward and outward, or as requiring doors from patient-occupied rooms to open into corridors. Such doors shall not be so hung as to obstruct egress passage. There shall be no obstruction at any time to the opening or closing of egress doors or doors from patient-occupied rooms into corridors.

c. All doorways from patient-occupied rooms and in egress passages to areas of refuge and to the outside shall be at least 74 inches in height in existing buildings and 78 inches for new construction, and of such greater height as will allow for free passage of beds and attached medical equipment where required.

d. Egress doors for the passage of beds as required in Sec. 172-1-111f, from patient occupied rooms to areas of refuge as required in Sec. 172-1-115, from patient occupied rooms into corridors in new buildings, and in additions to existing buildings, into corridors from ward rooms occupied by three or more bed patients, shall be at least 42 inches in width and of sufficient additional width to allow for free passage of beds with patients. Egress doors designated for use and used only by ambulatory patients and employees shall be at least 30 inches in width. All other egress doors from patient occupied rooms and to the outside shall be at least 36 inches in width.

e. Egress doors into stairway enclosures, doors in side wall openings of enclosed egress passages and all doors serving stairways and other vertical openings shall be equipped with self-closing devices designed, installed and maintained to automatically close such doors when not in use. Such doors shall be so hung as to allow for convenient manual opening and closing at all times.

f. Doors and jambs in walls and partitions required to be fire-resistant, except doors in outside walls, shall have a fire-resistant rating of not less than one-half hour, and shall be constructed and maintained close fitting and reasonably smoke-tight.

g. A door in a partition required to be fire-resistant may contain wired-glass when necessary, provided such glass shall not exceed 6 square feet.

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h. All egress doors from patient occupied rooms and to the outside shall be equipped with hardware which will ensure opening of such doors by a single motion, such as in the turning of a knob or pressure latch with normal strength, or equipped with panic hardware which will release when normal pressure is applied to the releasing device in the direction of exit travel. No such door shall be equipped with a lock, latch, bolt or other fastening device which will allow for locking such door against opening from within, or which will require a second operation or motion to open such door for egress purposes.

i. Revolving doors shall not be considered as approved means of egress.

j. All doorways entering upon common use corridors or egress passages shall be protected by a substantial door so constructed as to provide a reasonably smoke and gas-tight closure.

k. No egress doors from patient-occupied rooms or to the outside, or other doors entering upon common use corridors or egress passages, shall be held in an open position at any time by an under-door wedge or be fastened in an open position by a device which will require more than one movement of normal strength to swing such door to a closed position. No such wedge or door-holding device shall be placed in close proximity to such a door or allowed to remain in such a position.

SEC. 172-1-115. FIRE WALLS AND SMOKE BARRIERS

Convalescent homes shall have fire walls or smoke barriers through each patient-occupied story which is not ramped to the outside for bed passage, and which has a maximum occupancy in excess of 24 bed patients. Such walls or barriers shall be located so as to provide ample area of refuge within the building on each side of such wall or barrier, for all beds with patients located in each story.

SEC. 172-1-116. FIRE-STOPPING

Exterior walls of frame construction and interior stud partitions shall be fire-stopped at each floor level by a 2-inch thick plate or masonry filling, completely closing any possible vertical opening from one story to another.

SEC. 172-1-117. CLOSETS AND STOREROOMS

All closets or compartments which are used for the storage of cleaning or polishing compounds or implements shall be flame-resistant for at least one-half hour from within such closet or compartment including the door thereof, or shall be equipped with proper and adequate automatic fire extinguishing equipment and alarm devices.

SEC. 172-1-118. INCINERATORS

Incinerators within buildings or a part thereof shall be constructed in accordance with accepted good practice. Those within buildings shall be loaded and fired from a ves-

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tibule or compartment segregated from the rest of the building by construction with a fire-resistant rating of two hours, having a fire door equipped with a suitable self-closing device.

Sec. 172-1-119. EXIT SIGNS

a. Signs bearing the word "Exit" shall be placed at each egress doorway, except at doors of patient-occupied rooms entering upon common use corridors or passageways, and shall be so installed as to be legible from the direction of travel thereto. Where such doorways and signs are not readily discernible from patient-room doorways an adequate number of additional signs shall be provided bearing the term "Exit" and an arrow pointing in the direction of such exit.

b. Exit signs shall bear letters at least $4\frac{1}{2}$ inches in height with strokes not less than $\frac{3}{4}$ inch in width.

c. All exit and directional signs shall be maintained clearly legible by electric illumination or other adequate means when natural light fails.

Sec. 172-1-120.* EMERGENCY LIGHTING

a. Adequate artificial lighting shall be provided for the lighting of all corridors, passageways, stairways, ramps, fire-escapes and other means of egress leading direct to the outside.

b. An automatic, independent, secondary source of power for illumination shall be provided for the reasonable lighting of all corridors, passageways, stairways, ramps, fire-escapes and other means of egress leading directly to the outside from convalescent homes housing 25 or more patients. This secondary lighting system shall be termed herein as emergency lighting.

c. Acceptable types of emergency lighting systems are as follows:

TYPE A—A self-contained unit with attached heads, powered by dry cell batteries, wired to circuits supplying energy for normal lighting in the areas being protected.

TYPE B—A self-contained unit with a storage battery of 12 volts or less with an automatic charging attached heads and wired to circuits supplying energy for normal lighting in the areas being protected.

TYPE C—A self-contained unit of storage batteries of 24, 36 or 48 volts operating completely with relays and automatic charger for remote lighting.

TYPE D—A centrally located storage battery of 120 volts complete with automatic transfer switch.

TYPE E—An automatically started engine generator set, of the correct capacity for generating

* As Amended April 27, 1954

the energy required for the full emergency illuminating load.

d. Wiring of all emergency lighting systems shall be so arranged as to throw on the emergency lighting automatically which protects all corridors, passageways, stairways, ramps, fire-escapes and all other means of egress direct to the outside when the artificial lighting from any such areas fails.

e. All wiring for emergency lighting shall be in separate raceways independent of all other wiring and shall comply in every respect with proper and accepted standards.

f. All emergency lighting systems shall be designed and maintained to provide not less than 30 minutes of reasonable illumination of all locations required to be lighted under this section. Equipment for such power shall include a volt meter or hydrometer and a switch so arranged and located as to be reasonably convenient and reliable for the testing of available power.

g. *Battery systems of over 50 volts*—In such systems the battery and charging equipment shall be housed in a separate room of noncombustible construction adequately vented directly to the out-of-doors and secure against unauthorized entry.

h. *Motor generator sets*—Motor generator sets shall be housed in a separate masonry enclosure of two-hour fire-resistant construction with a Class B type door secured against unauthorized entry. Frames of doors shall be kalamein, steel buck or structural steel. The door sill shall be 6 inches above the floor. The room shall be adequately ventilated directly to the out-of-doors and the exhaust from the motor shall be installed in accordance with accepted safe practices.

Sec. 172-1-121. OXYGEN

a. Cylinders containing compressed oxygen shall not be stored within 10 feet of a desk, table, smoking stand, heating unit or any other fixture or article of furniture which may contain an ash tray or other source of ignition, except while being administered to a patient.

b. Oxygen cylinders shall be secured at all times against falling or damage by collision.

c. Oxygen shall not be stored in the same room with ether, ethylene or ethyl chloride.

d. Smoking shall not be permitted within a room in which compressed oxygen is used or stored.

Sec. 172-1-122. NITROUS OXIDE

Nitrous oxide shall not be stored in the same room with ether, ethylene or ethyl chloride.

Sec. 172-1-123. FLAMMABLE AND EXPLOSIVE COMPOUNDS

Ether and other flammable or explosive compounds or materials shall be stored in suitable buildings, rooms or compartments used for no other purpose, which rooms or com-

partments shall be reasonably gas-tight and lighted by electricity employing an incandescent lamp in a vapor-proof globe controlled by a switch outside the room. Oxygen and nitrous oxide shall not be stored with flammable compounds or materials.

SEC. 172-1-124. EXTINGUISHING EQUIPMENT REQUIRED
All convalescent homes shall be provided with proper fire extinguishing equipment adequate for the conditions involved and suitably located.

SEC. 172-1-125. * SPRINKLERS REQUIRED
Convalescent homes of combustible construction which are occupied by bed patients above the first story shall be protected by a system of automatic sprinklers installed and maintained in accordance with proper standards. (See Section 172-1-105).

SEC. 172-1-126. DECORATIVE AND ACOUSTICAL MATERIAL
All combustible decorative and acoustical material, including textile floor coverings and curtains located in corridors, passageways and in lobbies and other rooms or spaces for general patient or public use, shall be rendered and maintained flame-resistant.

SEC. 172-1-127. WALL AND CEILING SURFACES
The wall and ceiling surfaces of all corridors, egress passages and stairway enclosures shall be of such material or so treated that they shall not be readily flammable and will not carry or communicate fire.

SEC. 172-1-128. BED CASTERS
All beds and such equipment affixed to patients as is necessary to sustain life shall be equipped with roller casters at each floor contact, which casters shall be at least 2 inches in outside diameter and free wheeling.

SEC. 172-1-129. HAZARDOUS OCCUPANCIES
No motor vehicle, or other device or material which may originate or communicate fire, not necessary for patient treatment or care or building maintenance, shall be stored or used within a convalescent home. All such devices and materials necessary for use within convalescent homes shall be used and stored with reasonable regard for safety from fire.

SEC. 172-1-130. ALARMS

a. An alarm system shall be provided with suitable signalling devices of such character and so located as to be visible or audible throughout the corridors and non-patient areas of the convalescent home and in convalescent home living quarters of employees. Adequate switches or other alarm-sending devices shall be suitably located on each floor, convenient for operation by occupants and arranged so as to give immediate alarm throughout the building, or signal a supervisor who shall actuate the necessary alarm. Telephone or public address systems may be considered as suitable alarm devices.

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b. A telephone or other suitable alarm-sending device shall be provided as a means of communicating an alarm of fire to the fire department. Pay station telephones will not be approved for this purpose. (See Sections 172-1-66 and 172-1-82 for other alarm devices required).

SEC. 172-1-131. ATTENDANTS REQUIRED

a. Each convalescent home housing 15 or less patients shall have at least one attendant on duty therein at all times. At least one other stand-by attendant shall be available for emergency service within 200 feet of such home and within hearing of all emergency alarms required for such building. Additional on-duty attendants with an equivalent number of stand-by attendants shall be required for each building at the rate of one additional for more than 15, and not more than 29, and one additional for each 15 patients or part in excess thereof. Such additional on-duty attendants shall only be required at the rate of one for each 50 patients in excess of 50 where an inspection is made hourly throughout the premises by a special watchman service.

b. Attendants as required herein shall be at least 18 years of age and capable of performing the required duties of evacuation. No person other than the management or a person under management control shall be considered as an attendant.

SEC. 172-1-132. EVACUATION PLAN AND DRILLS

Each convalescent home shall formulate a plan for the protection of all patients in the event of fire and their evacuation to areas of refuge or from the building when necessary. All employees shall be instructed and kept informed respecting their duties under the plan.

SEC. 172-1-133. SMOKING

Smoking in convalescent homes shall be permitted only where proper facilities are provided and proper precautions have been taken against fire. (See Section 172-1-121d).

SEC. 172-1-134. HOUSEKEEPING

All convalescent home premises and other occupancies within buildings containing convalescent homes shall be kept clean and in tidy condition, and free from accumulation of combustible debris or other waste material.

ARTICLE VII* SCHOOLS

SEC. 172-1-135. GENERAL

a. The regulations contained in this Article shall apply to all buildings or portions thereof used for school or classroom purposes, as defined in Section 172-1-5.

* Adopted December 15, 1953

b. Fire-escapes and other outdoor stairways, oil burners, heating, cooking and ventilating facilities, and the use of electric appliances, shall be in accordance with separate Articles of this Code as well as with provisions for same.

SEC. 172-1-136. CONSTRUCTION OF NEW BUILDINGS (INCLUDING ADDITIONS TO EXISTING BUILDINGS)

a. *Buildings more than two stories in height* above the basement or ground shall be as follows:

1. Construction shall be enclosed in noncombustible construction having a fire-resistant rating of not less than 45 minutes, except as noted in Section 172-1-146, subsection c.

3. Corridors shall be enclosed in noncombustible construction having a fire-resistant rating of not less than 45 minutes, except as noted in Section 172-1-143, subsections d, e and f.

4. Flooring over accessible spaces which are more than five feet in clear height shall have a fire-resistant rating of not less than 45 minutes.

b. *Buildings two stories in height* above the basement or ground shall be as follows:

1. Exterior load bearing walls and/or structural supporting members shall be of noncombustible construction.

2. Stairways shall be enclosed in noncombustible construction having a fire-resistant rating of not less than 45 minutes, except as noted in Section 172-1-146, subsection c.

3. Corridors shall be enclosed in noncombustible construction having a fire-resistant rating of not less than 45 minutes, except as noted in Section 172-1-143, subsections d, e and f.

4. Flooring over accessible spaces which are more than five feet in clear height shall have a fire-resistant rating of not less than 30 minutes.

c. *Buildings only one story in height* above the basement or ground shall be as follows:

1. Corridors shall be enclosed at sides and beneath by construction having a fire-resistant rating of not less than 45 minutes, except when all pupil occupancies have direct means of egress to the outside, independent of all corridors.

2. Flooring over accessible spaces which are more than five feet in clear height, shall have a fire-resistant rating of not less than 30 minutes.

d. *Adjacent Buildings*.—No school building shall be constructed within 10 feet of another building of combustible construction, unless the exposed walls, sash and doors of such school are of noncombustible construction and all exposed glazing is of wired glass, or unless the exposed walls

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of such school building are protected by an approved sprinkler system or water curtain.

e. *Roofing*.—Roofs of school buildings shall be covered with roofing which is not readily flammable and does not carry or communicate fire.

SEC. 172-1-137. HEATING EQUIPMENT

a. Central heating plants, steam boilers, and oil-fired water heaters shall be segregated from all other occupancies by noncombustible construction having a fire-resistant rating of not less than two hours, and which provides a reasonably smoke-tight enclosure.

b. Such enclosures for heating equipment and incinerator enclosures shall be provided with adequate vents direct to the outside, sufficient for proper combustion and exhaust. Ventilating openings shall be provided having a total area equivalent to not less than twice the area of the flue outlet of the heating plant. Such openings shall be maintained in an open position with fixed louvers.

c. Heater rooms shall only contain equipment for heating, hot water supply, switchboard or facilities for unloading an incinerator, and shall not be used for any other purposes.

d. Interior doors shall be Class B type doors swinging into the heater room and equipped with a positive self-closing device without a hold-open device. Frames of doors shall be kalamein, steel buck, or structural steel.

e. Furnaces, boilers and other fired units shall be vented by means of reasonably gas-tight smokepipes or breechings connected properly to a chimney constructed of brick, solid block masonry, or reinforced concrete, with suitable flue lining, properly erected and maintained in safe condition.

f. Oil burners. See Section 172-1-60.

SEC. 172-1-138. SERVICE AREAS

Certain spaces shall be segregated from pupil-occupied spaces, as follows:

a. Incinerators within buildings shall be segregated from all other occupancies by noncombustible construction having a fire-resistant rating of not less than two hours, with a Class B type door having a positive closing device. Access to incinerator rooms for loading and firing same will not be permitted through heater rooms. Frames of doors shall be kalamein, steel buck or structural steel.

b. Spaces used for storage of tractors, power mowers, or other equipment having an internal combustion engine shall be segregated from all other occupancies by noncombustible construction having a fire-resistant rating of not less than two hours and be accessible only from outside the building.

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c. Maintenance and storage rooms for maintaining combustible materials shall be segregated from all other occupancies by construction having a fire-resistant rating of not less than one hour.

d. Trash or rubbish chutes not connected directly to an incinerator shall not be permitted.

SEC. 172-1-139. ELEVATORS AND DUMB-WAIVERS
a. Shafts and control rooms thereof shall be of noncombustible construction, having a fire-resistant rating of at least two hours. No opening shall be allowed through the shaftway for ventilating or other purposes except necessary doors. All doors shall be of closed or solid construction and reasonably smoke-tight when closed.

(Note: State Department of Labor regulations pertaining to the construction, operation, and maintenance of elevators and dumb-waivers must also be complied with.)

SEC. 172-1-140. VERTICAL OPENINGS

a. No vertical interior opening will be permitted in any shaft except for elevator doors, dumb-waiter doors, and doors to pipe shafts. Pipe shafts shall be enclosed with 45 minute fire-resistant construction and doors to pipe shafts (For elevator and dumb-waiter doors see Note, Section 172-1-139, subsection a.)

b. *Ventilating ducts*—Except in one-story school buildings all flues shall be noncombustible material and shall be continuous from room grills to points of intake and all exhaust outside of the building. Flexible connections shall be of flameproof material.

SEC. 172-1-141. GYMNASIUMS

a. Gymnasiums, whether or not provided with spectator seating, auditoriums and cafeterias are classed as "places of assembly" and are to be in accordance with Article I of this Code.

(Note: Auditoriums or other spaces where it is intended to show 35 mm. moving pictures must be in accordance with the "Rules and Regulations Governing Picture Exhibitions" as published by the State Department of Police.)

SEC. 172-1-142. EXITS

a. Each floor level of a school shall have exits or stairs in sufficient total width to fulfill the requirements of Section 172-1-148 (Exit determination).

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b. Exits or stairways shall be so located that no doorway of a pupil-occupied space shall be more than 100 feet from one such exit or stairway, and so that there is a minimum of two such stairways or exits from each story, located as remotely as possible from each other. The 100 foot requirement will be waived only in cases where all pupil-occupied areas have direct means of egress to the outside.

c. All classrooms designed as industrial arts shops shall have two separate and distinct means of egress, one of which shall be direct to the outside or through an adjoining room and thence to the outside. The other means of egress may be by common use corridor to the outside.

d. Homemaking kitchens, chemistry laboratories, arts and crafts rooms, and all classrooms designed to accommodate 40 or more persons shall have two separate means of egress, remote as practicable from each other, which lead to the common use corridor or to an adjoining room and thence to the corridor.

e. In one-story buildings having corridor partitions or floors of non-rated construction, there shall be at least two means of egress from each classroom, reasonably remote from each other, one of which shall be direct to the outside, or through an adjoining room and thence directly to the outside. The other means of egress may be by common use corridor to outside.

f. No pockets or dead ends shall be permitted in corridors, except that when all stairways are enclosed at that floor level, such pockets or dead ends may be permitted when they do not exceed 40 feet in length and do not serve a total occupancy of more than 60 pupils.

g. Multiple story fire-escapes on the exterior of a new building shall not be permitted.

h. Where courts occur enclosed on all sides and required exits from rooms or spaces exit into the court, an exit from the court to the exterior perimeter of the building shall be provided. This exit shall be segregated from all building occupancies by noncombustible construction having a fire-resistant rating of not less than 45 minutes.

SEC. 172-1-143. CORRIDORS (INCLUDING EGRESS PASSAGEWAYS)

a. Corridors used as means of egress from pupil-occupied areas shall be not less than 6 feet in unobstructed width. This minimum width shall exist at all points measured at right angles to the length of the corridor, and to the nearest point of extended locker doors, fully opened doors from occupied spaces, drinking fountains, fire extinguishers, or

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other projecting objects. Clear headroom shall be at least 7 feet 6 inches.

b. *Smoke barriers*—All corridors served by stairs unenclosed at that level and being over 300 feet in length shall be divided into approximately equal sections not over 300 feet in length by smoke barriers. Such barriers shall be similar in construction to the partitions and doors separating stairways from corridors, except that 50% of the doors therein shall swing in each direction.

c. Stairs of less than 3 risers shall not be used in corridors. Ramps shall be used for necessary small changes in level. Where ramps are used, rise shall not exceed 1 foot per 10 feet of run.

d. Where corridor walls of schoolrooms are required to have fire-resistant rating, transoms or similar openings in corridor walls of schoolrooms shall not be used except as follows: glazing of wired glass in panes not exceeding 9 square feet in area each and securely mounted in noncombustible frames, or glass blocks set in noncombustible frame and mortar will be permissible. Such glazing shall be not more than 36 inches in height nor be below 4 feet from the finished corridor floor. The total area of such glazing shall not exceed 25 per cent of the area of a corridor partition of the classroom, the height being measured from the corridor side. This does not apply to corridor walls of offices, cafeterias or libraries.

e. Corridor walls of offices may be constructed of glass unlimited in area and type.

f. Corridor walls of cafeterias and libraries may be constructed of glass unlimited in area. Such glass, however, shall be wired glass in panes not to exceed 9 square feet each in area and set in noncombustible frames.

g. *Decorative and Acoustical Material*—All combustible decorative and acoustical material, including textile floor coverings and curtains located in corridors, passageways, stairways and lobbies, shall be rendered and maintained flame resistant. This regulation shall not be construed to prohibit the use of wall or ceiling coverings affixed directly to the wall or ceiling, provided the surface will not be readily flammable and will not carry or communicate fire.

Sec. 172-1-144. Doors

a. All doors from pupil-occupied spaces, except toilets, shall swing in the direction of egress travel with hinges on jamb nearest to the closest stairway or exit. Minimum door dimensions shall be 36 inches wide, except that doors in multiple may be 30 inches wide.

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b. Locks on interior doors from all pupil-occupied spaces shall be of the "schoolhouse type"; that is, they shall lock by key only and shall be operative from the inside at all times by the turning of the knob only.

c. No sliding door, vertical-lift door, revolving door, or folding partition shall be used as a closure for a required means of egress; except folding gates may be used to segregate portions of the building.

d. Doors swinging in two directions, known as "double-swing," shall not be used as closures for required means of egress.

e. All interior egress doors, providing access to corridors, which are required to have a fire-resistant rating, shall be 45 minute fire resistant. Such doors may be of solid wood planking or built-up plywood with solid core, not less than 1 3/4 inch thick. Wired glass 1/4 inch thick, in single pane or smaller panes totaling not over 6 square feet, may be used in such doors.

f. Egress doors from corridors or stairway enclosures, which have locking or latching devices, shall have panic hardware which will permit the door to open with a single motion when pressure is applied to the releasing device in the direction of egress travel.

g. Where double-leaf doorways are used in stairway enclosures they shall be equipped with a mullion or astragal which will provide reasonably tight closure, but which will not interrupt a complete self-closing operation.

h. Interior doors to stairways shall provide as a minimum one 30-inch leaf for each 22 inches of stairway width.

i. Doors from corridors into stair enclosures shall be 45-minute fire resistant. Such doors may be of solid wood planking or built-up plywood with solid core, not less than 1 3/4 inches thick. Wired glass 1/4 of an inch thick in single pane or smaller panes totaling not over 6 square feet may be used in such doors. These doors shall be equipped with suitable self-closing devices, maintained in operating condition to keep the doors closed. No such door shall be equipped with a device for holding them in an open position. Double-leaf doorways shall be equipped with a mullion or astragal which will provide reasonably tight closure, but which will not interrupt a complete self-closing operation.

Sec. 172-1-145. STAIRWAYS

a. All required stairways shall lead directly to an outside area having unrestricted access to the exterior perimeter of the building.

b. All stairs (and platforms, landings, etc. used in connection therewith) shall be of noncombustible construction

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throughout. Treads of stairs and landings shall be solid (without perforations). Handrails are exempted from the above requirements, also short non-exit stairs serving stages, platforms, etc.

c. There shall be no variation in the width of treads and the height of risers in any flight. Where variation in riser heights in different flights is necessary because of varying story heights, such variation shall not exceed $\frac{3}{16}$ of an inch. All treads shall be not less than 10 inches in width, exclusive of nosing, and risers shall be not more than 7 inches in height. In general, treads and risers shall be so proportioned that the sum of two risers and one tread, exclusive of nosing, is not more than 25 inches and not less than 24 inches.

d. Treads and landing shall have non-slip surfaces.

e. There shall be no occupied spaces, closets, or other storage areas within stair enclosures. Spaces shall be left entirely open or shall be entirely enclosed, without door or other opening into the enclosure. Access doors to pipe-tunnels and similar non-storage spaces will be permitted, provided they are of 45-minute fire-resistant construction and kept locked.

f. No arrangement of treads known as "winders" shall be allowed.

g. Where doors open into stairways, there shall be a minimum clearance of 18 inches between the edge of the door in any position and the nosing of a riser.

h. All egress stairways shall have suitable handrails on both sides and at center of stairs wider than 88 inches. There shall be no more than 66 inches between adjacent handrails. Balustrades shall be not less than 3 feet high, and handrails shall be attached at a height of between 2 feet 6 inches and 2 feet 9 inches vertically above inter-sections of treads and risers.

i. No stairway shall be less than 44 inches in width, and no flight of stairs shall have a vertical rise of more than 9 feet.

j. Landings at turns shall be at least 44 inches in length, measured along the line of travel, and 18 inches from the inside handrail, except that right angle turns may be made with a square platform the width of the stairway. Intermediate landings on straight stairs shall have a length of at least 44 inches.

k. Ramps may be substituted for stairs, provided surfaces are non-slip and rise does not exceed 1 foot in 10 feet of run.

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SEC. 172-1-146. STAIRWAY ENCLOSURES

a. Stairways serving one or more stories *above the first* shall be segregated from corridors at all floor levels, except the uppermost floor, by means of a smoke barrier.

b. Stairways from basements shall be segregated from first floor corridors and means of egress by a smoke barrier.

c. The smoke barrier between stairways and corridors shall be constructed of noncombustible materials, and may have securely mounted wired glass panes not exceeding 9 square feet each in area.

SEC. 172-1-147. STAGES

a. Auditorium stages having a fly loft or grid above or below the structural opening between the stage and the auditorium, dressing rooms or storage rooms on the stage, shall be built of noncombustible construction throughout. The structure supporting the stage flooring above the normal auditorium floor level may be of combustible construction. Ventilation shall be provided by means of louvers, in the side walls or collapsible skylight in the roof, having an area equal to at least 10% of the floor area within the stage walls.

b. All drapes and scenery shall be rendered and maintained flame resistant.

SEC. 172-1-148. EXITS DETERMINATION

a. Required widths of exits and stairs shall be computed in accordance with the following:

1. Occupancy shall be determined by actual count of pupils, or where this is impracticable, assume one pupil for 40 square feet of gross floor area, not including places of assembly (which are to be computed according to Article I of this Code).

2. Stairs shall provide total aggregate width in 22 inch increments, in accordance with the following table:

<i>Number of Pupils in Area Served by Stairs</i>	<i>Total Width of Stairs</i>
120	44"
180	66"
240	88"
300	110"
360	132"
420	154"
480	176"

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540
600
660
720
780

198"
220"
242"
264"
286"

3. Exits to the outside shall provide one door for each 100 persons or major fraction thereof on that floor, plus one door for each 100 persons or major fraction thereof that required stairs are designed to accommodate.

4. No required exit doorway serving a stairway or corridor shall consist of less than two 30-inch leaves.

5. Exits required for places of public assembly may, if appropriately located, be used jointly as required exits for ordinary school occupancy where total occupancy of the building at any one time will not exceed the largest capacity calculated under either Article I or this Article.

SEC. 172-1-149. FIRE ALARM SYSTEMS

a. A fire alarm system shall be installed in every school building.

b. All fire alarm systems shall be of the closed circuit type, supervised against opens and grounds, and shall function as follows:

1. The operation of any manual fire alarm sending station or automatic fire detecting unit shall cause the simultaneous operation of all alarm sounding devices continually until the tripped station is restored to normal operation or the simultaneous operation of all alarm sounding devices for a complete cycle of not less than thirty seconds has taken place.

2. The power supply shall be taken from a point located between the meter and main switch.

3. All wiring for fire alarm systems shall be run in raceways properly protected from vandalism or injury.

c. Alarm sending stations shall be located in each corridor of each story so that from any corridor door not more than 100 feet will have to be traversed in order to reach a sending station. In buildings of more than 100 feet in length, alarm sending stations shall be located at exits in the natural path of egress from the building.

d. All manual sending stations shall be located not more than 5 feet above the floor and at ready, accessible and

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visible points which shall not be obstructed. All alarm sending stations shall be clearly marked "FIRE ALARM" and shall be painted a distinctive red color.

e. An alarm sending station shall also be provided adjacent to the places of assembly and on all stages near the stage lighting control board.

f. Automatic fire detectors shall be installed in boiler rooms, kitchens, and other hazardous areas where it is deemed necessary. Automatic fire detectors will not be required in buildings completely protected by an automatic sprinkler system.

g. Alarm sounding devices shall be horns used for no other purpose and of such character and so located as to be effectively heard above all other sounds by all occupants in every occupied space in the building.

h. All sounding devices in the alarm system shall be of the same type and all fire alarm sounding devices shall be used for fire alarm purpose only. No fire alarm sounding device shall be located in places of public assembly except those already located in existing buildings.

i. Bells or gongs, distinctive in tone and pitch from other sounding devices, will be approved in existing systems or in extensions to existing systems where such equipment is already in use.

j. Connections of school fire alarm systems to municipal alarm systems, central stations, or direct connected supervised systems, shall be located on the outside of the building. If located in the building, the alarm sending station shall be designed to sound the school alarm system when actuated.

k. Fire drills shall be conducted at least once each month, by use of the fire alarm system.

SEC. 172-1-150. EXIT SIGNS

a. For places of assembly see Section 172-1-19.

b. Signs bearing the word "EXIT" shall be placed at each exit from a corridor. Where an exit and/or its sign are not clearly visible from every point in the corridors served, an adequate number of directional signs shall be provided bearing the word "EXIT" and an arrow pointing in the direction of such exit.

c. Exit and directional signs shall have letters at least 4½ inches high, with strokes and arrows at least ¾ of an inch in width.

d. Exit and directional signs shall be clearly legible at all times.

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SEC. 172-1-151. EMERGENCY LIGHTING

a. Adequate artificial lighting shall be provided for the lighting of all places of assembly, corridors, passageways, stairways, ramps, fire-escapes, and other means of egress leading direct to the outside.

b. An automatic, independent, secondary source of power for illumination shall be provided for the reasonable lighting of all places of assembly, and the corridors, passageways, stairways, ramps, fire-escapes, and other means of egress direct to the outside from such places of assembly. This secondary lighting system shall be termed herein as emergency lighting.

c. Emergency lighting shall not be required for places of assembly which are not used in the night season, or for places which do not exceed 1500 square feet of floor area and so located that at least one exit is direct to the outside and within 5 feet of grade.

d. Acceptable types of emergency lighting systems are as follows:

TYPE A—A self-contained unit with attached heads, powered by dry cell batteries, wired to circuits supplying energy for normal lighting in the areas being protected.

TYPE B—A self-contained unit with a storage battery of 12 volts or less with an automatic charger, attached heads and wired to circuits supplying energy for normal lighting in the areas being protected.

TYPE C—A self-contained unit of storage batteries of 24, 36, or 48 volts, operating completely with relays and automatic charger for remote lighting.

TYPE D—A centrally located storage battery of 120 volts, complete with automatic transfer switch.

TYPE E—An automatically started engine generator set, of the correct capacity for generating the energy required for the full emergency illuminating load.

e. Wiring of all emergency lighting systems shall be so arranged as to throw on the emergency lighting automatically which protects the places of assembly and all exit passageways, corridors, stairways, ramps, fire-escapes and all other means of egress direct to the outside from such places of assembly when the artificial lighting for any such areas fails.

f. All wiring for emergency lighting shall be in separate raceways independent of all other wiring, and shall comply in every respect with proper and accepted standards.

g. All emergency lighting systems shall be designed and maintained to provide not less than 30 minutes of reasonable illumination at all locations required to be lighted under this section. Equipment for such power shall include a volt meter or hydrometer and a switch so arranged and located as to be reasonably convenient and reliable for the testing of available power.

h. *Battery Systems of Over 50 Volts*—In such systems the battery and charging equipment shall be housed in a separate room of noncombustible construction, adequately vented directly to the out-of-doors, and secure against unauthorized entry.

i. *Motor generator sets*—Motor generator sets shall be housed in a separate masonry enclosure of two-hour fire-resistant construction with a Class B type door secured against unauthorized entry. Frames of doors shall be kalamein, steel buck, or structural steel. The door sill shall be 6 inches above the floor. The room shall be adequately ventilated directly to the out-of-doors, and the exhaust from the motor shall be installed in accordance with accepted safe practices.

SEC. 172-1-152. HOUSEKEEPING

a. All school buildings shall be kept clean and in tidy condition, and free from accumulation of combustible debris or other waste material.

SEC. 172-1-153. STORAGE OF FLAMMABLE LIQUIDS

a. See Regulations Covering the Storage and Transportation of Flammable Liquids, Department of State Police.

SEC. 172-1-154. FIRE EXTINGUISHERS

a. A 2½ gallon soda acid or equivalent Class A fire extinguisher shall be located in corridors so that a person will not have to travel more than 100 feet from any room door to reach the nearest extinguisher.

b. A 2½ gallon soda acid or equivalent Class A fire extinguisher shall be located on the stage and in the boiler room; except in boiler rooms using oil-fired equipment, a 2½ gallon foam or equivalent Class B extinguisher shall be provided.

ARTICLE VIII*

EXISTING SCHOOL BUILDINGS

SEC. 172-1-155. CONSTRUCTION

a. No building not now a school building may hereafter be converted for school purposes unless it complies, after conversion, with the provisions of Article VII for new buildings, Sections 172-1-135 to 172-1-154, inclusive.

SEC. 172-1-156. SPRINKLER REQUIREMENTS

- a. All existing school buildings wholly or in part of combustible construction, which have student occupancy above the second story, shall be protected by a system of automatic sprinklers, installed and maintained in accordance with proper standards.
- b. Such buildings having noncombustible construction of 45-minute fire-resistant rating enclosing all required stairways and protecting corridors at sides and beneath shall be exempt from the requirements for sprinklers.

SEC. 172-1-157. HEATING EQUIPMENT

- a. Central heating plants, steam boilers and oil-fired water heaters shall be segregated from all other occupancies by walls, ceiling and floor having a fire-resistant rating of not less than 30 minutes, which shall provide a reasonably smoke-tight enclosure.
- b. Such enclosures for heating equipment and incinerators shall be provided with adequate vents direct to the outside, sufficient for proper combustion and exhaust. Ventilating openings shall be provided having a total area equal to not less than twice the flue outlet of the heating plant. Such openings shall be maintained in an open position with fixed louvers.
- c. Heater rooms shall only contain equipment for heating, water supply, switchboard, or facilities for unloading an incinerator, and shall not be used for any other purpose.
- d. Interior doors to heater rooms shall be of the same fire resistancy required for the segregating partitions, and shall be equipped with a positive self-closing device. Such doors shall have no hold-open devices, and shall be kept closed at all times.
- e. Furnaces, boilers and other fired units shall be vented to a chimney by means of a reasonably gas-tight smoke pipe. The chimney shall be properly constructed of brick, solid block masonry, or reinforced concrete.
- f. Oil burners—See Section 172-1-60.
- g. Space heaters—See Section 172-1-61.

SEC. 172-1-158. SERVICE AREAS

- a. Incinerators within buildings shall be segregated from all other occupancies by construction having a fire-resistant rating of not less than 30 minutes, with a door of the same fire resistancy having a positive self-closing device.
- b. Space used for storage of tractors, power mowers, or other equipment having internal combustion engines shall be segregated from all other occupancies by construction

having a fire-resistant rating of not less than one hour, and shall be accessible only from outside the building.

- c. Trash and rubbish chutes not connected directly to an incinerator in combustible buildings shall be protected by automatic sprinklers, and the doors shall be of not less than 30-minute fire-resistant construction, equipped with self-closing devices; or the shaft shall be discontinued from use and sealed horizontally at each floor level by construction equal to the adjacent floor.

SEC. 172-1-159. ELEVATORS AND DUMB-WAITERS

- a. Shafts and control rooms thereof shall be of noncombustible construction having a fire-resistant rating of at least two hours. No openings shall be allowed through the shaft for ventilator or other purposes, except necessary doors. All doors shall be of closed or solid construction, and shall be reasonably smoke-tight when closed.

(Note: State Department of Labor regulations pertaining to the construction, operation and maintenance of elevators and dumb-waiters must also be complied with.)

SEC. 172-1-160. VERTICAL OPENINGS

- a. *Abandoned ducts, ventilating ducts and shafts*
No vertical shaftway shall be used for storage purposes. Access doors to same shall be 30-minute fire resistant, and shall be kept locked.

b. *Light wells*

Open light wells, or other similar openings, within a school building shall not be permitted. Any such openings now existing shall be enclosed vertically at each floor level with construction having a fire-resistant rating of not less than 30 minutes; except that such enclosures may contain panes of quarter-inch wired glass not over nine square feet each in area, securely mounted in noncombustible frames; or may be floored over horizontally by construction equal to the adjacent floor.

SEC. 172-1-161. GYMNASIUMS

Gymnasiums, whether or not provided with spectator seating, auditoriums and cafeterias, are classed as places of assembly, and are to be in accordance with Article I of this Code.

SEC. 172-1-162. EXITS

- a. Each floor level of a school shall have two exits, stairways or approved fire-escapes, or combination thereof, in sufficient total width to fulfill the requirements of Section 172-1-169, EXITS DETERMINATION.

e. Egress doors from corridors or stairway enclosures, which have locking or latching devices, shall have panic hardware which will permit the door to open with a single motion when pressure is applied to the releasing device in the direction of egress travel.

f. Where double-leaf doorways are used in stairway enclosures, they shall be equipped with a mullion or astragal which will provide a reasonably tight closure, but which will not interrupt a complete self-closing operation.

g. Interior doors to stairways 44 inches or over in width shall provide as a minimum one 30-inch leaf for each 22 inches of stairway width. Where stairs are less than 44 inches in width, a single-leaf door shall be not less than 30 inches in width.

h. All interior doors in stairway enclosures required to have a fire-resistant rating shall be not less than 30-minute fire resistant. Such doors may be of solid wood planking or built-up plywood with solid core, not less than 1¾ inches thick. Wired glass ¼ inch thick in a single pane, or smaller panes totaling not over 6 square feet, may be used in such doors. These doors shall be equipped with suitable self-closing devices, maintained in operating condition to keep the doors closed. No such door shall be equipped with a device for holding same in an open position.

SEC. 172-1-165. STAIRWAYS

a. All required egress stairways shall lead directly to the outside or to a protected passageway which connects the stairs directly to the outdoors. Such stairways and protected passageways shall be enclosed and segregated from other portions of buildings by materials with a fire-resistant rating of not less than 30 minutes.

b. All existing stairways approved as an inside means of egress shall have stair treads not less than 8 inches in width, exclusive of nosing, and risers shall not exceed 8½ inches in height.

c. All stairways in approved egress passages shall be provided with landings at least 30 inches in depth between the nosing of the top or bottom stair and the door opening.

d. Winding stairs shall not be allowed in approved means of egress.

e. All egress stairways shall have suitable handrails on both sides, and at the center of stairs that are wider than 88 inches. There shall be no more than 66 inches between adjacent handrails, except stairways less than 3 feet in width may have but one handrail. Handrails shall be attached at a height of between 2 feet 6 inches and 2 feet

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b. Exits or stairs shall be so located that no doorway of a pupil-occupied space shall be more than 100 feet from one such exit or stairway. There shall be a minimum of two such stairways or exits from each story, located as remotely as possible from each other.

c. No pockets or dead-ends shall be permitted in corridors, except when all stairways are enclosed at each floor level. Such pockets or dead-ends may be permitted when they do not exceed 40 feet in length and do not serve a total occupancy of more than 60 pupils.

d. Where courts occur which are enclosed on all sides, and the required exits from rooms or spaces exit into the courts, an exit from the court to the exterior perimeter of the building shall be provided. This exit shall be segregated from all building occupancies by construction having a fire-resistant rating of not less than 30 minutes.

SEC. 172-1-163. CORRIDORS (INCLUDING EGRESS PASSAGEWAYS)

a. Corridors used as a means of egress from pupil-occupied areas shall not be less than 36 inches in unobstructed width.

b. *Decorative and acoustical materials*

All combustible decorative and acoustical material, including textile floor coverings and curtains, located in corridors, passageways, stairways and lobbies, shall be rendered and maintained flame resistant. This regulation shall not be construed to prohibit the use of wall or ceiling coverings and effective decoration of the wall or ceiling, provided the surface will not be readily flammable and will not carry or communicate fire.

SEC. 172-1-164. Doors

a. All doors from pupil-occupied spaces, except toilets, shall swing in the direction of egress travel. Minimum door dimensions shall be not less than 30 inches wide.

b. Doors leading from school rooms or pupil-occupied spaces into a hall or corridor shall not, during school hours, be locked, bolted or secured in any other manner than by a spring which will readily yield to pressure from the inside or by the turning of a knob.

c. No sliding door, vertical lift door, revolving door or folding partition shall be used as a closure for a required means of egress; except folding gates may be used to segregate portions of the building.

d. Doors swinging in two directions, known as a double-swing, shall not be used as closures for a required means of egress.

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9 inches vertically above the intersection of the treads and risers.

f. There shall be no closets or other storage areas within stair enclosures or beneath stairways used for storage purposes of any kind.

SEC. 172-1-166. SMOKE BARRIERS

a. Stairways serving one or more stories above the first shall be segregated from the corridors at all floor levels, except the uppermost floor, by means of a smoke barrier.

b. Stairways from basements shall be segregated from the first floor corridor and means of egress by a smoke barrier.

c. The smoke barrier between stairways and corridors shall be constructed of 30-minute fire-resistant material, and may have securely mounted wired glass panes not exceeding 9 square feet each in area.

d. All corridors served by stairs, unenclosed at that level and being over 300 feet in length, shall be divided into two approximately equal sections by smoke barriers. Such barriers shall be similar in construction to partitions and doors separating stairways from corridors, except that 50 per cent of the doors therein shall swing in each direction.

SEC. 172-1-167. FIRE-ESCAPES

Fire-escapes on existing buildings shall be designed and erected in conformance with Section 4093 of the 1949 revision of the General Statutes and Article III, Section 172-1-43 through 172-1-56, inclusive, of the Fire Safety Code.

SEC. 172-1-168. STAGES

All drapes and scenery shall be rendered and maintained flame resistant.

SEC. 172-1-169. EXITS DETERMINATION

a. Required width of exits and stairs or fire-escapes shall be computed in accordance with the following:

(1) Occupancy shall be determined by actual count of pupils or, where this is impracticable assume one pupil for 40 square feet of gross floor area, not including places of assembly (which are to be computed according to Article I of this Code).

(2) Approved egress stairways or fire-escapes shall provide a total aggregate width in 22-inch increments, in accordance with the following table:

<i>Number of Pupils in Area of Greatest Occupancy Served by Stairs</i>	<i>Total Width of Stairs</i>
60	22"
120	44"
180	66"
240	88"
300	110"
360	132"
420	154"
480	176"
540	198"
600	220"
660	242"
720	264"
780	286"

(3) Exit to the outside shall provide one door for each 100 persons or major fraction thereof on that floor, plus one door for each 100 persons or major fraction thereof that required stairs are designed to accommodate.

(4) Exits required for places of public assembly may, if appropriately located, be used jointly as required exits for ordinary school occupancy where total occupancy of the building at any one time will not exceed the largest capacity calculated under either Article I or this Article.

SEC. 172-1-170. FIRE ALARM SYSTEMS

a. A fire alarm system shall be installed in every school building.

b. The operation of any manual fire alarm sending station or automatic fire detecting unit shall cause the simultaneous operation of all alarm sounding devices continually, until the tripped station is restored to normal operation, or the simultaneous operation of all alarm sounding devices for a complete cycle of not less than 30 seconds has taken place.

c. Alarm sending stations shall be located in each corridor of each story, so that from any corridor door not more than 100 feet will have to be traversed in order to reach a sending station.

d. All manual sending stations shall be located not more than 5 feet above the floor, and at ready, accessible and visible points, which shall not be obstructed. All alarm sending stations shall be clearly marked "FIRE ALARM" and shall be painted a distinctive red color.

e. Automatic fire detectors shall be installed in boiler rooms, kitchens, and other hazardous areas where it is deemed necessary. Automatic fire detectors will not be required in buildings completely protected by an automatic sprinkler system or in one-story buildings having an occupancy of not more than 75 pupils.

f. Connections of school fire alarm systems to municipal alarm systems, central stations or direct connected supervised systems shall be located on the outside of the building. If located in the building, the alarm sending station shall be designed to sound the school alarm system when actuated.

g. Fire drills shall be conducted at least once each month by use of the fire alarm system.

h. New fire alarm systems shall comply with Section 172-1-149.

Sec. 172-1-171. EXIT SIGNS

a. For places of assembly see Section 172-1-19.

b. Signs bearing the word "EXIT" shall be placed at each exit from a corridor. Where an exit and/or its sign is not clearly visible from every point in the corridors served, an adequate number of directional signs shall be provided, bearing the word "EXIT" and an arrow pointing in the direction of such exit.

c. Exit and directional signs shall have letters at least $4\frac{1}{2}$ inches high, with strokes and arrows at least $\frac{3}{4}$ inch in width.

d. Exit and directional signs shall be clearly legible at all times.

Sec. 172-1-172. EMERGENCY LIGHTING

a. Adequate artificial lighting shall be provided for the lighting of all places of assembly, corridors, passageways, stairways, ramps, fire-escapes and other means of egress leading directly to the outside.

b. An automatic, independent, secondary source of power for illumination shall be provided for the reasonable lighting of all places of assembly and the corridors, passageways, stairways, ramps, fire-escapes and other means of egress direct to the outside from such places of assembly. This secondary lighting system shall be termed herein as emergency lighting.

c. Emergency lighting shall not be required for places of assembly which are not used in the night season, or for places which do not exceed 1500 square feet of floor area and are so located that at least one exit is direct to the outside and within five feet of grade.

d. Acceptable types of emergency lighting systems are as follows:

TYPE A—A self-contained unit with attached heads, powered by dry cell batteries, wired to circuits supplying energy for normal lighting in the areas being protected.

TYPE B—A self-contained unit with a storage battery of 12 volts or less with an automatic charger, attached heads and wired to circuits supplying energy for normal lighting in the areas being protected.

TYPE C—A self-contained unit of storage batteries of 24, 36 or 48 volts operating completely with relays and automatic charger for remote lighting.

TYPE D—A centrally located storage battery of 120 volts complete with automatic charging panel and automatic transfer switch.

TYPE E—An automatically started engine generator set, of the correct capacity for generating the energy required for the full emergency illuminating load.

e. Wiring of all emergency lighting systems shall be so arranged as to throw on the emergency lighting automatically which protects the places of assembly and all exit passageways, corridors, stairways, ramps, fire-escapes and all other means of egress direct to the outside from such places of assembly when the artificial lighting for any such area fails.

f. All wiring for emergency lighting shall be in separate raceways independent of all other wiring, and shall comply in every respect with proper and accepted standards.

g. All emergency lighting systems shall be designed and maintained to provide not less than 30 minutes of reasonable illumination at all locations required to be lighted under this section. Equipment for such power shall include a volt meter or hydrometer and a switch, so arranged and located as to be reasonably convenient and reliable for the testing of available power.

h. *Battery systems of over 50 volts.*

In such systems the battery and charging equipment shall be housed in a separate room of noncombustible construction, adequately vented directly to the out-of-doors and secure against unauthorized entry.

i. *Motor generator sets.*

Motor generator sets shall be housed in a separate masonry enclosure of 2-hour fire-resistant construction with a kalamein door secure against unauthorized entry; the door sill shall be 6 inches above the floor; the room shall be adequately ventilated directly to the out-of-doors and the exhaust from the motor shall be installed in accordance with accepted safe practices.

SEC. 172-1-173. HOUSEKEEPING

All school buildings shall be kept clean and in tidy condition and free from accumulation of combustible debris or other waste material.

SEC. 172-1-174. STORAGE OF FLAMMABLE LIQUIDS

See Regulations Covering the Storage and Transportation of Flammable Liquids, Department of State Police.

SEC. 172-1-175. FIRE EXTINGUISHERS

- a. A 2½ gallon soda acid or equivalent Class A fire extinguisher shall be located in corridors so that a person will not have to travel more than 100 feet from any room door to reach the nearest extinguisher.
- b. A 2½ gallon soda acid or equivalent Class A fire extinguisher shall be located on the stage and in the boiler room; except in boiler rooms using oil-fired equipment, a 2½ gallon foam or equivalent Class B extinguisher shall be provided.

ARTICLE IX*
BOARDING HOMES

SEC. 172-1-176. GENERAL

The regulations contained in this article shall apply to all boarding homes as defined in Sec. 172-1-5, except such places as are expressly exempt in accordance with the provisions of this Code.

SEC. 172-1-177. CONSTRUCTION

Every boarding home hereafter constructed and every addition hereafter made to a boarding home shall be of noncombustible construction throughout, having a fire-resistant rating of not less than one hour if more than one story in height above the basement.

SEC. 172-1-178. ** SPRINKLER SYSTEMS AND USE OF COMBUSTIBLE BUILDINGS

In combustible buildings presently used as boarding homes and buildings hereafter converted to boarding homes, the

* Adopted April 27, 1954

**As Amended August 10, 1954

first and second stories may be used as such; and the third story only in buildings completely protected by a system of automatic sprinklers installed and maintained in accordance with proper and accepted standards. No building may be used as a boarding home if it is more than three stories in height above the basement and of combustible construction. An unoccupied area immediately below the roof shall not be considered as a story in the application of this section.

SEC. 172-1-179. OTHER OCCUPANCIES

Boarding home buildings shall not contain an occupancy which is not within the immediate control of the boarding home management, and/or which is not incident to the administrative convenience or necessity, or pertinent to public health.

SEC. 172-1-180. ROOFS

Roofs of boarding homes shall be covered with roofing which is not readily flammable.

SEC. 172-1-181. MAXIMUM POSSIBLE OCCUPANCY

The number of boarders housed in each room shall not exceed the rate of one person for each 75 square feet therein. The total boarder occupancy for each story as determined in this manner shall be termed as the maximum possible occupancy.

SEC. 172-1-182. EGRESS FACILITIES REQUIRED

a. Each story of every building used as a boarding home shall have at least two approved means of egress from each story. Each boarder-occupied room shall have at least one doorway opening directly to the outside or to a corridor leading directly, or by stairway, to the outside. Exits shall be located remote from each other, providing the best practicable means of egress for all occupants in the event fire renders one exit impassable.

b. In all buildings, at least one passageway from each story shall lead directly to the outdoors or through an enclosed stairway or enclosed passageway or a combination of such stairway and passageway shall lead to the outside. Where necessary, one such stairway or passageway may be allowed to lead into an open space or lobby which has ample egress openings to the outside.

SEC. 172-1-183. EGRESS PASSAGEWAYS

a. Corridors and passageways from boarder-occupied rooms leading to egress stairways and then to the outside shall not be less than 48 inches in width in new buildings or additions to existing buildings and not less than 32 inches in existing buildings.

b. Corridors and passageways considered as approved means of egress shall be at least 78 inches in height.

c. Access to all interior and outside stairways, to fire-escapes and other exits considered as approved means of egress, shall be unobstructed and shall not be through a bathroom or a room used for any other purpose that may obstruct free passage, nor shall access be veiled from open view by ornamentation, curtains or other appurtenances.

SEC. 172-1-184. TRANSOMS

Transoms and other similar openings in corridors and passageways shall not be allowed in new construction. Existing transoms and like openings in corridors and passageways shall be permanently sealed and made fire-resistant equal to the related door or sidewall construction.

SEC. 172-1-185. VERTICAL OPENINGS

In all existing buildings, interior stairways constituting approved egress passageways shall be enclosed or segregated from other portions of the building by materials with a fire-resistant rating of not less than 30 minutes. All other vertical openings throughout such buildings shall be enclosed by materials with a fire-resistant rating of not less than 30 minutes.

SEC. 172-1-186. STAIRWAYS

a. Stairways in approved egress passages in existing buildings shall be not less than 30 inches in width, and in new buildings and additions to existing buildings such stairways shall be not less than 44 inches in width.

b. All stairways in egress passages shall have suitable handrails on both sides.

c. Existing stairways in required egress passages shall be provided with landings at least 30 inches in depth between the nosing of the top or bottom riser and the door openings. New stairways shall have landings at least 44 inches in depth. Intermediate landings shall be not less than the width of the stairway.

d. Stair treads in inside required egress stairways in existing buildings shall be not less than 8 inches in width exclusive of nosing, and risers shall not exceed 8½ inches in height. In new buildings such stair treads shall not be less than 9½ inches in width, exclusive of nosing, and risers shall not exceed 7¾ inches in height. Treads and risers shall be of uniform width and height in each individual stairway run.

e. No arrangement of treads known as "winders" shall be allowed in approved egress stairways.

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f. Ramps may be substituted for stairs in new and existing buildings, and the grade shall not exceed one foot in 10 feet of run.

SEC. 172-1-187. DOORS AND DOORWAYS

a. All doorways which are an approved means of egress shall be at floor level in new structures, and as near thereto as practicable in existing structures.

b. All egress doors to the outside or into stairways or passages leading to the outside shall open out in the direction of egress travel, but this regulation shall not be construed as requiring doors from boarder-occupied rooms to open into corridors. There shall be no obstruction at any time to the opening or closing of egress doors.

c. All egress doors in existing buildings shall be at least 30 inches in width. Egress doors in new buildings serving stairways 44 inches in width or over shall be not less than 36 inches in width.

d. Egress doors into stairway enclosures and all doors serving stairways and other vertical openings shall be equipped with self-closing devices designed, installed and maintained to automatically close such doors when not in use. All interior egress doors providing access to corridors and stairway enclosures shall be not less than 30-minute fire-resistant. In new buildings such doors may be of solid wood planking or built up with solid core construction not less than 1¾ inches thick. Wired glass ¼ of an inch thick in the single pane, or smaller panes totaling not over 6 square feet may be used in such doors.

e. All egress doors shall be equipped with hardware which will insure opening of such doors by a single motion, such as the turning of a knob or pressure of a latch with normal strength, or equipped with panic hardware which will release when pressure is applied to the releasing device in the direction of exit travel.

f. No such door shall be equipped with a lock, latch, bolt or other fastening device which will allow for locking such door against opening from within or which will require a second operation or motion to open such door for egress purposes. No door to a boarder-occupied room shall be equipped with a locking device.

g. No sliding door, vertical lift door, revolving door or folding partition shall be used as a closure for a required means of egress.

SEC. 172-1-188. FIRE-STOPPING

Exterior walls of frame construction and interior stud partitions shall be fire-stopped by a 2 inch thick timber or

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plate or masonry filling completely closing any possible vertical opening at the ceiling of the basement.

SEC. 172-1-189. CLOSETS AND STOREROOMS

All closets or compartments which are used for the storage of cleaning or polishing compounds or implements shall be fire-resistant for at least 30 minutes from within such closet or compartment including the door thereof, which door shall be equipped with a self-closing device, or shall be equipped with proper and adequate automatic fire extinguishing equipment or automatic fire detectors.

SEC. 172-1-190. INCINERATORS

Incinerators within buildings shall be loaded and fired from a vestibule or compartment segregated from the rest of the building by noncombustible construction having a fire-resistant rating of not less than two hours, having a Class B fire door equipped with a suitable closing device. Ventilating openings shall be provided direct to the outside from such enclosures equivalent to not less than twice the area of the flue of the incinerator.

SEC. 172-1-191. EXIT SIGNS

a. Signs bearing the word "EXIT" shall be placed at each approved egress doorway and shall be so installed as to be legible at all times from the direction of travel thereto. Where such doorways and signs are not readily discernible from boarder-occupied rooms, an adequate number of additional signs shall be provided bearing the term "EXIT" and an arrow pointing in the direction of exit travel.

b. Exit signs shall bear letters at least $4\frac{1}{2}$ inches in height with strokes not less than $\frac{3}{4}$ of an inch in width.

SEC. 172-1-192. ILLUMINATION OF EXIT PASSAGES

Adequate lighting shall be provided at all times for the lighting of corridors, stairways, passageways, ramps and fire-escapes.

SEC. 172-1-193. EMERGENCY LIGHTING

a. An automatic, independent, secondary source of power for illumination shall be provided for the reasonable lighting of all corridors, passageways, stairways, ramps, fire-escapes and other means of egress direct to the outside from boarding homes housing 25 or more boarders. This secondary lighting system shall be termed herein as emergency lighting.

b. Acceptable types of emergency lighting systems are:

TYPE A—A self-contained unit with attached heads, powered by dry cell batteries, wired to cir-

cuits supplying energy for normal lighting in the areas being protected.

TYPE B—A self-contained unit with a storage battery of 12 volts or less with an automatic charger, attached heads and wired to circuits supplying energy for normal lighting in the areas being protected.

TYPE C—A self-contained unit of storage batteries of 24, 36 or 48 volts operating completely with relays and automatic charger for remote lighting.

TYPE D—A centrally located storage battery of 120 volts, complete with automatic transfer switch.

TYPE E—An automatically started engine generator set of the correct capacity for generating the energy required for the full emergency illuminating load.

c. Wiring of all emergency lighting systems shall be so arranged as to throw on the emergency lighting automatically which protects all corridors, passageways, stairways, ramps, fire-escapes and all other means of egress direct to the outside when the artificial lighting for any such areas fails.

d. All wiring for emergency lighting shall be in separate raceways independent of all other wiring and shall comply in every respect with proper and accepted standards.

e. All emergency lighting systems shall be designed and maintained to provide not less than 30 minutes of reasonable illumination at all locations required to be lighted under this section. Equipment for such power shall include a volt meter or hydrometer, and a switch so arranged and located as to be reasonably convenient and reliable for the testing of available power.

f. *Battery systems of over 50 volts*—In such systems the battery and charging equipment shall be housed in a separate room of noncombustible construction, adequately vented directly to the out-of-doors, and secure against unauthorized entry.

g. *Motor generator sets*—Motor generator sets shall be housed in a separate masonry enclosure of two-hour fire-resistant construction with a Class B type door secured against unauthorized entry. Frames of doors shall be kalamein, steel buck or structural steel. The door sill shall be 6 inches above the floor. The room shall be adequately ventilated direct to the out-of-doors, and the exhaust from

the motor shall be installed in accordance with accepted safe practices.

SEC. 172-1-194. FIRE ALARMS

a. A fire alarm system shall be provided with suitable alarm sounding devices of such character and so located as to be audible throughout the corridors of each story occupied in the boarding home. Adequate alarm sending devices shall be suitably located in each story convenient for operation by the occupants.

b. Approved automatic fire detectors shall be located in all kitchens and boiler rooms to operate the building alarm system from a temperature not higher than 165 degrees Fahrenheit in kitchens and not more than 212 degrees Fahrenheit in boiler rooms. Automatic fire detectors will not be required in buildings protected by a sprinkler system.

c. A telephone or other suitable alarm sounding device shall be provided as a means of communicating an alarm of fire to the Fire Department. Pay station telephones will not be approved for this purpose.

SEC. 172-1-195. DECORATIVE AND ACOUSTICAL MATERIALS

All combustible decorative and acoustical material, including curtains located in corridors, passageways, stairways, lobbies and other rooms or spaces for general boarder or public use shall be rendered and maintained flame-resistant.

SEC. 172-1-196. WALL AND CEILING SURFACES

The wall and ceiling surfaces of all corridors, egress passages and stairway enclosures shall be of such material and so treated that they will not be readily flammable and will not carry or communicate fire.

SEC. 172-1-197. HAZARDOUS OCCUPANCIES

No motor vehicle or other device which may originate or communicate fire shall be stored within boarding homes.

SEC. 172-1-198. FIRE EXTINGUISHERS

All boarding homes shall be provided with proper type fire extinguishing equipment adequate for the conditions involved and suitably located.

SEC. 172-1-199. SPACE HEATERS

Space heaters or above-the-floor devices for the direct heating of the space in and adjacent to that in which the device is located shall not be used. (See Sec. 172-1-61.)

SEC. 172-1-200. HEATING EQUIPMENT

a. Central heating plants, steam boilers, and oil-fired water heaters shall be segregated from all other occupancies

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by walls, ceilings and floors having a fire-resistant rating of not less than 30 minutes in existing combustible buildings, and which shall provide a reasonably smoke-tight enclosure. In new construction and in noncombustible buildings, such enclosure shall be of noncombustible construction having a fire-resistant rating of not less than two hours.

b. Such enclosures for heating equipment shall be provided with adequate vents direct to the outside sufficient for proper combustion and exhaust. Ventilating openings shall be provided having a total area equal to not less than twice the flue outlet of the heating plant. Such opening shall be maintained in an open position with fixed louvers.

c. Heater rooms shall only contain equipment for heating, water supply and switchboard and shall not be used for any other purpose.

d. Interior doors to heater rooms in combustible buildings shall be of not less than 30 minute fire-resistant construction and shall be equipped with a positive self-closing device. In new construction, the heater room doors shall be Class B type doors swinging into the heater room and equipped with a positive self-closing device. Such doors shall have no hold-open device and shall be kept closed at all times.

e. The furnaces, boilers and other fired units shall be vented by means of reasonably gas-tight smoke pipes or breechings connected properly to a chimney constructed of brick, solid block masonry or reinforced concrete with suitable flue lining properly erected and maintained in a safe condition.

f. Oil burners—See Sec. 172-1-60.

SEC. 172-1-201. HOUSEKEEPING

All boarding home premises and other occupancies within buildings containing boarding homes shall be kept clean and in a tidy condition and free from accumulation of combustible debris or other waste material.

SEC. 172-1-202. ATTENDANTS REQUIRED

a. Each boarding home housing 25 or less boarders shall have at least one attendant in residence at all times. One additional attendant shall be in residence at all times for more than 25 and not more than 50 and one additional attendant for each 25 or part in excess thereof.

b. Attendants as required herein shall be at least 18 years of age and capable of performing the required duties of evacuation. No person other than the management or a person under management control shall be considered as an attendant.

SEC. 172-1-203. EVACUATION PLAN AND DRILLS

Each boarding home management shall formulate a

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plan and be responsible for the protection of all boarders in the event of fire and their evacuation to areas of refuge or from the building when necessary. All employees shall be instructed and kept informed respecting their duties under the plan.

ARTICLE X • ROOMING HOUSES

SEC. 172-1-204. GENERAL

The regulations contained in this Article shall apply to all rooming houses as defined in Section 172-1-5.

SEC. 172-1-205. EGRESS FACILITIES REQUIRED

a. Each story of every building used as a rooming house shall have at least two means of egress. Exits shall be located remote from each other, providing the best practicable means of egress for all occupants in the event fire renders one exit impassable.

b. Each occupied room shall have at least one door opening directly to the outside or to a corridor or stairway leading directly to the outside.

SEC. 172-1-206. EGRESS PASSAGEWAYS

a. Corridors and passageways leading to stairways and then to the outside shall be not less than 30 inches in width.

b. Corridors and passageways considered as approved means of egress shall be at least 78 inches in height.

c. Except in existing rooming houses, access to all interior and outside stairways, fire-escapes, and other exits considered as approved means of egress shall be through a door from floor level and shall be unobstructed and shall not be through a bathroom or a room used for any other purpose.

d. In existing rooming houses, access to fire-escapes and outside stairways shall be unobstructed and shall provide safe, adequate and convenient means of exit.

SEC. 172-1-207. STAIRWAYS

a. Stairways in approved egress passageways shall be not less than 30 inches in width.

b. All stairways in egress passages 30 inches in width shall have a suitable handrail on one side. Stairways greater than 36 inches in width shall have a suitable handrail on both sides.

c. Stair treads in approved inside egress stairways shall be not less than 8 inches in width, exclusive of nosing, and risers shall not exceed 8½ inches in height. In new buildings, such stair treads shall be not less than 9½ inches in width, exclusive of nosing, and risers shall not exceed 7¾ inches in height. Treads and risers shall be all uniform width and height in each individual stairway run in new construction.

Adopted August 10, 1954

SEC. 172-1-208. DOORS AND DOORWAYS

a. Doorways which are of themselves or are a part of a means of egress in new buildings and buildings hereafter converted to a rooming house shall be at floor level and shall be not less than 2 feet 6 inches in width and not less than 6 feet 6 inches in height.

b. Windows shall not be considered as a means of egress in new buildings or buildings hereafter converted to rooming houses. In existing rooming houses, windows will be approved as means of egress provided they can be opened to give a clear unobstructed width of not less than 2 feet 6 inches and a height of not less than 3 feet.

c. Egress doors to the outside shall be equipped with hardware which will insure the opening of such door from within at all times.

SEC. 172-1-209. FIRE-STOPPING

Exterior walls of frame construction and interior stud partitions shall be fire-stopped by a 2 inch thick timber or plate or masonry filling, completely closing any possible vertical opening at the ceiling of the basement.

SEC. 172-1-210. EXIT SIGNS

a. Signs bearing the word "EXIT" shall be placed at each approved means of egress from each story, and shall be so installed as to be legible at all times from the direction of travel thereto. Where such doorways and signs are not readily discernible from corridors, an adequate number of additional signs shall be provided bearing the term "EXIT" and an arrow pointing in the direction of exit travel.

b. Exit signs shall bear letters at least 4½ inches in height with strokes not less than ¾ inch in width.

SEC. 172-1-211. ILLUMINATION OF EXIT PASSAGES

Adequate lighting shall be provided for the lighting of corridors, stairways, egress passages, fire-escapes and other means of egress leading directly to the outside at all times.

SEC. 172-1-212. FIRE EXTINGUISHERS

All rooming houses shall be provided with proper type fire extinguishing equipment adequate for the area involved, and suitably located.

SEC. 172-1-213. HOUSEKEEPING

a. All rooming house premises and other occupancies within buildings containing rooming houses shall be kept clean and in a tidy condition, and free from accumulation of combustible debris or other waste material.

b. All corridors, passageways, stairways and fire-escapes shall be kept free and clear of all storage at all times.

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ARTICLE XI* CHILD DAY CARE CENTERS

SEC. 172-1-214. GENERAL.

The regulations contained in this article shall apply to all buildings in which are located child day care centers as defined in Section 172-1-5, except when such child day care centers are located in occupancies defined as "Boarding Home," "Place of Assembly," and "Schools" in Section 172-1-5 and regulated respectively by Article IX, Article I, Article VII, and Article VIII of the Fire Safety Code.

SEC. 172-1-215. HEATING EQUIPMENT

a. Central heating plants, steam boilers and oil-fired water heaters shall be segregated from all other occupancies by walls, ceiling and floor having a fire-resistant rating of not less than 30 minutes, which shall provide a reasonably smoke-tight enclosure. In new buildings the enclosure shall be of not less than one-hour fire-resistant construction.

b. Such enclosure for heating equipment shall be provided with adequate vents direct to the outside sufficient for proper combustion and exhaust. Ventilating openings shall be provided having a total area equal to not less than twice the flue outlet of the heating plant. Such opening shall be maintained in an open position with fixed louvers.

c. Heater rooms shall contain only equipment for heating, water, and/or switchboard, and shall not be used for any other purposes.

d. Interior doors to heater rooms shall be of the same fire resistancy required for segregating partitions, and shall be equipped with a positive self-closing device. Such doors shall have no hold-open devices, and shall be kept closed at all times.

e. Furnaces, boilers, and other fired units shall be vented to a chimney by means of a gas-tight smokepipe. The chimney shall be constructed of brick, solid block masonry reinforced concrete or stone, with suitable flue lining erected and maintained in a safe condition.

f. Oil Burners. See Section 172-1-60.

SEC. 172-1-216. INCINERATORS

Incinerators within buildings shall be loaded and fired from a vestibule or compartment segregated from the rest of the building by noncombustible construction having a fire-resistant rating of not less than two hours, having a Class B fire door equipped with a positive self-closing device and with no hold-open device. Ventilating openings shall be provided direct to the outside from such enclosures equivalent to not less than twice the area of the flue of the incinerator.

* Adopted January 11, 1953

SEC. 172-1-217. SPACE HEATERS

Space heaters or above-the-floor devices for the direct heating of space in and adjacent to that in which the device is located shall not be used. (See Section 172-1-61).

SEC. 172-1-218. HAZARDOUS OCCUPANCY

No child day care center shall be located in a building containing any manufacturing, commercial occupancy, or occupancy which is not within immediate control of the management, or which contains materials and/or equipment of high hazard.

SEC. 172-1-219. USE OF COMBUSTIBLE BUILDINGS

In combustible buildings presently used as child day care centers only the first and second stories may be used as such. In combustible buildings hereafter constructed for or converted to child day care centers only the first story may be so used except that in buildings completely protected by a system of automatic sprinklers installed and maintained in accordance with proper standards the second story may be so used.

SEC. 172-1-220. EGRESS FACILITIES REQUIRED

a. In buildings used as child day care centers there shall be at least two approved means of egress from each occupied level. Each room used for child day care center activity shall have at least one doorway opening directly to the outside or to a corridor or space having access to two means of egress directly to the outside. Exits shall be located remote from each other, providing the best practical means of egress for all occupants in the event fire renders one exit impassable.

b. In all buildings at least one passageway from each occupied level shall lead directly to the outdoors or through an enclosed stairway or enclosed passageway or a combination of such stairway and passageway to the outside. Where necessary, one such stairway or passageway may be allowed to lead through an open space or lobby which has ample egress opening to the outside.

SEC. 172-1-221. EGRESS PASSAGEWAYS

a. Corridors and passageways from occupied rooms leading to egress stairways and then to the outside shall be not less than 30 inches in width.

b. Access to all interior and outside stairways to fire-escapes and other exits considered as approved means of egress shall be unobstructed and shall not be through a bathroom or a room used for any other purpose that may

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obstruct free passage, nor shall access be veiled from open view by ornamentation, curtains or other appurtenances.

SEC. 172-1-222. VERTICAL OPENINGS

a. In all buildings, interior stairways constituting approved egress passageways shall be enclosed and segregated from other portions of the building by materials with a fire-resistant rating of not less than 30 minutes. All other vertical openings shall be enclosed by materials with a fire-resistant rating of not less than 30 minutes.

b. No enclosure will be required for any stairway leading to a story above that is not occupied or used as a child day care center or purposes incidental thereto.

SEC. 172-1-223. STAIRWAYS

a. Stairways in approved egress passages in existing buildings shall be not less than 30 inches in width.

b. All stairways in approved egress passages shall have stair treads of not less than 8 inches in width exclusive of nosing, and risers shall not exceed 8½ inches in height.

c. All stairways in approved egress passages shall be provided with landings at least 30 inches in depth between the nosing of the top or bottom riser and the door opening.

d. No arrangement of treads known as "winders" shall be allowed in approved egress stairways.

e. All egress stairways shall have suitable handrails on both sides. Handrails shall be attached at a height between 2 feet and 2 feet 6 inches vertically above the intersection of the treads and risers at the nosing.

f. There shall be no closets or other storage areas within stair enclosures or beneath stairways used for storage of any kind.

SEC. 172-1-224. DOORS AND DOORWAYS

a. All doorways which are approved means of egress shall be at floor level.

*b. All egress doors to the outside or into stairways or passageways leading to the outside shall open out in the direction of egress travel, but this regulation shall not be construed as requiring doors from children-occupied rooms to open into the corridors. There shall be no obstruction at any time to the opening or closing of egress doors.

c. All egress doors shall be at least 28 inches in width.

d. Egress doors into stair enclosures, and all doors serving stairways or other vertical openings shall be equipped with self-closing devices designed, installed and maintained to automatically close such doors when not in use. All interior egress doors providing access to stairway enclosures shall be not less than 30-minute fire-resistant. Wired glass

¼ inch thick in a single pane or smaller panes totalling not over 6 square feet may be used in such doors.

e. All egress doors shall be equipped with hardware which will insure opening of such doors by a single motion such as the turning of a knob or pressure of a latch, or shall be equipped with panic hardware which will release when pressure is applied to the releasing device in the direction of exit travel.

f. No egress door from a child-occupied room to stairway enclosures or to the outside shall be equipped with a lock, latch, bolt or other fastening device which will allow for locking such door against opening from within, or which will require a second operation or motion to open such door for egress purposes.

g. No sliding door, vertical lift door, revolving door or folding partition or gate shall be used as a closure for a required means of egress.

SEC. 172-1-225. EXIT SIGNS

a. Signs bearing the word "EXIT" shall be placed at each approved egress doorway from each story, and shall be so installed as to be legible at all times from the direction of travel thereto. Where such doorways and signs are not readily discernible from doors of occupied rooms, an adequate number of additional signs shall be provided with the term "EXIT" and an arrow pointing in the direction of exit travel.

b. Exit signs shall bear letters at least 4½ inches in height with strokes not less than ¾ inches in width.

SEC. 172-1-226. FIRE ALARMS

a. A suitable fire alarm system shall be provided with alarm-sounding devices of such character and so located as to be audible throughout each story occupied in the building. At least one alarm sending device shall be suitably located in each story convenient for operation.

b. Approved automatic fire detectors shall be located in all kitchens and boiler rooms to operate the fire alarm system from a temperature not higher than 165 degrees Fahrenheit in kitchens and not more than 212 degrees Fahrenheit in boiler rooms.

c. A telephone or other suitable alarm sending device shall be provided as a means of communicating an alarm of fire to the Fire Department. Pay station telephones will not be approved for this purpose.

SEC. 172-1-227. FIRE-STOPPING

Exterior walls of frame construction and interior stud partitions shall be completely fire-stopped by a timber of

not less than two inches in thickness or other suitable non-combustible material completely closing any possible vertical openings, open joist channels and stud spaces, at the ceiling of the basement.

SEC. 172-1-228. FIRE EXTINGUISHERS

All child day care centers shall be provided with proper type fire extinguishing equipment adequate for the conditions involved and suitably located.

SEC. 172-1-229. HOUSEKEEPING

a. All child day care center buildings shall be kept clean and in tidy condition free from the accumulation of combustible debris and other waste material.

b. All corridors, passageways, stairways and fire-escapes shall be kept free and clear of all storage and/or obstructions at all times.

SEC. 172-1-230. EVACUATION

The management of each child day care center shall formulate a plan for the protection of all children in the event of fire or other emergency and their evacuation to areas of refuge outside of the building when necessary. All employees shall be instructed and kept informed respecting their duties under the plan.

DEPARTMENT OF PUBLIC SAFETY
Division of Fire, Emergency and Building Services
Office of State Fire Marshal

From:

1418

Bureau of Engineering

Referred to: Fire Services

Date: 10-21-95 Time: _____

- ☐ Comment
- ☐ Investigate and Advise
- ☐ Necessary Action
- ☐ Please Reply
- ☒ For Your Information
- ☐ Note and Return
- ☐ Prepare Reply for my Signature

Remarks: This copy of
the Fire Safety Code
is reviewed to 01-01-96
is courtesy of Dr. Vesteeg

SP-519-C