## AMENDMENTS TO THE WISCONSIN STATE BUILDING CODE

Effective December 12, 1949

ISSUED BY THE INDUSTRIAL COMMISSION OF WISCONSIN

MADISON, WISCONSIN

#### TABLE OF CONTENTS

Chapter 3—Definitions and Standards Fire Alarm Systems	Order Number 5124	Page
Chapter 5—Structural Requirements Section 2		
Building Brick	_ 5305	4
Section 5		
Wood Construction	_ 5328	5
Chapter 6-Factories and Mercantile Buildings		
Fire Alarm	_ 5416	11
Chapter 7—Theaters and Assembly Halls		
Section 2		
Exits	_ 5507	11
Section 3		
Grandstands, Bleachers, Tents and Places of Outdoor Assembly555		.) 11–16
Chapter 8—Schools		
Floor Space and Ceiling Height	5611	16
Fire Alarms	5619	17
Chapter 9-Apartment Buildings, Hotels, etc.		
Scope	5700	17
Fire Alarm	5722	17

### INDUSTRIAL COMMISSION OF

#### WISCONSIN

VOYTA WRABETZ HARRY J. BURCZYK
Chairman Commissioner

C. L. MILER

Commissioner

#### HELEN E. GILL, Secretary

O. T. NELSON, Director, Safety and Sanitation C. J. CADDELL
Building Engineer

#### AMENDMENTS TO THE BUILDING CODE

The following orders 5124, 5305, 5328, 5416, 5507, 5551, 5552, 5553, 5554, 5555, 5556, 5557, 5558, 5559, 5560, 5561, 5562, 5563, 5564, 5565, 5566, 5567, 5611, 5619, 5700 and 5722 were adopted by the Industrial Commission October 18, 1949 and became effective as a part of the Wisconsin State Building Code December 12, 1949.

#### WISCONSIN STATE BUILDING CODE REVISIONS

#### 1949

#### Order 5124-Fire Alarm Systems.

Interior fire alarm systems required under Orders 5416, 5619, and 5722 shall be designed and constructed in conformity with the following requirements.

All such alarm systems shall consist of operating stations on each floor of the building, including the basement, with bells, gongs or other attention compelling devices, which are effective throughout the building.

Electrical alarm systems shall operate on a closed circuit electric current and shall be so arranged that the operation of any one station will actuate all devices connected to the system.

In buildings more than 3 stories in height, a device shall be provided at one central location to indicate the story of the structure in which the signal originated. All such alarm systems shall be electrically supervised to indicate a failure or serious reduction of operating current.

Operating stations shall be prominently located in an accessible position at all required exit doors and required exit stairways. Boxes at operating stations shall be of an approved type and shall be conspicuously identified. All such boxes shall be of a type, which after being operated, will indicate that an alarm has been sent therefrom until re-set by an authorized means. (A box with a "Break Glass" panel will be acceptable for operating stations.)

Electric wiring in connection with fire alarm systems shall be installed in armored cable, metal raceways or other approved non-

combustible tubing.

All such alarm systems shall be tested at least once every week. Not less than one test each month shall be made in the presence of a member of the fire department and a record of such tests shall be kept by the fire department.

Existing fire alarm systems that are effective in operation will be

accepted if approved by the Industrial Commission.

#### Order 5305-Building Brick.

1. Definition. By Building Brick is meant a structural unit of burned clay or shale, sand lime or concrete, usually solid and about 8 inches by 3% inches by 2% inches in size.

2. Structure. All building brick shall be rectangular in form, free from cracks, laminations and other defects which may interfere with proper laying of the brick or impair the strength or permanence of the structure.

3. Manufacture. Concrete building brick shall be manufactured from a mixture of Portland cement and approved aggregates, such as sand, gravel, crushed stone, bituminous or anthracite cinders, burned clay or shale, or blast furnace slag.

4. Identification. All building brick shall be of distinctive design or appearance, or marked so that the identity of the manufacturer may be known at any time.

5. Strength and Absorption.

(a) The strength and absorption of all building brick manufactured from burned clay or shale shall conform to the following minimum requirements:

	Compressive St (bricks flatw lbs. per square Average Gross	rise) e inch	by 5 hou	bsorption ir boiling cent	C/B	Ratio
Grade	Average of	Indîvidual	Average of	Individual	Average of	Individual
	5 bricks	Minimum	5 bricks	Maximum	5 bricks	Maximum
S.W.	3000	2500	17.0	20.0	0.78	0.89
M.W.	2500	2200	22.0	25.0	0.88	0.90
N.W.	1500	1250	No Limit	No Limit	No Limit	No Limit

Note: The ratio C/B is the ratio of absorption by 24-hour submersion in water at room temperature to that after 5-hour submersion in boiling water.

If the average compressive strength is greater than 8000 pounds per square inch and the average water absorption is less than 8 per cent by weight after 24 hours submersion in cold water, the C/B ratio shall be waived.

Grade S. W. brick shall be used in exterior and exposed locations where a high degree of resistance to frost action is desired and the exposure is such that the brick may be frozen when permeated with water.

Note: Brick used for foundation courses, retaining walls, parapet walls and similar locations shall conform to this grade.

Grade M. W. brick may be used where exposed to temperatures below freezing but where brick are not likely to be permeated with water or where a moderate degree of resistance to frost action is permissible.

Note: Brick conforming to this grade may be used in the face of a wall above grade.

Grade N. W. brick may be used for backup or for interior construction or if exposed for use where no frost action occurs.

(b) The strength of all concrete and sand lime brick used in masonry construction shall conform to the following minimum requirements:

Pounds Per	ve Strength flatwise) Square Inch Fross Ares	Modulus o (bricks Pounds Per	of Rupture flatwise) Square Inch
Average of 5 Tests	Individual Minimum	Average of 5 Tests	Individua Minimum
2500	2000	450	300

6. Tests. Typical specimens of all types of building brick shall be tested originally to prove compliance with the provisions of this code, and all concrete and sand-lime brick shall be retested at intervals of not more than one year. Further tests may be demanded at any time there is reasonable suspicion of non-conformance to the requirements of this code.

The testing of all brick shall be in accordance with the Standard Methods of Testing Brick (A. S. T. M. Designation C 67) of the American Society for Testing Materials.

#### Order 5328-Wood Construction.

1. Quality of Material. The quality and design of all wood used in the construction of all buildings and structures or parts thereof, shall conform to the minimum standards under this section. All members shall be so framed, anchored, tied and braced together as to develop the maximum strength and rigidity necessary for the purpose for which they are used. No member shall be stressed in excess of the strength of its details and connections.

All wood structural members shall be of sufficient quality, size and strength, as to carry their imposed loads safely and without exceeding the allowable working stresses as specified in this order.

The requirements stated are a minimum standard and apply primarily to conventional types of construction.

The substitution of materials other than those called for in the code will be permitted when shown by an approved authority to be equal to or better than those specified.

Workmanship in fabrication, preparation, installation, joining of wood members and the connectors and mechanical devices for the fastening thereof, shall conform throughout to good engineering practice.

Where wood is used in parts of a building or structure habitually exposed to moisture, ample ventilation or sufficient preservative treatment, or both, shall be provided.

2. Allowable Working Stresses. In the design of wood structural members and the construction of structures of wood, the following unit stresses in pounds per square inch shall not be exceeded.

Stresses that exceed those given in the following table for the lowest grade of any species shall be used only when the higher grade of that species is identified by the grade mark or a certificate of inspection issued by a recognized lumber grading or inspection agency:

# ALLOWABLE WORKING STRESSES FOR WOOD

				Allowable (	Init Stresses in	Allowable Unit Stresses in Pounds Per Square Inch	quare Inch	
Commercial Grade			Rules Under Which Graded	Tension and Extreme Fiber in Bending	Maximum Horizontal Shear	Compression Perpendicular to Grain	Compression Parallel to Grain	Modulus of Elasticity
2150 # [ Grade 1906 # [ Grade 1706 # [ Grade 1460 # [ Grade 1300 # [ Grade 1300 # [ Grade	D. D. D. D. W.	1 & P 1 & P 1 & P 1 & P 1 & P 1 & S 1 & S	National Hardwood Lumber Association	1,950 1,700 1,550 1,300 1,150	130 130 110 110	550	1, 550 1, 400 1, 200 1, 050 950	1, 500, 000
2150 # f Grade J 6 1900 # f Grade J 6 1700 # f Grade J 6 1450 # f Grade J 6	2020	& P-B&S & P-B&S & P-B&S	National Hardwood Lumber Association	1, 950 1, 700 1, 550 1, 300	130 130 130 110	550	1, 675 1, 375 1, 225 1, 050	1, 600, 600
2150 # f Grade J & 1800 # f Grade J & 1700 # f Grade J & 1700 # f Grade J & 1450 # f Grade J & 1450 # f Grade	3333	J&P J&P-B&S J&P-B&S J&P-B&S	National Hardwood Lumber Association	1, 950 1, 550 1, 800	130 130 130 110	550	1, 575 1, 375 1, 225 1, 050	1, 600, 000
1450 # f Grade J & & 1500 # f Grade J & & 1075 # c Grade P & Grade	33 T	J& P J& P-B&S P& T	National Hardwood Lumber Association	1, 300 1, 100	110	325	1, 075 850 975	1, 000, 000
1700 # f Grade J & 1800 # Grade J & 1800 # Grade J & 1450 # c Grade P & 1200 # c Grade P & 1200 # c Grade P & 1200 # c Grade	32 T	J& P-B&S J& P-B&S P& T P& T	National Hardwood Lumber Association	1, 550 1, 150	130 110	325	1, 275 1, 025 1, 300 1, 075	1, 200, 000
	Session of	J& P-B&S J& P-B&S J& P-B&S J& P-B&S J& P-B&S	West Coast Bureau of Lumber Grades & Inspection	1, 950 1, 700 1, 550 1, 300 1, 000	130 110 130 110 100	410 375 350 350	1, 400 1, 300 1, 200 1, 075	1, 600, 000
Dense No. 1 P& No. 1	*****	-E-E-		# 1 1 1 # 7 2 6 # 1 5 6 # 1 5 1 # 1 5 1 # 1 5 1 # 1 7 7 1 # 1 7 7 1	+ 1 4 7 + 1 7 4 + 1 7 4 + 1 8 1 + 1	24.83 250 250 250	11111 2000 2000 2000 2000	

#### ALLOWABLE WORKING STRESSES FOR WOOD-Continued

				Allowable 1	Unit Stresses i	n Pounds Per S	Square Inch	
Species			Rules Under Which Graded	Tension and Extreme Fiber in Bending	Extreme Maximum Fiber in Horizontal		Compression Parallel to Grain	Modulus of Elasticity
DOUGLAS FIR— INLAND REGION	Select Structural Structural Common Structural Select Structural Structural Common Structural	J&P J&P J&P P&T P&T P&T	Western Pine Association	1, 950 1, 700 1, 800	130 90 85	410 360 340 410 360 340	1, 575 1, 250 1, 125 1, 675 1, 250 1, 125	1, 600, 000 1, 500, 000 1, 500, 000 1, 600, 000 1, 500, 000 1, 500, 000
ELM, ROCK	2150 # f Grade 1900 # f Grade 1700 # f Grade 1450 # f Grade 1550 # c Grade 1450 # c Grade 1200 # c Grade	J& P J& P-B&S J& P-B&S J& P-B&S P& T P& T P& T	National Hardwood Lumber Association	1, 950 1, 700 1, 550 1, 300	130 130 130 130 110	550	1, 575 1, 375 1, 225 1, 225 1, 400 1, 300 1, 075	1, 800, 000
GUM, BLACK & RED	1700 # f Grade 1450 # f Grade 1200 # f Grade 1076 # c Grade	J&P J&P-B&S J&P-B&S P&T	National Hardwood Lumber Association	1, 550 1, 300 1, 100	110 110 110	325	1, 100 950 800 975	1, 200, 000
HEMLOCK, EASTERN	Select Structural Prime Structural Common Structural Utility Structural Select Structural	J&P-B&S J&P J&P J&P J&P P&T	Northern Hemlock & Hardwood Manufacturers Assn.	1, 200 1, 100 1, 000 850	75 55 55 55 55	325	775 700 600 550 775	1, 100, 000
HEMLOCK, WEST COAST	1600 # f Select Structural 1450 # f No. 1 1100 # f No. 2 No. 1 Hemlock Timbers	J&P J&P-B&S J&P P&T	West Coast Bureau of Lumber Grades & Inspection	1, 450 1, 300 1, 000	90 90 80	925 925 925	1, 000 975 775 1, 000	1, 400, 000
HICKORY	2150 # f Grade 1900 # f Grade 1700 # f Grade 1550 # c Grade 1450 # c Grade 1325 # c Grade	J&P-B&S J&P-B&S J&P-B&S J&P-B&S P&T P&T P&T	National Hardwood Lumber Association	1, 950 1, 700 1, 550	130 130 130	650	1, 550 1, 400 1, 225 1, 400 1, 300 1, 200	1, 800, 000

#### ALLOWABLE WORKING STRESSES FOR WOOD-Continued

				Allowable U	Jnit Stresses i	n Pounds Per S	Square Inch	
Species	Commercial Grad	le	Rules Under Which Graded	Tension and Extreme Fiber in Bending	Maximum Horizontal Shear	Horizontal to		Modulus of Elasticity
LARCH	Select Structural Structural Common Structural Select Structural Structural Common Structural	J&P J&P J&P P&T P&T P&T	Western Pine Association	1, 950 1, 700 1, 300	130 110 110	410 375 350 410 375 350	1, 575 1, 300 1, 200 1, 576 1, 300 1, 200	1, 300, 000
MAPLE, HARD	2150 # f Grade 1900 # f Grade 1700 # f Grade 1450 # f Grade 1550 # c Grade 1450 # c Grade 1200 # c Grade	J&P J&P-B&S J&P-B&S J&P-B&S P&T P&T P&T	National Hardwood Lumber Association	1, 950 1, 700 1, 550 1, 300	130 130 130 130 110	550	1, 575 1, 375 1, 225 1, 025 1, 400 1, 300 1, 075	1, 600, 000
OAK, RED & WHITE	2150 # f Grade 1990 # f Grade 1700 # f Grade 1450 # f Grade 1990 # f Grade 1325 # c Grade 1200 # c Grade 1200 # c Grade	J&P J&P-B&S J&P-B&S J&P-B&S B&S P&T P&T P&T	National Hardwood Lumber Association	1, 950 1, 700 1, 550 1, 300 1, 156	130 130 130 110 110	550	1, 400 1, 250 1, 075 950 850 1, 200 1, 075 975	1, 500, 000
PINE, NORWAY	Prime Structural Common Structural Utility Structural	J& P J& P J& P	Northern Hemlock & Hardwood Manufacturers Assn.	1, 100 1, 000 850	65 65 65	325	800 700 575	1, 200, 000
PINE. SOUTHERN	Dense Select Structural Dense Structural S E & S Dense Structural S E & S Dense No. 1—Structural No. 1—Dense No. 1 No. 2—Dense No. 2 Dense Select Structural	J& P-B&S J& P-B&S J& P-B&S J& P-B&S J& P-B&S J& P-J& P-J& P-J& P-J& P-J& P-J& P-J& P-	Southern Pine Inspection Bureau	2, 150 1, 800 1, 600 1, 450 1, 550 1, 300 1, 100 1, 000	110 110 110 110 135 115 90 75	410 410 410 410 410 350 410 350 410	1, 575 1, 250 1, 175 1, 625 1, 250 1, 250 1, 075 925 775 1, 575	1, 600, 000

| | |-

9-

PINE. SOUTHERN Dense Structural PINE Dense Structural PINE Dense Structural PINE Dense Structural SE & S Dense No. 1 Structural SOUTHERN Solot EEAP No. 1 Long Leaf No. 2 Long Leaf No. 4 Long Leaf No. 4 Long Leaf No. 4 Long Leaf No. 5 Long	6	Rules Under Which Graded					
	F		Tension and Extreme Fiber in Bending	Maximum Horizontal Shear	Compression Perpendicular to Grain	Compression Parallel to Grain	Mod of Elasti
	- C-C-				410 410 410	1, 250 1, 176 1, 025	
No. 1-Structural Long Leaf	ng Leaf J&P-B&S I & P-B&S I P & I P-B I P P P P P P P P P P P P P P P P P P P	Southern Pine Inspection Bureau	1, 2, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15	110 110 110 110 110 135 90	410	1111252 2002666 20017553 200766666666666666666666666666666666666	1, 600
RED CEDAR, Structural WESTERN	1 t t t t t t t t t t t t t t t t t t t	West Coast Lumber- men's Association Jan. 1, 1941	1, 000	100	200	800	1, 000
REDWOOD Dense Structural Heart Structural Dense Structural Heart Structural	J & P-B&S J & P-B&S P & T P & T	California Redwood Association	1, 150	100 85	290	1, 300 1, 000 1, 300 1, 000	1, 200
SPRUCE, 1450 # [Structural Grade EASTERN 1300 # [Structural Grade 1200 # f Structural Grade	ያልም ያልም ያልም	North Eastern Lumber Manu- facturers Assn.	1, 300 1, 150 1, 050	100 85 85	270	950 875 800	1, 200

#### Order 5416-Fire Alarm.

A fire alarm system complying with Order 5124 shall be provided in every factory or workshop where more than 10 persons are employed above the second story except buildings which are provided with a complete automatic sprinkler system and except fire-resistive buildings whose contents are practically incombustible.

#### Order 5507-Number and Location of Exits.

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

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

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

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

#### Section 3. GRANDSTANDS, BLEACHERS, TENTS AND PLACES OF OUTDOOR ASSEMBLY

#### Order 5551-Grandstands,

Grandstands erected of frame construction shall be located at least 20 feet from any other building or adjoining property line unless the exterior walls of such adjacent building are of two-hour fire-resistive construction or better and all openings therein are protected with fire-resistive doors and windows as specified in Orders 5109 and 5110.

No wood grandstand unit shall exceed 10,000 square feet in ground area or 200 feet in length.

Wood grandstand units shall be placed not less than 20 feet apart or shall be separated by walls of not less than two-hour fire-resistive construction.

The highest level of seat platforms of any wood grandstands shall not be more than 20 feet. Portable grandstands or bleachers within tents shall not be more than 12 feet above the ground or surface at the front of the grandstand.

All grandstands shall be designed and constructed to conform with the structural requirements of Chapter 5 of this code.

Seat boards and foot boards shall be designed to safely support a live load of not less than 120 pounds per lineal foot. The width of foot boards shall not be less than 71/2 inches.

The space under a grandstand shall be kept free from extraneous flammable materials and shall not be occupied for other than exit

purposes except that such space, if enclosed with one-hour fire-resistive construction or better, may be used for non-hazardous purposes if approved in writing by the Industrial Commission.

#### Order 5552-Exits.

Every grandstand, balcony or tier considered separately shall be provided with at least two exits located as remotely from each other as practicable and leading directly to the outside at grade. If the capacity of any such structure, balcony, or tier exceeds 1,000 persons, there shall be at least 3 exits and where the capacity exceeds 4,000 persons, there shall be at least 4 exits.

Exits shall be distributed uniformly to prevent congestion and shall be so located that the line of travel to an exit or to the entrance to an exit passageway is not greater than 150 feet.

The total width of exits from any grandstand, balcony or tier shall not be less than 22 inches per 100 persons, except that for grandstands which are constructed of incombustible material throughout and have a closed incombustible deck under the seats, the total width of exits may be not less than 22 inches for each 500 persons or fraction.

#### Order 5553-Aisles and Passageways.

All ramps, stairs, doorways and doors used for exit purposes shall conform to the requirements of Orders 5508, 5509, and 5510 of this code.

Aisles having seats on both sides shall not be less than 3 feet 6 inches in width and aisles having seats on one side only shall not be less than 24 inches wide. Cross aisles shall not be less than 48 inches in width. No aisles will be required for grandstands or bleachers where the seats extend to the floor or to the ground without a railing along the front.

Trailer seating mounted on incombustible decking not exceeding 300 capacity each shall be provided with aisles or stairways not less than 36 inches in width.

#### Order 5554--Seating.

The seating arrangement shall comply with the requirements of Order 5513 except that for seats without backs the horizontal distance from back to back of seats shall not be less than 22 inches. There shall be a space of not less than 12 inches between the back of each seat and the front of the seat immediately behind it. All measurement is to be taken between plumb lines.

Where the same level is not used for both seat bench and foot rest, independent foot rests shall be provided.

All seat boards and foot boards shall be securely fastened in place in such a manner that they cannot be accidentally displaced.

Where the rise of a seat bench or platform exceeds 11 inches, intermediate steps shall be provided the full width of the aisle. Such steps

shall have a rise of not more than 11 inches and a tread of not less than 10 inches nominal width. In no case shall the angle of seating exceed 45 degrees.

#### Order 5555-Guard Rails.

A substantial guard rail not less than 42 inches in height and having 2 intermediate rails shall be provided along the back and ends of all grandstands where the seats are more than 4 feet above the ground. Where the front foot rest of any grandstand is more than 2 feet above the ground, a guard rail extending not less than 36 inches above such front foot rest shall be provided.

#### Order 5556-Portable Grandstands or Bleachers.

Portable grandstands or bleachers shall be self-contained units having all necessary parts to withstand and restrain all forces which may be developed during occupancy. They shall be so designed and constructed that if any structural member essential to the strength and stability of the structure is omitted during erection, the presence of unused connections or fittings will make the omission self-evident.

A portable grandstand shall not be used for public occupancy until it has been securely assembled in accordance with this requirement.

Portable grandstands shall be provided with base plates, sills, floor runners, or sleepers of sufficient area and strength to support safely the total live and dead loads.

Where portable grandstands rest directly on the ground, mud sills of suitable material and having sufficient area to prevent dangerous settlement shall be provided under the base plates or sleepers. All mud sills shall be properly anchored to the ground and all bearing surfaces shall be in contact.

A-frames or other supports and seat stringers for portable grandstands or bleachers shall be secured to prevent accidental displacement during occupancy.

Field connections to wood members shall be by means of rivets, bolts, connectors, lag screws, friction or other approved devices. Lag screws shall not be used for direct tension. The use of nails and wood screws is permissible for holding wood posts together except that they shall not be used for demountable connections.

Wood members in tension shall be connected at each end by not less than two bolts or lag screws or by approved connectors or other approved devices. Adequate provision shall be made to prevent the splitting or shearing of wood at such connections.

#### Order 5557-Inspection.

Every portable grandstand or bleacher shall be carefully inspected by a building official before each period of public occupancy and any loose connections, defective or broken members or loose supports shall be properly repaired before the structure is used. In cities or towns which do not have a building official, such inspections shall be made by the chief of the fire department or other public official designated by the Industrial Commission.

#### Order 5558-Tents.

For the purpose of this order, a tent is a portable, temporary shelter or a structure, the covering of which is made of a pliable material.

No tent shall be erected to cover more than 75 per cent of the premises on which it is located.

Tents used for assembly purposes which cover 1500 square feet or more of ground area shall be located at least 20 feet from any other structure or adjoining property lines.

Stake lines of adjacent tents used for assembly purposes shall be sufficient distance from each other to provide an emergency exit passageway not less than 6 feet in width between stake lines. Proper protection shall be provided along such stake lines to eliminate tripping hazards.

Concession and other tents not used for assembly purposes need not be separated from each other and may be located less than 20 feet from other structures.

Note: This order does not apply to tents or shelters used exclusively for construction purposes.

#### Order 5559-Structural Requirements.

Poles and other members supporting tents shall be of sufficient size and strength to support the structure safely without exceeding the stresses specified in Chapter 5 of this code.

All tents shall be adequately guyed, supported and braced to withstand a wind pressure or suction of not less than 10 pounds per square foot.

The poles, guys, stakes, fastenings, etc. shall be of sufficient strength and so attached as to resist a wind pressure of at least 20 pounds per square foot of projected area of the tent.

#### Order 5560-Flame Resistance.

All tents used for assembly purposes or in which animals are stabled and other tents located on premises used by the public shall be effectively flame-proofed. The owner shall furnish a certificate or test report by a recognized testing engineer or laboratory as evidence that such tents have the required flame resistance.

#### Order 5561-Fire Hazards.

The ground enclosed by any tent used in connection with a place of outdoor assembly and for a distance of not less than 10 feet outside such structure on all sides shall be cleared of all flammable material or vegetation which will transmit fire. The premises shall be kept free from such flammable material during the period the premises are used by the public.

No hay, straw, shavings or similar combustible materials other than that necessary for the current feeding and care of animals shall be permitted within any tent used for public assembly except that sawdust and shavings may be used if kept damp.

No smoking or unapproved open flame of any kind shall be permitted in any tent while occupied by the public. "No Smoking" signs shall be conspicuously posted in all tents open to the public.

Tents shall not be used for motion picture performances unless safety film is used.

#### Order 5562-Exits.

Every tent occupied by the public shall have at least two standard exits located at or near opposite ends of the structure.

In tents used for assembly purposes, exits shall be provided on 3 sides if the capacity exceeds 600 persons and on 4 sides where the capacity exceeds 1,000 persons. Exits shall be uniformly distributed but in no case shall the line of travel to an exit be greater than 150 feet.

The total width of exits from a tent used for assembly purposes shall not be less than 44 inches per 100 persons. Exit openings shall comply in all respects with the requirements of Orders 5510 and 5115 of this code.

#### Order 5563-Electrical Installations.

Electrical systems in all places of outdoor assembly shall be installed in accordance with the requirements of the Wisconsin State Electrical Code. All such systems shall be maintained and operated in a safe and workmanlike manner.

The electrical system and equipment shall be isolated from the public by proper elevation and guarding. All electrical fuses and switches shall be installed in approved enclosures. Cables laid on the ground or in areas traversed by the public shall be placed in trenches or protected by approved covers.

#### Order 5564-Fire Extinguishing Equipment.

One or more fire extinguishers of approved type and size shall be provided in connection with every wood grandstand and in all tents used for assembly purposes. Such extinguishers shall be maintained in proper working order and shall be located where they are easily accessible, preferably in or near the ticket office. In large installations, additional fire extinguishing equipment shall be provided as directed by the building official.

#### Order 5565-Illumination-Exit Lights and Signs.

All exits, aisles and passageways leading to exits in grandstands and other places of outdoor assembly shall be kept adequately lighted at all times when the structure is occupied by the public. Artificial illumination having an intensity of not less than 2.5 foot candles at the floor line shall be provided when natural light is inadequate.

Exit lights and signs complying with the requirements of Order 5511 shall be provided in all places of outdoor assembly where more than 100 persons can be accommodated.

#### Order 5566-Boiler and Furnace Room.

Every boiler or furnace room, including the breeching and fuel room, in places of outdoor assembly, shall be enclosed with a two-hour fire-resistive enclosure or better and all interior openings in walls forming such enclosures shall be protected by self-closing fire-resistive doors. Gas-fired appliances for heating water shall be installed in a boiler or furnace room. Chimneys shall be constructed in conformity with the requirements of Order 5210 of this code.

#### Order 5567-Toilet Facilities.

Separate toilets shall be provided for each sex in connection with all places of outdoor assembly. Toilet rooms and equipment shall comply in all respects with the requirements of Orders 5250-5264, inclusive, of this code.

#### Order 5611-Floor Space and Height of Ceiling.

All class and recitation rooms shall have a minimum floor space of 18 square feet per person. Rooms used only for study purposes shall have a minimum floor space of 15 square feet per person.

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

All rooms used for educational purposes shall be not less than 10 feet high in the clear. Toilet rooms, service rooms, store rooms and similar spaces shall be not less than 8 feet high in the clear.

Note: The following are the minimum requirements recommended by the Department of Public Instruction:

- (1) A standard classroom should be from 22 feet to 23 feet in width and from 31 feet to 33 feet in length.
- (2) Although the minimum space between the first window and the front blackboard is required to be 4 feet, a 6 foot space is recommended. This space should be left entirely blank.
- (3) Blackboards should be not less than 24 inches above the floor for even the smallest children; 30 to 34 inches is recommended for

front blackboards. Blackboards should not be higher than 48 inches; 42 inches is recommended.

(4) Ample bulletin board space the full width of the blackboards should be provided in all rooms and especially in the kindergarten and primary rooms. This is in addition to tack boards over the blackboards.

#### Order 5619-Fire Alarms.

Every building two or more stories in height and every one-story building with 6 or more classrooms and an assembly hall or gymnasium accommodating more than 100 persons shall be provided with a proper alarm system complying with Order 5124.

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

#### Order 5700-Scope.

The requirements of this chapter shall apply to all apartment buildings, rooming houses, hotels, dormitories, convents, monasteries, hospitals, children's homes, homes for the aged and infirm, nursing homes, convalescent hospitals, convalescent homes, asylums, jails and other places of abode or detention.

By place of abode is meant a building or part of a building as follows:

- (1) Occupied as a residence of 3 or more families living independently or occupied by 2 such families and used also for business purposes, or
- (2) Occupied for sleeping or lodging purposes by 3 or more persons not members of the same family.

By place of detention is meant a building or part of a building used as a place of abode and wherein persons are forcibly confined, such as asylums and jails.

Note: The attorney general has ruled that all persons committed to an insane asylum by court order come within the meaning of the words "forcibly confined". Also that the words "forcibly confined" apply to all persons confined without their consent.

#### Order 5722-Fire Alarm.

Every building which accommodates 20 or more persons except hospitals and places of detention shall be provided with an approved fire alarm system complying with Order 5124. This order applies to buildings now in existence and to buildings hereafter constructed. Every hospital which accommodates 20 or more persons shall be provided with a signal system of a type approved by the Industrial Commission.

Note: See Chapter 440, Laws of 1949, Section 160.055 for requirements for watchman patrol in hotels having more than 12 bedrooms above the second story.

#### REVISION OF ORDER 5720 WISCONSIN STATE BUILDING CODE EFFECTIVE APRIL 24, 1950

#### Order 5720. Isolation of Fire Hazards.

All boiler and furnace rooms, including fuel rooms and breeching, all laundries, drying rooms, carpenter shops, paint shops, and other hazardous work rooms and storage rooms in all buildings accommodating transients and in all hospitals, asylums and other places of detention shall be enclosed with a four-hour fire-resistive enclosure as specified in Orders 5105 and 5106. All openings shall be protected by self-closing fire-resistive doors as specified in Order 5109.

In all other buildings under this classification, such rooms shall be enclosed with a two-hour fire-resistive enclosure as specified in Orders 5105 and 5106, or better.

Exception: Gas-fired space heaters may be used in private apartments and in guest rooms, in motels or tourist courts without an enclosure if approved by the Industrial Commission.

	_		
±°	_ <del></del> -		
			,
•			