

Standard for

Grandstands, Tents and Other

PLACES OF OUTDOOR ASSEMBLY

[ASA Z20.2]

1948

25 Cents

NATIONAL FIRE PROTECTION ASSOCIATION
International

60 Batterymarch Street, Boston 10, Mass.

National Fire Protection Association

INTERNATIONAL

The National Fire Protection Association was organized in 1896 to promote the science and improve the methods of fire protection and prevention, to obtain and circulate information on these subjects and to secure the cooperation of its members in establishing proper safeguards against loss of life and property by fire. Its membership includes over a hundred and fifty national and regional societies and associations and more than twelve thousand individuals, corporations, and organizations.

This pamphlet is one of a large number of publications issued by the Association. These include the monthly *News Letter*, *Quarterly* magazine, standards on fire prevention and fire protection, special reports and bulletins, the *Year Book*, and the *Proceedings* of the annual meetings.

Membership in the National Fire Protection Association is open to any society, corporation, firm or individual interested in the protection of life or property against loss by fire. The Association is the clearing house for all the authoritative information on fire protection and prevention, and members are privileged to submit to it their individual problems for solution. The Association is always glad to send samples of its publications to prospective members upon request.

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FOREWORD.

This standard for Grandstands, Tents and Other Places of Outdoor Assembly is the result of a committee project inaugurated shortly after the circus fire in Hartford, Conn., on July 6, 1944, in which 168 lives were lost. This disaster showed that tents and other places of outdoor assembly have not in general been subjected to the same sort of regulation in the interest of public safety that has been applied to theatres, halls and other places of indoor assembly which are covered by building codes and other municipal and state regulations. While the principles of life safety from fire and panic in places of outdoor assembly are in general the same as in buildings, there are many differences in the detail of application and immediately after the Hartford fire there was a widespread demand for a standard on this subject which could be used as the basis of municipal or state regulations applied with the force of law.

A committee was organized under the joint sponsorship of the Building Officials Conference of America and the National Fire Protection Association under the procedure of the American Standards Association. As a result of extensive deliberation during the winter of 1944-1945, this committee prepared a draft of a proposed standard which was submitted at the annual meeting of the National Fire Protection Association in June 1945. This was then printed, sent to all of the 10,000 members of the Association, to a representative group of leaders in the outdoor amusement industry, and to all others who filed requests for copies. As a result, numerous constructive suggestions were received, all duly considered by the committee in several meetings, and the 1946 standard was completed. All members of the committee recorded themselves as in favor of the adoption of the 1946 standard with the exception of the representative of Ringling Brothers and Barnum and Bailey's Circus who requested to be recorded as not voting but expressed appreciation of the consideration given to the circus interest.

After completion of the 1946 standard by the committee, it was approved by the sponsoring organizations, the National Fire Protection Association and the Building Officials Conference of America. Action on behalf of the NFPA was taken by the Board of Directors by letter ballot completed April 10, 1946 and was submitted to the American Standards Association and approved by them as an American Standard on May 22, 1946.

The committee considered various proposals for clarification of the 1946 standard in April and November 1947. All members of the committee were recorded as favoring the proposed revision of the 1946 standard except the representatives of the American Iron and Steel Institute and the National Canvas Goods Manufacturers Association, who are recorded as not voting. Amendments to the 1946 standard were adopted by the National Fire Protection Association at the 1948 annual meeting and by the Building Officials Conference of America. The revisions have been submitted to the American Standards Association for its approval.

NATIONAL FIRE PROTECTION ASSOCIATION.

June 16, 1948.

Standard for Grandstands, Tents and Other Places of Outdoor Assembly.

SECTION 1. SCOPE AND DEFINITIONS.

1-1. Scope and Purpose.

This standard covers the design, construction, location, maintenance, and use of grandstands, tents and other structures and premises for use or used as places of outdoor assembly. Its purpose is to specify reasonable standards as a means to safeguard persons and property in so far as it affects public safety.

1-2. Definitions.

(a) **ADMINISTRATIVE OFFICIAL** means the executive officer charged with the administration of matters covered by this standard.

(b) **APPROVED** refers to approval by the authority having jurisdiction in the enforcement or application of the standard.

(c) **GRANDSTAND** means any structure, excepting movable seating and sectional benches as herein defined, intended primarily to support persons for purposes of assembly, but shall not apply to the permanent seating in buildings. Where the term grandstand is preceded by an adjective denoting a material it shall mean a grandstand, the essential members of which, exclusive of seating, are of the material designated.

(d) **MOVABLE SEATING** means any form of seating which is not a fixed part of a structure or attached to the surface on which it rests and which is set out on the same floor or ground level, and not in a grandstand.

(e) **OWNER** means any person, firm, corporation, association, or governmental subdivision owning or controlling property and legally liable for the use thereof.

(f) **PLACES OF OUTDOOR ASSEMBLY** means all premises used or intended to be used for public gatherings of 200 or more persons, other than buildings and other structures in which public safety is covered by building codes or other codes governing permanent buildings.

(g) **PORTABLE GRANDSTAND** means an assembly of prefabricated units, readily erected, dismantled and transported, and used or intended for use as movable or temporary support of persons.

(h) **SECTIONAL BENCHES** means seating benches made up for assembly in sections not to exceed 10 rows and not to exceed 100 seat spaces per section, and the uppermost seats of which are not more than 4 feet above the ground or floor level on which they are supported.

(i) **TENT** means a shelter or structure, the covering of which is made of a pliable material.

SECTION 2. PLACES OF OUTDOOR ASSEMBLY— GENERAL REQUIREMENTS.

2-1. Capacity.

(a) The capacity of any structure or enclosure for outdoor assembly shall be the number of fixed seats plus an allowance of one person for each 6 square feet of floor or ground area designated or used as standing space or for movable seats. A distance of 18 inches along any undivided bench or

platform shall constitute one seat in computing capacity. The floor area of stairways, ramps, aisles, passageways, or spaces within such structures or enclosures used for access or circulation shall not be considered in computing the capacity of a place of outdoor assembly, and shall not be used for seats or for standing room.

(b) The number of persons admitted to any place of outdoor assembly shall not exceed the capacity as computed in accordance with the provisions of this section.

2-2. Accessibility to Public Ways.

All places of outdoor assembly shall have at all times ample and unrestricted access to public ways of approach from at least two points, remote from each other. An available park, field or open space approved as an area of refuge may be used in lieu of one means of access to a public way.

2-3. Design Standards.

The materials, design, fabrication, and construction of grandstands and other structures used as places of outdoor assembly shall comply with approved construction standards for safety to life and property. Where no specific standards are prescribed, conformity with the following applicable standards shall be deemed a compliance with approved standards for safety to persons and property.

1. Concrete. Building Regulations for Reinforced Concrete, American Concrete Institute, ACI 318.

2. Masonry. American Standard Building Code Requirements for Masonry, ASA A41.1.

3. Structural steel. American Standard Building Code Requirements for Structural Steel, ASA A57.1.

4. Wood. Wood Handbook, Forest Products Laboratory, U. S. Department of Agriculture.*

5. Means of egress. Building Exits Code, National Fire Protection Association, ASA A9.1.**

6. Electric wiring and apparatus. National Electrical Code, ASA C1.

7. Elevators and escalators. American Standard Safety Code for Elevators, Dumbwaiters and Escalators, ASA A17.1.

SECTION 3. GRANDSTANDS.

3-1. Location.

No grandstand shall be erected on the roof of any building or structure unless such building or structure is of adequate strength to support safely the additional loads.

3-2. Separation.

(a) No wood grandstand shall be erected within less than two-thirds of its height, but in no case less than 10 feet, of a nearby building unless the wall of such building be of not less than one-hour fire resistance and have any openings therein protected against the fire exposure hazard created by the grandstand, or unless a protecting wall of not less than one-hour fire resistance is interposed between such grandstand and nearby building.

* Additional reference: National Design Specifications for Stress-Grade Lumber and Its Fastenings, National Lumber Manufacturers Association.

** Additional reference: Design and Construction of Building Exits, National Bureau of Standards, U. S. Department of Commerce.

(b) No wood grandstand unit shall exceed 10,000 square feet in ground area or 200 feet in length. (A unit whose total area, or length, does not exceed the above may be made up of one or more sections.) Grandstand units shall be placed not less than 20 feet apart or shall be separated by walls of one-hour fire resistance. Not more than 3 such units shall be erected in any one group. Each such group shall be separated from any other group by a wall of two-hour fire resistive construction extending 2 feet above the seat platforms or by an open space not less than 50 feet, or by noncombustible construction of not less than 50 feet in length fire-stopped at each end with walls of one-hour fire-resistive construction extending 2 feet above the seat platforms. If the grandstand units are made of flame-resistive wood treated in accordance with standard practice, the permitted areas and lengths may be doubled. The administrative official may accept a recognized label or certificate of a manufacturer or processor as evidence that the wood is treated in accordance with standard practice.

(c) The highest level of seat platforms of any wood grandstand shall be not more than 20 feet, and of portable grandstands within tents not more than 12 feet, above the ground or the surface at the front of the grandstand.

3-3. Loads.

(a) Grandstands shall be designed to support, in addition to their own weight, a uniformly distributed live load of not less than 100 pounds per square foot of gross horizontal projection of the grandstand. All seats and footboard members shall be designed for live loads of not less than 120 pounds per linear foot.

(b) Grandstands shall be designed to resist, with or without live load, a horizontal wind load of 30 pounds per square foot of all vertical projections of the stand.

(c) Grandstands shall be designed to resist a horizontal swaying force applied to the seats in a direction parallel to the length of the seats, of 24 pounds per linear foot of seats, and in a direction perpendicular to the length of the seats, of 10 pounds per linear foot of seats.

(d) Members in which the stresses are greater under a partial loading of the grandstand than under full load shall be designed to meet the conditions causing the largest stress.

3-4. Design.

(a) Grandstands shall conform to the requirements of Section 2-3, Design Standards, and their design shall be in accordance with accepted engineering practice, and shall admit of analysis in accordance with principles of mechanics.

(b) A grandstand shall be so designed and assembled that the maximum expansion, contraction, settlement, or misalignment likely to occur during the life of the stand will not cause stresses in excess of those permissible, nor jeopardize the structure or its occupants. It shall be of such design as always to remain stable, so as not to be overturned either by wind or by unequal distribution of live load. Members comprising the seating, walkways, railings, bracing, and supporting members shall be structurally sound.

(c) Portable grandstands shall be self-contained, having within themselves all necessary parts to withstand and restrain all forces which might reasonably be developed during human occupancy. They shall be so designed and manufactured that if any structural members essential to the strength and stability of the structure have been omitted during erection, the presence of unused connection 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 the requirements of this standard.

3-5. Erection.

(a) Portable grandstands shall be provided with base plates, sills, floor runners, or sleepers, of such area that the total live and dead load shall not exceed 55 psi on base plates, sills, floor runners, or sleepers. When portable grandstands rest directly on earth of such character as to be incapable of supporting the load without appreciable settlement, mud sills of suitable material, having sufficient area to prevent undue or dangerous settlement, shall be installed under base plates, runners, or sleepers. All bearing surfaces shall be in contact.

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

(c) Field connections to wood members shall be by means of rivets, bolts, approved connectors, friction or other devices, or lag screws, except that lag screws shall not be permitted for direct tension. The use of nails and woodscrews is permissible for holding wood parts together, except that these shall not be used for demountable joinings, nor shall these be used where their loosening or splitting of surrounding wood would jeopardize the structure or its occupants. Wood members in tension shall be connected at each end by means of not less than 2 bolts, rivets, 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.

3-6. Aisles.

(a) Any grandstand having a railing or guard along the front shall be provided with aisles so located that no seat of a row shall have more than 16 seats between it and the nearest aisle, provided that in a grandstand within a tent no seat in a row shall have more than 11 seats between it and the nearest aisle.

(b) Aisles provided in compliance with Section 3-6(a) shall be of not less than 40 inches clear width except that, (1) aisles in bleacher type grandstands without canopy, roof, or cover, or in grandstands of steel, concrete or masonry, or combinations thereof, which have a closed noncombustible deck under the seating, may be not less than 36 inches, and (2) aisles serving not more than 60 seats may be of 24 inches clear width. Where an aisle is divided by a portal, column or other obstruction, each part shall be not less than 24 inches wide. Where the entrance to an aisle is elevated above the ground level, such aisle shall be provided with a stairway, or ramp, whose width is not less than the width of the aisle.

(c) Steps shall not be placed in aisles to overcome differences in level unless the gradient shall exceed one foot in 10 feet of run. When the rise of seating platforms exceeds 11 inches an intermediate step shall be provided the full width of the aisles and so proportioned as to provide two steps of equal rise per platform. When the rise of seating platform exceeds 18 inches, two intermediate steps shall be provided the full width of the aisles and so proportioned as to provide three steps of equal rise per platform.

(d) The usual line of travel, from any seat to the nearest exit on the seating area, shall be not greater than 150 feet.

3-7. Seating.

(a) The horizontal distance back to back of seats shall be not less than 30 inches for seats having back rests or not less than 22 inches for bleacher type seats. Where the same level is used for both seats and footrests these levels shall be not less than 22 inches in width. 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 measurements shall be taken between plumb lines.

(b) The width of footboards in grandstands shall be not less than 9½ inches. Where the same level is not used for both seat foundation and footrests, footrests independent of seats shall be provided.

(c) Bleacher type seats and footrests of grandstands shall be securely supported in such manner that they cannot be displaced inadvertently. Footrests which are lapped shall be provided with some positive means to prevent displacement of one piece on the other.

(d) Individual seats or chairs shall be permitted only if firmly secured in rows in an approved manner, except that seats if not more than 16 in number, on level floors, and within railed-in enclosures, such as boxes, need not be fastened.

(e) Spaces underneath grandstands shall be kept free of extraneous flammable materials and shall not be occupied for other than protective or exit purposes, except that such space as is enclosed with constructions surfaced with noncombustible materials and having not less than ¾-hour fire resistance may be used for other purposes as approved by the administrative official.

3-8. Railings or Guards.

Railings or guards not less than 42 inches high above the aisle surface or platform tread whichever is adjacent, shall be provided along those portions of the backs and ends of all grandstands where the seats are more than four feet above the ground. Where the front footrest of any grandstand is more than 2 feet above the ground, railings or guards not less than 33 inches high above such front footrests shall be provided. Openings between the top railing or guard and walkway surface below, if more than 18 inches in height, shall be not more than 11 inches wide. Railings or guards shall be capable of sustaining a vertical load of 100 pounds per linear foot and a horizontal thrust of 50 pounds per linear foot. When grandstands are used adjacent to a wall or fence, railings or guards may be omitted from those portions where such wall or fence affords equivalent safeguard.

3-9. Sectional Benches.

Sectional benches shall conform to the requirements for grandstands in the matter of seat size, seat spacing, loads, seating arrangement, width of aisles, and exits.

3-10. Movable Seating.

Movable seating shall not be used in permanent or temporary grandstands except as provided in Section 3-7(d), but may be used in places of outdoor assembly when placed upon the ground, or upon the level floor of a structure which shall be enclosed, railed, or otherwise safeguarded. The arrangement of such movable seating shall conform to Section 3-6, Aisles, and Section 3-7, Seating.

SECTION 4. TENTS.

4-1. Location.

(a) No tent or tents shall be erected to cover more than 75 per cent of the premises; nor shall any tent be erected closer than 10 feet to other structures except as hereinafter provided. Stake lines of adjacent tents shall be sufficiently distant from each other to provide an area to be used as a means of emergency egress.

(b) Concession or other tents not occupied by the public need not be separated from each other and may be erected less than 10 feet from other structures only if the administrative official deems such closer spacing safe from hazard to the public.

(c) Tents, each not exceeding 1,200 square feet in ground area, located on fair grounds or similar open spaces need not be separated from each other, provided safety precautions meeting the approval of the administrative official are taken.

4-2. Structural Requirements.

(a) All supporting members shall be of sufficient size and strength to support the structure.

(b) Tents shall be adequately guyed, supported and braced to withstand a wind pressure or suction of 10 pounds per square foot. The poles and their supporting guys, stays, stakes, fastenings, etc., shall be of sufficient strength and attached so as to resist wind pressure of 20 pounds per square foot of projected area of the tent.

4-3. Flame Resistance.

(a) All tents occupied for assembly, or in which animals are stabled, or those located within that portion of the premises used by the public; and all tents in places of outdoor assembly in or about which any devices using fuels are operated, and all tarpaulins and decorative materials in connection with any of these, shall meet the requirements for resistance to fire prescribed in the Federal Specification for Fire, Water and Weather Resistant Cotton Duck, CCC-D-746, except that decorative materials for indoor use need not be subjected to accelerated weathering. Safety nets shall be exempt from the above requirements for resistance to fire.

(b) The administrative official shall (1) make field tests in accordance with methods recommended by the National Fire Protection Association "Flameproofing of Textiles" (NFPA Proceedings 1940, p. 407), or (2) require a certificate or other evidence of approval by a laboratory of recognized standing, or (3) he may accept the report of tests made by other administrative officials or a recognized testing laboratory as evidence that the tents, tarpaulins and decorations have the required resistance to fire.

4-4. Fire Hazards.

(a) Tents shall conform to the general requirements of Section 6, Fire Protection in Places of Outdoor Assembly, and to the following special requirements.

(b) The ground enclosed by any tent used in connection with a place of outdoor assembly, and for a reasonable distance but not less than 10 feet outside of such structure or structures, shall be cleared of all flammable material or vegetation which will carry fire. This work shall be accomplished to the satisfaction of the administrative official prior to the erection of such structure or structures. The premises shall be kept free from such flammable materials during the period for which the premises are used by the public.

(c) 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.

(d) No smoking, fireworks, 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 any tent open to the public.

(e) Tents shall not be used for the display of motion pictures unless safety film is used.

SECTION 5. WAYS OF EGRESS FROM PLACES OF OUTDOOR ASSEMBLY.

5-1. Number of Exits.

(a) Every structure used as a place of outdoor assembly, and every balcony or tier thereof considered separately, shall be provided with at least two exits as remote from each other as practicable and leading directly to the outside. If the capacity of such structure, balcony or tier thereof exceeds 1,000 there shall be at least three, and if the capacity exceeds 4,000 there shall be at least four exits, provided that in tents if the capacity exceeds 600 there shall be at least three, and if the capacity exceeds 1,000 there shall be at least four exits.

(b) A fenced place of outdoor assembly shall have at least two exits from the enclosure. If more than 6,000 persons are to be served by such exits, there shall be at least three, and if more than 9,000 there shall be at least four exits. Exits shall be distributed as uniformly as practicable for exit purposes.

5-2. Distance to an Exit.

The line of travel to an exit or to an entrance to an exitway shall be not greater than 150 feet, except that in tents the line of travel to an exit shall be not greater than 150 feet.

5-3. Doorways, Stairways and Ramps.

(a) The aggregate clear width of doorways, stairways, or ramps serving as required exits from structures used as places of outdoor assembly shall be determined on a basis of not less than one unit of 22 inches width for each 100 persons to be accommodated, provided that for grandstands of the types described in Section 3-6(b) such aggregate width may be determined on a basis of not less than one unit of 22 inches width for each 500 persons to be accommodated.

(b) The aggregate clear width of doorways serving as exits from the enclosure of a fenced place of outdoor assembly shall be determined on a basis of not less than one unit of 22 inches width for each 100 persons to be accommodated, provided that if the enclosure has within it an easily accessible open space or spaces which provide refuge, or if such exits serve grandstands of the types described in Section 3-6(b), the aggregate width may be determined on a basis of not less than one unit of 22 inches width for each 500 persons to be accommodated.

(c) Doorways serving as required exits from stairways, ramps or passageways shall be not less than 36 inches in clear width, nor less in width than the required width of the exitway served except that the net width of such doorways may be 2 inches less in width for each unit of width of the exitway.

(d) Required stairways and ramps shall have a minimum width of 44 inches. Moving stairways may be considered the equivalent of stairways in computing exit capacity.

5-4. Aisles and Passageways.

(a) Within any structure used as a place of outdoor assembly where there is not direct access to exits, safe and continuous aisles, passageways, spaces, or corridors leading directly to exits and so arranged as to be conveniently accessible to every occupant, shall be maintained at all times on all floors, tiers, or balconies of such structures.

(b) The aggregate width of aisles, passageways, spaces or corridors serving an exit shall be at least equal to the required width of the exit.

Where several ways lead to an exit, each shall have a width suitable for the traffic but not less than 36 inches unless otherwise provided herein.

(c) Aisles in grandstands shall conform to the requirements of Section 3, Grandstands.

(d) Within any tent, aisles from grandstands or other seating arrangements that do not lead directly to an exit shall discharge into an unobstructed space leading directly to one or more exits, and so arranged as to be conveniently accessible to every occupant; and such space shall have a clear width not less than the required width of the exit to which it leads, but in no case less than 5 feet.

(e) If required exits from places of outdoor assembly do not discharge directly into a street or open space leading to a street, unobstructed lanes not less than 20 feet in width shall be maintained from such exits to the street at all times while such places of outdoor assembly are occupied by the public.

5-5. Unobstructed Means of Egress.

No aisle, passageway, stair, door or other way of ingress or egress in any place of outdoor assembly shall be obstructed in any manner while such place of outdoor assembly is occupied by the public. No tent stake, guy wire, or guy rope shall be permitted in any aisle or in any other way of ingress or egress, nor shall any guy wire or guy rope cross any aisle or other way of ingress or egress at a height of less than 7 feet. Tent stakes adjacent to any way of ingress or egress to any tent open to the public shall be railed off, capped, or covered in such manner as not to present a hazard to the public.

5-6. Exit Lighting and Signs.

(a) Exits, and aisles and passageways leading to them, in structures used as places of outdoor assembly shall be kept adequately lighted at all times when such structures are occupied by the public. Artificial light shall be provided whenever natural light is inadequate. (Lighting conforming to the requirements of Section 12 of the Building Exits Code will be considered adequate.)

(b) Exit doorways in structures used as places of outdoor assembly shall be adequately indicated; and in structures having a capacity of 200 persons or more there shall be placed over each doorway or opening to be used for egress a sign with the word EXIT in plainly legible letters not less than 6 inches high, and with the principal strokes of such letters not less than $\frac{3}{4}$ inch in width.

(c) Exit signs shall be adequately illuminated by a reliable light source at all times when the structure is occupied by the public.

(d) Where necessary, suitable directional signs shall be displayed in a conspicuous location to indicate the proper direction of egress.

SECTION 6. FIRE PROTECTION IN PLACES OF OUTDOOR ASSEMBLY.

6-1. Electrical Installations.

(a) Except as otherwise provided by law, ordinance or regulation, electrical installations shall conform to the requirements of the National Electrical Code, as approved by the American Standards Association.

(b) The electrical system shall be installed, maintained, and operated in a safe and workmanlike manner. If portable, it shall be inspected daily when in use by a qualified person representing the owner and any defects found shall be corrected before the public is admitted to the show or performance involved.

(c) The electrical system and equipment shall be isolated from the public by proper elevation or guarding, and all electrical fuses and switches shall be enclosed in approved enclosures. Cables on the ground in areas traversed by the public shall be placed in trenches or protected by approved covers.

6-2. Storage and Handling of Flammable Liquids and Gases.

Storage and handling of flammable liquids or gases shall be in accordance with recognized, safe practices. Compliance with the standards of the National Fire Protection Association shall be considered as evidence of safe practice. No storage or handling of flammable liquids or gases shall be permitted at any location at which it would jeopardize egress from the structure. Refueling of equipment with Class I or Class II liquids shall be permitted only with safety containers of approved type.

6-3. Police and Fire Detail.

Police and fire details, if deemed necessary in any place of outdoor assembly, shall be determined by the administrative official.

6-4. Fire Extinguishing Equipment.

(a) Fire extinguishing equipment of approved types shall be furnished by the person operating, conducting, or promoting any place of outdoor assembly in such amount and in such locations as may be directed by the administrative official. Such fire extinguishing equipment shall be maintained in good working order and shall be operated by employees of such place of outdoor assembly who shall be properly trained for the purpose, and who shall be required to exhibit their skill on order of the administrative official. This equipment shall be maintained in such locations as may be directed by the administrative official, who may also direct the installation of such additional fire extinguishing equipment if he deems it essential.

(b) One or more methods of fire alarm and emergency communication shall be arranged by agreement between the owner and the administrative official.

**SECTION 7. SANITARY ARRANGEMENTS IN
PLACES OF OUTDOOR ASSEMBLY.**

Rules, regulations, and directions of the Department of Health shall govern the protection, preparation, and serving of meals, refreshments, and confections; the facilities for the collection and disposal of garbage and refuse; the provision of water supply for drinking and sanitary purposes; and the provision of toilet facilities in any place of outdoor assembly.

APPENDIX.

The Appendix consists of explanatory matter referring to various parts of the recommended requirements. It is not a part of the requirements but is presented as background material. The subdivisions of the Appendix are numbered to correspond with the section numbers of the requirements.

1-2 (b). **Administrative Official.** The term "administrative official" is used throughout the standard as a general term to denote the official charged with enforcement of its provisions. In larger municipalities certain provisions may be enforced by the chief of police, others by the building official, and others by the chief of the fire department or the chief of the fire prevention bureau. In the smaller municipalities one official may be charged with the enforcement of all provisions of the standard; the same may be true in large cities where the fire, police and building departments are a part of the department of public safety. Whatever the administrative arrangement may be, it is essential that the responsibility for enforcement of the provisions of the standard should be clearly set forth. Hence the proper local title should be substituted in those sections of the standard where the term "administrative official" is used. (See Sections 4-1 (b), 4-1 (c), 4-3 (b), 4-4 (b), 6-3, 6-4 (a), and 6-4 (b).)

1-2 (f). **Places of Outdoor Assembly.** For the purpose of this standard, places of outdoor assembly include among others, structures for such occupancies as the following and all similar types of places, together with such premises, buildings, appurtenances, and establishments, as are necessary to the operation of such places of outdoor assembly:

Amusement parks	Observation platforms
Arenas	Race tracks
Athletic fields or bowls	Reviewing stands
Automobile speedways	Rodeos
Aviation shows	Skating rinks
Band stands	Stadiums
Baseball parks	Swimming pools
Bathing establishments	Tents for circuses, carnivals, religious, educational or recreational purposes, or public meetings.
Beach enclosures	
Bleachers	
Concession booths	
Grandstands	

2-2. **Accessibility to Public Ways.** The Building Exits Code states: "It is important that ample roadways be available from buildings in which there are large assemblies so that exits will not be blocked by persons already outside. Two or more avenues of departure should be available for all but very small places." The present committee believes the same principle is applicable to places of outdoor assembly, but because of the scope of this project which includes a variety of operations, among them circuses, fair grounds, amusement parks, baseball stadiums, race tracks, etc., some of which may be located in open country and may be served by only one street or road, it is believed advisable to make the requirement reasonably elastic so as to be applicable to these conditions. Hence, the requirement is that there shall be access to public ways of approach from at least two "points" at all times.

Where possible, avenues of departure should lead to separate streets or roads, otherwise there should be ample access to the single road or street from remote points which should be kept clear at all times not only to facilitate departure of persons but to permit entrance of fire apparatus or