CHAPTER 31
SPECIAL CONSTRUCTION

SECTION 3101
GENERAL

3101.1 Scope. The provisions of this chapter shall govern special building construction including membrane structures, temporary structures, pedestrian walkways and tunnels, awnings and canopies, marquees, signs, and towers and antennas.

SECTION 3102
MEMBRANE STRUCTURES

3102.1 General. The provisions of this section shall apply to tents, air-supported, air-inflated, membrane-covered cable, membrane-covered frame structures, and tensioned membrane structures, collectively known as membrane structures, including circus and carnival tents, entertainment, recreational and food service establishments and other similar structures. Membrane structures covering water storage facilities, water clarifiers, water treatment plants, sewage treatment plants, greenhouses and similar facilities not used for human occupancy, are required to meet only the requirements of Sections 3102.3.1 and 3102.7.

3102.1.1 Approval required. Tents and membrane structures having an area in excess of 200 square feet (19 m²) and canopies in excess of 400 square feet (37 m²) shall not be erected, operated or maintained for any purpose without first receiving plan approval in accordance with the provisions of Chapter 1.

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. Canopies open on all sides which comply with all of the following:
   2.1. Individual canopies having a maximum size of 700 square feet (65 m²).
   2.2. The aggregate area of multiple canopies placed side by side with a minimum clearance of less than 12 feet (3658 mm), not exceeding 700 square feet (65 m²).
   2.3. A minimum clearance of 12 feet (3658 mm) to all structures and other tents.

3102.1.2 Construction requirements. Construction shall comply with this code and the applicable provisions of Chapter 24 in the International Fire Code.

3102.2 Definitions. The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein:

AIR-SUPPORTED STRUCTURE. A building wherein the shape of the structure is attained by air pressure and occupants of the structure are within the elevated pressure area. Air-supported structures are of two basic types:

   Double skin. Similar to a single skin, but with an attached liner that is separated from the outer skin and provides an airspace which serves for insulation, acoustic, aesthetic or similar purposes.

   Single skin. Where there is only the single outer skin and the air pressure is directly against that skin.

CABLE-RESTRAINED, AIR-SUPPORTED STRUCTURE. A structure in which the uplift is resisted by cables or webbings which are anchored to either foundations or dead men. Reinforcing cable or webbing is attached by various methods to the membrane or is an integral part of the membrane. This is not a cable-supported structure.

CANOPY. For the purposes of this chapter, a canopy is a structure, enclosure, or shelter constructed of fabric or pliable materials supported by any manner, except by air or the contents it protects, and is open without sidewalls or drops on 75 percent or more of the perimeter.

MEMBRANE-COVERED CABLE STRUCTURE. A nonpressurized structure in which a mast and cable system provides support and tension to the membrane weather barrier and the membrane imparts stability to the structure.

MEMBRANE-COVERED FRAME STRUCTURE. A nonpressurized building wherein the structure is composed of a rigid framework to support a tensioned membrane which provides the weather barrier.

NONCOMBUSTIBLE MEMBRANE STRUCTURE. A membrane structure in which the membrane and all component parts of the structure are noncombustible.

TENT. A structure or shelter constructed of fabric or other pliable material supported by any manner except by air or the contents that it protects.

3102.3 Type of construction. Noncombustible membrane structures shall be classified as Type IIB construction. Noncombustible frame or cable-supported structures covered by an approved membrane in accordance with Section 3102.3.1 shall be classified as Type IIB construction. Heavy timber frame-supported structures covered by an approved membrane in accordance with Section 3102.3.1 shall be classified as Type IV construction. Other membrane structures shall be classified as Type V construction.

Exception: Plastic less than 30 feet (9144 mm) above any floor used in greenhouses, where occupancy by the general public is not authorized, and for aquaculture pond covers, is not required to be flame resistant.

3102.3.1 Membrane and interior liner material. Membranes and interior liners shall be either noncombustible as set forth in Section 703.4, or flame resistant as determined
in accordance with NFPA 701 and the manufacturer's test protocol.

Exception: Plastic less than 20 mil (0.51 mm) in thickness used in greenhouses, where occupancy by the general public is not authorized, and for aquaculture pond covers, is not required to be flame resistant.

3102.4 Allowable floor areas. The area of a membrane structure shall not exceed the limitations set forth in Table 503, except as provided in Section 506.

3102.5 Maximum height. Membrane structures shall not exceed one story nor shall such structures exceed the height limitations in feet set forth in Table 503.

Exception: Noncombustible membrane structures serving as roofs only.

3102.6 Mixed construction. Membrane structures shall be permitted to be utilized as specified in this section as a portion of buildings of other types of construction. Height and area limits shall be as specified for the type of construction and occupancy of the building.

3102.6.1 Noncombustible membrane. A noncombustible membrane shall be permitted for use as the roof or as a skylight of any building or atrium of a building of any type of construction provided it is at least 20 feet (6096 mm) above any floor, balcony or gallery.

3102.6.1.1 Flame-resistant membrane. A flame-resistant membrane shall be permitted to be used as the roof or as a skylight on buildings of Type IIB, III, IV and V construction provided it is at least 20 feet (6096 mm) above any floor, balcony or gallery.

3102.7 Engineering design. The structure shall be designed and constructed to sustain dead loads; loads due to tension or inflation; live loads including wind, snow or flood and seismic loads and in accordance with Chapter 16.

3102.8 Inflation systems. Air-supported and air-inflated structures shall be provided with primary and auxiliary inflation systems to meet the minimum requirements of Sections 3102.8.1 through 3102.8.3.

3102.8.1 Equipment requirements. This inflation system shall consist of one or more blowers and shall include provisions for automatic control to maintain the required inflation pressures. The system shall be so designed as to prevent overpressurization of the system.

3102.8.1.1 Auxiliary inflation system. In addition to the primary inflation system, in buildings exceeding 1,500 square feet (140 m²) in area, an auxiliary inflation system shall be provided with sufficient capacity to maintain the inflation of the structure in case of primary system failure. The auxiliary inflation system shall operate automatically when there is a loss of internal pressure and when the primary blower system becomes inoperative.

3102.8.1.2 Blower equipment. Blower equipment shall meet the following requirements:

1. Blowers shall be powered by continuous-rated motors at the maximum power required for any flow condition as required by the structural design.

2. Blowers shall be provided with inlet screens, belt guards and other protective devices as required by the building official to provide protection from injury.

3. Blowers shall be housed within a weather-protecting structure.

4. Blowers shall be equipped with backdraft check dampers to minimize air loss when inoperative.

5. Blower inlets shall be located to provide protection from air contamination. The location of inlets shall be approved.

3102.8.2 Standby power. Wherever an auxiliary inflation system is required, an approved standby power-generating system shall be provided. The system shall be equipped with a suitable means for automatically starting the generator set upon failure of the normal electrical service and for automatic transfer and operation of all of the required electrical functions at full power within 60 seconds of such service failure. Standby power shall be capable of operating independently for a minimum of 4 hours.

3102.8.3 Support provisions. A system capable of supporting the membrane in the event of deflation shall be provided for in air-supported and air-inflated structures having an occupant load of more than 50 or where covering a swimming pool regardless of occupant load. The support system shall be capable of maintaining membrane structures used as a roof for Type I construction not less than 20 feet (6096 mm) above floor or seating areas. The support system shall be capable of maintaining other membranes at least 7 feet (2134 mm) above the floor, seating area or surface of the water.

SECTION 3103
TEMPORARY STRUCTURES

3103.1 General. Temporary structures shall comply with Section 107.

3103.1.1 Permit required. Deleted.

3103.2 Construction documents. Deleted.

3103.3 Location. Deleted.

3103.4 Means of egress. Deleted.

SECTION 3104
PEDESTRIAN WALKWAYS AND TUNNELS

3104.1 General. This section shall apply to connections between buildings such as pedestrian walkways or tunnels, located at, above or below grade level, that are used as a means of travel by persons. The pedestrian walkway shall not contribute to the building area or the number of stories or height of connected buildings.

3104.2 Separate structures. Connected buildings shall be considered to be separate structures.

Exceptions:

1. Buildings on the same lot in accordance with Section 503.1.3.
2. For purposes of calculating the number of Type B units required by Chapter 11, structurally connected buildings and buildings with multiple wings shall be considered one structure.

3104.3 Construction. The pedestrian walkway shall be of noncombustible construction.

Exception: Combustible construction shall be permitted where connected buildings are of combustible construction.

3104.4 Contents. Only materials and decorations approved by the building official shall be located in the pedestrian walkway.

3104.5 Fire barriers between pedestrian walkways and buildings. Walkways shall be separated from the interior of the building by fire barrier walls with a fire-resistance rating of not less than 2 hours. This protection shall extend vertically from a point 10 feet (3048 mm) above the walkway roof surface or the connected building roof line, whichever is lower, down to a point 10 feet (3048 mm) below the walkway and horizontally 10 feet (3048 mm) from each side of the pedestrian walkway. Openings within the 10-foot (3048 mm) horizontal extension of the protected walls beyond the walkway shall be equipped with devices providing a 1/2-hour fire protection rating in accordance with Section 715.

Exception: The walls separating the pedestrian walkway from a connected building are not required to have a fire-resistance rating by this section where any of the following conditions exist:

1. The distance between the connected buildings is more than 10 feet (3048 mm), the pedestrian walkway and connected buildings are equipped throughout with an automatic sprinkler system in accordance with NFPA 13 and the wall is constructed of a tempered, wired or laminated glass wall and doors subject to the following:

   1.1. The glass shall be protected by an automatic sprinkler system in accordance with NFPA 13 and the sprinkler system shall completely wet the entire surface of interior sides of the glass wall when actuated.

   1.2. The glass shall be in a gasketed frame and installed in such a manner that the framing system will deflect without breaking (loading) the glass before the sprinkler operates.

   1.3. Obstructions shall not be installed between the sprinkler heads and the glass.

2. The distance between the connected buildings is more than 10 feet (3048 mm), and both sidewalls of the pedestrian walkway are at least 50 percent open with the open area uniformly distributed to prevent the accumulation of smoke and toxic gases.

3. Buildings are on the same lot, in accordance with Section 503.1.3.

4. Where exterior walls of connected buildings are required by Section 704 to have a fire-resistance rating greater than 2 hours, the walkway shall be equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13.

The previous exceptions shall apply to pedestrian walkways having a maximum height above grade of three stories or 40 feet (12 192 mm), or five stories or 55 feet (16 764 mm) where sprinklered.

3104.6 Public way. Pedestrian walkways over a public way shall also comply with Chapter 32.

3104.7 Egress. Access shall be provided at all times to a pedestrian walkway that serves as a required exit.

3104.8 Width. The unobstructed width of pedestrian walkways shall not be less than 36 inches (914 mm). The total width shall not exceed 30 feet (9144 mm).

3104.9 Exit access travel. The length of exit access travel shall not exceed 200 feet (60 960 mm).

Exceptions:

1. Exit access travel distance on a pedestrian walkway equipped throughout with an automatic sprinkler system in accordance with NFPA 13 shall not exceed 250 feet (76 200 mm).

2. Exit access travel distance on a pedestrian walkway constructed with both sides at least 50 percent open shall not exceed 300 feet (91 440 mm).

3. Exit access travel distance on a pedestrian walkway constructed with both sides at least 50 percent open, and equipped throughout with an automatic sprinkler system in accordance with NFPA 13, shall not exceed 400 feet (122 m).

3104.10 Tunnelle walked way. Separation between the tunneled walkway and the building to which it is connected shall not be less than 2-hour fire-resistant construction and openings therein shall be protected in accordance with Table 715.3.

3104.11 Ventilation. Smoke and heat vents shall be provided for enclosed walkways and tunneled walkways as required for Group F-1 occupancies in accordance with Section 910.

SECTION 3105
AWNINGS AND CANOPIES

3105.1 General. Awnings or canopies shall comply with the requirements of this section and other applicable sections of this code.

3105.2 Definition. The following term shall, for the purposes of this section and as used elsewhere in this code, have the meaning shown herein.

RETRACTABLE AWNING. A retractable awning is a cover with a frame that retracts against a building or other structure to which it is entirely supported.

3105.3 Design and construction. Awnings and canopies shall be designed and constructed to withstand wind or other lateral loads and live loads as required by Chapter 16 with due allowance for shape, open construction and similar features that relieve the pressures or loads. Structural members shall be protected to prevent deterioration. Awnings shall have frames of noncombustible material, fire-retardant-treated wood, wood of Type IV size, or 1-hour construction with combustible or noncombustible covers and shall be either fixed, retractable, folding or collapsible.
3105.4 Canopy materials. Canopies shall be constructed of a rigid framework with an approved covering, that is flame resistant in accordance with NFPA 701 or has a flame spread index not greater than 25 when tested in accordance with ASTM E84.

3106.1 General. Marquees shall comply with this section and other applicable sections of this code. Marquee signs shall comply with the provisions of Section 3107.13.

3106.2 Thickness. The maximum height or thickness of a marquee measured vertically from its lowest to its highest point shall not exceed 3 feet (914 mm) where the marquee projects more than two-thirds of the distance from the property line to the curb line, and shall not exceed 9 feet (2743 mm) where the marquee is less than two-thirds of the distance from the property line to the curb line.

3106.3 Roof construction. Where the roof or any part thereof is a skylight, the skylight shall comply with the requirements of Chapter 24. Every roof and skylight of a marquee shall be sloped to downspouts that shall conduct any drainage from the marquee in such a manner so as not to spill over the sidewalk.

3106.4 Location prohibited. Every marquee shall be so located as not to interfere with the operation of any exterior standpipe, and such that the marquee does not obstruct the clear passage of stairways or exit discharge from the building or the installation or maintenance of street lighting.

3106.5 Construction. A marquee shall be supported entirely from the building and constructed of noncombustible materials. Marquees shall be designed as required in Chapter 16. Structural members shall be protected to prevent deterioration.

SECTION 3107 SIGNS

3107.1 General. Signs shall be designed, constructed and maintained in accordance with this section and other applicable sections in this code.

3107.1.1 Construction documents and written consent. Construction documents for signs shall be submitted for approval in accordance with the provisions of Chapter 1. The application for approval shall be accompanied by the written consent of the owner or lessee of the property upon which the sign is to be erected.

Exceptions:
1. Signs painted directly on building surfaces.
2. Temporary yard signs.
3. Signs erected by federal, state and local transportation authorities.
4. Signs not more than 2.5 square feet in area (0.23 m²).
5. Signs required in accordance with the provisions of Chapter 11.
6. Signs undergoing minor repairs in accordance with Section 105.2.

3107.2 Definitions. Unless otherwise expressly stated, the following words and terms shall, for the purposes of this chapter, have the meanings shown herein. Refer to Chapter 2 of this code for general definitions.

SIGN. Any fabricated panel or outdoor display structure, including its structure, consisting of any letter, figure, character, mark, plane, point, marquee sign, design, poster, pictorial, picture, stroke, stripe, line, trademark, reading matter or illuminated device, which is constructed, placed, attached, erected, fastened or manufactured in any manner so that the same is used for the attraction of the public to any place, subject, person, firm, corporation, public performance, article, machine or merchandise, which is displayed outdoors for recognized advertising purposes. Signs shall be classified and conform to the requirements of those classifications as set forth in this chapter.

Display sign. The area made available by the sign structure for the purpose of displaying the advertising message.

Electric sign. A sign containing electrical wiring, but not including signs illuminated by an exterior light source.

Ground sign. A billboard or similar type of sign which is supported by one or more uprights, poles or braces in or upon the ground other than a pole sign, as defined by this code.

Pole sign. A sign wholly supported by a pole in the ground.

Portable display surface. A display surface temporarily fixed to a standardized advertising structure which is regularly moved from place to place at periodic intervals.

Projecting sign. A sign other than a wall sign, which projects from and is supported by a wall of a building or structure.

Roof sign. A sign erected upon or above a roof or parapet of a building or structure.

Sign structure. Any structure which supports or is capable of supporting a sign as defined in this code. A sign structure is permitted to be a single pole and is not required to be an integral part of the building.

Wall sign. Any sign attached to or erected against the wall of a building or structure, with the exposed face of the sign in a plane parallel to the plane of the wall.

3107.3 Location restrictions. Signs shall not be erected in a manner that would confuse or obstruct the view of or interfere with exit signs required by Chapter 10 or with traffic signs, signals or devices. Signs shall not be erected, constructed or maintained so as to obstruct any fire escape or any window, door or opening used as a means of egress. A sign shall not be attached to a fire escape, nor shall it be placed in such a manner as to interfere with any opening required for ventilation.

3107.4 Identification. Every outdoor sign shall be plainly marked with the name of the person, firm or corporation erecting and maintaining the sign.

3107.5 Structural requirements. Signs shall be constructed to comply with the structural requirements of this section.
3107.5.1 Wind load. Signs shall be designed and constructed to withstand wind pressure as provided for in Chapter 16.

3107.5.2 Seismic load. Signs designed to withstand wind pressures shall be considered capable of withstanding earthquake loads, except as provided for in Chapter 16.

3107.5.3 Working stresses. In outdoor signs, the allowable working stresses shall conform with the requirements of Chapter 16. The working stresses of wire rope and its fastenings shall not exceed 25 percent of the ultimate strength of the rope or fasteners.

Exceptions:
1. The allowable working stresses for steel and wood shall be in accordance with the provisions of Chapters 22 and 23.
2. The working strength of chains, cables, guys or steel rods shall not exceed one-fifth of the ultimate strength of such chains, cables, guys or steel.

3107.5.4 Attachment. Signs attached to masonry, concrete or steel shall be safely and securely fastened by means of metal anchors, bolts or approved expansion screws of sufficient size and anchorage to safely support the loads applied.

3107.6 Electrical Illumination. A sign shall not be illuminated by other than electrical means, and electrical devices and wiring shall be installed in accordance with the requirements of Chapter 27. Any open spark or flame shall not be used for display purposes.

3107.6.1 Internally illuminated signs. Except as provided for in Sections 402.14 and 2611, where internally illuminated signs have sign facings of wood or approved plastic, the area of such facing section shall not be more than 120 square feet (11 m²) and the wiring for electric lighting shall be entirely enclosed in the sign cabinet with a clearance of not less than 2 inches (51 mm) from the facing material. The dimensional limitation of 120 square feet (11 m²) shall not apply to sign facings made from flame-resistant coated fabric (ordinarily known as “flexible sign face plastic”) that weighs less than 20 ounces per square yard (678 g/m²) and which, when tested in accordance with NFPA 701, meets the requirements of both the small-scale and large-scale test.

3107.6.2 Electrical service. Signs that require electrical service shall comply with the requirements of Chapter 27.

3107.7 Combustible materials. Wood, approved plastic or plastic veneer panels as provided for in Chapter 26, or other materials of combustible characteristics similar to wood, used for moldings, cappings, nailing blocks, letters and latticing shall comply with Section 3107.9, and shall not be used for other ornamental features of signs.

3107.7.1 Plastic materials. Notwithstanding any other provisions of the code, plastic materials which burn at a rate no faster than 2.5 inches per minute (64 mm/s) when tested in accordance with ASTM D 635 shall be deemed approved plastics and may be used as the display surface material and for the letters, decorations and facings on signs and outdoor display structures.

3107.7.2 Electric sign faces. Individual plastic facings of electric signs shall not exceed 200 square feet (19 m²) in area.

3107.7.3 Area limitation. If the area of a display surface exceeds 200 square feet (19 m²), the area occupied or covered by approved plastics, shall be limited to 200 square feet (19 m²) plus 50 percent of the difference between 200 square feet (19 m²) and the area of display surface. The area of plastic on a display surface shall not in any case exceed 1,100 square feet (102 m²).

3107.8 Animated devices. Signs that contain moving sections or ornaments shall have fail-safe provisions to prevent the section or ornament from releasing and falling or shifting its center of gravity more than 15 inches (381 mm). The fail-safe device shall be in addition to the mechanism and the mechanism’s housing, which operate the movable section or ornament. The fail-safe device shall be capable of supporting the full dead load of the section or ornament when the moving mechanism releases.

3107.9 Ground signs. The structural frame of ground signs shall not be erected of combustible materials to a height of more than 35 feet (10 668 mm) above the ground. Ground signs constructed entirely of noncombustible material shall not be erected to a height of greater than 100 feet (30 480 mm) above the ground.

3107.9.1 Required clearance. Deleted.

3107.9.2 Wood anchors and supports. Where wood anchors or supports are embedded in the soil, the wood shall be pressure treated with an approved preservative.

3107.10 Roof signs. Roof signs shall be constructed entirely of metal or other approved noncombustible material except as provided for in Sections 3107.6.1 and 3107.7. Provisions shall be made for electric grounding of metallic parts. Where combustible materials are permitted in letters or other ornamental features, wiring and tubing shall be kept free and insulated therefrom. Roof signs shall be so constructed as to leave a clear space of not less than 6 feet (1829 mm) between the roof level and the lowest part of the sign and shall have at least 5 feet (1524 mm) clearance between the vertical supports thereof. No portion of any roof sign structure shall project beyond an exterior wall.

3107.10.1 Bearing plates. The bearing plates of roof signs shall distribute the load directly to or upon masonry walls, steel roof girders, columns or beams. The building shall be designed to resist the loads imposed by roof signs.

3107.10.2 Height of open signs. Open roof signs in which the uniform open area is not less than 40 percent of total gross area shall not exceed a height of 75 feet (22 860 mm) on buildings of Type I or II construction. On buildings of other construction types, the height shall not exceed 40 feet (12 192 mm). Such signs shall be thoroughly secured to the building upon which they are installed, erected or constructed by iron, metal anchors, bolts, supports, chains, stranded cables, steel rods or braces.

3107.10.3 Height of closed signs. A closed roof sign shall not be erected to a height greater than 50 feet (15 240 mm) above the roof of buildings of Types I and II construction.
nor more than 35 feet (10 668 mm) above the roof of build-
ings of Types III, IV and V construction.

3107.11 Wall signs. Wall signs which have an area exceeding 40 square feet (4 m²) shall be constructed of metal or other ap-
proved noncombustible material, except for nailing rails and as provided for in Sections 3107.6.1 and 3107.7.

3107.11.1 Exterior wall mounting details. Wall signs at-
tached to exterior walls of solid masonry, concrete or stone, shall be safely and securely attached by means of metal an-
chors, bolts or expansion screws of not less than 1/4 inch (9.5
mm) diameter and shall be embedded at least 5 inches (127
mm). Wood blocks shall not be used for anchorage, except in the case of wall signs attached to buildings with walls of
wood construction. A wall sign shall not be supported by an-
chorages secured to an unbraced parapet wall.

3107.11.2 Extension. Wall signs shall not extend above the
top of the wall, nor extend beyond the ends of the wall to
which the signs are attached, unless such signs conform to
the requirements for roof signs, projecting signs or ground
signs.

3107.12 Projecting signs. Projecting signs shall be con-
structed entirely of metal or other noncombustible material
and securely attached to a building or structure by metal sup-
pports, such as bolts, anchors, supports, chains, guys or steel rods. Staples or nails shall not be used to secure any projecting
sign to any building or structure. The dead load of projecting
signs not parallel to the building or structure and the load due
to wind pressure shall be supported with chains, guys or steel
rods having a net cross-sectional dimension of not less than 1/4
inch (9.5 mm) diameter. Such supports shall be erected or
maintained at an angle of at least 45 percent (0.78 rad) with the
horizontal to resist the dead load and at an angle of 45 percent
(0.78 rad) or more with the face of the sign to resist the spec-
ified wind pressure. If such projecting sign exceeds 30 square
feet (3 m²) in one facial area, there shall be provided at least
two such supports on each side not more than 8 feet (2438 mm)
apart to resist the wind pressure.

3107.12.1 Attachment of supports. Supports shall be se-
cured to a bolt or expansion screw, that will develop the
strength of the supporting chains, guys or steel rods, with a
minimum 1/4 inch (16 mm) bolt or lag screw, by an expansion
shield. Turnbuckles shall be placed in chains, guys or steel
rods supporting projecting signs.

3107.12.2 Wall-mounting details. Chains, cables, guys or
steel rods used to support the live or dead load of projecting
signs are permitted to be fastened to solid masonry walls
with expansion bolts or by machine screws in iron supports,
but such supports shall not be attached to an unbraced par-
apet wall. Where the supports must be fastened to walls of
wood construction, the supporting anchor bolts must pe-
terate the wall and be fastened on the inside in a secure man-
ner.

3107.12.3 Height limitation. A projecting sign shall not be
erected on the wall of any building so as to project above the
roof or cornice or above the roof level where there is no cor-
nice; except that a sign erected at a right angle to the build-
ing, the horizontal width of such sign does not exceed 18
inches (457 mm) and is perpendicular to such a wall, is per-
mittted to be erected to a height not exceeding 2 feet (610
mm) above the roof or cornice wall or above the roof level
where there is no cornice. A sign attached to a corner of a
building and parallel to the vertical line of such corner shall
be deemed to be erected at a right angle to the building wall.

3107.12.4 Additional loads. Projecting sign structures
which may be used to support an individual on a ladder or
other service equipment, whether or not specifically de-
signed for the service equipment, shall be capable of sup-
porting the anticipated load, but it shall not be less than a
100-pound (445 N) concentrated horizontal load and a
300-pound (1334 N) concentrated vertical load applied at
the point of assumed or most eccentric loading. The building
component to which the projecting sign is attached shall
also be designed to support the additional loads.

3107.13 Marquee signs. Marquee signs shall be constructed
together with signs that are constructed in accordance with
Section 3106.

3107.13.1 Attachment. Marquee signs shall be attached to
approved marquées that are constructed in accordance with
Section 3106.

3107.13.2 Dimensions. Marquee signs, whether on the
front or side of the marquee, shall not project beyond the
perimeter of the marquee.

3107.13.3 Height limitation. Marquee signs shall not ex-
tend more than 6 feet (1829 mm) above, nor 1 foot (305 mm)
below such marquee, but under no circumstances shall the
sign or signs have a vertical dimension greater than 8 feet
(2438 mm).

SECTION 3108
RADIO AND TELEVISION TOWERS

3108.1 General. Subject to the provisions of Chapter 16 and
the requirements of Chapter 15 governing the fire-resistance
ratings of buildings for the support of roof structures, radio and
television towers shall be designed and constructed as herein
provided.

3108.2 Location and access. Towers shall be located and
equipped with step bolts and ladders so as to provide ready ac-
cess for inspection purposes. Guy wires or other accessories
shall not cross or encroach upon any street or other public
space, or over above-ground electric utility lines, or encroach
upon any privately owned property without written consent of
the owner of the encroached-upon property, space or above-ground electric utility lines.

3108.3 Construction. Towers shall be constructed of approved
corrosion-resistant noncombustible material. The minimum
type of construction of isolated radio towers not more than 100
feet (30 480 mm) in height shall be Type IIIB.

3108.4 Loads. Towers shall be designed to resist wind loads in
accordance with TIA/EIA-222. Consideration shall be given to
conditions involving wind load on ice-covered sections in lo-
calities subject to sustained freezing temperatures.

3108.4.1 Dead load. Towers shall be designed for the dead
load plus the ice load in regions where ice formation occurs.
3108.4.2 Wind load. Adequate foundations and anchorage shall be provided to resist two times the calculated wind load.

3108.5 Grounding. Towers shall be permanently and effectively grounded.

SECTION 3109
SWIMMING POOL ENCLOSURES AND SAFETY DEVICES

3109.1 General. Swimming pools and all appurtenant structures, installations and equipment shall comply with the requirements of this chapter and other applicable sections of this code and the Ohio Department of Health rules pertaining to swimming pools and their service equipment (Chapter 3701-31 of the Administrative Code, pursuant to Chapter 3749 of the Revised Code). Private residential swimming pools are not regulated by this code.

3109.2 Definition. The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

SWIMMING POOLS. Deleted.

PRIVATE RESIDENTIAL SWIMMING POOL. Any indoor or outdoor structure, chamber or tank containing a body of water for swimming, diving or bathing intended to serve a residential structure containing not more than three dwelling units and used exclusively by the residents and their nonpaying guests. Any swimming pool other than a private swimming pool shall be classified as a public swimming pool.

PUBLIC SWIMMING POOL. Any indoor or outdoor structure, chamber or tank containing a body of water for swimming, diving or bathing that is intended to be used collectively for swimming, diving or bathing and is operated by any person whether as the owner, lessee, operator, licensee or concessionaire, regardless of whether or not a fee is charged for use, but does not mean any public bathing area, private residential swimming pool or any structure, chamber and tank that is easily portable when empty with a capacity of no more than 150 (568 L) gallons.

3109.3 Enclosures. Public swimming pools shall be completely enclosed by a fence or similar barrier at least 4 feet (1290 mm) in height. Openings in the fence or barrier shall not permit the passage of a 4-inch-diameter (102 mm) sphere. Gates shall be equipped with self-closing and self-latching devices. Gates serving as required exits shall conform to the requirements of Section 1008.2.

3109.4 Plan approval. A public swimming pool or appurtenances thereto shall not be constructed, installed, enlarged or altered until plans for those elements subject to this code have been submitted and approval has been obtained from the building official. All public swimming pools are required to have approval by the Ohio Department of Health in accordance with Section 3749.03 of the Revised Code prior to application for plan approval. Copies of these approvals shall be obtained by the applicant and submitted as part of the supporting data for the plan approval application.

3109.4.1 Plans. Plans shall accurately show dimensions and construction of the pool and appurtenances and properly established distances to lot lines, buildings, walks and fences, as well as details of the water supply system, drainage and water disposal systems and all appurtenances pertaining to the swimming pool. Detailed plans of structures, vertical elevations and sections through the pool showing depth shall be included.

3109.4.1.1 Openings. Deleted.

3109.4.1.2 Solid barrier surfaces. Deleted.

3109.4.1.3 Closely spaced horizontal members. Deleted.

3109.4.1.4 Widely spaced horizontal members. Deleted.

3109.4.1.5 Chain link dimensions. Deleted.

3109.4.1.6 Diagonal members. Deleted.

3109.4.1.7 Gates. Deleted.

3109.4.1.8 Dwelling wall as a barrier. Deleted.

3109.4.1.9 Pool structure as barrier. Deleted.

3109.4.2 Indoor swimming pools. Deleted.

3109.4.3 Prohibited locations. Deleted.

3109.5 Structural design. Pools and towers or slide structures shall be engineered and designed to withstand the expected forces to which those structures will be subjected.

3109.5.1 Stairs and ladders. Stairs for towers,platforms, slides and similar structures exceeding 3 meters in height shall be designed and constructed in accordance with the applicable requirements of Section 1009. Ladders or stairs conforming with the manufacturer’s recommended installation instructions shall be provided for structures 3 meters or less in height.

3109.6 Water supply. Water supply and cross connection control shall be in accordance with rules of the Ohio Department of Health. Any required backflow prevention devices shall be installed and tested in accordance with the plumbing code.

3109.6.1 Drainage systems. Deck drainage shall be directed to a storm water system or otherwise disposed of in an approved manner. Decks for indoor pools shall be provided with separate deck drainage unless specifically exempted by the Ohio Department of Health.

3109.7 Appurtenant structures. All appurtenant structures, installations and equipment, such as showers, slide structures, dressing rooms, equipment houses or other buildings and structures, including plumbing, heating and air-conditioning systems, shall comply with all applicable requirements of this code.

3109.7.1 Accessories. All swimming pool accessories shall be designed, constructed and installed so as not to be a safety hazard. Installations or structures for diving purposes shall be properly anchored to ensure stability.

3109.8 Equipment installations. Pumps, filters and other mechanical and electrical equipment for public swimming pools shall be enclosed in such a manner as to be accessible only to authorized persons and not to bathers. Construction and
drainage shall be arranged to avoid the entrance and accumulation of water in the vicinity of electrical equipment.

SECTION 3110
MANUFACTURED HOMES AND MOBILE UNITS

3110.1 General. Manufactured homes constructed under 24 CFR Part 3280, Manufactured Home Construction and Safety Standards, used for single-family dwellings are not regulated by this code. The federal standards shall be the exclusive construction and safety standards in this state and neither the state nor any political subdivision of the state may establish any other standard governing the construction of manufactured homes. Mobile units used for temporary occupancy for travel, recreation or vacation purposes are not regulated by this code. All similar mobile units used for any other purpose are regulated by this code and shall be classified with respect to its use in one of the applicable groups.

3110.2 Manufactured home parks. See Ohio Department of Health rules for licensing and other manufactured home park regulations.