4101:1-31-01 Special construction.

[Comment: When a reference is made within this rule to a federal statutory provision, an industry consensus standard, or any other technical publication, the specific date and title of the publication as well as the name and address of the promulgating agency are listed in rule 4101:1-35-01 of the Administrative Code. The application of the referenced standards shall be limited and as prescribed in section 102.5 of rule 4101:1-1-01 of the Administrative Code.]

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, automatic vehicular gates, awnings and canopies, marquees, signs, and towers and antennas.

SECTION 3102
MEMBRANE STRUCTURES

3102.1 General. The provisions of Sections 3102.1 through 3102.8 shall apply to air-supported, air-inflated, membrane covered cable, membrane-covered frame and tensile membrane structures, collectively known as membrane structures, erected for a period of 180 days or longer. Those erected for a shorter period of time shall comply with the *fire code*. 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. Membrane structures erected on a building, balcony, deck or other structure for any period of time shall comply with this section.

3102.1.1 Tensile membrane structures. Tensile membrane structures, including permanent and temporary structures, shall be designed and constructed in accordance with ASCE 55. The provisions in Sections 3102.3 through 3102.6 shall apply.

3102.2 Definitions. The following terms are defined in Chapter 2:

AIR-INFLATED STRUCTURE.

AIR-SUPPORTED STRUCTURE.

Double skin.

Single skin.

CABLE-RESTRAINED, AIR-SUPPORTED STRUCTURE.
CANOPY
MEMBRANE-COVERED CABLE STRUCTURE.
MEMBRANE-COVERED FRAME STRUCTURE.
NONCOMBUSTIBLE MEMBRANE STRUCTURE.
TENSILE MEMBRANE STRUCTURE.
TENT

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 meet the fire propagation performance criteria of Test Method 1 or Test Method 2, as appropriate, of NFPA 701.

3102.3.1 Membrane and interior liner material. Membranes and interior liners shall be either noncombustible as set forth in Section 703.5 or meet the fire propagation performance criteria of Test Method 1 or Test Method 2, as appropriate, of NFPA 701 and the manufacturer's test protocol.

Exception: Plastic less than 20 mil (0.5 mm) in thickness used in greenhouses, where occupancy by the general public is not authorized, and for aquaculture pond covers is not required to meet the fire propagation performance criteria of Test Method 1 or Test Method 2, as appropriate, of NFPA 701.

3102.4 Allowable floor areas. The area of a membrane structure shall not exceed the limitations specified in Section 506.

3102.5 Maximum height. Membrane structures shall not exceed one story nor shall such structures exceed the height limitations in feet specified in Section 504.3.

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 the membrane is not less than 20 feet (6096 mm) above any floor, balcony or gallery.

3102.6.1.1 Membrane. A membrane meeting the fire propagation performance criteria of Test Method 1 or Test Method 2, as appropriate, of NFPA 701 shall be permitted to be used as the roof or as a skylight on buildings of Type IIB, III, IV and V construction, provided the membrane is not less than 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.

3102.7.1 Lateral restraint. For membrane-covered frame structures, the membrane shall not be considered to provide lateral restraint in the calculation of the capacities of the frame members.

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 over pressurization of the system.

3102.8.1.1 Auxiliary inflation system. In addition to the primary inflation system, in buildings larger than 1,500 square feet (140 m^2) 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 all of 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 not less than 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 50 or more 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 not less than 7 feet (2134 mm) above the floor, seating area or surface of the water.

SECTION 3103
TEMPORARY STRUCTURES

3103.1 General. The provisions of Sections 3103.1 through 3103.4 shall apply to structures erected for a period of less than 180 days. Tents and other membrane structures erected for a period of less than 180 days shall comply with *this section and Chapter 24 of* the *fire code*. Those erected for a longer period of time shall comply with applicable sections of this code.

3103.1.1 Conformance. Temporary structures and uses shall conform to the structural strength, fire safety, means of egress, accessibility, light, ventilation

and sanitary requirements of this code as necessary to ensure public health, safety and general welfare.

3103.1.2 ***Approval* required.** Temporary structures, *other than tents and membrane structures*, that cover an area greater than 120 square feet (11.16 m^2) *or that exceed an occupant load* of 10 or more persons shall not be erected, operated or maintained for any purpose without obtaining *an approval* from the building official *as authorized in Section 102.8.*

3103.1.3 Approval required for tents and membrane structures. *Temporary tents and temporary membrane structures having either of the following characteristics shall not be erected, operated or maintained for any purpose without first obtaining an approval from the building official. For the purpose of determining required distances, support ropes and guy wires shall be considered as part of the temporary tent or membrane structure.*

1. *An individual tent or membrane structure with an area in excess of 400 square feet (37 m^2); or*

2. *Multiple tents or membrane structures with an aggregate area in excess of 400 square feet (37 m^2) when adjacent temporary tents or membrane structures are located within 12 feet (3,658 mm) of one another.*

Exceptions:

1. *An approval is not required for tents used exclusively for recreational camping purposes.*
2. *An approval is not required for tents open on all sides which comply with all of the following:*
   - 2.1 *Individual tents having a maximum size of 700 square feet (65 m^2).*
   - 2.2 *The aggregate area of multiple tents placed side by side without a fire break clearance of 12 feet (3,658 mm), not exceeding 700 square feet (65 m^2) total.*
   - 2.3 *A minimum clearance of 12 feet (3658 mm) to all structures and other tents.*

3103.2 Construction documents. *An* application and construction documents shall be submitted for each installation of a temporary structure. The construction documents shall include a site plan indicating the location of the temporary structure and information delineating the means of egress and the occupant load.

3103.3 Location. Temporary structures shall be located in accordance with the requirements of Table 602 based on the fire-resistance rating of the exterior walls for the proposed type of construction.

3103.4 Means of egress. Temporary structures shall conform to the means of egress requirements of Chapter 10 and shall have an exit access travel distance of 100 feet (30 480 mm) or less.

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.

3104.1.1 Application. Pedestrian walkways shall be designed and constructed in accordance with Sections 3104.2 through 3104.9. Tunnels shall be designed and constructed in accordance with Sections 3104.2 and 3104.10.

3104.2 Separate structures. Buildings connected by pedestrian walkways or tunnels shall be considered to be separate structures.

Exceptions:

1. Buildings that are on the same lot and considered as portions of a single building in accordance with Section 503.1.2.
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.

Exceptions:

1. Combustible construction shall be permitted where connected buildings are of combustible construction.
2. Fire-retardant-treated wood, in accordance with Section 603.1, Item 1.3, shall be permitted for the roof construction of the pedestrian walkway where connected buildings are a minimum of Type I or II construction.

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

3104.5 Connections of pedestrian walkways to buildings. The connection of a pedestrian walkway to a building shall comply with Section 3104.5.1, 3104.5.2, 3104.5.3 or 3104.5.4.

Exception: Buildings that are on the same lot and considered as portions of a single building in accordance with Section 503.1.2.

3104.5.1 Fire barriers. Pedestrian walkways shall be separated from the interior of the building by not less than 2hour fire barriers constructed in accordance with Section 707 and Sections 3104.5.1.1 through 3104.5.1.3.

3104.5.1.1 Exterior walls. Exterior walls of buildings connected to pedestrian walkways shall be 2-hour fireresistance rated. This protection shall extend not less than 10 feet (3048 mm) in every direction surrounding the perimeter of the pedestrian walkway.

3104.5.1.2 Openings in exterior walls of connected buildings. Openings in exterior walls required to be fire-resistance rated in accordance with Section 3104.5.1.1 shall be equipped with opening protectives providing a not less than $^{3}/_{4}$-hour fire protection rating in accordance with Section 716.

3104.5.1.3 Supporting construction. The fire barrier shall be supported by construction as required by Section 707.5.1.

3104.5.2 Alternative separation. The wall separating the pedestrian walkway and the building shall comply with Section 3104.5.2.1 or 3104.5.2.2 where:

1. The distance between the connected buildings is more than 10 feet (3048 mm).
2. The pedestrian walkway and connected buildings are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, and the roof of the walkway is not more than 55 feet (16 764 mm) above grade connecting to the fifth, or lower, story above grade plane, of each building.

   Exception: Open parking garages need not be equipped with an automatic sprinkler system.

3104.5.2.1 Passage of smoke. The wall shall be capable of resisting the passage of smoke.

3104.5.2.2 Glass. The wall shall be constructed of a tempered, wired or laminated glass wall and doors or glass separating the interior of the building from the pedestrian walkway. The glass shall be protected by an automatic sprinkler system in accordance with Section 903.3.1.1 that, when actuated, shall completely wet the entire surface of interior sides of

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

3104.5.3 Open sides on walkway. Where the distance between the connected buildings is more than 10 feet (3048 mm), the walls at the intersection of the pedestrian walkway and each building need not be fire-resistance rated provided both sidewalls of the pedestrian walkway are not less than 50 percent open with the open area uniformly distributed to prevent the accumulation of smoke and toxic gases. The roof of the walkway shall be located not more than 40 feet (12 160 mm) above grade plane, and the walkway shall only be permitted to connect to the third or lower story of each building.

Exception: Where the pedestrian walkway is protected with a sprinkler system in accordance with Section 903.3.1.1, the roof of the walkway shall be located not more than 55 feet (16 764 mm) above grade plane and the walkway shall only be permitted to connect to the fifth or lower story of each building.

3104.5.4 Exterior walls greater than 2 hours. Where exterior walls of connected buildings are required by Section 705 to have a fire-resistance rating greater than 2 hours, the walls at the intersection of the pedestrian walkway and each building need not be fire-resistance rated provided:

1. The pedestrian walkway is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
2. The roof of the walkway is not located more than 55 feet (16 764 mm) above grade plane and the walkway connects to the fifth, or lower, story above grade plane of each building.

3104.6 Public way. Pedestrian walkways over a public way shall 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 be not less than 36 inches (914 mm). The total width shall be not greater than 30 feet (9144 mm).

3104.9 Exit access travel. The length of exit access travel shall be 200 feet (60 960 mm) or less.

Exceptions:

1. Exit access travel distance on a pedestrian walkway equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 shall be 250 feet (76 200 mm) or less.
2. Exit access travel distance on a pedestrian walkway constructed with both sides not less than 50 percent open shall be 300 feet (91 440 mm) or less.
3. Exit access travel distance on a pedestrian walkway constructed with both sides not less than 50 percent open, and equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, shall be 400 feet (122 m) or less.

3104.10 Tunneled walkway. Separation between the tunneled walkway and the building to which it is connected shall be not less than 2-hour fire-resistant construction and openings therein shall be protected in accordance with Table 716.5.

SECTION 3105
AWNINGS AND CANOPIES

3105.1 General. Awnings and canopies shall comply with the requirements of Sections 3105.2 through 3105.4 and other applicable sections of this code.

3105.2 Definition. The following term is defined in Chapter 2:

RETRACTABLE AWNING.

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 Awnings and canopy materials. Awnings and canopies shall be provided with an approved covering that meets the fire propagation performance criteria of Test Method 1 or Test Method 2, as appropriate, of NFPA 701 or has a flame spread index not greater than 25 when tested in accordance with ASTM E 84 or UL 723.

Exception: The fire propagation performance and flame spread index requirements shall not apply to awnings installed on detached one- and two-family dwellings.

SECTION 3106
MARQUEES

3106.1 General. Marquees shall comply with Sections 3106.2 through 3106.5, *Section 3107.13* and other applicable sections of this code.

3106.2 Thickness. The height or thickness of a marquee measured vertically from its lowest to its highest point shall be not greater than 3 feet (914 mm) where the marquee projects more than two-thirds of the distance from the lot line to the curb line, and shall be not greater than 9 feet (2743 mm) where the marquee is less than two-thirds of the distance from the lot 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 *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 ft.^{2} in area (0.23m^2).*
5. *Signs required in accordance with the provisions of Chapter 11.*
6. *Signs undergoing minor repairs in accordance with section 102.10.2.*

3107.2 Definitions. The following term is defined in Chapter 2:

SIGN

Combination
Display
Electrical
Marquee
Projecting
Roof
Wall
Sign Structure

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. Signs shall not be erected, constructed so as to obstruct any fire escape or any window or door or opening used as a means of egress. Signs shall not be attached to fire escapes, nor shall they 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 Structural loads. *Signs shall be designed and constructed to withstand all structural loads as provided for in Chapter 16.*

3107.5.2 Working stresses. *The allowable working stresses for signs shall conform with the requirements of Chapter 16. The working stresses of supports and their fastenings shall not exceed 25 per cent of their ultimate strength.*

Exceptions:

1. *The allowable working stresses for steel and wood shall be in accordance with the provisions of Chapter 22 and Chapter 23.*
2. *The working strength of chains, cables, wire ropes, steel rods and similar products shall not exceed one-fifth of their ultimate strength.*

3107.5.3 Attachment. *Signs shall be securely fastened to supporting structures with anchors, bolts, expansion screws or other approved devices 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 unless approved by the building official.*

3107.6.1 Internally illuminated signs. *Except as provided for in sections 402.16 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 ft.^{2} (11.16 m^2) 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.*

Exception: *The dimensional limitation of 120 ft.^{2} (11.16 m^2) shall not apply to sign facing sections made from flame resistant-coated fabric (ordinarily known as "flexible sign face plastic") that weighs less than 20 oz./yd.^{2} (678 g/m^2) and which, when tested in accordance with NFPA 701, meets the fire propagation performance requirements of both Test 1 and 2 or that when tested in accordance with an approved test method, exhibits an average burn time of 2 seconds or less and a burning extent of 5.9 inches (150 mm) or less for 10 specimens.*

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, copings, nailing blocks, letters, latticing and similar features shall comply with section 3107.9, and shall not be used for other ornamental features of signs unless approved by the building official.*

3107.7.1 Plastic materials. *Notwithstanding any other provisions of this 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 (18.6 m^2) in area.*

3107.7.3 Area limitation. *If the display surface exceeds 200 $ft.^2$ (18.6 m^2), the area occupied or covered by approved plastics shall be limited to 200 $ft.^2$ (18.6 m^2) plus 50 per cent of the difference between 200 $ft.^2$ (18.6 m^2) and the area of display surface. The area of plastic on a display surface shall not in any case exceed 1,100 $ft.^2$ (102 m^2).*

3107.7.4 Plastic appurtenances. *Letters and decorations mounted on an approved plastic facing or display surface may consist of approved plastics.*

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. The fail-safe device shall be in addition to the mechanism that operates 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 Roof signs. *Roof signs which have an area exceeding 40 $ft.^2$ (3.72 m^2) shall be constructed entirely of metal or other approved noncombustible material. 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 (1,829 mm) between the roof level and the lowest part of the sign and shall have at least 5 feet (1,524 mm) clearance between the vertical supports thereof. No portion of a roof sign structure shall project beyond an exterior wall unless it also complies with the requirements for projecting signs.*

3107.9.1 Bearing. *The bearing components of roof signs shall distribute the load directly upon the supporting structure for the building. The building shall be designed to resist the loads imposed by roof signs. All signs shall be securely fastened to the building upon which they are installed to safely support the loads applied.*

3107.9.2 Height of open signs. *Open roof signs in which the uniform open area is not less than 40 per cent of total gross area shall not exceed a height*

of 75 feet (22 860 mm) on buildings of Type I or Type II construction. On buildings of other construction types, the height shall not exceed 40 feet (12, 192 mm).

3107.9.3 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 buildings of Types III, IV and V construction.*

3107.10 Wall signs. *Wall signs which have an area exceeding 40 ft.^{2} (3.72 m^2) shall be constructed of metal or other approved noncombustible material.*

3107.10.1 Exterior wall mounting details. *Wall signs shall be securely attached to exterior walls to safely support the loads applied. A wall sign shall not be supported by anchorages secured to an unbraced parapet wall.*

3107.10.2 Extension. *Wall signs shall not extend above the top of the wall, nor extend beyond the the walls to which the signs are attached unless such signs conform to the requirements for roof signs, projecting signs or ground signs.*

3107.11 Projecting signs. *Projecting signs which have an area exceeding 40 ft.^{2} (3.72 m^2) shall be constructed entirely of metal or other noncombustible material and be securely attached to the building or structure with supports in a manner that safely supports the loads applied. Projecting signs not parallel to the building or structure shall be supported with approved means. Such signs shall be designed and erected to resist the structural loads specified in Chapter 16.*

3107.11.1 Attachment of supports. *Supports shall be securely anchored to the building or structure with bolts, expansion screws or other approved means.*

3107.11.2 Wall mounting details. *Supports used for projecting signs are permitted to be fastened to exterior walls with expansion bolts, machine screws or other approved means, but such supports shall not be attached to unbraced parapet walls.*

3107.11.3 Height limitation. *A projecting sign shall not be erected on the wall of any building so as to project above the top of the wall.*

Exception: *A sign erected perpendicular to the building wall having a horizontal width not exceeding 18 inches (457 mm) is permitted to be erected to a height not exceeding 2 feet (610 mm) above the top of the wall*

unless approved by the building official. 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.

3107.11.4 Additional loads. *Projecting sign structures which may be used to support an individual on a ladder or other service equipment, whether or not specifically designed for the service equipment, shall be capable of supporting the anticipated load, but it shall not be less than a 100 pound (445 N) concentrated horizontal load and a 300 pound (1,334 N) concentrated vertical load applied at the point of most eccentric loading. The building component to which the projecting sign is attached shall also be designed to support the additional loads.*

3107.12 Marquee signs. *Marquee signs which have an area exceeding 40 ft.^{2} (3.72 m^2) shall be constructed entirely of metal or other approved noncombustible material.*

3107.12.1 Attachment. *Marquee signs shall be attached to approved marquees that are constructed in accordance with section 3106.*

3107.12.2 Dimensions. *Marquee signs, whether on the front or side of the marquee, shall not project beyond the perimeter of the marquee.*

3107.12.3 Height limitation. *Marquee signs shall not extend more than 6 feet (1829 mm) above, nor more than 1 foot (305 mm) below the marquee unless approved by the building official. Marquee signs have a vertical dimension not greater than 8 feet (2,438 mm) unless approved by the building official.*

3107.13 Combination signs. *Combination signs shall conform to the requirements for pole, projecting and roof signs to the extent such features are incorporated from each type.*

SECTION 3108
TELECOMMUNICATION AND BROADCAST TOWERS

3108.1 General. Towers shall be designed and constructed in accordance with the provisions of TIA-222. Towers shall be designed for seismic loads; exceptions related to seismic design listed in Section 2.7.3 of TIA-222 shall not apply. In Section 2.6.6.2 of TIA 222, the horizontal extent of Topographic Category 2, escarpments, shall be 16 times the height of the escarpment.

Exception: Single free-standing poles used to support antennas not greater

than 75 feet (22 860 mm), measured from the top of the pole to grade, shall not be required to be noncombustible.

3108.2 Location and access. Towers shall be located such that guy wires and 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 the written consent of the owner of the encroached-upon property, space or aboveground electric utility lines. Towers shall be equipped with climbing and working facilities in compliance with TIA-222. Access to the tower sites shall be limited as required by applicable OSHA, FCC and EPA regulations.

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 Sections 3109.2 through 3109.5, other applicable sections of this code and 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. Swimming pool facilities shall be accessible in accordance with ICC A117.1 to the extent required in Chapter 11.*

3109.1.1 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 code 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.*

3109.1.2 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.*

3109.2 Definition. *The following terms are defined in Chapter 2:*

PRIVATE RESIDENTIAL SWIMMING POOL
PUBLIC SWIMMING POOL
RESIDENTIAL SWIMMING POOL

3109.3 Public swimming pools. *Public swimming pools shall be completely enclosed by a fence or similar barrier not less than 4 feet (1290 mm) in height or a screen enclosure. Openings in the fence shall not permit the passage of a 4-inch-diameter (102 mm) sphere. The fence or screen enclosure shall be equipped with self-closing and self-latching gates. Gates provided and functioning as an element of a building's required means of egress shall comply with the requirements of Section 1008.2.*

3109.4 Residential swimming pool enclosures. *Residential swimming pools shall be completely enclosed by a barrier complying with Sections 3109.4.1 through 3109.4.3.*

Exception: *A swimming pool with a power safety cover or a spa with a safety cover complying with ASTM F 1346 need not comply with this section.*

3109.4.1 Barrier height and clearances. *The top of the barrier shall be not less than 48 inches (1219 mm) above grade measured on the side of the barrier that faces away from the swimming pool. The vertical clearance between grade and the bottom of the barrier shall be not greater than 2 inches (51 mm) measured on the side of the barrier that faces away from the swimming pool. Where the top of the pool structure is above grade, the barrier is authorized to be at ground level or mounted on top of the pool structure, and the vertical clearance between the top of the pool structure and the bottom of the barrier shall be not greater than 4 inches (102 mm).*

3109.4.1.1 Openings. *Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.*

3109.4.1.2 Solid barrier surfaces. *Solid barriers which do not have openings shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.*

3109.4.1.3 Closely spaced horizontal members. *Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall be not greater than $1^{3}/_{4}$ inches (44 mm) in width. Where there are decorative cutouts within*

vertical members, spacing within the cutouts shall be not greater than 1 3/4 inches (44 mm) in width.

3109.4.1.4 Widely spaced horizontal members. *Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall be not greater than 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall be not greater than 1 3/4 inches (44 mm) in width.*

3109.4.1.5 Chain link dimensions. *Mesh size for chain link fences shall be not greater than a 2 1/4-inch square (57 mm square) unless the fence is provided with slats fastened at the top or the bottom that reduce the openings to not more than 1 3/4 inches (44 mm).*

3109.4.1.6 Diagonal members. *Where the barrier is composed of diagonal members, the opening formed by the diagonal members shall be not greater than 1 3/4 inches (44 mm).*

3109.4.1.7 Gates. *Access doors or gates shall comply with the requirements of Sections 3109.4.1.1 through 3109.4.1.6 and shall be equipped to accommodate a locking device. Pedestrian access doors or gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Doors or gates other than pedestrian access doors or gates shall have a self-latching device. Release mechanisms shall be in accordance with Sections 1010.1.9 and 1109.13. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) above the finished surface, the release mechanism shall be located on the pool side of the door or gate 3 inches (76 mm) or more, below the top of the door or gate, and the door or gate and barrier shall be without openings greater than 1/2 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.*

3109.4.1.8 Dwelling wall as a barrier. *Where a wall of a dwelling serves as part of the barrier, one of the following shall apply:*

1. *Doors with direct access to the pool through that wall shall be equipped with an alarm that produces an audible warning when the door or its screen, if present, are opened. The alarm shall be listed and labeled in accordance with UL 2017. In dwellings not required to be Accessible units, Type A units or Type B units, the deactivation switch shall be located 54 inches (1372 mm) or more*

above the threshold of the door. In dwellings required to be Accessible units, Type A units or Type B units, the deactivation switch shall be located not higher than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the threshold of the door.

2. *The pool shall be equipped with a power safety cover that complies with ASTM F 1346.*
3. *Other means of protection, such as self-closing doors with self-latching devices, which are approved, shall be accepted so long as the degree of protection afforded is not less than the protection provided by Item 1 or 2 above.*

3109.4.1.9 Pool structure as barrier. *Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then the ladder or steps either shall be capable of being secured, locked or removed to prevent access, or the ladder or steps shall be surrounded by a barrier that meets the requirements of Sections 3109.4.1.1 through 3109.4.1.8. Where the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.*

3109.4.2 Indoor swimming pools. *Walls surrounding indoor swimming pools shall not be required to comply with Section 3109.4.1.8.*

3109.4.3 Prohibited locations. *Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb the barriers.*

3109.5 Entrapment avoidance. *Suction outlets shall be designed and installed in accordance with ANSI/APSP-7 and applicable Ohio department of health rules pertaining to swimming pools and their service equipment (Chapter 3701-31 of the Administrative Code).*

3109.6 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.*

3109.6.1 Access to accessory structures*. 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.

3109.7 Water supply. *Water supply and cross connection control shall be in accordance with rules of the Ohio department of health.*

3109.7.1 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.*

3109.8 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.*

3109.8.1 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 insure stability.*

3109.9 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
AUTOMATIC VEHICULAR GATES

3110.1 General. Automatic vehicular gates shall comply with the requirements of Sections 3110.2 through 3110.4 and other applicable sections of this code.

3110.2 Definition. The following term is defined in Chapter 2:

VEHICULAR GATE.

3110.3 Vehicular gates intended for automation. Vehicular gates intended for automation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

3110.4 Vehicular gate openers. Vehicular gate openers, where provided, shall be listed in accordance with UL 325.

SECTION 3111
PHOTOVOLTAIC PANELS AND MODULES

3111.1 General. Photovoltaic panels and modules shall comply with the requirements of this code and the *fire code*.

3111.1.1 Rooftop-mounted photovoltaic panels and modules. Photovoltaic panels and modules installed on a roof or as an integral part of a roof assembly shall comply with the requirements of Chapter 15 and the *fire code*.

SECTION 3112
MANUFACTURED HOMES

3111.1 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.*

The installation, alteration and maintenance of manufactured homes is regulated by the rules of the Ohio manufactured homes commission pursuant to section 4781 of the Revised Code.

3111.2 Manufactured home parks. *See applicable Ohio manufactured homes commission rules for licensing and other manufactured home park regulations.*

SECTION 3113
REFUSE CONTAINERS

3112.1 General. *Pursuant to sections 3791.21 and 3791.99 of the Revised Code, this section prescribes the safety standards for refuse containers which are self-dumping by means of a specially designed front, side or rear loading vehicle.*

3112.2 Purpose. *The purpose of prescribing safety standards for the manufacture, construction, installation, or redesign of refuse containers is to ensure that they will not tip over if persons climb in or on the refuse container.*

3112.3 Standards. *All newly manufactured or installed refuse containers and all existing refuse containers, as described in Section 3112.1, shall be tested and*

comply with the testing conditions and procedures of the "Consumer Product Safety Act Regulations, 16 C.F.R. 1301."

3112.4 Enforcement. *The jurisdiction may adopt ordinances to provide for the enforcement of the provisions of Section 3112.3.*

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