

APPENDIX H

PATIO COVERS

SECTION AH101 GENERAL

AH101.1 Scope. Patio covers shall conform to the requirements of this appendix chapter.

SECTION AH102 DEFINITION

Patio covers. One-story structures not exceeding 12 feet (3657 mm) in height. Enclosure walls shall be permitted to be of any configuration, provided the open or glazed area of the longer wall and one additional wall is equal to at least 65 percent of the area below a minimum of 6 feet 8 inches (2032 mm) of each wall, measured from the floor. Openings shall be permitted to be enclosed with (1) insect screening, (2) *approved* translucent or transparent plastic not more than 0.125 inch (3.2 mm) in thickness, (3) glass conforming to the provisions of Section R308, or (4) any combination of the foregoing.

SECTION AH103 PERMITTED USES

AH103.1 General. Patio covers shall be permitted to be detached from or attached to *dwelling units*. Patio covers shall be used only for recreational, outdoor living purposes and not as carports, garages, storage rooms or habitable rooms.

SECTION AH104 DESIGN LOADS

AH104.1 General. Patio covers shall be designed and constructed to sustain, within the stress limits of this code, all dead loads plus a minimum vertical live load of 10 pounds per square foot (0.48 kN/m²) except that snow loads shall be used where such snow loads exceed this minimum. Such covers shall be designed to resist the minimum wind loads set forth in Section R301.2.1.

SECTION AH105 LIGHT AND VENTILATION/EMERGENCY EGRESS

AH105.1 General. Exterior openings required for light and ventilation shall be permitted to open into a patio structure conforming to Section AH101, provided that the patio structure shall be unenclosed if such openings are serving as emergency egress or rescue openings from sleeping rooms. Where such exterior openings serve as an exit from the *dwelling unit*, the patio structure, unless unenclosed, shall be provided with exits conforming to the provisions of Section R310 of this code.

SECTION AH106 FOOTINGS

AH106.1 General. In areas with a frostline depth of zero as specified in Table R301.2(1), a patio cover shall be permitted to be supported on a slab on *grade* without footings, provided the slab conforms to the provisions of Section R506 of this code, is not less than 3.5 inches (89 mm) thick and the columns do not support live and dead loads in excess of 750 pounds (3.34 kN) per column.

SECTION AH107 SPECIAL PROVISIONS FOR ALUMINUM SCREEN ENCLOSURES IN HURRICANE-PRONE REGIONS

AH107.1 General. Screen enclosures in *hurricane-prone regions* shall be in accordance with the provisions of this Section.

AH107.1.1 Habitable spaces. Screen enclosures shall not be considered *habitable spaces*.

AH107.1.2 Minimum ceiling height. Screen enclosures shall have a ceiling height of not less than 7 feet (2134 mm).

AH107.2 Definitions.

SCREEN ENCLOSURE. A building or part thereof, in whole or in part self-supporting, and having walls of insect screening and a roof of insect screening, plastic, aluminum, or similar lightweight material.

AH107.3 Screen enclosures.

AH107.3.1 Thickness. Actual wall thickness of extruded aluminum members shall be not less than 0.040 inches (1.02 mm).

AH107.3.2 Density. Screen density shall be a maximum of 20 threads per inch by 20 threads per inch mesh.

AH107.4 Design.

AH107.4.1 Wind load. Structural members supporting screen enclosures shall be designed to support minimum wind loads given in Table AH107.4(1) and AH107.4(2). Where any value is less than 10 psf (0.479 kN/m²) use 10 psf (0.479 kN/m²).

AH107.4.2 Deflection limit. For members supporting screen surfaces only, the total load deflection shall not exceed *l/60*. Screen surfaces shall be permitted to include a maximum of 25 percent solid flexible finishes.

AH107.4.3 Importance factor. The wind factor for screen enclosures shall be 0.77 in accordance with Section 6.5.5 of ASCE 7.

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AH107.4.4 Roof live load. The minimum roof live load shall be 10 psf (0.479 kN/m²).

provisions of Section R506, is not less than 3½ inches (89 mm) thick, and the columns do not support loads in excess of 750 pounds (3.36 kN) per column.

AH107.5 Footings. In areas with a frost line is zero, a screen enclosure shall be permitted to be supported on a concrete slab on *grade* without footings, provided the slab conforms to the

**TABLE AH107.4(1)
DESIGN WIND PRESSURES FOR ALUMINUM SCREEN ENCLOSURE FRAMING
WITH AN IMPORTANCE FACTOR OF 0.77^{a, b, c}**

LOAD CASE	WALL	Basic Wind Speed (mph)											
		100		110		120		130		140		150	
		Exposure Category Design Pressure (psf)											
		C	B	C	B	C	B	C	B	C	B	C	B
A ^d	Windward and leeward walls (flow thru) and windward wall (non-flow thru) L/W = 0-1	12	8	14	10	17	12	19	14	23	16	26	18
A ^d	Windward and leeward walls (flow thru) and windward wall (non-flow thru) L/W = 2	13	9	16	11	19	14	22	16	26	18	30	21
B ^e	Windward: Non-gable roof	16	12	20	14	24	17	28	20	32	23	37	26
B ^e	Windward: Gable roof	22	16	27	19	32	23	38	27	44	31	50	36
	ROOF												
All ^f	Roof-screen	4	3	5	4	6	4	7	5	8	6	9	7
All ^f	Roof-solid	12	9	15	11	18	13	21	15	24	17	28	20

For SI: 1 mile per hour = 0.44 m/s, 1 pound per square foot = 0.0479 kPa, 1 foot = 304.8 mm.

- a. Values have been reduced for 0.77 Importance Factor in accordance with Section AH107.4.3.
- b. Minimum design pressure shall be 10 psf in accordance with Section AH107.4.1.
- c. Loads are applicable to screen enclosures with a mean roof height of 30 feet or less. For screen enclosures of different heights the pressures given shall be adjusted by multiplying the table pressure by the adjustment factor given in Table AH107.4(2).
- d. For Load Case A flow thru condition the pressure given shall be applied simultaneously to both the upwind and downwind screen walls acting in the same direction as the wind. The structure shall also be analyzed for wind coming from the opposite direction. For the non-flow thru condition the screen enclosure wall shall be analyzed for the load applied acting toward the interior of the enclosure.
- e. For Load Case B the table pressure multiplied by the projected frontal area of the screen enclosure is the total drag force, including drag on screen surfaces parallel to the wind, which must be transmitted to the ground. Use Load Case A for members directly supporting the screen surface perpendicular to the wind. Load Case B loads shall be applied only to structural members which carry wind loads from more than one surface.
- f. The roof structure shall be analyzed for the pressure given occurring both upward and downward.

**TABLE AH107.4(2)
HEIGHT ADJUSTMENT FACTORS**

MEAN Roof Height (ft)	EXPOSURE	
	B	C
15	1	0.86
20	1	0.92
25	1	0.96
30	1	1.00
35	1.05	1.03
40	1.09	1.06
45	1.12	1.09
50	1.16	1.11
55	1.19	1.14
60	1.22	1.16

For SI: 1 foot = 304.8 mm.