port a roof photovoltaic live load, as defined in Section 1607.13.5.1 in combination with other applicable loads. Solar photovoltaic panels or modules in this application are not permitted to be classified as "not accessible" in accordance with Section 1607.13.5.1.

1607.13.5.4 Ballasted photovoltaic panel systems. Roof structures that provide support for ballasted *photovoltaic panel systems* shall be designed, or analyzed, in accordance with Section 1604.4; checked in accordance with Section 1604.3.6 for deflections; and checked in accordance with Section 1611 for ponding.

1607.14 Crane loads. The crane live load shall be the rated capacity of the crane. Design loads for the runway beams, including connections and support brackets, of moving bridge cranes and monorail cranes shall include the maximum wheel loads of the crane and the vertical impact, lateral and longitudinal forces induced by the moving crane.

1607.14.1 Maximum wheel load. The maximum wheel loads shall be the wheel loads produced by the weight of the bridge, as applicable, plus the sum of the rated capacity and the weight of the trolley with the trolley positioned on its runway at the location where the resulting load effect is maximum.

1607.14.2 Vertical impact force. The maximum wheel loads of the crane shall be increased by the following percentages to determine the induced vertical impact or vibration force:

Monorail cranes (powered)	25 percent
Cab-operated or remotely operated bridge cranes (powered)	25 percent
Pendant-operated bridge cranes (powered)	10 percent
Bridge cranes or monorail cranes with hand-geared bridge, trolley and hoist	0 percent

1607.14.3 Lateral force. The lateral force on crane runway beams with electrically powered trolleys shall be calculated as 20 percent of the sum of the rated capacity of the crane and the weight of the hoist and trolley. The lateral force shall be assumed to act horizontally at the traction surface of a runway beam, in either direction perpendicular to the beam, and shall be distributed with due regard to the lateral stiffness of the runway beam and supporting structure.

1607.14.4 Longitudinal force. The longitudinal force on crane runway beams, except for bridge cranes with hand-geared bridges, shall be calculated as 10 percent of the maximum wheel loads of the crane. The longitudinal force shall be assumed to act horizontally at the traction surface of a runway beam, in either direction parallel to the beam.

1607.15 Interior walls and partitions. Interior walls and partitions that exceed 6 feet (1829 mm) in height, including their finish materials, shall have adequate strength and stiffness to resist the loads to which they are subjected but not less than a horizontal load of 5 psf (0.240 kN/m^2).

1607.15.1 Fabric partitions. Fabric partitions that exceed 6 feet (1829 mm) in height, including their finish materials, shall have adequate strength and stiffness to resist the following load conditions:

1. The horizontal distributed load need only be applied to the partition framing. The total area used to determine the distributed load shall be the area of the fabric face between the framing members to which the fabric is attached. The total distributed load shall be uniformly applied to such framing members in proportion to the length of each member.
2. A concentrated load of 40 pounds (0.176 kN) applied to an 8-inch-diameter (203 mm) area [50.3 square inches (32 452 mm^2)] of the fabric face at a height of 54 inches (1372 mm) above the floor.

1607.15.2 Fire walls. In order to meet the structural stability requirements of Section 706.2 where the structure on either side of the wall has collapsed, fire walls and their supports shall be designed to withstand a minimum horizontal allowable stress load of 5 psf (0.240 kN/m^2).

SECTION 1608
SNOW LOADS

1608.1 General. Design snow loads shall be determined in accordance with Chapter 7 of ASCE 7, as modified by Section 1608.2.

1608.2 Modifications to ASCE 7. The text of ASCE 7 shall be modified as indicated in Sections 1608.2.1 through 1608.2.5.

1608.2.1 ASCE 7, Section 7.1. Modify ASCE 7, Section 7.1.2, *Symbols*, meaning of p_g, to read as follows:

p_g = ground snow load as determined from Section 1608.2.2 or 1608.3 of the *Building Code*, in lb/ft^2 (kN/m^2)

1608.2.2 ASCE 7, Section 7.2. Modify ASCE 7, Section 7.2, *Ground Snow Loads, p_g*, to read as follows:

Ground snow loads, p_g, to be used in the determination of design snow loads for roofs shall be those set forth in the online lookup tool at http://snowload.seao.org/lookup.html published by the Structural Engineers Association of Oregon. Where the site elevation is higher than the modeled elevation reported by the online lookup tool, the reported ground snow load values shall be adjusted by adding the specified loads from Table 7.2.

The importance factor times the ground snow load, I_s p_g, shall be used as the balanced snow load for snow accumulation surfaces, such as decks, balconies, and other near-ground level surfaces or roofs of subterranean spaces, whose height above the ground surface is less than the depth of the ground snow, h_g ($h_g = p_g/\gamma$).

Exception: Ground snow loads determined in accordance with Section 1608.3 of the *Building Code*.

TABLE 7.2
GROUND SNOW LOAD ADJUSTMENT

REGION	GROUND SNOW ADJUSTMENT LOADS (psf per foot of elevation gain)
Oregon Coast Mountains	0.07
Interior and Willamette Valleys	0.04
Cascade Mountains	0.07
Siskiyou and Kalmiopsis Mountains	0.04
Plains east of the Cascades	0.007
Klamath Basin	0.008
Eastern Oregon Mountains	0.04

1608.2.3 ASCE 7, Section 7.3.4. Modify ASCE 7, Section 7.3.4, *Minimum Snow Load for Low-Slope Roofs,* p_m, to read as follows:

The roof snow load for monoslope, hip and gable roofs with slopes less than 15 degrees and for curved roofs where the vertical angle from the eaves to the crown is less than 10 degrees shall be not less than 20 psf times the importance factor, I_s, plus the rain-on-snow surcharge determined from Section 7.10. This minimum roof snow load is a separate uniform load case and need not be used in determining or in combination with drift, sliding, unbalanced or partial loads.

1608.2.4 ASCE 7, Section 7.4. Modify ASCE 7, Section 7.4, *Sloped Roof Snow Loads,* p_s, to add the following:

The sloped roof snow load, p_s, used for design shall be not less than 20 psf times the importance factor, I_s, plus the rain-on-snow surcharge determined from Section 7.10. This minimum sloped roof snow load is a separate uniform load case and need not be used in determination of or in combination with drift, sliding, unbalanced or partial loads.

1608.2.5 ASCE 7, Section 7.10. Modify ASCE 7, Section 7.10, *Rain-on-Snow Surcharge Load,* to read as follows:

A 5 psf rain-on-snow surcharge shall be added to the minimum roof snow load determined from Sections 7.3.4 and 7.4 where any of the following conditions exist:

1. All roofs having a slope less than or equal to 1 unit vertical in 12 units horizontal (1:12).
2. Roofs of any slope that constrain runoff of the drainage system by parapets or other physical obstructions and are capable of accumulating more than 1 inch of standing water on any part of the roof. Structures with a continuous gutter at the low-point eave or comparable system shall not be considered as having constrained runoff.

   Exception: The 5 psf rain-on-snow surcharge need not apply to roofs, of any slope, where all of the following conditions exist:

   1. The roof drainage is not constrained.
   2. The mapped ground snow load, p_g, is less than 15 psf.
   3. The structure lies west of the Coast Range crest or east of the Cascade Range crest. At the most northern point of the Coast Range crest, the dividing line shall be the county line between Clatsop and Columbia counties.

1608.3 Site-specific snow load study. Where ground snow loads determined from Section 1608.2.2 exceed the location-specific threshold loads in Table 1608.3, an *approved* site-specific snow load study is required to determine the ground snow load used for design. The ground snow load determination from a site-specific study shall be based on an extreme value statistical analysis of data available in the vicinity of the site using a value with a 2-percent annual probability of being exceeded (50-year mean recurrence interval).

TABLE 1608.3
LOCATIONS AND CRITERIA FOR
SITE-SPECIFIC GROUND SNOW LOAD STUDY REQUIREMENT

LOCATION	GROUND SNOW THRESHOLD LOADS FOR SITE-SPECIFIC STUDY (psf)
Oregon Coast Mountains	100
Cascade Mountains	350
Siskiyou and Kalmiopsis Mountains	200
Eastern Oregon Mountains	200

1608.4 Ponding instability. Susceptible bays of roofs shall be evaluated for ponding instability in accordance with Chapters 7 and 8 of ASCE 7.

SECTION 1609
WIND LOADS

1609.1 Applications. Buildings, structures and parts thereof shall be designed to withstand the minimum wind loads prescribed herein. Decreases in wind loads shall not be made for the effect of shielding by other structures.

1609.1.1 Determination of wind loads. Wind loads on every building or structure shall be determined in accordance with Chapters 26 to 30 of ASCE 7 using the basic design wind speed, *V,* as determined by Section 1609.3. The exposure category for a site is permitted to be determined in accordance with Section 1609 or ASCE 7. Wind shall be assumed to come from any horizontal direction and wind pressures shall be assumed to act normal to the surface considered.

Exceptions:

1. Subject to the limitations of Section 1609.1.1.1, the provisions of ICC 600 shall be permitted for applicable Group R-2 and R-3 buildings.
2. Subject to the limitations of Section 1609.1.1.1, residential structures using the provisions of AWC WFCM.
3. Subject to the limitations of Section 1609.1.1.1, residential structures using the provisions of AISI S230.
4. Designs using NAAMM FP 1001. The wind speed used for the design shall be determined by Section 1609.3.