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605.11.1.2 Marking content. The marking shall contain the words “PHOTOVOLTAIC POWER SOURCE.”



605.11.2 Locations of DC conductors. Conduit, wiring systems, and raceways for photovoltaic circuits shall be located as close as possible to the ridge or hip or valley and from the hip or valley as directly as possible to an outside wall to reduce trip hazards and maximize ventilation opportunities. Conduit runs between sub arrays and to DC combiner boxes shall be installed in a manner that minimizes the total amount of conduit on the roof by taking the shortest path from the array to the DC combiner box. The DC combiner boxes shall be located such that the conduit runs are minimized in the pathways between arrays. DC wiring shall be installed in metallic conduit or raceways when located within enclosed spaces in a building.



605.11.3 Access and pathways. Roof access, pathways and spacing requirements shall be provided in accordance with Sections 605.11.3.1 through 605.11.3.3.3.

Exceptions:

1. Residential structures shall be designed so that each photovoltaic array is no greater than 150 feet (45,720 mm) by 150 feet (45,720 mm) in either axis.
2. Panels/modules shall be located up to the roof ridge where an alternative ventilation method approved by the fire code official has determined vertical ventilation techniques will not be employed.

605.11 Solar photovoltaic power systems

Installation, modification, or alteration of solar photovoltaic power systems shall comply with this section. Due to the emerging technologies in the solar photovoltaic industry, it is understood fire code officials may need to amend prescriptive requirements of this section to meet the requirements for firefighter access and product installations. Section 104.9 of this code shall be considered when approving the installation of solar photovoltaic power systems. Solar photovoltaic power systems shall be installed in accordance with Sections 605.11.1 through 605.11.4, the *International Building Code* and NFPA 70.

Exception: Detached, nonhabitable Group U structures shall not be subject to the requirements of Sections 604.11.2 through 605.11.3.3.3.

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605.11.3.2. Residential systems for one- and two-family dwellings. Access to residential systems for one- and two-family dwellings shall be provided in accordance with Sections 605.11.3.2.1 through 605.11.3.2.4.

Exceptions:

1. Residential dwellings with an approved automatic fire sprinkler system installed.
2. Residential dwellings with approved mechanical or passive ventilation systems.
3. Where the fire code official determines that the slope of the roof is too steep for emergency access.
4. Where the fire code official determines that vertical ventilation tactics will not be utilized.
5. These requirements shall not apply to roofs where the total combined area of the solar array does not exceed thirty-three percent as measured in plan view of the total roof area of the structure, where the solar array will measure 1,000 sq. ft. or less in area, and where a minimum eighteen inches unobstructed pathway shall be maintained along each side of any horizontal ridge.

605.11.3.2.3 Residential buildings with roof hips and valleys. Panels/modules installed on residential buildings with roof hips and valleys shall be located no closer than 18 inches (457 mm) to a hip or a valley where panels/modules are to be placed on both sides of a hip or valley. Where panels are to be located on only one side of a hip or valley, the panels shall be permitted to be placed directly adjacent to the hip or valley.

Exception: These requirements shall not apply to roofs with slopes of two units vertical in 12 units horizontal (2:12) or less.

605.11.3.2.4 Residential building smoke ventilation. Panels/modules installed on residential buildings shall be located no higher than 18 inches (457 mm) below the ridge in order to allow for fire department rooftop operations.

605.11.4 Ground-mounted photovoltaic arrays. Ground-mounted photovoltaic arrays shall comply with Sections 605.11 through 605.11.2 and this section. Setback requirements shall not apply to ground-mounted, free-standing photovoltaic arrays.

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