

Fire Safety Requirements/Fire Fighter Access:

Solar arrays which function as building components (building integrated) shall comply with the Building Code, and shall not reduce the required fire-resistance or fire classification of the structure. Examples include but are not limited to: curtain walls, membrane roofing, sky lights and solar windows. (This Section belongs in another part of the structural code requirements.)

Scope: This Fire Fighter Access Section is designed as a supplement to the Electrical and structural Section of this document and to providedescribe the necessary access to equipment requiring maintenance and to provide firefighters with access and adequate pathways to assist in firefighting efforts. Existing p Pipelines or exhaust/make-up ductRooftop mechanical and electrical systems that are not impacted by the solar array shall not be required to meet this Section.

~~**Pathways created for access to electrical equipment, skylights, roof hatches, HVAC equipment and other equipment requiring maintenance may be combined with the firefighter access required by this Section.**~~

On residential structures, One and Two Family Dwellings Pathways. All pathways required in this section shall comply with the following:

- A. On One and Two Family Dwellings the pathway shall be not less than 24” wide measured from the edge of the solar array or any portion thereof.s. shall maintain a minimum clearance of 24” from**
- B. On All Other Structures the pathway shall be not less than 36” wide measured from the edge of the solar array or any portion thereof.**
- A.C. Structures that are occasionally occupied by persons such as garages, sheds, agricultural, or similar use shall not be required to meet the setback or walkways required by this Section.**
- D. Special permission may be granted by the authority having jurisdiction to waive or modify the requirements in this Section. Special permission shall be asked for and approved in writing prior to permit approval.**

Firefighter Access. A pathway shall be constructed along all roof edges, peaks, and valleys for Firefighter Access., roof access points, skylights.

~~**Exc: A 24" minimum clearance shall not be required if the roof can be accessed for fire fighting efforts from the north side of the array.**~~

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Access for Maintenance. In addition, a minimum 24" wide A pathway shall be maintained provided to access skylights, roof hatches, and equipment that requires maintenance such as including, but not limited to, HVAC equipment or other equipment requiring maintenance. This pathway and shall be maintained extend from a Firefighter Roof Access pathway. Pathways created for access for maintenance to electrical equipment, skylights, roof hatches, HVAC equipment and other equipment requiring maintenance may be combined with the fFirefighter aAccess required by this Section.

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On commercial structures a 36" wide pathway shall be maintained from all edges, peaks, valleys, roof access points, skylights. In addition, a minimum 36" wide pathway shall be maintained to access skylights, roof hatches, HVAC equipment or other equipment requiring maintenance, . The firefighter access pathway this pathway shall be directly over roof structural members. On Large Ssystems. A large system is any system that includes a Solar Array section that is larger than 150' measured in any dimension and shall comply with the following.

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In intermediate Ppathways.

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An intermediate pathway 36" wide shall be provided for every 150' of array. The 150' shall be measured in any one direction and including offset modules or angled installations. The mMaximum square footage of an array shall not exceed 22,500sq. ft. without the installation of an intermediate pathway.

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Vent Cut-outs.

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The All firefighter pathways shall have a vent cut-out every 25 feet measured along the axis of the pathway. The cut-out shall not be less than 30 inches in any dimension.

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Electrical Equipment.

Disconnects, j-boxes, combiner boxes or gutters shall not be located in the any required pathway or cut-out. Disconnects shall be located adjacent to the a pathways for accessibility. What about the need for intermediate pathways on large systems, such as every 150' as was suggested? (See attached examples for best design practices).

~~Installation of conductors, conduits, combiner boxes, disconnects shall be made in such a manner as to not create a tripping hazard or impede firefighter access nor cross through the required pathway.~~ Raceways that cross a required pathway shall be bridged to avoid tripping hazards.

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Raceways shall be visible marked with the words “D/C Conductors” in a manner suitable for the environment. The marking methods may include signage similar to signage used to designate water lines, natural gas lines, or other plumbing or mechanical lines.

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Raceways containing dc conductors that are run through the roof and into the building shall be ~~maintained a minimum of~~ shall be located not less than 18" below the roof decking. ~~Firefighters would prefer to minimize the DC conductors in the building. Prohibiting conduits in the required pathways could result in forcing DC conductors into the building that would not otherwise be there.~~

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~~Each-Every~~ combiner box shall be installed with a visible D/C disconnect. This disconnect shall be integral to or immediately adjacent to the combiner box. This disconnect shall be marked “~~—Array disconnect 1, 0f of X—~~”. Letters shall be a minimum of 1” in height, suitable for the environment and red in color.

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A placard shall be posted at the ac service disconnecting means that accurately designates the location of all combiner box disconnects, inverters, and dc raceways and the method of identification used for dc raceways. The placard shall be legible, durable and suitable for the environment.

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