City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

Occupiable Roof Shade Structure
Enclosure Allowance

Issue Date:	December 14, 2020
Code/Section:	2018 IBC 503.1.4.1, Amended 3105, 2018 PFC 903.1, 903.3.1.1.5
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Issue:
Occupiable roofs are becoming more prevalent and slowly more incorporated by the adopted model building codes, however very little specifics are given for the stated requirements of enclosures over occupiable roofs or enclosures around the occupiable roof area.

Intent:
This document is intended to show how the provisions of IBC Section 503.1.4.1 can be used together with Amended IBC Section 3105 for having *Non-residential patio covers* on an occupiable roof.

- This document does not contain all the code requirements of occupiable roofs.
- This document does not apply to structures built to the IRC.
- Site Planning approval must be obtained for occupiable roof shade structures.

Enclosures Over the Occupiable Roof Area.
Non-residential patio covers may be used over the top of occupiable roof areas and will not add to the building stories, building height, or building area if they comply with the following requirements:

1. Comply with the amendments to IBC Section 3105, except as noted here AND
2. Have an open structural framework covered with a shade fabric meeting IBC 3105.3 OR
3. Have a uniformly distributed slatted, latticed, or louvered roof structure with not less than 25 percent of the cover's area open to the sky AND
4. The covers shall have a width that is not greater than 30 feet AND
5. The covers shall be spaced apart from each other and other rooftop structures by a minimum of 10 feet, measured at right angles from their perimeters. Shade canopies and patio covers that are not separated by this distance are considered the same shade canopy or patio cover for calculating width and area AND
6. Have vertical columns that are spaced apart from each other by at least 10 feet.

<u>Sprinklers</u>
Sprinklers are regulated in accordance with the Phoenix Fire Code Sections 903.1 and 903.3.1.1.5. Any questions regarding the interpretation of these code provisions should be directed to the Phoenix Fire Department at 602-262-6771.

For more information or for a copy of this publication in an alternate format, contact Planning & Development at (602) 262-7811 voice or TTY use 7-1-1.

Enclosure Surrounding the Area.
Construction, obstructions, or barriers surrounding any occupiable roof area or portion thereof shall be no higher than 48 inches within a horizontal distance of 10 feet from any occupiable roof area. This includes *mechanical equipment screens* and oversized parapets. This does not include the vertical columns necessary for the support of the shade covers. This does not include the exception items in IBC 503.1.4.1. However, if there is a shade canopy or patio cover it must comply with the enclosures over the area section, above.

Rationale and Reference:
The intent of IBC Section 503.1.4.1 is likely composed of two themes: 1) Ensure ease of firefighting, rescue, and dispersion of people and 2) Ensure that the space is sufficiently open to the exterior to minimize the accumulation of smoke and toxic gases.
The limitations identified here are mostly taken from the amendments to IBC Section 3105 but modified for inclusion with 503.1.4.1's intent as well as with guidance from pedestrian walkway maximum width, and exterior exit component separation requirements.

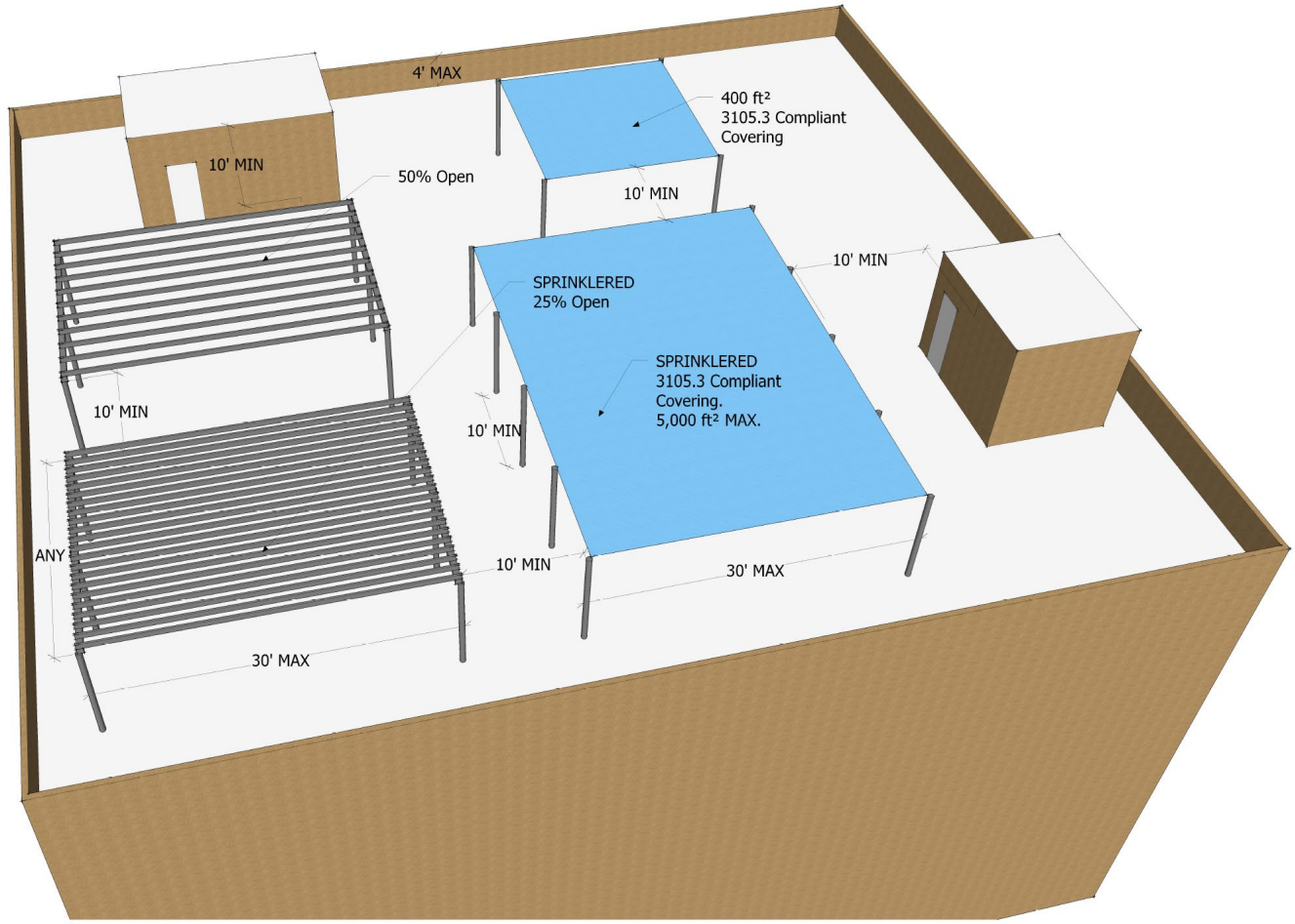

Figure 1 – Example of occupiable roof shade structures. Does not contain all building code requirements, just this topic.