

## ROOF ASSEMBLIES

**R905.17.1 Deck requirements.** *BIPV roof panels* shall be applied to a solid or closely-fitted deck, except where the roof covering is specifically designed to be applied over spaced sheathing.

**R905.17.2 Deck slope.** *BIPV roof panels* shall be used only on roof slopes of 2 units vertical in 12 units horizontal (17-percent slope) or greater.

**R905.17.3 Underlayment.** *Underlayment* shall comply with Section 905.1.1.

**R905.17.3.1 Ice barrier.** Where required, an ice barrier shall comply with Section R905.1.2.

**R905.17.4 Ice barrier.** In areas where there has been a history of ice forming along the eaves causing a backup of water, as designated in Table R301.2, an ice barrier that consists of not less than two layers of *underlayment* cemented together or of a self-adhering polymer-modified bitumen sheet shall be used in lieu of normal *underlayment* and extend from the lowest edges of all roof surfaces to a point not less than 24 inches (610 mm) inside the exterior wall line of the building.

**Exception:** Detached *accessory structures* that do not contain conditioned floor area.

**R905.17.5 Material standards.** *BIPV roof panels* shall be *listed* and *labeled* in accordance with UL 7103 or with both UL 61730-1 and UL 61730-2.

**R905.17.6 Attachment.** *BIPV roof panels* shall be attached in accordance with the manufacturer's installation instructions.

## SECTION R906 ROOF INSULATION

**R906.1 General.** Where above-deck thermal insulation is installed, such insulation shall be covered with an *approved* roof covering and shall comply with NFPA 276 or UL 1256.

**R906.2 Material standards.** Above-deck thermal insulation board shall comply with the standards in Table R906.2.

TABLE R906.2  
MATERIAL STANDARDS FOR ROOF INSULATION

Cellular glass board	ASTM C552
Composite boards	ASTM C1289, Type III, IV, V or VI
Expanded polystyrene	ASTM C578
Extruded polystyrene board	ASTM C578
Fiber-reinforced gypsum board	ASTM C1278
Glass-faced gypsum board	ASTM C1177
Mineral wool board	ASTM C726
Perlite board	ASTM C728
Polyisocyanurate board	ASTM C1289, Type I or II
Wood fiberboard	ASTM C208

## SECTION R907 ROOFTOP-MOUNTED PHOTOVOLTAIC PANEL SYSTEMS

**R907.1 Rooftop-mounted photovoltaic panel systems.** Rooftop-mounted *photovoltaic panel systems* shall be designed and installed in accordance with Section R324 and NFPA 70.

## SECTION R908 REROOFING

**R908.1 General.** Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 9.

### Exceptions:

1. *Reroofing* shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section R905 for roofs that provide *positive roof drainage*.
2. For roofs that provide positive drainage, recovering or replacing an existing roof covering shall not require the secondary (emergency overflow) drains or *scuppers* of Section R903.4.1 to be added to an existing roof.

**R908.2 Structural and construction loads.** The structural roof components shall be capable of supporting the roof covering system and the material and equipment loads that will be encountered during installation of the roof covering system.

**R908.3 Roof replacement.** *Roof replacement* shall include the removal of existing layers of roof coverings down to the *roof deck*.

**Exception:** Where the existing *roof assembly* includes an ice barrier membrane that is adhered to the *roof deck*, the existing ice barrier membrane shall be permitted to remain in place and covered with an additional layer of ice barrier membrane in accordance with Section R905.

**R908.3.1 Roof recover.** The installation of a new roof covering over an existing roof covering shall be permitted where any of the following conditions occur:

1. Where the new roof covering is installed in accordance with the roof covering manufacturer's approved instructions
2. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.
3. Metal panel, metal shingle and concrete and clay tile roof coverings shall be permitted to be installed over existing wood shake roofs where applied in accordance with Section R908.4.

4. The application of a new protective *roof coating* over an existing protective *roof coating*, *metal roof panel*, *metal roof shingle*, mineral surfaced roll roofing, built-up roof, modified bitumen roofing, thermoset and thermoplastic single-ply roofing and spray polyurethane foam roofing system shall be permitted without tear-off of existing roof coverings.

**R908.3.1.1 Roof recover not allowed.** A *roof recover* shall not be permitted where any of the following conditions occur:

1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.
2. Where the existing roof covering is slate, clay, cement or asbestos-cement tile.
3. Where the existing roof has two or more applications of any type of roof covering.

**R908.4 Roof recovering.** Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with gypsum board, mineral fiber, glass fiber or other *approved* materials securely fastened in place.

**R908.5 Reinstallation of materials.** Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Any existing flashings, edgings, outlets, vents or similar devices that are a part of the assembly shall be replaced where rusted, damaged or deteriorated. Aggregate surfacing materials shall not be reinstalled.

**R908.6 Flashings.** Flashings shall be reconstructed in accordance with *approved* manufacturer's installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.