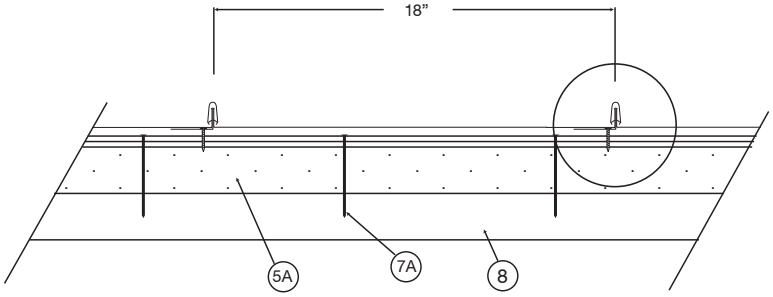
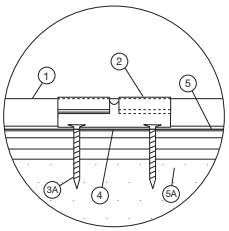
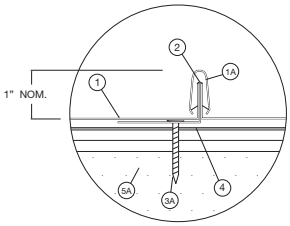
UL Construction No. 351 (Alternate Construction)

Uplift - Class 90 / Fire Not Investigated







1 Metal Roof Deck Panels * / “Snap-On Standing Seam”
No. 24 MSG min coated steel panels, 18 in. wide max, 12 in. wide min, 1 in. high at ribs. Panels continuous over three or more clips with no endlaps. A bead of sealant may be used at panel side joints.

1A Panel Battens* / “Snap-On Standing Seam Cap”
No. 24 MSG min coated steel. “U” shaped, 1 in. high formed to snap over panel clips (Item 2).

2 Roof Deck Fasteners* (Panel Clips) / “Snap-On Standing Seam Clip”
One piece assembly, 2-1/2 in. wide, 1-5/16 in. high. Min thickness No. 26 MSG. Clips spaced 18 in. OC, fastened to plywood deck.

3A Fasteners (Screws)
Fasteners used to attach panel clip (Item 2) to Nailable Insulation (Item 5A) to be No. 8-8 by 1-1/4 in. long bugle-head coated steel wood screws with a No. 2 Phillips drive. Minimum two fasteners per clip to be used.

4 Underlayment
Underlayment used over nailable insulation to be type 30 lb. organic felt. Sides overlapped min 2 in., end laps per manufacturer’s instructions. Felt nailed to nailable insulation with 1 in. long galv steel roofing nails, located per manufacturer’s instructions. Nail spacing to be max 12 in. OC at the side lap and max 24 in. OC in interior rows.

5A Nailable Insulation
Consisting of 1 in. min to 3-1/2 in. maximum nominal thickness Classified Polysisocyanurate foamed plastic with a factory laminated 7/16 in. thick APA rated O.S.B. Density of foamed plastic to be 2 pcf.

6A Supports (Purlins) (Not Shown)
Purlins used for liner panel support to be cold formed steel sections. As alternatives, structural steel components (hot rolled beams, channels, open web joists, etc.) may be used. Min gauge and yield to depend on design considerations for uplift loading. Max spacing to depend on design considerations for uplift loading.

7A Fasteners (Screws)
Fasteners used to attach nailable insulation to steel deck (Item 8) to be No. 11-13, No. 3 Phillips drive, truss head, painted steel screws. Length to depend on overall thickness of deck and to penetrate steel deck 1/2 in. min. A 2 in. diameter formed pressure plate fabricated from No. 22 MSG coated steel to be used with each screw. Fasteners located in three rows along the 8 ft. length of the nailable insulation beginning 6 in. from the 8 ft. edges with a row down the center and spaced 21 in. beginning 6 in. from the 4 ft. edges OC. A total of 15 fasteners used for each 4 by 8 ft board.

8 Liner Panel (Steel Deck)
No. 22 MSG min thickness coated steel. Min depth 1-1/2 in. max pitch 6 in. fabricated to various profiles. Min yield strength 33,000 psi. Fastened to supports (Item 6A) with fastener type and spacing per liner panel manufacturers instructions for uplift loading.

9 Gypsum Board (Optional) (Not Shown)
Max thickness 5/8 in. supplied in 4 by 8 ft sheets. Butt joints located over crests of steel deck. Fastened to deck with same fasteners used for nailable insulation.

Refer to General Information, Roof Deck Construction for items not evaluated.

*Bearing the UL Classification Marking

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