

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

Roof Deck Constructions

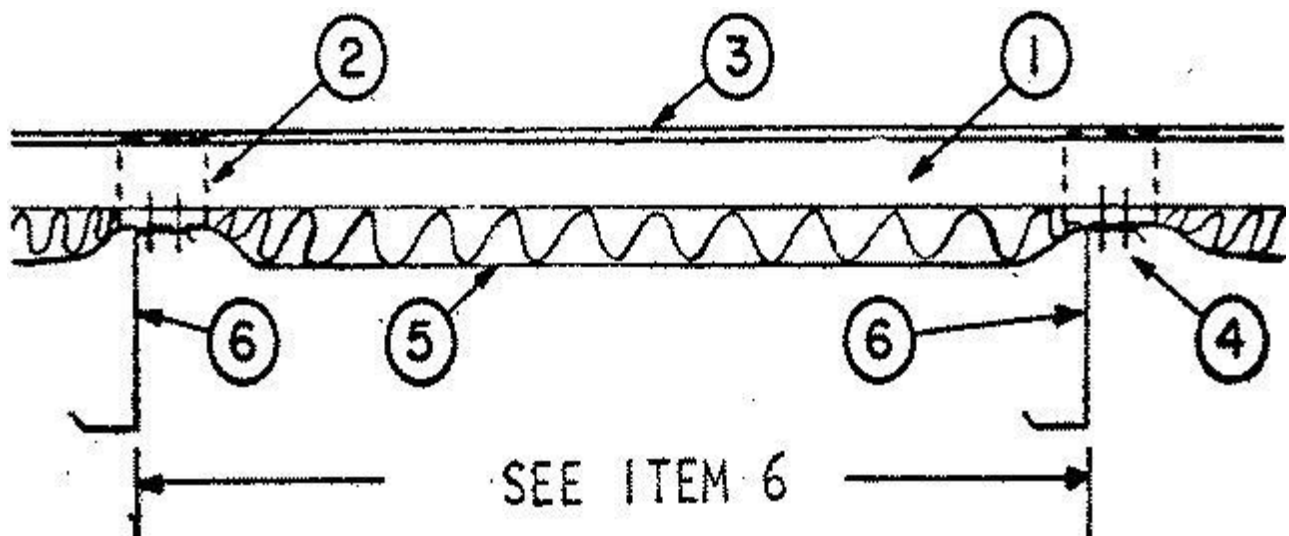
[See General Information for Roof Deck Constructions](#)

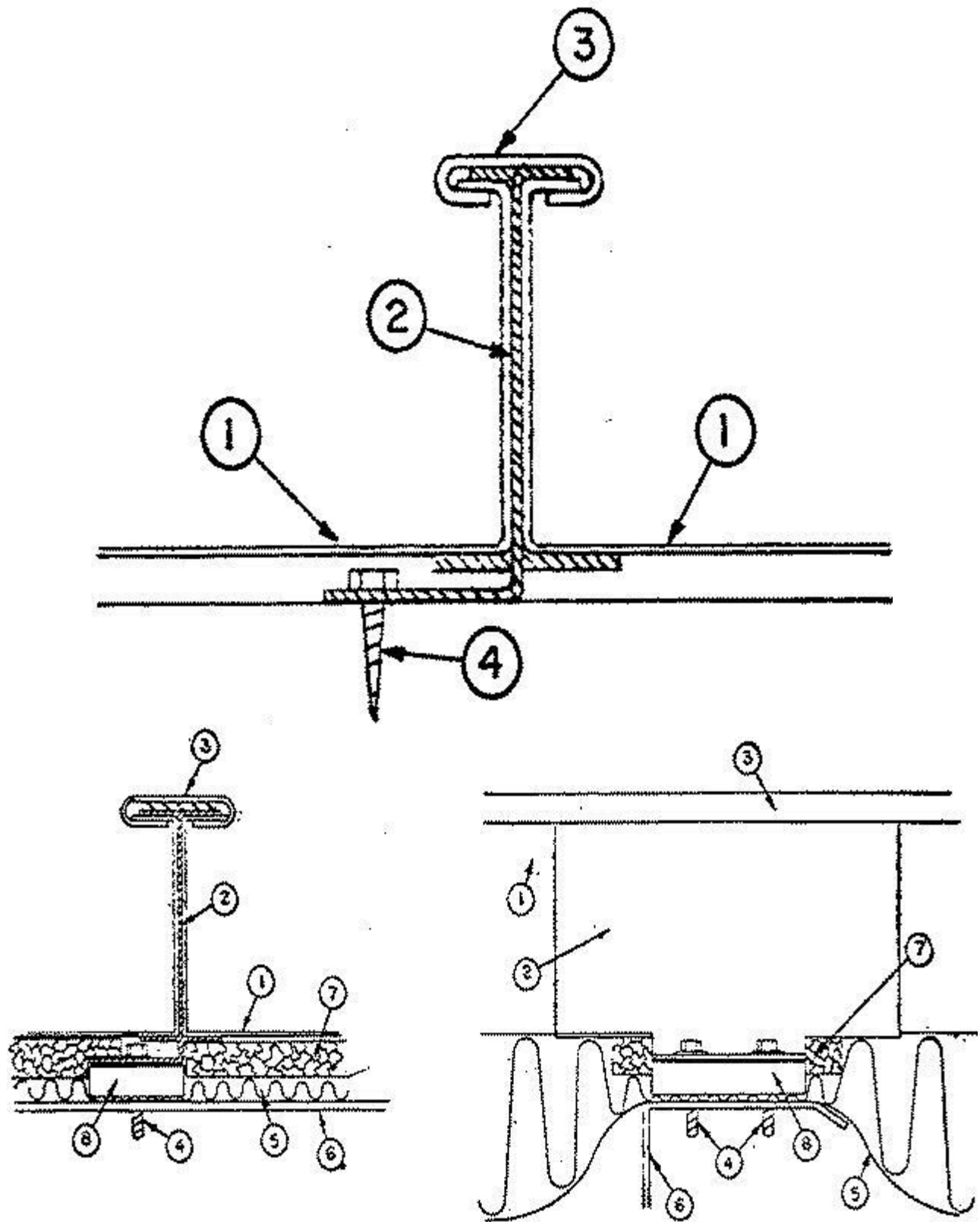
Construction No. 103

June 07, 2005

Uplift — Class 90, 60 or 30

Fire Not Investigated





1. Metal Roof Deck Panels* — No. 24 MSG or No. 26 MSG min gauge, 18 in. wide, coated steel. Panels continuous over two or more spans. End laps to occur over purlins with panels overlapped 4 in. min. (Side laps to be continuously crimped with a special motorized crimping tool.) A bead of sealant may be used at panel end and side laps. For Class 60 and 90 ratings, panels must be No. 24 MSG min.

FABRAL INC ([View Classification](#)) — "Standing Seam T-Rib"

2. Panel Clip* — No. 18 MSG min gauge coated steel. Min width 4 1/2 in., max height 3 3/4 in.

FABRAL INC ([View Classification](#)) — "Standing Seam T-Rib"

Feedback

3. **Panel Cap Strip** — No. 24 MSG min gauge coated steel, 2 1/2 in. wide. Used at each panel side joint. To be included in the crimping operation.

4. **Fasteners** — Fasteners used to attach panel clips to purlins, when using No. 24 or 26 MSG panels, to be, No. 12-14 by 1 in. plated steel screws with a 5/8 or 9/16 in. OD aluminum washer and a bonded neoprene sealing washer. Length to be 1 in. when thermal spacer block (Item 7) is not used and 1-1/2 in. when thermal spacer block is used. Two fasteners per clip inserted into predrilled locations to be used. Stainless steel fasteners used at end laps to be same type spaced in a 2-1/4, -4-1/2, -4-1/2, -4-1/2, -2-1/4 in. Pattern beginning 2-1/4 in. from the side ribs driven into purlin.

As an alternate fastener at end laps only, for either thickness of panel, No. 14 by 3/4 in. Type A. Self-tapping, hex-head, stainless steel screws with a 5/8 in. OD aluminum washer and a bonded neoprene sealing washer may be used. Pilot holes to be 0.199 in. diam or, No. 12-14 by 1 in. self-drilling, self-tapping, hex-head, steel screws with a stainless steel fastener head covering, and with a separate 5/8 in. outside diam stainless steel washer and a bonded neoprene sealing washer. When using a floating end-lap detail, fasteners for end-lap to be No. 12-14 by 1-1/4 in. long self-drilling, self-tapping, hex-head, plated steel screws with a 5/8 in. O.D. aluminum washer and a bonded neoprene sealing washer. Spacing to be in a 2, 3-1/2, 3-1/2, 3-1/2, 3-1/2, 2 in. pattern beginning 2 in. from the side rib. Fasteners driven into the end-lap splice plate.

5. **Insulation** — (Optional) — Any compressible blanket insulation. Max thickness before compression:

For Class 90 - 6 in. max thickness (with purlin spacing of 49 in. max).

For Class 60 - 4 in. max thickness (with purlin spacing of 61 in. max).

For Class 30 with 24 MSG panels - 6 in. max thickness.

For Class 30 with 26 MSG panels - 4 in. max thickness.

6. **Purlin** — No. 16 MSG min gauge steel (50,000 psi min yield strength) or min H Series open web steel joists.

Spacing — When using 24 MSG min gauge panels

For Class 90 - 49 in. max.

For Class 60 - 61 in. max.

When using 26 MSG min gauge panels for Class 30 - 61 in. max.

7. **Thermal Spacer Block (Optional)** — For use with No. 24 MSG panels only — Expanded polystyrene, width 4 in., length 16-3/4 in., thickness 3/8 or 1 in. Located between panel clips.

8. **Stand-off Block** — For use with No. 24 MSG panels only — Used in conjunction with 3/8 in. Thermal Spacer Block only — ASTM A-36 steel, width 2 in., length 3 in., thickness 3/8 in., with two pre-drilled holes 7/16 in. diam to accommodate panel clip fasteners. Located between purlin clip and purlin.

9. **Floating end-lap** — (Not shown) — As an alternate, a splice plate may be used at the end-lap location. The plate is to rest on the purlin upper flange and is slipped over the lower panel. The plate measures 16-3/4 in. wide, 12 in. long, with a 1 in. return leg and is fabricated from No. 18 MSG coated steel.

Refer to General Information, Roof Deck Construction, (Roofing Materials and Systems Directory) for Items not evaluated.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2005-06-07

Feedback

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