

TGKX.342 - ROOF DECK CONSTRUCTIONS

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

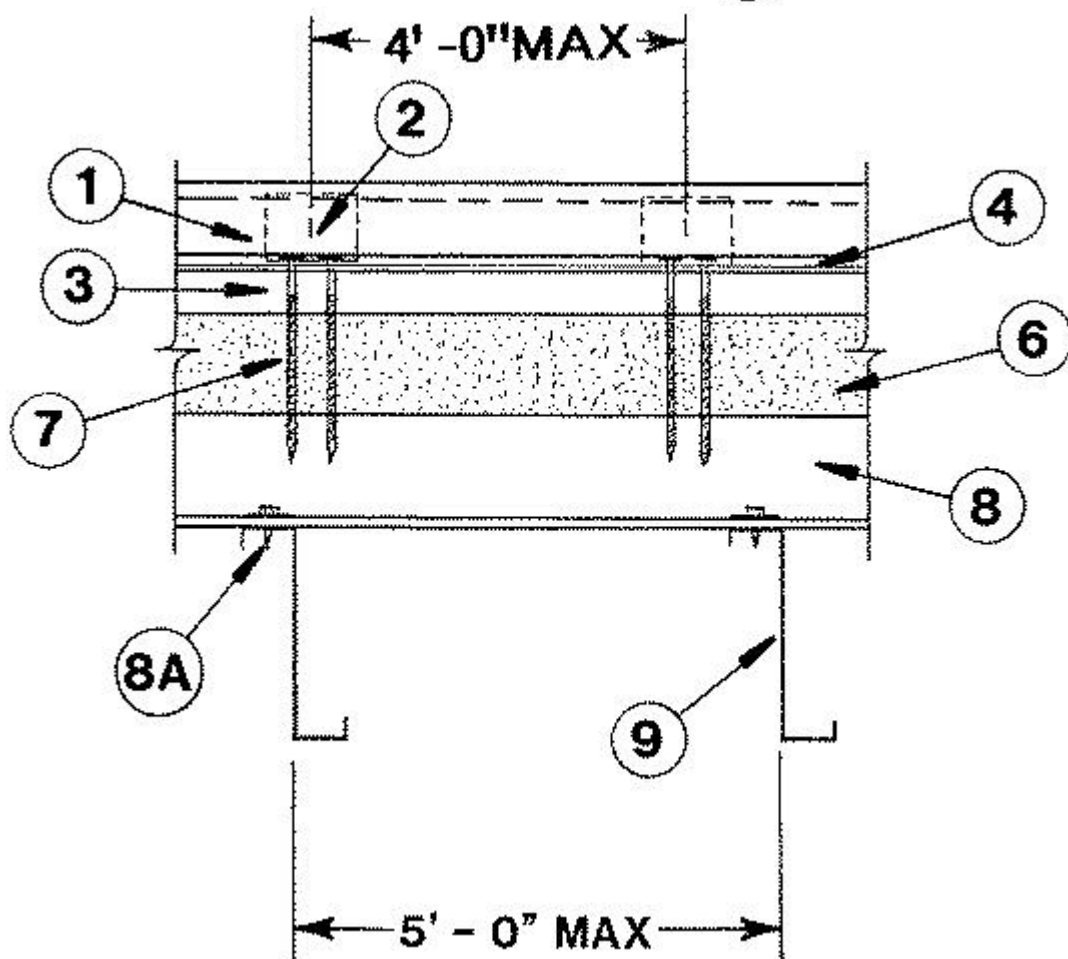
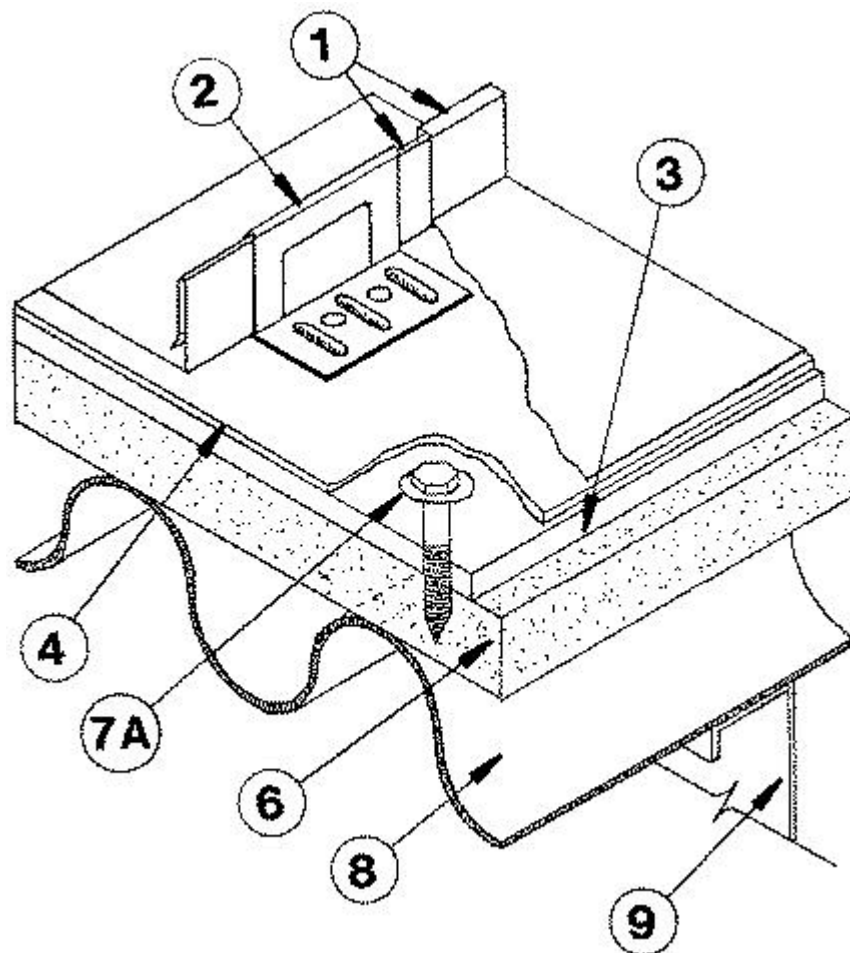
See General Information for Roof Deck Constructions

Construction No. 342

April 02, 2019

Uplift — Class 90

Fire Not Investigated



1. **Metal Roof Deck Panels*** — No. 24 MSG min gauge coated steel. Panel width 18 in. max., 10 in. min. Rib height 1-3/4 in. at female side. A bead of sealant may be used at panel side joints. Panels continuous over three or more clips with no end laps.
A & S BUILDING SYSTEMS L P (View Classification) — "LokSeam"

ACI BUILDING SYSTEMS INC (View Classification) — "SnapLok"

AEP SPAN, DIV OF ASC PROFILES (View Classification) — "18 in. Snap-Seam", "12 in. Snap-Seam", "10 in. Snap-Seam"

ALLIANCE STEEL INC (View Classification) — "NFS16"

AMERICAN BUILDING COMPONENTS (View Classification) — "LokSeam"

ATAS INTERNATIONAL INC (View Classification) — "MRS Panel"

BERRIDGE MFG CO (View Classification) — "Snaplock Panel"

BORGA STEEL INC (View Classification) — "Vertical Lock"

CENTRAL STATES MFG INC (View Classification) — "Central Snap"

CENTRAL TEXAS METAL ROLLFORMING INC (View Classification) — "Shurloc 175"

FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"

MBCI (View Classification) — "LokSeam"

METAL FORMING INC (View Classification) — "1.75 Snap Lock Steel Panel"

METAL ROOFING SYSTEMS INC (View Classification) — "MRS System 2000"

METAL SALES MANUFACTURING CORPORATION (View Classification) — "Vertical Seam"

MORIN CORP (View Classification) — "SWL-12", "SWL-16", "SWL-18"

NCI BUILDING SYSTEMS L P (View Classification) — "Lok Seam"

NORTHWEST ROOF TILE & METAL L L C (View Classification) — "LT175"

P S M L V INC DOING BUSINESS AS PENN SHEET METAL (View Classification) — "PSM175SL"

ROLLFAB METAL BUILDING PRODUCTS (View Classification) — "SL-175" or "1.75 Snap Lock Steel Panel"

SHEET METAL WORKS OF ARIZONA (View Classification) — "SL175"

STANDARD STRUCTURES INC (View Classification) — "SnapSeam"

SOUTHEASTERN METALS MANUFACTURING CO INC (View Classification) — "Verti-Lok"

TAYLOR METAL INC, DBA TAYLOR METAL PRODUCTS (View Classification) — "Versa Span"

WESTAR ROOFING CORP (View Classification) — "SL175"

WHIRLWIND STEEL BUILDINGS INC (View Classification) — "Weather Snap-12" or "Weather Snap-16"

2. **Roof Deck Fasteners* — (Panel Clips)** — One piece assembly, No. 24 MSG min thickness, 3-1/2 in. wide, 1-15/16 in. high. Clip spacing to be 48 in. OC.

AEP SPAN, DIV OF ASC PROFILES (View Classification) — "Snap Seam Clip"

AMERICAN BUILDING COMPONENTS (View Classification) — "LokSeam UL 90 Clips"

ATAS INTERNATIONAL INC (View Classification) — "MRS Clip"

EXCEL STAMPING & MFG INC (View Classification) — "LS-178-18 Clip"

FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14 Clip"

LOGAN STAMPINGS INC — "Snap Lock Clip No. 675"

METAL SALES MANUFACTURING CORPORATION (View Classification) — "Vertical Seam Clip"

NCI BUILDING SYSTEMS L P (View Classification) — "LokSeam UL 90 Clips"

3. **Gypsum Board* (Mineral Board)** — Min thickness 1/2 in. Opposite side edges have a tongue and groove configuration. Butt (end) joints to be staggered and occur over steel deck crests. Wallboard installed perpendicular to steel deck corrugations.

LOADMASTER SYSTEMS INC (View Classification) — "Mineral Board"

4. **Vapor Barrier** — (Optional) — Installed on top of metal deck (Item 8) or on top of gypsum wallboard (Item 3). Minimum 6 mil plastic sheet.

5. **Joint Tape** — (Not Shown) — All wallboard joints shall be taped with 2.5 in. wide joint tape supplied by the manufacturer.

6. **Foamed Plastic — (Rigid Insulation)** — (Optional) — Expanded polystyrene supplied in 4 by 8 ft sheets, min thickness 13/16 in., min density 1.0 pcf, or (Rigid Insulation) Polyisocyanurate supplied in 4 by 8 ft sheets or (Rigid Insulation) Phenolic supplied in 4 by 8 ft sheets. All end joints to be staggered with respect to adjoining rows. All joints to be offset from joints in mineral board (Item 3).

7. **Fasteners** — For attaching panel clips to steel deck to be two 0.140 in. diam threaded shank Phillips, bugle or trumpet head, self-drilling, self-tapping corrosion resistant coated steel screws supplied by roof deck manufacturer. Screws shall penetrate steel deck min 1/2 in.

7A. **Fasteners** — For attaching wallboard to steel deck (Item 8) to be min 0.140 in. diam threaded shank Phillips, bugle or trumpet head, self-drilling, self-tapping, corrosion resistant coated steel screws supplied by the manufacturer. Screws are installed into top corrugations of steel deck through nom 3 by 3 in. corrosion resistant steel roof deck plates, spaced in a pattern as determined by the pitch of the steel deck with the min density of 21 fasteners per 4 by 8 ft sheet (Item 3).

7B. **Panel Fasteners — (Screws)** — As an alternate, when no Rigid Insulation (Item 4) is used, No. 10-16 by min 1 in. long TEK 3 Carbon pancake head, self-drilling, self-tapping screws to be used. When rigid insulation is used, No. 14-13 by varying lengths, DP1, carbon, pancake-head, Square/Phillips Head screws to be used. Two fasteners per clip to be used for either type. See Item 8 for steel deck thickness.

8. **Steel Deck** — Fabricated to various profiles, min yield strength 33,000 psi. Steel deck profile, support spacing and method of positioning (end and side laps) and fastening of deck to supports to be per deck manufacturers requirements for uplift loading. Deck thickness to accommodate panel clip screw fastener pullout strength. When fasteners described in Item 7B are used, min thickness to be No. 22 MSG

8A. **Deck Fasteners** — Steel deck panels to be fastened to structural supports and at laps using ARC spot welds with weld washers or screw fasteners per deck manufacturer's requirements for uplift loading.

9. **Purlins** — 16 MSG min gauge steel (min yield strength 50,000 PSI) or min Type H open web joists.

The following items (not shown) may be used in conjunction with the "AEP SPAN" Metal Roof Deck Panels (Item 1). When used, the panel system is identified as "SNAP-SEAM (SBS)"

A. **Batten Clips*** — Slipped over ribs formed by roof deck panels. One piece assembly, 1-3/4 in. high, 1-3/4 in. max width, with four legs and two arms. Formed to engage ribs of AEP SPAN Panels and Batten Cap (Item 6). Clips spaced 48 in. O.C.
AEP SPAN, DIV OF ASC PROFILES (View Classification) — "SNAP-SEAM (SBS) Clip"

B. **Batten Cap*** — Slipped over batten clip. Two inches high 1-1/2 in. wide at top with sides formed to engage batten clip. Snapped over batten clips.
AEP SPAN, DIV OF ASC PROFILES (View Classification) — "SNAP-SEAM (SBS) Batten"

The following items may be used in conjunction with the "K-Lok Structural Panel" (Item 1).

A. **Batten Clips*** — Slipped over ribs formed by roof deck panels. One piece assembly formed to engage ribs of "K-Lok Structural Panels (Item 1) and Batten Cap (Item B). Spaced 48 in. O.C.
ATAS INTERNATIONAL INC (View Classification) — "MRS Batten Clip"

B. **Batten Cap*** — Slipped over batten clip (Item A) and formed to snap and engage batten clip.
ATAS INTERNATIONAL INC (View Classification) — "MRS Batten"

The following items may be used in conjunction with the "Design-Lok" panel (Item 1).

A. **Batten Clips*** — Slipped over ribs formed by roof deck panels. One piece assembly formed to engage ribs of "Design-Lok" panels (Item 1) and "Design-Lok Batten Cap" (Item B) spaced 48 in. OC.
METAL SALES MANUFACTURING CORPORATION (View Classification) — "Vertical Seam Batten Clip"

B. **Batten Cap*** — Slipped over batten clip (Item A), formed to snap over and engage batten clip.
METAL SALES MANUFACTURING CORPORATION (View Classification) — "Vertical Seam Batten Cap"

The following items may be used in conjunction with the "Structural Standing Seam" panel and a Classified Batten Clip as described in this construction.

A. **Snap-on-Batten*** — Slipped over a Classified Batten Clip, formed to snap over and engage batten clip. Refer to General information, Roof Deck Constructions 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 2019-04-02

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