

# TGKX.436 - 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

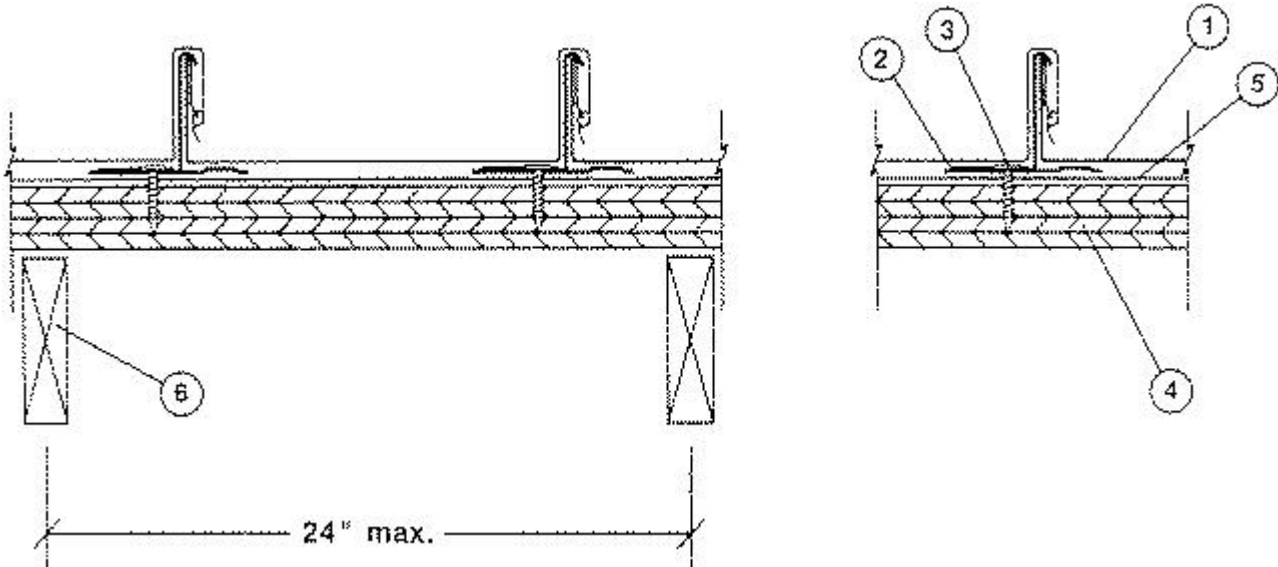
See General Information for Roof Deck Constructions

### Construction No. 436

April 02, 2019

**Uplift — Class 90**

**Fire Not Investigated**



1. **Metal Roof Deck Panels\*** — No. 24 MSG min coated steel. Max panel width 18 in., rib height 1-3/4 in. Panels continuous over two or more spans. Endlap for panels to be overlapped 6 in. A bead of sealant may be used at panel ends and side joints.  
**A & S BUILDING SYSTEMS L P** (View Classification) — " LokSeam 10, 12 or 18"

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

**ALLIANCE STEEL INC** (View Classification) — "NFS16"

**AMERICAN BUILDING COMPONENTS** (View Classification) — "LokSeam"

**BEACON SALES ACQUISITION INC, DBA COASTAL METAL SERVICE** (View Classification) — "EZ Loc"

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

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

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

**CUSTOM-BILT METALS** (View Classification) — SL-1750

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

**MBCI** (View Classification) — " LokSeam 10, 12, or 18 in."

**MCELROY METAL MILL INC** (View Classification) — "ABC Permaseam Panel"

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

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

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

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

**NCI BUILDING SYSTEMS L P** (View Classification) — "LokSeam"

**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"

**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, 3-1/2 in. wide by 1-7/8 in high. Clip spacing to be 48 in. OC.

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

**BEACON SALES ACQUISITION INC, DBA COASTAL METAL SERVICE** (View Classification) — "EZ Loc Panel 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"

**MCELROY METAL MILL INC** (View Classification) — "ABC Permaseam Clip"

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

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

3. **Fasteners — (Screws)** — Screws used to attach the panel clips to Substructure (Item 4) to be No. 10 by minimum 1 in long, without insulation and/or cover board, Pancake head wood screws with a No. 2 Phillips head or 10x1 in., 1/4 in. Hex Head Woodgrip. Two screws per clip.

Screws used to attach Substructure (Item 4) to wood trusses or joists (Item 6) to be No. 8 by 2 in. Bugle head screws. As an optional fastener, 2-1/2 in. long 8d common deformed shank nails may be used. Fasteners used at endlaps to be 14x1 in. Type AB or 10x1 in. woodgrip.

When light gauge structural steel joists are used, screws to be No. 12 by 1-5/8 in. long with a Phillips head.

Spacing of screws to be 6 in. OC at plywood or OSB ends and 12 in. OC at interior joists.

4. **Substructure (Plywood or OSB)** — Plywood decking (PS-1) or oriented strand board (OSB) (PS-2) to be a nom 5/8 in. thick, exposure sheathing span C-D, 40/20 plywood. (All butt joints to be sealed against leakage by using tape and/or caulking). In lieu of plywood, 1 in. tongue and groove decking may be used.

5. **Moisture Barrier** — (Optional) — Any suitable membrane to protect Substructure (Item 4).

6. **Joists** — Joists, spaced at 2 ft, 0 in. OC max (when tongue and groove decking is used, joist spacing may be 30 in. OC max), may be one of the following:

A. Nom 2 by 6 in. wood joists, No. 2 or better.

B. Nom 2 by 4 in wood when used on a top chord of a wood truss, No. 2 or better.

C. Light gauge structural steel framing with the member against the plywood to be a min No. 22 MSG coated steel.

7. **Batten Clips and Cap\*** — The followed 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

8. **Foamed Plastic\*** — (Rigid Insulation — Optional — Not Shown) — Applied flat or tapered to maximum 10 in. thick combination of Item 8A. Bearing plates required under panel attachment points.

**FIRESTONE BUILDING PRODUCTS CO L L C** (View Classification) — " ISO 95+ GL" or "Resista"

8A. **Foamed Plastic** — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 8. Maximum 10-in thick combination of Item 8. Bearing plates required under panel attachment points.  
**FIRESTONE BUILDING PRODUCTS CO L L C** (View Classification) — "ISOGARD HD"

9. **Roof Deck Fasteners\*** — (Bearing Plates) — Plates to be 4 in by 4 in. by No. 26 MSG min galvanized steel. Two 1/4 in. guide holes located in line with panel clip (Item 2) guide holes.  
**FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC** (View Classification) — "UC Bearing Plate"

10. **Cover Board** — (Optional — Not Shown) — Min 1/2 in. thick (15/32 in. actual) plywood, DOC PS-1 rated (square edged may be used) or min 7/16 in thick OSB, DOC PS-2 rated, 1/2 in. thick gypsum board, 1/2 in. wood fiberboard, 1/4 in. min thickness G-P Gypsum "DensDeck", 1/4 in. min thick USG "SECUROCK Glass Mat Board" or "SECUROCK Roof Board" applied over the plywood decking (Item 4) or Foamed Plastic (Items 8 and/or 8A). When used or used over Foamed Plastic bearing plate not required.

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.**

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