

TECHNICAL BULLETIN

Issue Date: April 27, 2020

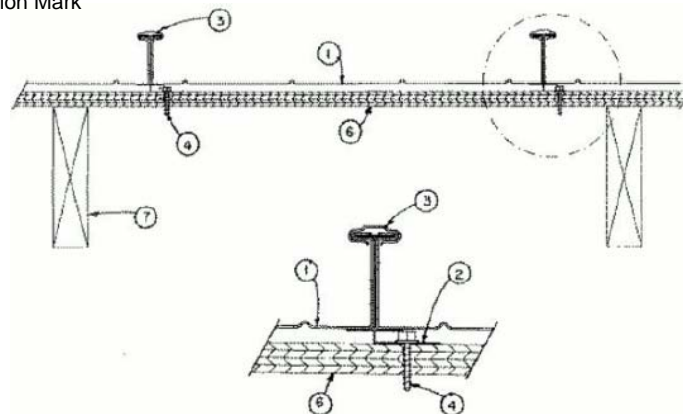
No. 03-414-20

UL Construction #268D 138T UL 580 Class 90 Wind Uplift

1. **Metal Roof Deck Panels*** - Min No. 24 MSG gauge steel or stainless steel, nom 16 in. wide, 1-3/8 in. high standing seams. Heavier gauges or narrower panels acceptable. Panels continuous over three or more clips with no end laps.
McElroy Metal Mill, Inc. "138T Roof Panel"
2. **Panel Clips*** — No. 16 MSG min gauge coated steel or stainless steel, 3.5 in. long by 1.5 in. high. Base to have two or four 0.281 in. dia. guide holes to accommodate screw fasteners (Item 4). Clips spaced 36 in. OC max, fastened to plywood deck.
McElroy Metal Mill, Inc. "138T Roof Clip", "4 in. ASV Clip" or "8 in. Shingle Recover Clip with ASV"
3. **Cap** — Used at seam, nom 1 in. wide, 1/2 in. deep fabricated from min No. 24 MSG steel, stainless steel. Cap continuously seamed over panel seams with a special motorized seaming tool. Seaming process to include panel clips (Item 2) and a bead of caulk.
4. **Fasteners — (Screws)** — Fasteners used to attach panel clips to plywood deck to be No. 10-12 by 1 in., carbon or stainless steel screws. When the 5B. Underlayment is used, fasteners used to attach panel clips to plywood deck to be No. 14-10 Type A x 1-1/2 in. carbon or stainless steel screws. Four fasteners per clip to be used with the "138T Roof Clip" or "4 in. ASV Clip". Four fasteners per clip to be used with the "8 in. Shingle Recover Clip with ASV".
5. **Underlayment** — (Optional) — (Not Shown) Underlayment used over plywood deck to be Type 15 or 30 organic felt. Sides overlapped min 2 in., end laps per manufacturer's instructions. Felt nailed to plywood deck with 1-1/4 in. long steel cap 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. **Underlayment** — (Optional) — (Not Shown) A self-adhering modified bitumen water proofing membrane may be used, installed per manufacturer's instructions.
- 5B. **Underlayment** — (Optional) — (Not Shown) A layer of existing 3 tab or laminate (asphalt or organic) shingles and existing shingle underlayment may be retained in-place under the metal roofing. An additional layer of Type 15 or 30 organic felt or *self-adhering modified bitumen membrane may be used on top of the shingles per the manufacturer's instructions.
6. **Plywood Decking** — Plywood decking to be graded per PS83 specifications, 15/32 in. thick, exposure 1, APA Rated Sheathing (42/20) square edged. Butt ends not blocked.
7. **Supports** — Spaced max of 24 in. OC. Any of the following types may be used to support the plywood decking:
 - A. Nom 2 by 6 in., No. 2 grade or better S-P-F, Hemlock Fir, Douglas Fir or Southern Yellow Pine or equivalent.
 - B. Wood trusses with a nom 2 by 4 in. upper chord of the same grade as Item A.
 - C. No. 22 MSG min cold formed coated steel (min yield to be 3,000 psi).
8. **Plywood Fasteners** — (Not Shown) Fasteners used to attach the plywood deck to the supports to be as follows: Fasteners used to attach plywood substructure (Item 6) to wood trusses or joists to be No. 8 by 2-1/2, 8d common deformed shank nails. As an optional fastener, No. 8 by 2 bugle head screws can be used. When light gauge structural steel joists are used, screws to No. 12 by 1-5/8 in. long with Phillips head. Fasteners to be spaced 6 in. OC at edges and 8 in. OC in the interior to attach to joists (Item 9).
9. **Joists** — (Not Shown) — Joists space at 2 ft, 0 in., OC, 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 cord 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.

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

*Bearing the UL Classification Mark



MANUFACTURING LOCATIONS

ADELANTO, CA	ASHBURN, GA	BOSSIER CITY, LA	CLINTON, IL	DIAMOND, MO	HOUSTON, TX	LEWISPORT, KY
MARSHALL, MI	MAUSTON, WI	MERKEL, TX	PEACHTREE CITY, GA	SUNNYVALE, TX	WINCHESTER, VA	