



## INSTALLATION INSTRUCTIONS FOR: Cornell Ventilated Roof Sheathing

### 1. PRODUCT

Cornell Ventilated Roof Sheathing (CVRS) consists of a top layer of sheathing (either oriented strand board or plywood) with 27 wood spacer blocks secured to the underside of each 4' x 8' panel. The spacer blocks maintain a 1" deep open space to allow air flow below the sheathing. The layout of the small internal spacers leaves over 90% of the area open for air movement. This allows air flow in all directions to give improved cooling and ventilation throughout the roof area, especially at hips and valleys. Spacers are not over 12" apart in both directions to minimize deflection of the sheathing. For more information on the product and its uses and limitations, please see company literature. CHECK LOCAL BUILDING CODES.

### 2. STORAGE

CVRS is shipped covered with a plastic bag which is intended to temporarily protect the material while in transit only. On the jobsite the piles should be covered with a breathable waterproof tarpaulin. The plastic bag should be removed if moisture accumulates inside it.

### 3. INSTALLATION

a. If specified, install a vapor retarder on the supporting roof deck below the insulation. We recommend one over high humidity areas such as swimming pools. In this case particular care should be taken to seal all openings in the deck around light fixtures, skylights, end walls and at the ridge, etc. On any building where conduit is installed above the structural deck, a separate layer of 1-1/2" foam board insulation is recommended.

b. Install wood nailers at the eave and rake edge of the roof. Check that the supporting roof deck is smooth and even without bumps or depressions.

c. Maintain a 1/8" minimum gap between the sheathing on adjacent panels. Stagger end joints in succeeding panel rows.

d. Fasten right through the vented sheathing and the insulation into the supporting deck, use insulation fasteners as shown on next page. Do not over-torque the screws and compress the insulation too much.

e. Check the top surface of the vented sheathing for uneven edges BEFORE covering. Grind off any uneven edges with an electric sander/grinder.

f. Roofing should be applied over dry vented sheathing as soon as possible. Apply roofing felt and shingles to the vented sheathing using shingle nails NOT OVER 1-1/4" LONG placed according to the shingle manufacturer's recommendations. For best results use barbed or ring shank shingle nails and premium or laminated shingles.

g. When installed over metal deck additional spacers should be applied across any flute area when the vented sheathing does not end over a flat surface.

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4. FASTENERS

a. Number – use 15 screws per 4' x 8' panel. There are lines on the sheathing (OSB only) at 24" and 48" from the panel ends which will assist in locating the placement of the fasteners. Ignore the lines at 16" and 32". Use additional screws at the eave and ridge as shown below.

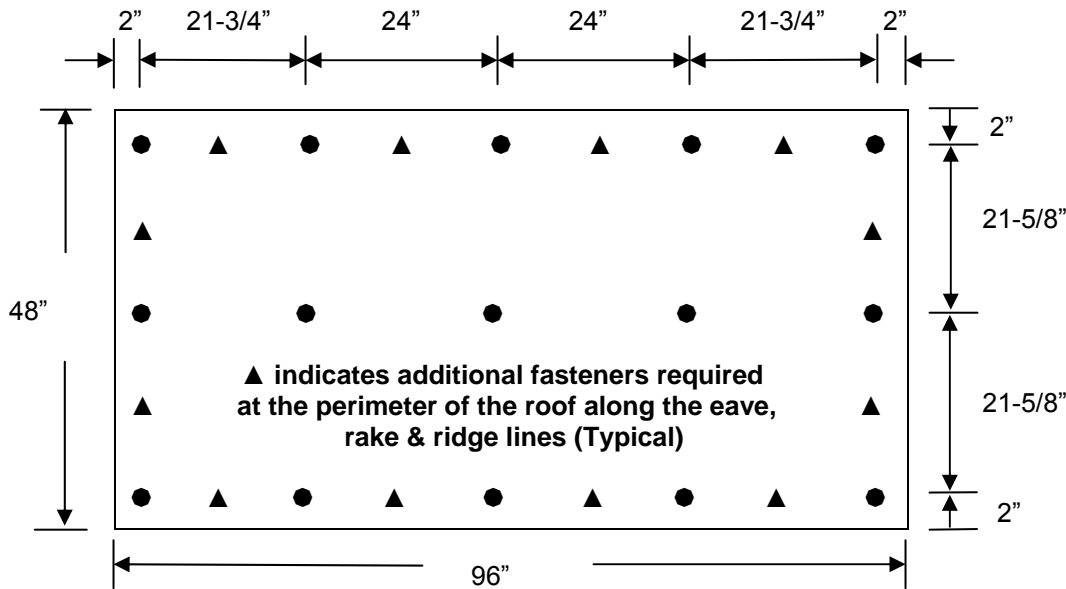
b. Wood structural deck – Use roof insulation screws (as recommended by Cornell Corporation) **without plates** to obtain at least 1-1/4" penetration into the deck. If the wood deck is only 1-1/2" actual thickness use screws with a minimum of 1" penetration and install four extra screws on the horizontal center line of each panel. On plywood use screws that protrude through the deck by at least 1/4". If exposed screw tips are not acceptable, contact Cornell Corporation for suggestions.

d. Steel Deck – Use self-drilling self-tapping roof insulation screws **without plates**. They should penetrate the steel deck a minimum of 1/2".

c. Concrete Deck – Use Tapcon screws or equal. Advance testing of the pull out resistance is recommended.

5. FASTENER PATTERN:

Use 15 fasteners per panel (5 across- parallel to the ridge & 3 up the slope) as the standard fastening pattern. Add additional fasteners as shown below.



b. When installing heavy material such as natural slate or tile on a pitch greater than 4/12, install 4 additional fasteners on each panel along the center of the panel (aligned along the 8' length) parallel with the ridge line.