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Legacy report on the 1997 *Uniform Building Code*™

DIVISION: 08—DOORS AND WINDOWS
Section: 08620—Unit Skylights

SKYVIEW SKYLIGHTS

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1.0 SUBJECT

Skyview Skylights.

2.0 DESCRIPTION

2.1 General:

The Skyview Skylights are either plastic-domed or glass-glazed skylights that are curb or deck mounted.

2.1.1 Plastic-Domed Skylights: The domes are formed from acrylic plastic sheets, and are attached by the manufacturer to an aluminum sill frame and aluminum retainer cap with corrosion-resistant screws. The sill frame acts as a code complying curb for deck-mounted units. A 2-by-wood member acts as the curb for curb-mounted units. The skylights are fixed or openable, and have either single or double domes. Tables 1 and 2 list model numbers, dimensions, and allowable loads. Figures 1, 2 and 3 provide curb details.

2.1.2 Glass-Glazed Skylights: The glass-glazed, curb-mount skylights are similar in construction to the plastic-domed skylights except for the glazing material and the shape of the aluminum retainer cap. Table 3 lists model numbers, dimensions, and allowable loads. Figure 4 provides curb details.

2.2 Material:

2.2.1 Plastic Domes: Plastic domes are Type 147K Lucite acrylic plastics. See ICBO ES Evaluation Report ER-1990. The plastic has a CC2 classification.

2.2.2 Glass Glazing: Glazing is insulating glass with a top lite of $\frac{3}{16}$ -inch-thick tempered glass and a bottom lite of laminated glass. The laminated glass bottom lite consists of two plies of 0.122-inch-thick annealed glass with a polyvinyl butyral interlayer. The insulated glass glazing complies with ASTM E 774 and E 773.

2.2.3 Aluminum Frame and Retainer Cap: Extruded aluminum alloy Type 6063 T5 complies with Chapter 20, Division II, of the code and ASTM B 209.

2.2.4 Fasteners:

2.2.4.1 Screws: Electrogalvanized, No. 8, $\frac{1}{2}$ -inch-long, self-drilling, tamper-proof steel screws.

2.2.4.2 Nails: Galvanized 6d common nails.

2.2.5 Flashing: Minimum No. 26 gage corrosion-resistant metal.

2.2.6 Curbs: Wood curbs are minimum 2-inch-wide, nominal size, Group II species lumber.

2.3 Installation:

2.3.1 Curb-Mount Skylights: Curb-mount skylights are installed on roofs, including those that require no minimum slope. Wood curbs support the skylights at least 4 inches above the roof plane. The wood curb attachment to the roof structure is not recognized in this report and needs to be designed to resist the required wind-uplift and gravity loads. Step flashing extends 6 inches beyond each curb member. The flashing, which extends up the side to the top of the curb, is set in mastic at the roof sheathing, and tack nailed or set in mastic at the curb. The gap between the wood curb and vertical-mounting leg of the aluminum frame is maximum $\frac{9}{16}$ inch. A continuous $\frac{1}{2}$ -inch-diameter bead of silicone sealant provides a water-resistant seal between the frame and the flashing. The skylight is fastened to the curb with 6d common nails, which require a minimum nail penetration of $1\frac{1}{4}$ inches. See Table 4 for required number of fasteners.

2.3.2 Deck-Mount Skylights: Deck-Mount, plastic-domed skylights are self-flashing and are installed on roof decks that require no minimum slope. The skylights are attached with 6d common nails, which require a minimum nail penetration into structural members of $1\frac{1}{4}$ inches. See Table 4 for required number of fasteners.

2.4 Identification:

Each skylight unit label bears the manufacturer's name and address, evaluation report number, plastic thickness before forming, and CC2 plastic classification. Additionally, each skylight has a safety label warning of risk of fall. Glass identification complies with Section 2402 of the code.

3.0 EVIDENCE SUBMITTED

Data in accordance with the ICBO ES Acceptance Criteria for Plastic Skylights (AC16), dated April 1997; and ICBO ES Acceptance Criteria for Sloped Glass Glazing in Solariums, Patio Covers and Prefabricated Skylights (AC17), dated April 1991.

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4.0 FINDINGS

That the Solar Industries, Inc., Skyview Skylights described in this report comply with the 1997 *Uniform Building Code*TM, subject to the following conditions:

4.1 Installation complies with Sections 2409.4 and 2603.7 of the code, the manufacturer's instructions, and this report.

4.2 Allowable loads comply with Tables 1, 2 and 3, of this report.

This report is subject to re-examination in two years.

TABLE 1—ALLOWABLE LOADS FOR CURB-MOUNTED PLASTIC SKYLIGHTS¹

| ITEM NO. | MODEL NO. | CURB DIMENSIONS (in. × in.) | | NOMINAL PLASTIC THICKNESS PRIOR TO FORMING ² (in.) | DOME RISE (in.) | ALLOWABLE LOADS (psf) | |
|----------|-----------|---|---|---|--------------------------------|-----------------------|--------|
| | | Outer | Inner | | | Gravity | Uplift |
| 1 | 2028 | 18 ³ / ₈ × 26 ³ / ₈ | 14 ¹ / ₄ × 22 ¹ / ₄ | 0.093 | 5 | 20 | 20 |
| 2 | 2040 | 18 ³ / ₈ × 38 ³ / ₈ | 14 ¹ / ₄ × 34 ¹ / ₄ | 0.093 | 5 | 20 | 20 |
| 3 | 2042 | 18 ³ / ₈ × 40 ³ / ₈ | 14 ¹ / ₄ × 36 ¹ / ₄ | 0.093 | 5 | 20 | 20 |
| 4 | 2052 | 18 ³ / ₈ × 50 ³ / ₈ | 14 ¹ / ₄ × 46 ¹ / ₄ | 0.093 | 5 | 20 | 20 |
| 5 | 2076 | 18 ³ / ₈ × 74 ³ / ₈ | 14 ¹ / ₄ × 70 ¹ / ₄ | 0.118 | 5 | 20 | 20 |
| 6 | 2864 | 26 ³ / ₈ × 62 ³ / ₈ | 22 ¹ / ₄ × 58 ¹ / ₄ | 0.118 | 5 | 20 | 20 |
| 7 | 2876 | 26 ³ / ₈ × 74 ³ / ₈ | 22 ¹ / ₄ × 70 ¹ / ₄ | 0.118 | 5 | 20 | 20 |
| 8 | 2896 | 26 ³ / ₈ × 94 ³ / ₈ | 22 ¹ / ₄ × 90 ¹ / ₄ | 0.118 | 5 | 20 | 20 |
| 9 | 2840 | 26 ³ / ₈ × 38 ³ / ₈ | 22 ¹ / ₄ × 34 ¹ / ₄ | 0.118 | 5 | 35 | 35 |
| 10 | 2842 | 26 ³ / ₈ × 40 ³ / ₈ | 22 ¹ / ₄ × 36 ¹ / ₄ | 0.118 | 5 | 35 | 35 |
| 11 | 2852 | 26 ³ / ₈ × 50 ³ / ₈ | 22 ¹ / ₄ × 46 ¹ / ₄ | 0.118 | 5 | 35 | 35 |
| 12 | 3652 | 34 ³ / ₈ × 50 ³ / ₈ | 30 ¹ / ₄ × 46 ¹ / ₄ | 0.118 | 6 | 20 | 20 |
| 13 | 4052 | 38 ³ / ₈ × 50 ³ / ₈ | 34 ¹ / ₄ × 46 ¹ / ₄ | 0.118 | 7 | 20 | 20 |
| 14 | 4252 | 40 ³ / ₈ × 50 ³ / ₈ | 36 ¹ / ₄ × 46 ¹ / ₄ | 0.118 | 7 ¹ / ₄ | 20 | 20 |
| 15 | 3676 | 34 ³ / ₈ × 74 ³ / ₈ | 30 ¹ / ₄ × 70 ¹ / ₄ | 0.150 | 6 | 20 | 20 |
| 16 | 4264 | 40 ³ / ₈ × 62 ³ / ₈ | 36 ¹ / ₄ × 58 ¹ / ₄ | 0.150 | 7 ¹ / ₄ | 20 | 20 |
| 17 | 4364 | 41 ³ / ₈ × 62 ³ / ₈ | 37 ¹ / ₄ × 58 ¹ / ₄ | 0.150 | 7 ¹ / ₂ | 20 | 20 |
| 18 | 4276 | 40 ³ / ₈ × 74 ³ / ₈ | 36 ¹ / ₄ × 70 ¹ / ₄ | 0.150 | 7 ¹ / ₄ | 20 | 20 |
| 19 | 4296 | 40 ³ / ₈ × 94 ³ / ₈ | 36 ¹ / ₄ × 90 ¹ / ₄ | 0.150 | 7 ¹ / ₄ | 20 | 20 |
| 20 | 5264 | 50 ³ / ₈ × 62 ³ / ₈ | 46 ¹ / ₄ × 58 ¹ / ₄ | 0.150 | 9 ¹ / ₄ | 20 | 20 |
| 21 | 5276 | 50 ³ / ₈ × 74 ³ / ₈ | 46 ¹ / ₄ × 70 ¹ / ₄ | 0.150 | 9 ¹ / ₄ | 20 | 20 |
| 22 | 5296 | 50 ³ / ₈ × 94 ³ / ₈ | 46 ¹ / ₄ × 90 ¹ / ₄ | 0.150 | 9 ¹ / ₄ | 20 | 20 |
| 23 | 5298 | 50 ⁵ / ₈ × 96 ³ / ₈ | 46 ¹ / ₂ × 92 ¹ / ₄ | 0.150 | 9 ¹ / ₄ | 20 | 20 |
| 24 | 52100 | 50 ³ / ₈ × 98 ³ / ₈ | 46 ¹ / ₄ × 94 ¹ / ₄ | 0.150 | 9 ¹ / ₄ | 20 | 20 |
| 25 | 54102 | 52 ¹ / ₈ × 100 ¹ / ₈ | 48 × 96 | 0.150 | 9 ³ / ₄ | 20 | 20 |
| 26 | 2020 | 18 ³ / ₈ × 18 ³ / ₈ | 14 ¹ / ₄ × 14 ¹ / ₄ | 0.093 | 5 | 35 | 35 |
| 27 | 2424 | 22 ³ / ₈ × 22 ³ / ₈ | 18 ¹ / ₄ × 18 ¹ / ₄ | 0.093 | 5 | 35 | 35 |
| 28 | 2828 | 26 ³ / ₈ × 26 ³ / ₈ | 22 ¹ / ₄ × 22 ¹ / ₄ | 0.093 | 5 | 35 | 35 |
| 29 | 3636 | 34 ³ / ₈ × 34 ³ / ₈ | 30 ¹ / ₄ × 30 ¹ / ₄ | 0.118 | 6 | 30 | 30 |
| 30 | 4040 | 38 ³ / ₈ × 38 ³ / ₈ | 34 ¹ / ₄ × 34 ¹ / ₄ | 0.118 | 6 | 30 | 30 |
| 31 | 4242 | 40 ³ / ₈ × 40 ³ / ₈ | 36 ¹ / ₄ × 36 ¹ / ₄ | 0.118 | 7 ¹ / ₄ | 30 | 30 |
| 32 | 5252 | 50 ³ / ₈ × 50 ³ / ₈ | 46 ¹ / ₄ × 46 ¹ / ₄ | 0.118 | 9 ¹ / ₄ | 30 | 30 |
| 33 | 6464 | 62 ³ / ₈ × 62 ³ / ₈ | 58 ¹ / ₄ × 58 ¹ / ₄ | 0.187 | 12 | 20 | 20 |
| 34 | 7676 | 74 ³ / ₈ × 74 ³ / ₈ | 70 ¹ / ₄ × 70 ¹ / ₄ | 0.187 | 14 | 20 | 20 |
| 35 | 9696 | 94 ³ / ₈ × 94 ³ / ₈ | 90 ¹ / ₄ × 90 ¹ / ₄ | 0.250 | 18 | 20 | 20 |
| 36 | 102102 | 100 ¹ / ₈ × 100 ¹ / ₈ | 96 × 96 | 0.250 | 19 ¹ / ₂ | 20 | 20 |

¹See Figures 1 and 2 for details of curb-mount and deck-mount skylights, respectively.

²Thickness is within a tolerance of 10 percent.

TABLE 2—ALLOWABLE LOADS FOR OPERABLE PLASTIC-DOMED AND GLASS-GLAZED SKYLIGHTS¹

| ITEM NO. | MODEL NO. | CURB DIMENSIONS (in. x in.) | | NOMINAL PLASTIC THICKNESS PRIOR TO FORMING ² (in.) | PLASTIC DOME RISE (in.) | ALLOWABLE LOADS (psf) | |
|----------|-----------|---|---|---|-------------------------------|-----------------------|--------|
| | | Outer | Inner | | | Gravity | Uplift |
| 1 | 2028 | 18 ³ / ₈ × 26 ³ / ₈ | 14 ¹ / ₄ × 22 ¹ / ₄ | 0.093 | 5 | 20 | 30 |
| 2 | 2040 | 18 ³ / ₈ × 38 ³ / ₈ | 14 ¹ / ₄ × 34 ¹ / ₄ | 0.093 | 5 | 20 | 30 |
| 3 | 2042 | 18 ³ / ₈ × 40 ³ / ₈ | 14 ¹ / ₄ × 36 ¹ / ₄ | 0.093 | 5 | 20 | 30 |
| 4 | 2052 | 18 ³ / ₈ × 50 ³ / ₈ | 14 ¹ / ₄ × 46 ¹ / ₄ | 0.093 | 5 | 20 | 30 |
| 9 | 2840 | 26 ³ / ₈ × 38 ³ / ₈ | 22 ¹ / ₄ × 34 ¹ / ₄ | 0.118 | 5 | 35 | 35 |
| 10 | 2842 | 26 ³ / ₈ × 40 ³ / ₈ | 22 ¹ / ₄ × 36 ¹ / ₄ | 0.118 | 5 | 35 | 35 |
| 11 | 2852 | 26 ³ / ₈ × 50 ³ / ₈ | 22 ¹ / ₄ × 46 ¹ / ₄ | 0.118 | 5 | 35 | 35 |
| 12 | 3652 | 34 ³ / ₈ × 50 ³ / ₈ | 30 ¹ / ₄ × 46 ¹ / ₄ | 0.118 | 6 | 20 | 30 |
| 13 | 4052 | 38 ³ / ₈ × 50 ³ / ₈ | 34 ¹ / ₄ × 46 ¹ / ₄ | 0.118 | 7 | 20 | 30 |
| 14 | 4252 | 40 ³ / ₈ × 50 ³ / ₈ | 36 ¹ / ₄ × 46 ¹ / ₄ | 0.118 | 7 ¹ / ₄ | 20 | 30 |
| 26 | 2020 | 18 ³ / ₈ × 18 ³ / ₈ | 14 ¹ / ₄ × 14 ¹ / ₄ | 0.093 | 5 | 35 | 35 |
| 27 | 2424 | 22 ³ / ₈ × 22 ³ / ₈ | 18 ¹ / ₄ × 18 ¹ / ₄ | 0.093 | 5 | 35 | 35 |
| 28 | 2828 | 26 ³ / ₈ × 26 ³ / ₈ | 22 ¹ / ₄ × 22 ¹ / ₄ | 0.093 | 5 | 35 | 35 |
| 29 | 3636 | 34 ³ / ₈ × 34 ³ / ₈ | 30 ¹ / ₄ × 30 ¹ / ₄ | 0.118 | 6 | 30 | 30 |
| 30 | 4040 | 38 ³ / ₈ × 38 ³ / ₈ | 34 ¹ / ₄ × 34 ¹ / ₄ | 0.118 | 6 | 30 | 30 |
| 31 | 4242 | 40 ³ / ₈ × 40 ³ / ₈ | 36 ¹ / ₄ × 36 ¹ / ₄ | 0.118 | 7 ¹ / ₄ | 30 | 30 |
| 32 | 5252 | 50 ³ / ₈ × 50 ³ / ₈ | 46 ¹ / ₄ × 46 ¹ / ₄ | 0.118 | 9 ¹ / ₄ | 30 | 30 |

¹Glass-glazed skylights are curb mounted, and the insulated glass thickness is 1 inch. The insulated glass consists of a tempered top pane and a laminated bottom pane. See Section 2.2 of this report for details.

²Thickness is within a tolerance of 10 percent.

TABLE 3—ALLOWABLE LOADS FOR CURB-MOUNT GLASS-GLAZED SKYLIGHTS^{1,2}

| ITEM NO. | MODEL NO. | CURB DIMENSIONS (in. x in.) | | ALLOWABLE LOADS (psf) | |
|----------|-----------|---|---|-----------------------|--------|
| | | Outer | Inner | Gravity | Uplift |
| 1 | 2028 | 18 ³ / ₈ × 26 ³ / ₈ | 14 ¹ / ₄ × 22 ¹ / ₄ | 40 | 40 |
| 2 | 2040 | 18 ³ / ₈ × 38 ³ / ₈ | 14 ¹ / ₄ × 34 ¹ / ₄ | 40 | 40 |
| 3 | 2042 | 18 ³ / ₈ × 40 ³ / ₈ | 14 ¹ / ₄ × 36 ¹ / ₄ | 40 | 40 |
| 4 | 2052 | 18 ³ / ₈ × 50 ³ / ₈ | 14 ¹ / ₄ × 46 ¹ / ₄ | 40 | 40 |
| 5 | 2076 | 18 ³ / ₈ × 74 ³ / ₈ | 14 ¹ / ₄ × 70 ¹ / ₄ | 40 | 40 |
| 6 | 2864 | 26 ³ / ₈ × 62 ³ / ₈ | 22 ¹ / ₄ × 58 ¹ / ₄ | 40 | 40 |
| 7 | 2876 | 26 ³ / ₈ × 74 ³ / ₈ | 22 ¹ / ₄ × 70 ¹ / ₄ | 40 | 40 |
| 8 | 2896 | 26 ³ / ₈ × 94 ³ / ₈ | 22 ¹ / ₄ × 90 ¹ / ₄ | 40 | 40 |
| 9 | 2840 | 26 ³ / ₈ × 38 ³ / ₈ | 22 ¹ / ₄ × 34 ¹ / ₄ | 40 | 40 |
| 10 | 2842 | 26 ³ / ₈ × 40 ³ / ₈ | 22 ¹ / ₄ × 36 ¹ / ₄ | 40 | 40 |
| 11 | 2852 | 26 ³ / ₈ × 50 ³ / ₈ | 22 ¹ / ₄ × 46 ¹ / ₄ | 40 | 40 |
| 12 | 3652 | 34 ³ / ₈ × 50 ³ / ₈ | 30 ¹ / ₄ × 46 ¹ / ₄ | 40 | 40 |
| 13 | 4052 | 38 ³ / ₈ × 50 ³ / ₈ | 34 ¹ / ₄ × 46 ¹ / ₄ | 40 | 40 |
| 14 | 4252 | 40 ³ / ₈ × 50 ³ / ₈ | 36 ¹ / ₄ × 46 ¹ / ₄ | 40 | 40 |
| 26 | 2020 | 18 ³ / ₈ × 18 ³ / ₈ | 14 ¹ / ₄ × 14 ¹ / ₄ | 40 | 40 |
| 27 | 2424 | 22 ³ / ₈ × 22 ³ / ₈ | 18 ¹ / ₄ × 18 ¹ / ₄ | 40 | 40 |
| 28 | 2828 | 26 ³ / ₈ × 26 ³ / ₈ | 22 ¹ / ₄ × 22 ¹ / ₄ | 40 | 40 |
| 29 | 3636 | 34 ³ / ₈ × 34 ³ / ₈ | 30 ¹ / ₄ × 30 ¹ / ₄ | 40 | 40 |
| 30 | 4040 | 38 ³ / ₈ × 38 ³ / ₈ | 34 ¹ / ₄ × 34 ¹ / ₄ | 40 | 40 |
| 31 | 4242 | 40 ³ / ₈ × 40 ³ / ₈ | 36 ¹ / ₄ × 36 ¹ / ₄ | 40 | 40 |
| 32 | 5252 | 50 ³ / ₈ × 50 ³ / ₈ | 46 ¹ / ₄ × 46 ¹ / ₄ | 40 | 40 |

¹Insulating glass thickness is 1 inch and complies with Section 2.2 of this report.

²See Figure 3 for skylight details.

TABLE 4—FASTENER REQUIREMENTS FOR PLASTIC-DOME AND GLASS-GLAZED SKYVIEW SKYLIGHTS

| ITEM NO. | MODEL NO. | NUMBER OF RETAINER FASTENERS ¹ | NUMBER OF FRAME-TO-CURB FASTENERS ² | NUMBER OF FRAME-TO-ROOF STRUCTURE FASTENERS ³ |
|----------|-----------|---|--|--|
| 1 | 2028 | 6 | 6 | 12 |
| 2 | 2040 | 6 | 6 | 14 |
| 3 | 2042 | 6 | 6 | 14 |
| 4 | 2052 | 8 | 8 | 18 |
| 5 | 2076 | 12 | 12 | 22 |
| 6 | 2864 | 12 | 12 | 22 |
| 7 | 2876 | 10 | 10 | 26 |
| 8 | 2896 | 18 | 16 | 30 |
| 9 | 2840 | 8 | 8 | 18 |
| 10 | 2842 | 8 | 8 | 18 |
| 11 | 2852 | 10 | 10 | 20 |
| 12 | 3652 | 10 | 10 | 22 |
| 13 | 4052 | 10 | 10 | 22 |
| 14 | 4252 | 10 | 10 | 22 |
| 15 | 3676 | 14 | 14 | 28 |
| 16 | 4264 | 12 | 12 | 24 |
| 17 | 4364 | 12 | 12 | 26 |
| 18 | 4276 | 14 | 14 | 28 |
| 19 | 4296 | 18 | 16 | 34 |
| 20 | 5264 | 14 | 14 | 28 |
| 21 | 5276 | 16 | 16 | 32 |
| 22 | 5296 | 20 | 18 | 36 |
| 23 | 5298 | 20 | 18 | 36 |
| 24 | 52100 | 20 | 18 | 38 |
| 25 | 54102 | 20 | 18 | 38 |
| 26 | 2020 | 4 | 4 | 10 |
| 27 | 2424 | 4 | 4 | 12 |
| 28 | 2828 | 8 | 8 | 14 |
| 29 | 3636 | 8 | 8 | 18 |
| 30 | 4040 | 8 | 8 | 20 |
| 31 | 4242 | 8 | 8 | 20 |
| 32 | 5252 | 12 | 12 | 26 |
| 33 | 6464 | 16 | 16 | 32 |
| 34 | 7676 | 20 | 20 | 38 |
| 35 | 9696 | 28 | 24 | 48 |
| 36 | 102102 | 28 | 24 | 50 |

¹Retainer fasteners attach the retainer cap to the skylight frame.

²Frame-to-curb fasteners attach curb-mount skylight to Douglas fir wood curb, other species of lumber will require additional nails.

³Frame-to-roof structure fasteners attach deck-mounted skylight to the roof structure.

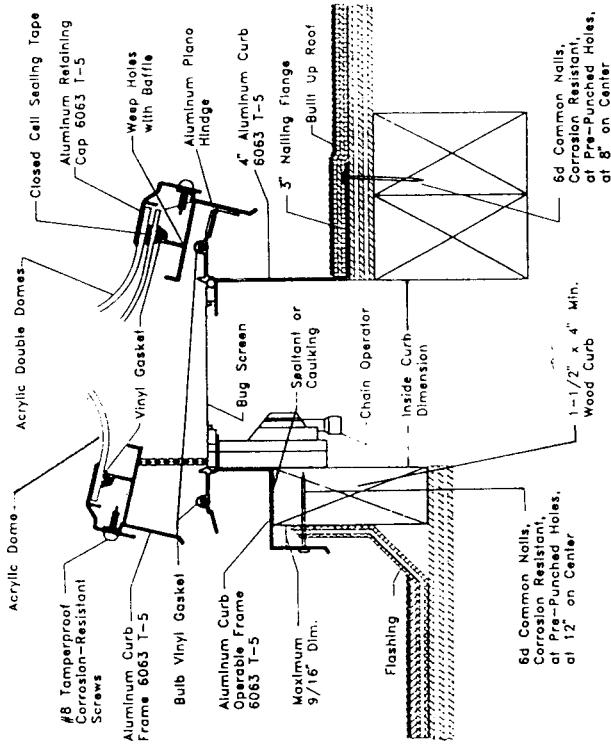


FIGURE 1—PLASTIC-DOME SKYLIGHTS

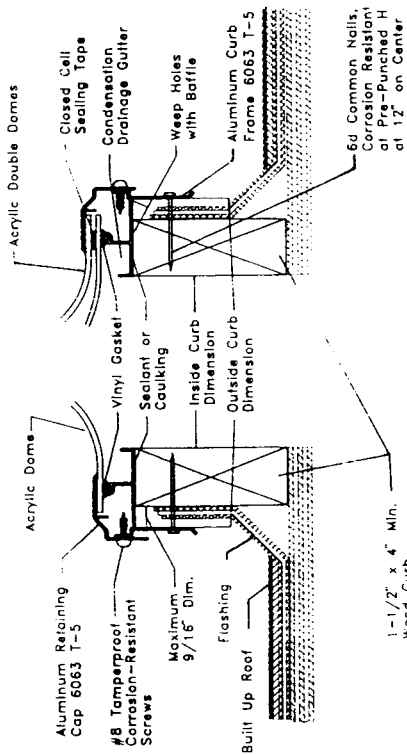


FIGURE 2—PLASTIC-DOME SKYLIGHTS

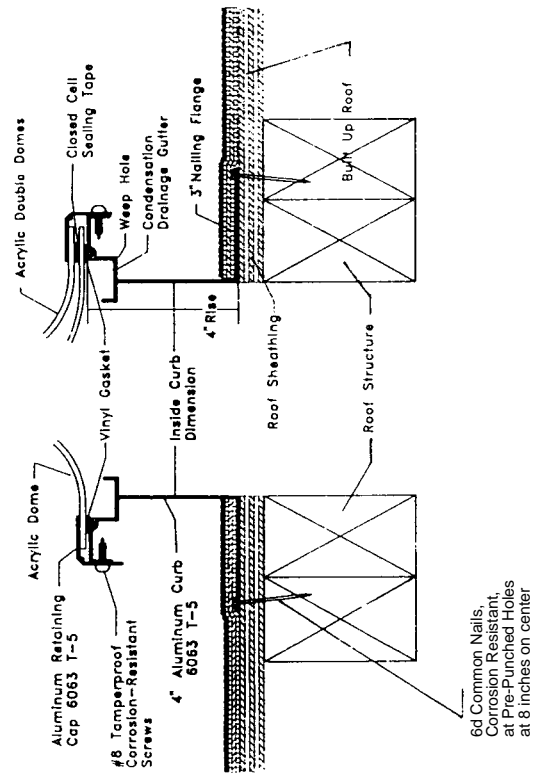


FIGURE 3—PLASTIC-DOME SKYLIGHTS

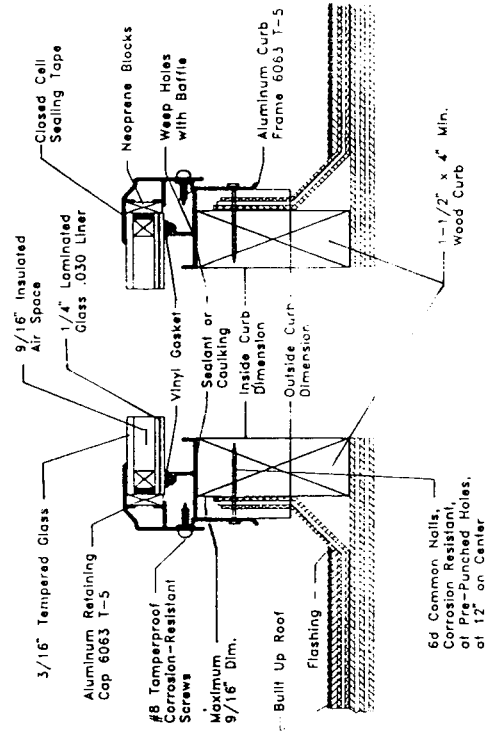


FIGURE 4—GLASS-GLAZING SKYLIGHTS