

# bulletin

## technical



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### SIPLAST LIGHTWEIGHT INSULATING CONCRETE BULLETIN #10

#### VENTING SIPLAST ROOF MEMBRANE AND ROOF INSULATION SYSTEMS

Updated June 14, 2007 – T-992

Siplast Lightweight Insulating Concrete Systems require venting of new pours to ensure the release of any vapor pressure build-up. When Siplast roof membrane systems are used with Siplast lightweight insulating concrete systems, the following venting conditions are required.

#### Metal Deck Constructions - Venting Substrates

- ZIC and Zonocel systems require bottom slotted metal decks for downward venting. The amount of bottom venting is 0.75% of the total metal deck surface area.
- Insulcel specifications are preferably installed over bottom slotted metal decks for downward venting. The amount of bottom venting for Insulcel systems is 0.50% of the total metal deck surface area.
- Perimeter and curb venting are required as part of the standard specification.
- Topside vents are required for installations where perimeter venting cannot be utilized.

#### NVS and Insulcel Systems - Non-Venting Substrates

- The NVS System, by design, is poured over non-venting substrates such as structural concrete, existing roof membranes that are approved for re-cover applications, and other structural units that are approved in advance by Siplast. Where these systems are used, perimeter, curb, and topside venting are required.
- In situations where Insulcel systems are poured over non-venting substrates, perimeter, curb, and topside venting are required.
- Topside venting can be eliminated if the roof has a maximum distance of 60 feet between venting perimeters.

#### Insulcel RT Systems – Venting and Non-Venting Substrates

- The Insulcel RT System is poured over venting substrates such as slotted metal decks or non-venting substrates such as structural concrete, non-slotted metal decks, existing roof membranes that are approved for re-cover applications, and other structural units that are approved in advance by Siplast.

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- In all situations Insulcel RT systems require the use of topside venting.
- The installation of the topside vents must be completed daily, immediately following application of the 20 TS ply sheet.

### Perimeter Venting

Perimeter venting can be accomplished following a Siplast detail that allows for vapor pressure relief or is designed for venting purposes. The following Siplast standard details, when configured according to Siplast requirements, utilize perimeter venting: (ZB for venting substrates; NB for non-venting substrates)

1. *Venting Masonry Parapet No. 2031ZBW6, 2031NBW6*
2. *Plywood Veneered Parapet No. 2031ZBW5, 2031NBW5*
3. *Parapet Non-Wall Supported Deck No. 2031ZBW2, 2031NBW2*
4. *Roof Edge No. 2031ZBE1, 2031NBE1*
5. *Paraguard Roof Perimeter Edge No. 2031ZBE3, 2031NBE3*
6. *Expansion Joint No. 2031ZBC3, 2031NBC3*

### Topside Venting

Topside vents should be designed for "one-way" venting, and fabricated from spun aluminum having a minimum 4-inch flange. Plastic vents are not acceptable. Configuring the vent with the Siplast membrane system should follow *Siplast Roof Vent (venting substrates) detail Ref.#:2030zbP4* for venting through the roof membrane over slotted metal decks, and *Siplast Roof Vent (non-venting substrates) detail Ref.#:2030nbP4* for venting through the roof membrane and Siplast Lightweight Insulating Concrete System over substrates that do not provide underside venting beneath the system.

Topside vents should be installed on minimum 30-foot centers. Refer to Siplast schematic *Roof Vent Placement SRIS V1* for recommended placement.

The following Siplast penetration details, by their design, allow for vapor pressure relief when configured according to Siplast requirements. (2B for venting substrates; NB for non-venting substrates)

1. *Waste Stack No. 2031ZBP1, 2031NBP1*
2. *Equipment Frame No. 2031ZBP2, 2031NBP2*
3. *Curb No. 2031ZBC1, 2031NBC1*
4. *HVAC Curb No. 2031ZBC2, 2031NBC2*

Specific venting capabilities of the roof perimeter and existing penetrations can be reviewed by Siplast on a job-to-job basis in order to minimize the number of topside vents required. Contact your local Siplast representative or the Siplast Technical Department at (800) 922-8800 for assistance.

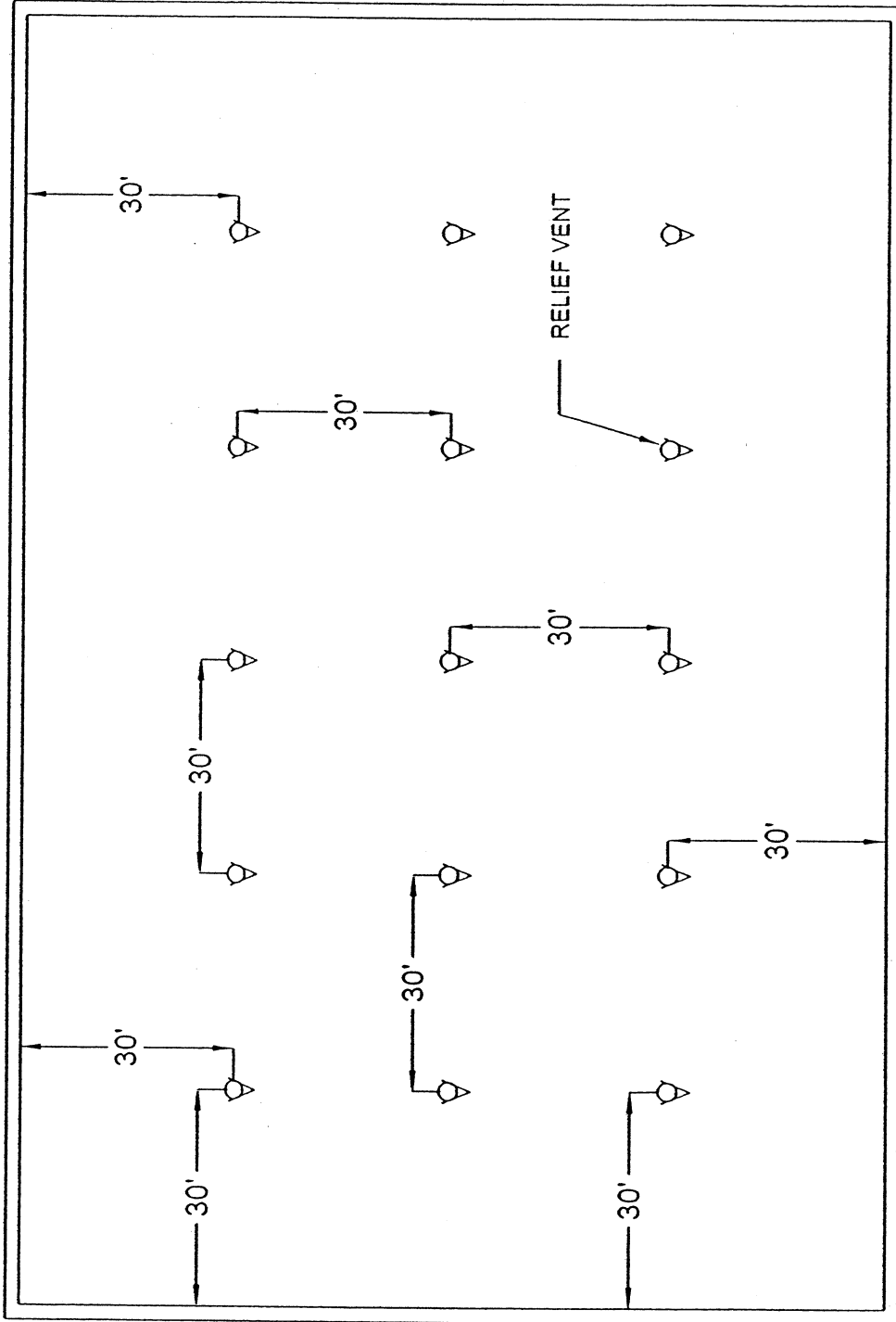
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Distribution: C, D, E, F, K

Issued: 7/29/99

Revised: 6/14/07

# ROOF PLACEMENT (Vented Perimeter)



1. The vent schematic above indicates the proper placement of topside vents from the roof perimeter and in the field based on a simple roof plan. Actual placement may vary based on roof shape, dimensions and venting penetrations.
2. Topside vents should be of spun aluminum construction, having a minimum 3 inch flange, and designed for "one-way" venting. Plastic vents are not acceptable.
3. Configuring the vent with the Siplast membrane system should follow Siplast detail No. 2030LBP4.

N.T.S.

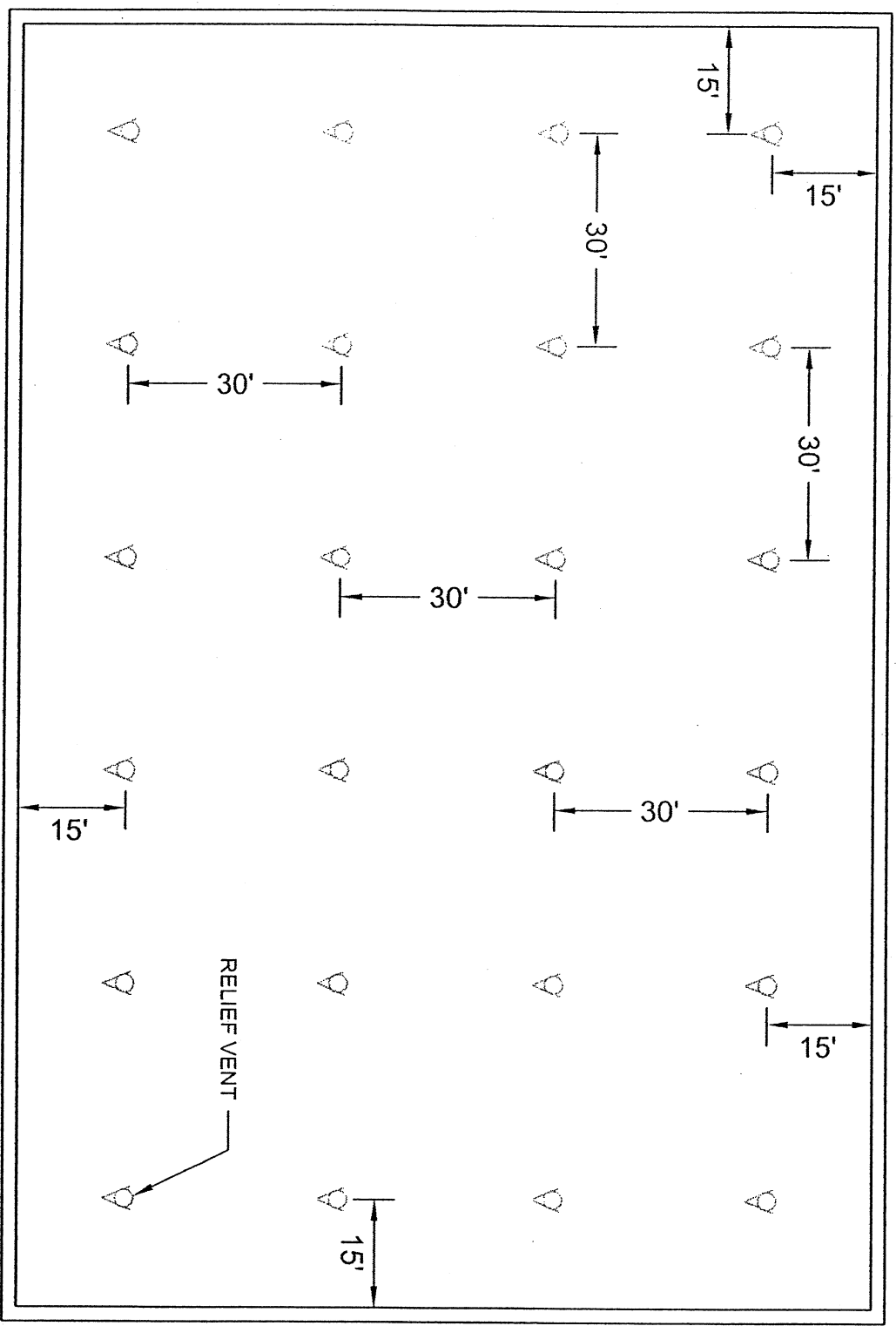


Siplast - 1000 East Rochelle Boulevard - Irving, Texas - 75062-3940  
 (800) 922-8800 FAX: (469) 995-2206 www.siplast.com

Ref. #: sris v1

Date: 03/17/05

# ROOF VENT PLACEMENT (Non-Vented Perimeter)



- NOTES: 1. THE VENT SCHEMATIC ABOVE INDICATES THE PROPER PLACEMENT OF TOP-SIDE VENTS FROM THE ROOF PERIMETER AND IN THE FIELD BASED ON A SIMPLE ROOF PLAN. ACTUAL PLACEMENT MAY VARY BASED ON ROOF SHAPE, DIMENSIONS, AND VENTING PENETRATIONS.  
 2. TOP-SIDE VENTS SHOULD BE OF SPUN ALUMINUM CONSTRUCTION, HAVING A MINIMUM 3 INCH FLANGE, AND DESIGNATED FOR "ONE WAY" VENTING. PLASTIC VENTS ARE NOT ACCEPTABLE.  
 3. CONFIGURING THE VENT WITH THE SIPLAST MEMBRANE SYSTEM SHOULD FOLLOW SIPLAST DETAIL 2030LBP4.

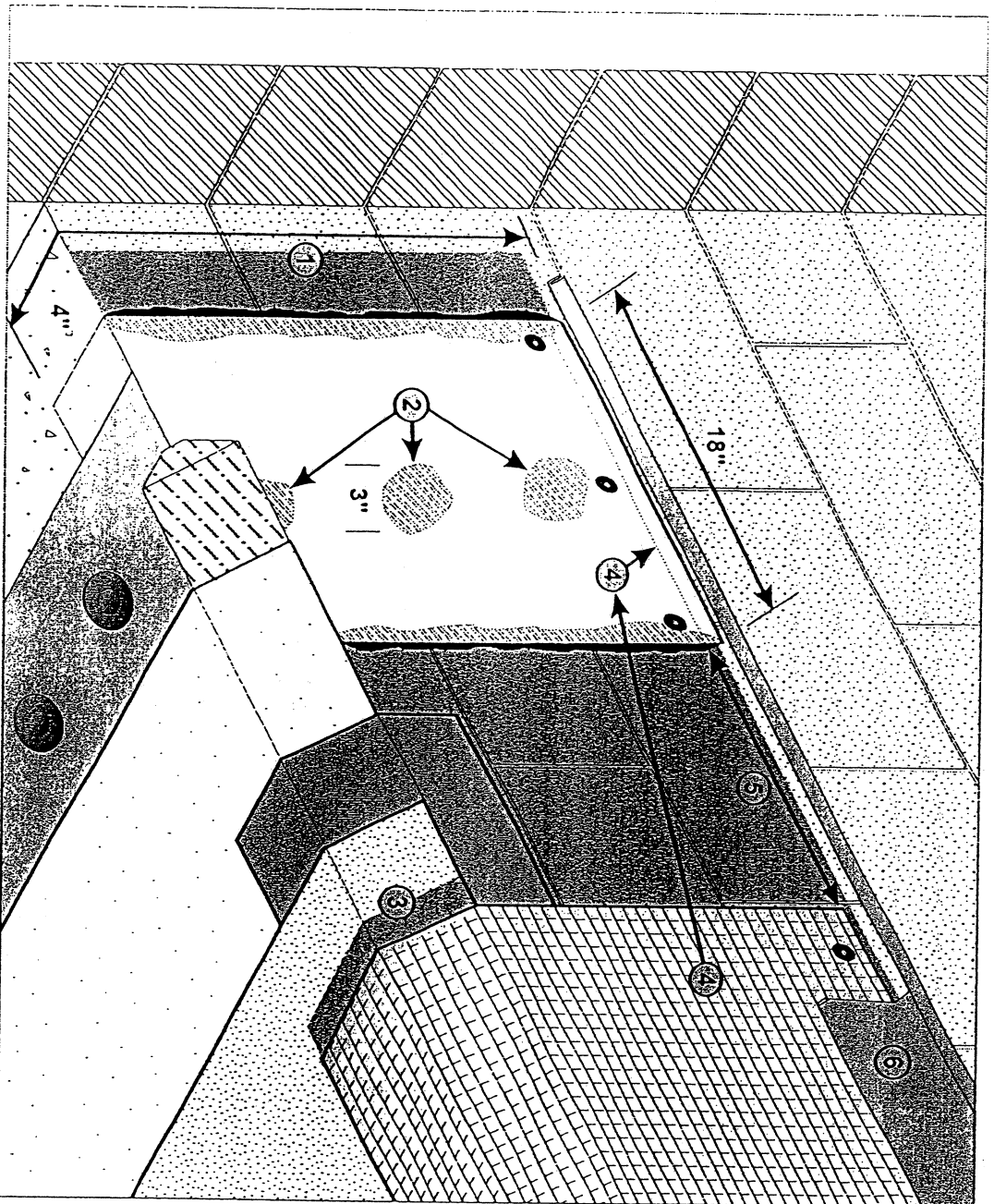
N.T.S.



Siplast - Suite 1600 - 222 West Las Colinas Blvd. - Irving, Texas - 75039-5487  
 (800) 922-8800 FAX: (972) 506-6206

Ref. #: vents n-v-p  
 Date: 12/9/98

# VENTING MASONRY PARAPET (w/ counterflashing)



## INSTALLATION STEPS

1. Cut an 18 inch wide vent strip of the specified Siplast finish ply material, i.e. Paradiene 30, Veral, Parator 50 LT, Paradiene 40, etc. The length should allow the strip to extend from the highest point under the counterflashing to 4 inches onto the finished surface of the lightweight insulating concrete.
2. Install the vent strip with the finish side against the wall surface in PA-828 Flashing Cement or PA-1021 Plastic Cement. The cement should be distributed in a thin 3 inch wide bead along the vertical edges, and in 3 inch dollops in the center of the sheet. Carefully make a temporary seal to the top with a narrow bead of cement (the sealed portion will be removed later). Nail the top edge of the vent strip on 9 inch centers.
3. Install Parabase, cant, and Paradiene 20/30 following Siplast standard detail requirements.
4. Immediately prior to installing the Veral flashing, cut the top edge seal of the vent strip and remove all sealed material.
5. Install the Veral flashing to the top edge (only) of the vent strip. Allow the vent strip to be open along the top edge - do not seal.
6. Install counterflashing as specified. Allow for the Veral to be covered a minimum of 3 inches.

NOTE: Vent strips are installed on 30 foot centers.

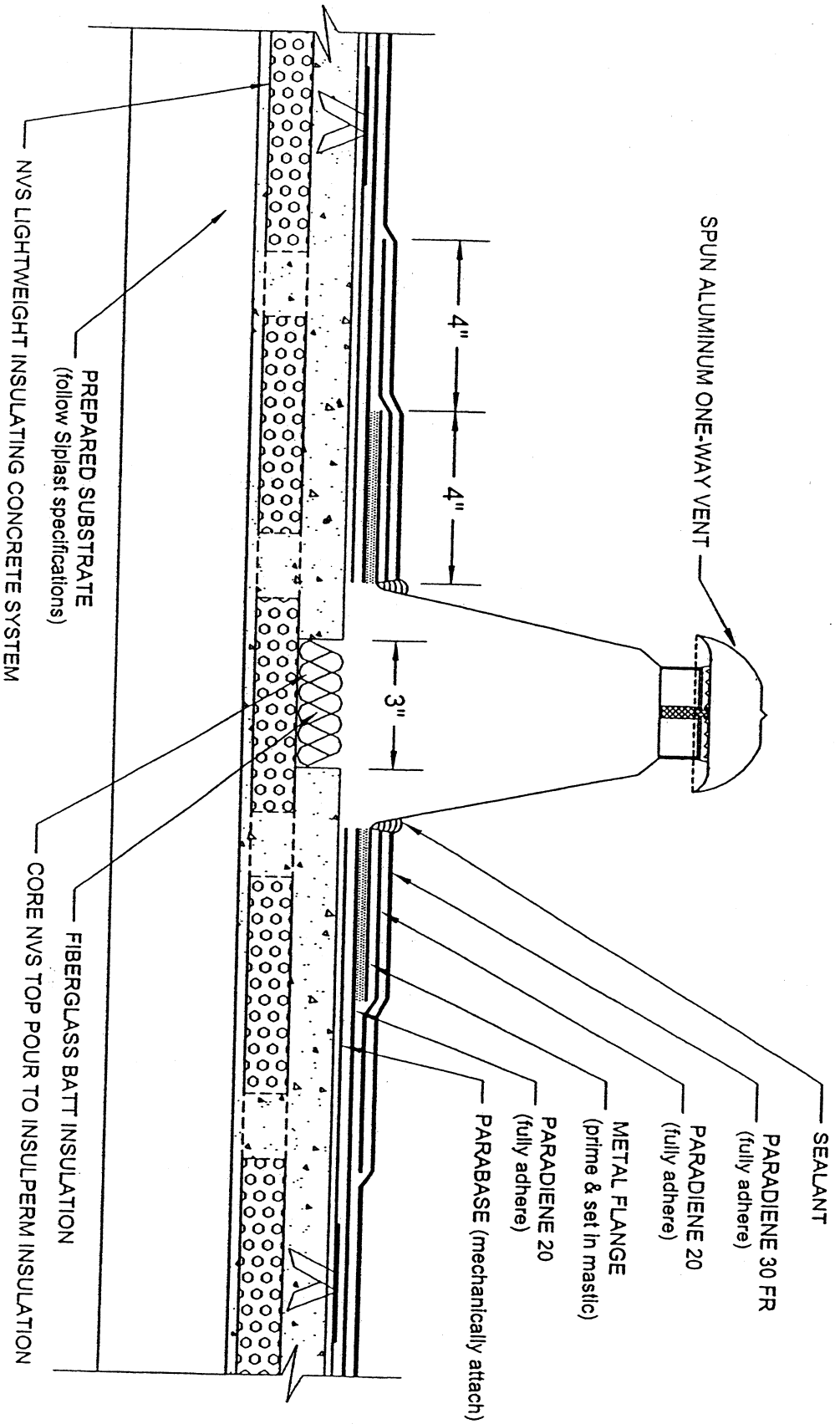
Requirements and recommendations detailed in Siplast specifications shall apply in addition to the above drawing.



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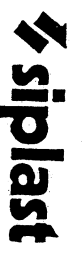
REF. #: 2031BPW6  
DATE: 2/15/2001

# ROOF VENT



- NOTES:
1. ONE WAY VENTS SHOULD BE PREFABRICATED FROM SPUN ALUMINUM. PLASTIC VENTS ARE NOT ACCEPTABLE.
  2. VENTS SHOULD BE INSTALLED IN ACCORDANCE WITH SIPLAST TECHNICAL BULLETIN T-992.
  3. PA-1021 PLASTIC CEMENT AND PA-1125 PRIMER ARE REQUIRED WHERE MASTIC AND PRIMER ARE INDICATED.
  4. SHEATHING PAPER IS REQUIRED BENEATH THE PARABASE BASE SHEET FOR ROOF SYSTEMS APPLIED IN PA-311 ADHESIVE.
  5. REQUIREMENTS AND RECOMMENDATIONS DETAILED IN SIPLAST MEMBRANE & SRS SPECIFICATIONS SHALL APPLY IN ADDITION TO THE ABOVE DRAWING.

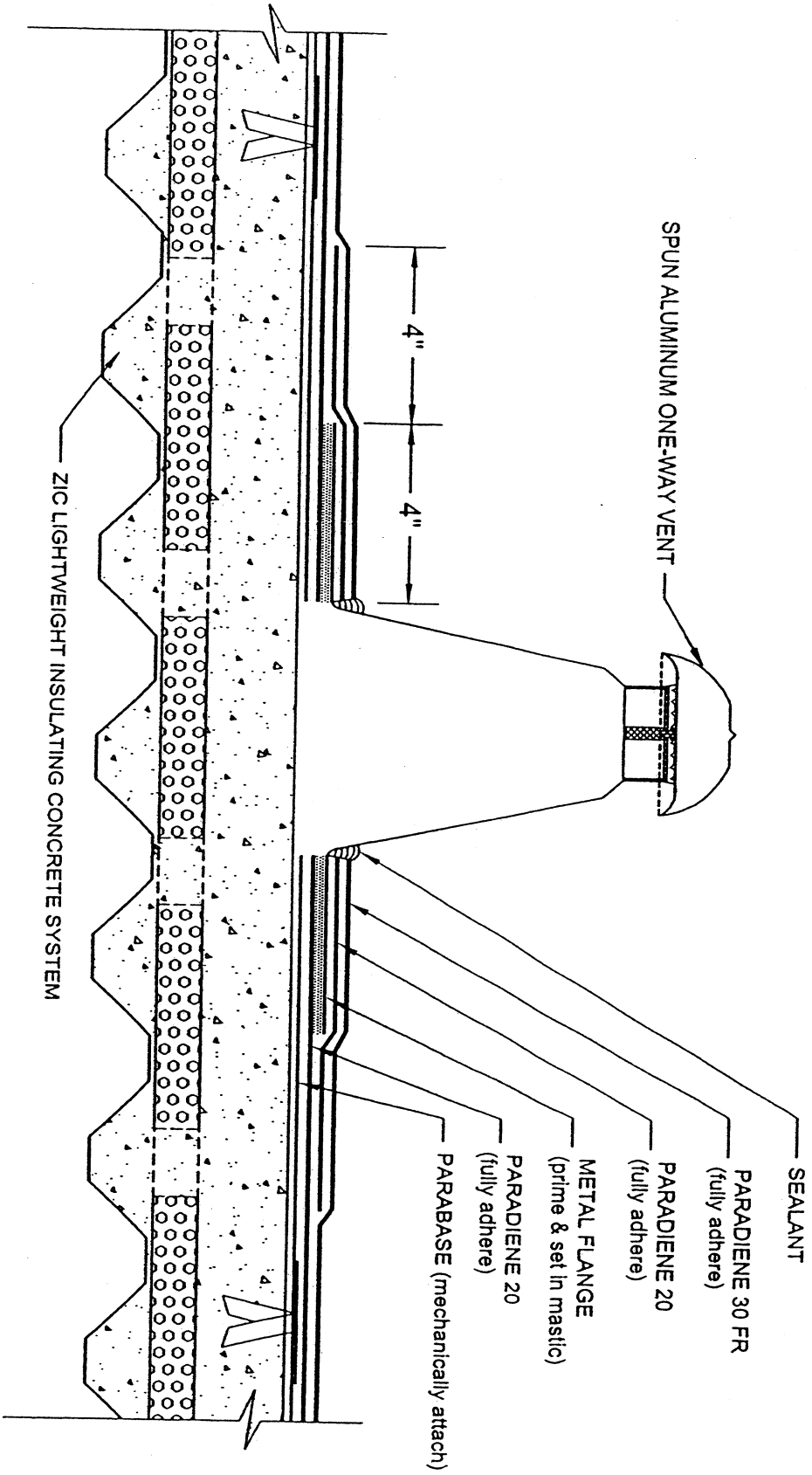
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Ref. #: 2031nbP4  
 Date: 8/15/2000

# ROOF VENT



- NOTES:
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  2. VENTS SHOULD BE INSTALLED IN ACCORDANCE WITH SIPLAST TECHNICAL BULLETIN T-992.
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