



# NAILABLE INSULATION GUIDE

Using ACFoam® Nail Base or ACFoam® CrossVent®  
For an Efficient and Fully Functional Nailable Roof System

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# ACFoam<sup>®</sup> Nail Base

## Nailable Roof Insulation

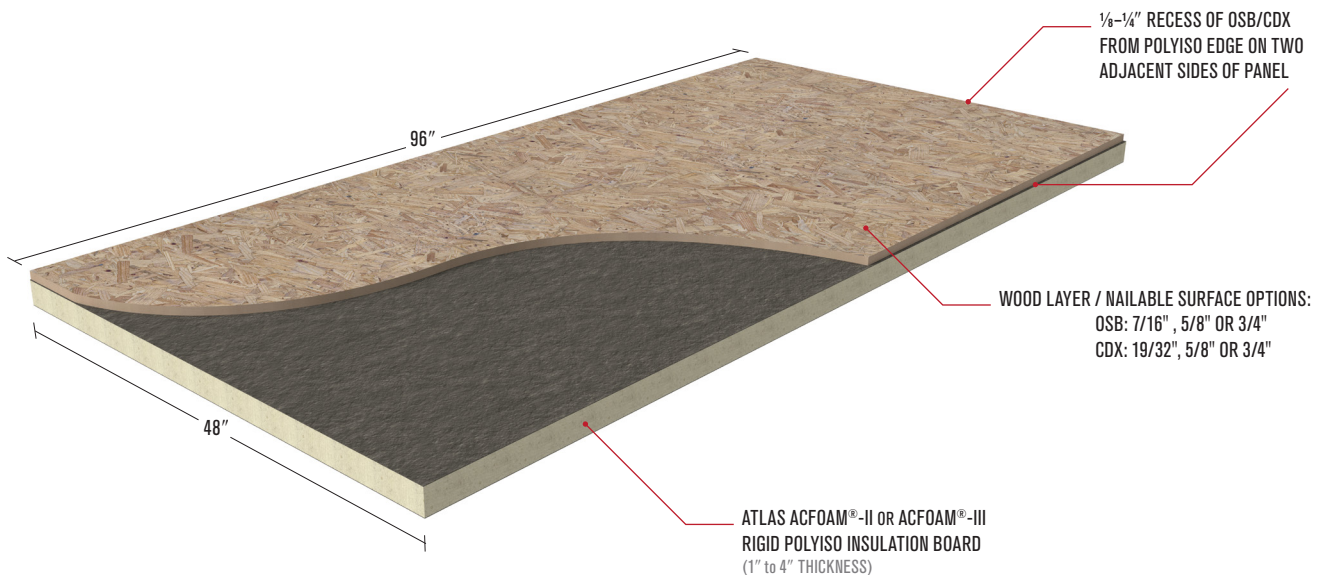
- ACFoam Nail Base is a 4' x 8' non-structural panel comprised of thermally efficient closed-cell ACFoam<sup>®</sup>-II or ACFoam<sup>®</sup>-III polyisocyanurate (polyiso) insulation board bonded to min. 7/16" APA/TECO rated OSB or min. 19/32" CDX plywood.
- Wood Layer / Nailable Surface Options:  
OSB: 7/16", 5/8", or 3/4"  
CDX: 19/32", 5/8" or 3/4"
- Available as a special order product with FSC<sup>®</sup> Certified OSB or CDX plywood.
- Typical roof systems include asphalt shingles (confirm applicability with shingle manufacturer), standing seam metal, architectural metal roofing, tile and slate. For standing seam metal roofing, or heavy roof coverings such as tile, slate, etc., thicker OSB/CDX such as 3/4" may be required. Consult roof cover manufacturer or design professional.
- Manufactured in accordance with ASTM C1289, Type V Specifications.
- Made to order in nominal thickness of 1.5" to 4.75", providing long-term thermal resistance (LTTR) values from 6.3 to 24.2.
- Polyiso Layer: 1.0" (25.4mm) minimum up to 4.0" (101.6mm) maximum.
- Manufactured using CFC-, HCFC- and HFC-free foam blowing technology with zero ozone depletion potential (ODP) and virtually no (negligible) global warming potential (GWP).
- Approved for use as a non-structural panel in new and re-roofing applications.
- Approved only when mechanically attached to an approved structural deck as per Atlas Fastening Requirements. Not approved to adhere ACFoam Nail Base to structural decks, base layers of insulation, existing roof systems, or air/thermal barriers.
- See ACFoam Nail Base Technical Data Sheet for additional information.
- Atlas recommends the design professional for the project determines suitability for type (OSB or CDX) and thickness of the nailable surface of the Nail Base panel.
- Prior to installation, Atlas Roofing Corporation recommends, as applicable, you consult with your local building code official(s), contract documents, design professional, and all other relevant parties to ensure compliance.
- For additional information, please see the ACFoam Nail Base Technical Data Sheet.

**NB-1.0**

ISOMETRIC VIEW– STANDARD BOARD DIMENSIONS

SCALE: NTS

For Illustration Purposes Only



### Multi-Layer, Offset and Staggered Board Joints

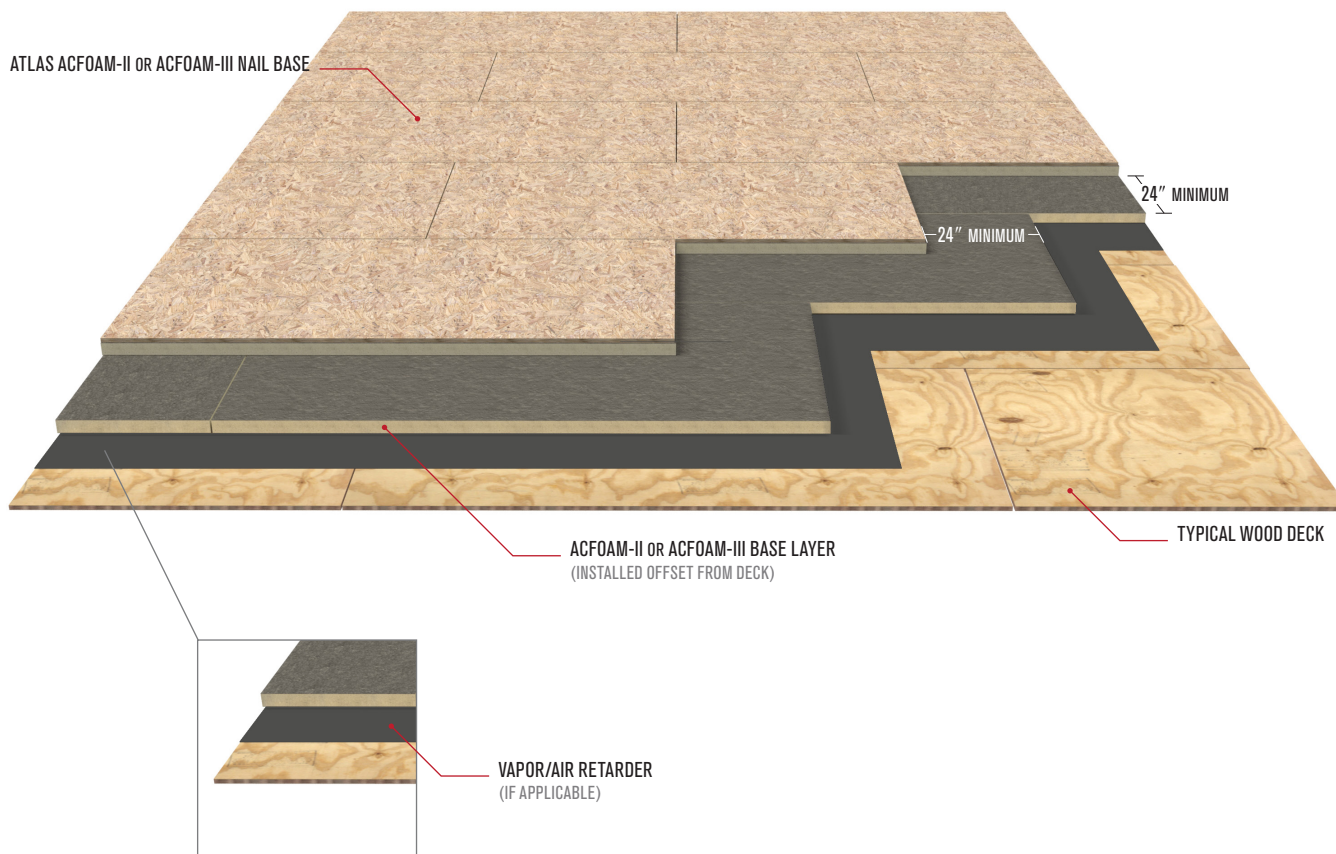
- To minimize the effect of thermal bridging, and the impact of moisture/airflow into the roof system, Atlas strongly recommends the ACFoam Nail Base roof assembly be installed in multiple layers using a base layer(s) of ACFoam roof insulation below the ACFoam Nail Base composite panel and through-fastened with Atlas Nailable Insulation Fasteners.
- When installing a multi-layer insulation assembly, Atlas recommends a minimum 24" offset and stagger of the insulation joints between layers.
- Atlas recommends that the designer carefully consider the need for a vapor/air retarder in order to limit moisture/airflow into the roof system. Determining the need for and location of the vapor/air retarder remains solely the responsibility of the architect, engineer, or design professional. Follow vapor/air retarder manufacturer's installation instructions for seaming and perimeter edge/penetration terminations.

#### NB-1.1

#### MULTI-LAYER APPLICATION

SCALE: NTS

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## Board Orientation

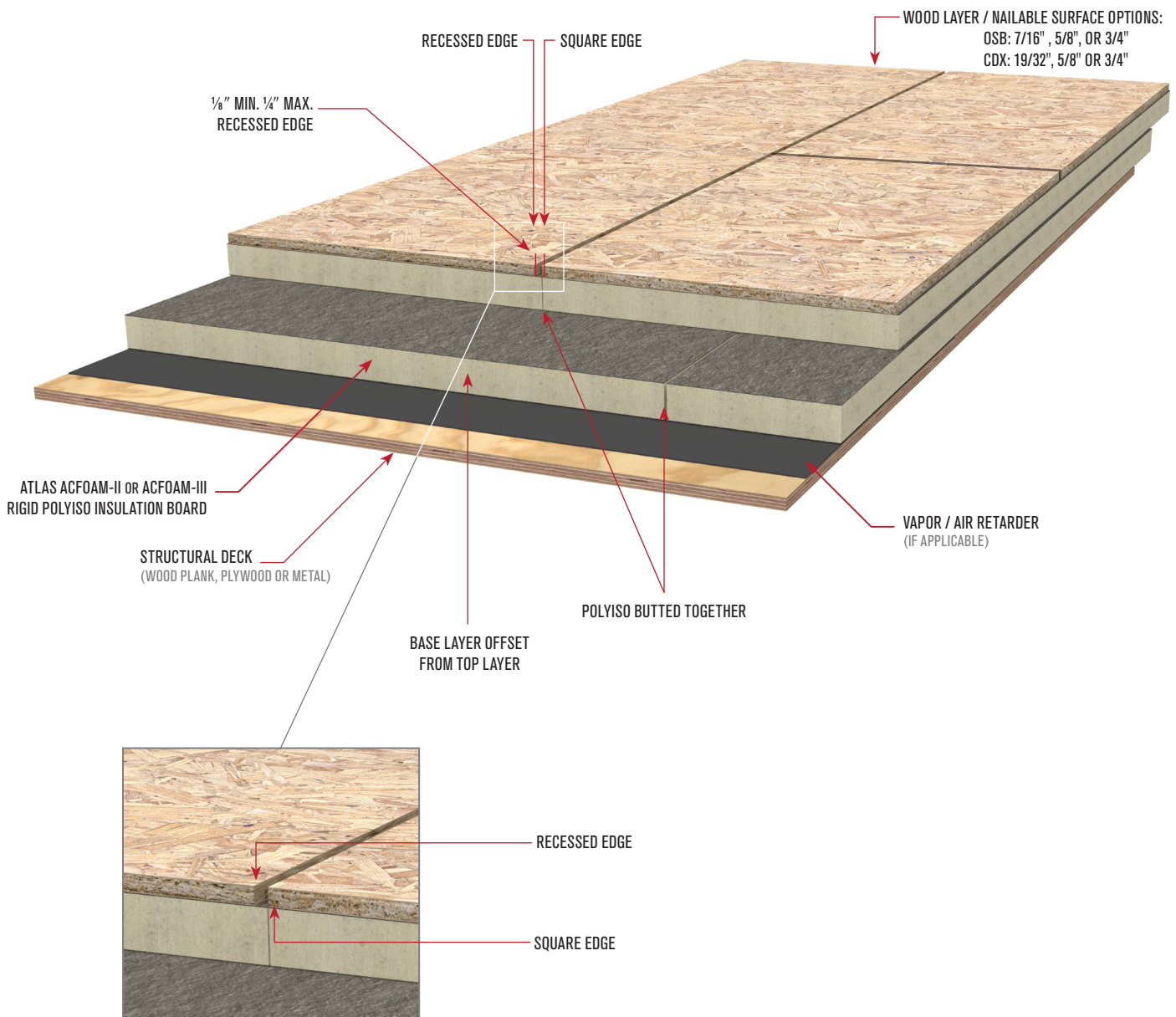
- ACFoam® Nail Base shall be installed over an approved structural roof deck. Refer to page 17 for list of approved decks types.
- Always orientate ACFoam Nail Base panels with the 1/8" minimum recess edges against a square edge of an adjacent panel. This will yield a consistent nominal 1/8" gap in the OSB/CDX around all perimeter edges of the panel.

## NB-1.2

## RECESSED EDGE DETAIL

SCALE: NTS

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### Fastening Requirements

- Fastening requirements are only valid for Atlas Nailable Insulation Fasteners.
- See page 17 for approved deck types, required number of Atlas Nailable Insulation Fasteners per panel and fastener penetration requirements.
- For fastening patterns, see pages 20-22.

**Prior to installation**, Atlas Roofing Corporation recommends, as applicable, you consult with your local building code official(s), contract documents, design professional, and all other relevant parties to ensure compliance.

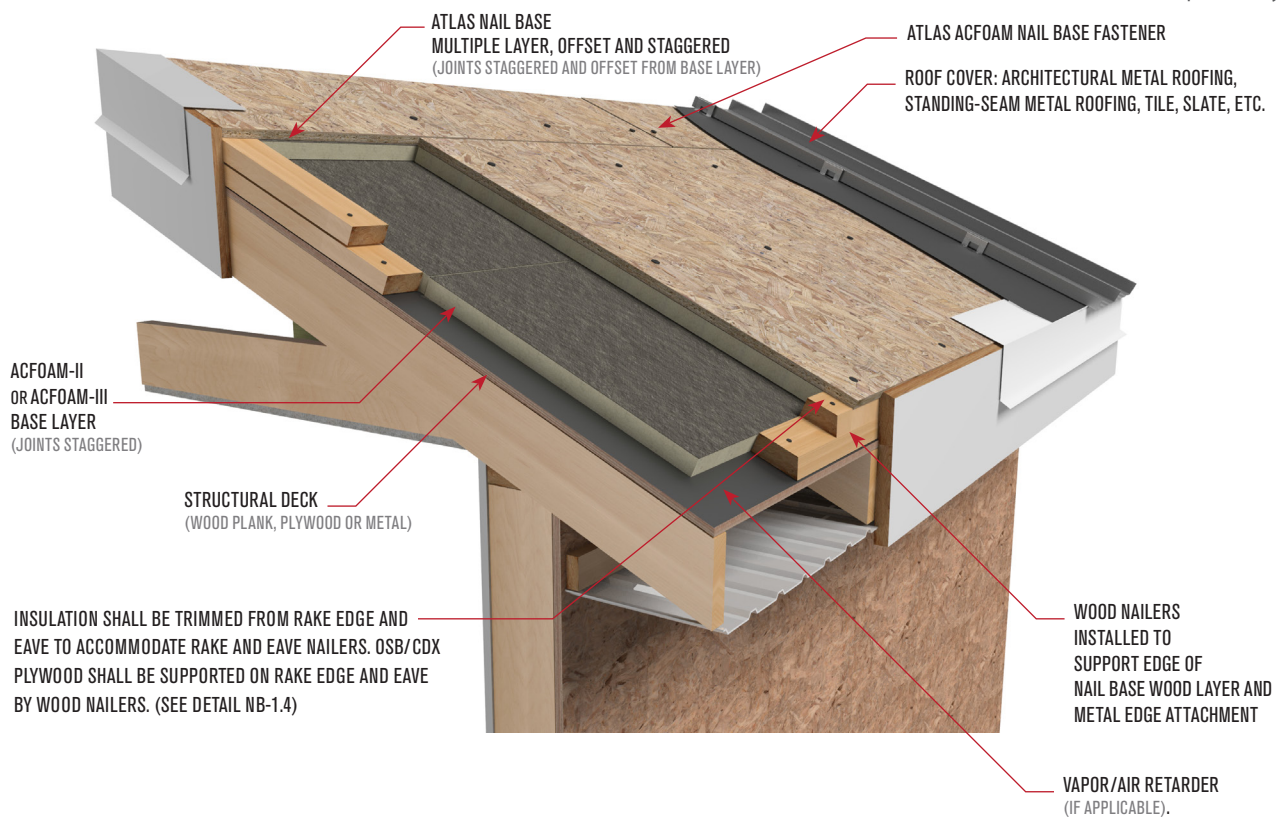
### Typical Eave Nailer and Rake Edge

NB-1.3

TYPICAL EAVE AND RAKE DETAIL

SCALE: NTS

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### Rake Edge and Eave Nailer

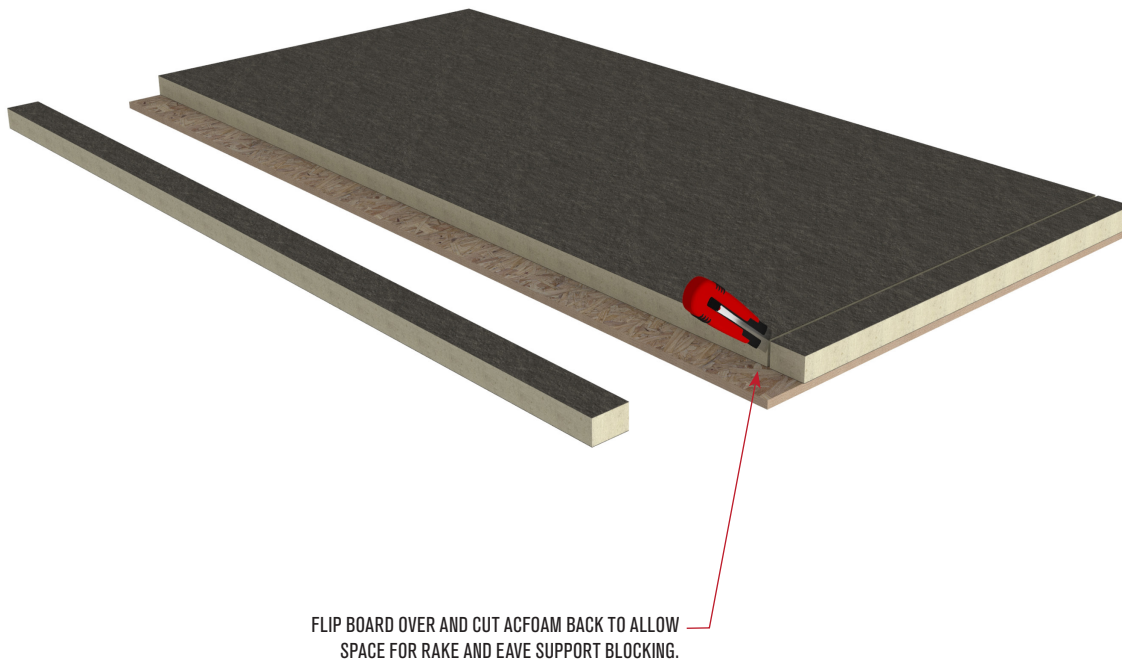
**NB-1.4**

RAKE EDGE & EAVE NAILER INSTALLATION

SCALE: NTS

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Insulation shall be trimmed from rake edge and eave to accommodate rake and eave nailers. OSB/CDX PLYWOOD shall be supported on rake edge and eave by wood nailers.



### Storage and Handling

- ACFoam® Nail Base shall be kept dry before, during and after installation. Refer to product packaging, Atlas Technical Bulletin #12 and PIMA Technical Bulletin #109 for storage and handling recommendations. Refer to Page 21 for additional information.



# ACFoam® CrossVent®

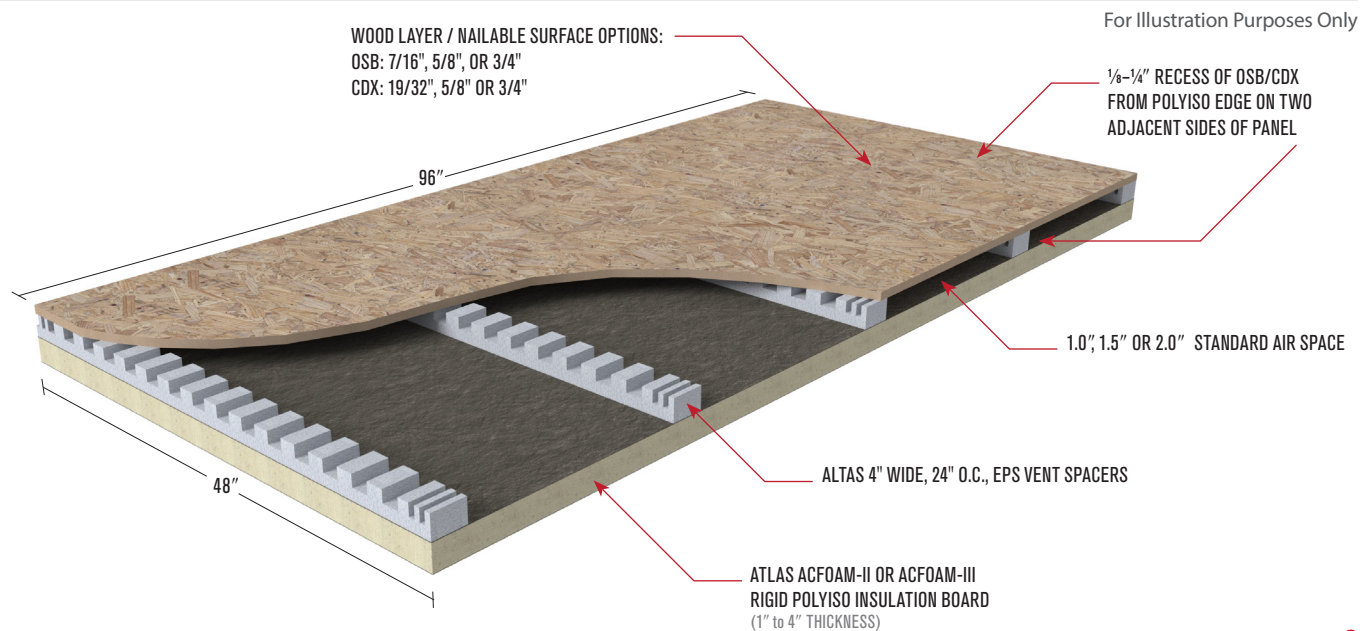
## Nailable Cross Ventilated Roof Insulation

- ACFoam CrossVent is a 4' x 8' non-structural panel comprised of thermally efficient closed-cell ACFoam®-II or ACFoam®-III polyisocyanurate (polyiso) insulation board bonded to 5 individual 4" wide Integrity EPS vent spacer strips that are bonded to a min.  $\frac{7}{16}$ " APA/TECO rated OSB or  $\frac{19}{32}$ " CDX plywood nailable surface.
- Wood Layer / Nailable Surface Options:
  - OSB: 7/16", 5/8" or 3/4"
  - CDX: 19/32", 5/8" or 3/4"
- Available as a special order product with FSC® Certified OSB or CDX plywood.
- Available with 1.0", 1.5" or 2.0" airspace for 9.5 sq. inch, 14.25 sq. inch, and 19 sq. inch of Net Free Area (NFA) respectively.
- Airspace is provided by five 4.0" wide (24" o.c.) Atlas Integrity EPS vent spacers per panel, each yielding a 6,000 psf minimum compressive resistance and continuous support for Atlas Nailable Insulation Fasteners which allows flexibility for compliance with fastening densities required by the International Building Code (IBC).
- Typical roof systems include asphalt shingles, standing seam metal, architectural metal roofing, tile and slate. For standing seam metal roofing, or heavy roof coverings such as tile, slate, etc., thicker OSB / CDX such as 3/4" may be required. Consult roof cover manufacturer or design professional.
- Manufactured in accordance with ASTM C1289, Type V Specifications.
- Made to order in nominal thickness of 2.5" to 6.75", providing long-term thermal resistance (LTTR) values from 5.7 to 23.6.
- Polyiso Layer: 1.0" (25.4mm) minimum up to 4.0" (101.6mm) maximum.
- Manufactured using CFC-, HCFC- and HFC-free foam blowing technology with zero ozone depletion potential (ODP) and virtually no (negligible) global warming potential (GWP).
- Approved only when mechanically attached to an approved structural deck as per Atlas Fastening Requirements. Not approved to adhere ACFoam CrossVent to structural decks, base layers of insulation, existing roof systems, or air / thermal barriers.
- ACFoam CrossVent is intended for use on 3:12 roof slopes or greater.
- See ACFoam CrossVent Technical Data Sheet for additional information.
- Atlas recommends the design professional for the project determines suitability for type (OSB or CDX) and thickness of the nailable surface of the CrossVent panel.
- Prior to installation, Atlas Roofing Corporation recommends, as applicable, you consult with your local building code official(s), contract documents, design professional, and all other relevant parties to ensure compliance.
- For additional information, such as airspace options with corresponding net free area, please see the ACFoam CrossVent Technical Data Sheet.

### CV-1.0

### STANDARD BOARD DIMENSIONS

SCALE: NTS





### Multi-Layer, Offset and Staggered Board Joints

- To minimize the effect of thermal bridging, and the impact of moisture/airflow into the roof system, Atlas strongly recommends the ACFoam CrossVent roof assembly be installed in multiple layers using a base layer(s) of ACFoam roof insulation below the ACFoam CrossVent composite panel and through-fastened with Atlas Nailable Insulation Fasteners.
- When installing a multi-layer insulation assembly, Atlas recommends a minimum 24" offset and stagger of the insulation joints between layers.
- Atlas recommends that the designer carefully consider the need for a vapor/air retarder in order to limit moisture/airflow into the roof system. Determining the need for and location of the vapor/air retarder remains solely the responsibility of the architect, engineer, or design professional. Follow vapor/air retarder manufacturer's installation instructions for seaming and perimeter edge/penetration terminations.

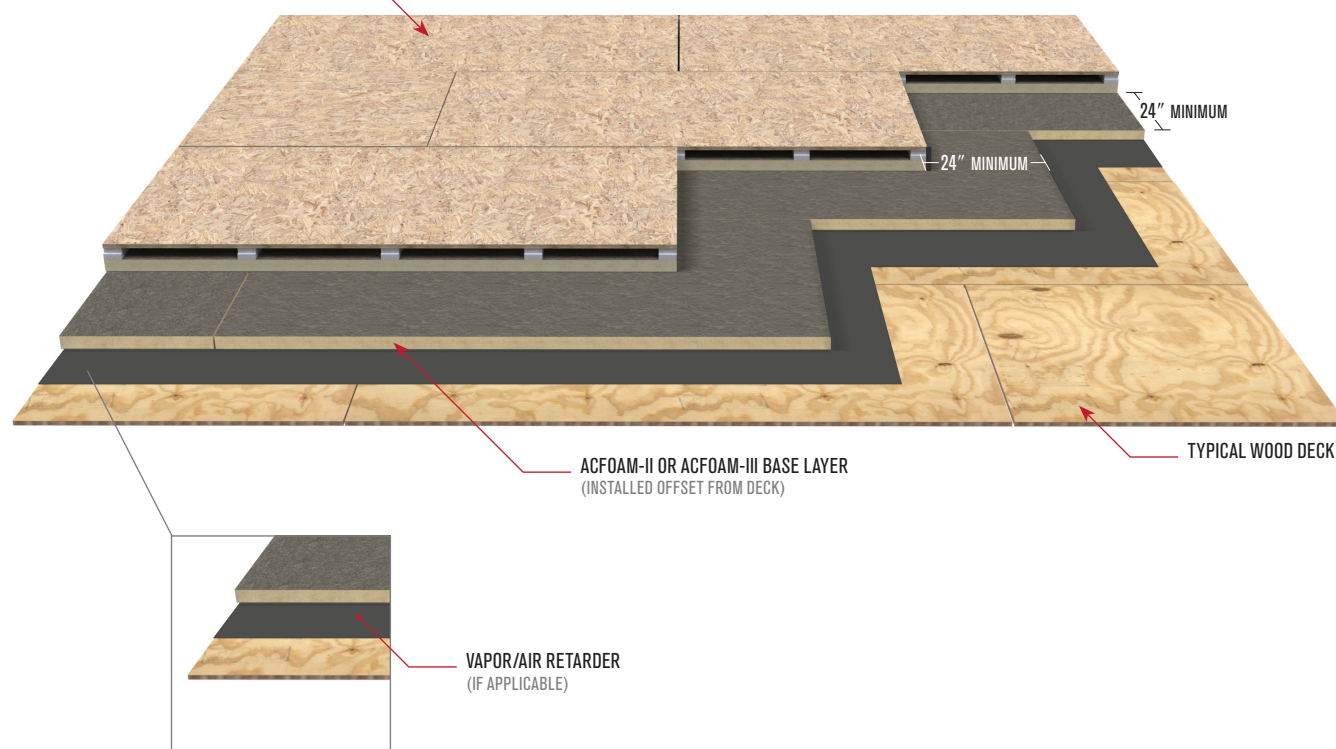
#### CV-1.1

#### MULTI-LAYER APPLICATION

SCALE: NTS

For Illustration Purposes Only

ATLAS ACFOAM-II OR ACFOAM-III CROSSVENT



### Board Orientation

- ACFoam® CrossVent® shall be installed over an approved structural roof deck. Refer to page 17 for list of approved decks types.
- Always position the ACFoam CrossVent panels with the 8' dimension parallel to the roof eave(s). (In a landscape position). In no case should the EPS vent spacers and

primary air flow direction be positioned perpendicular to the roof slope.

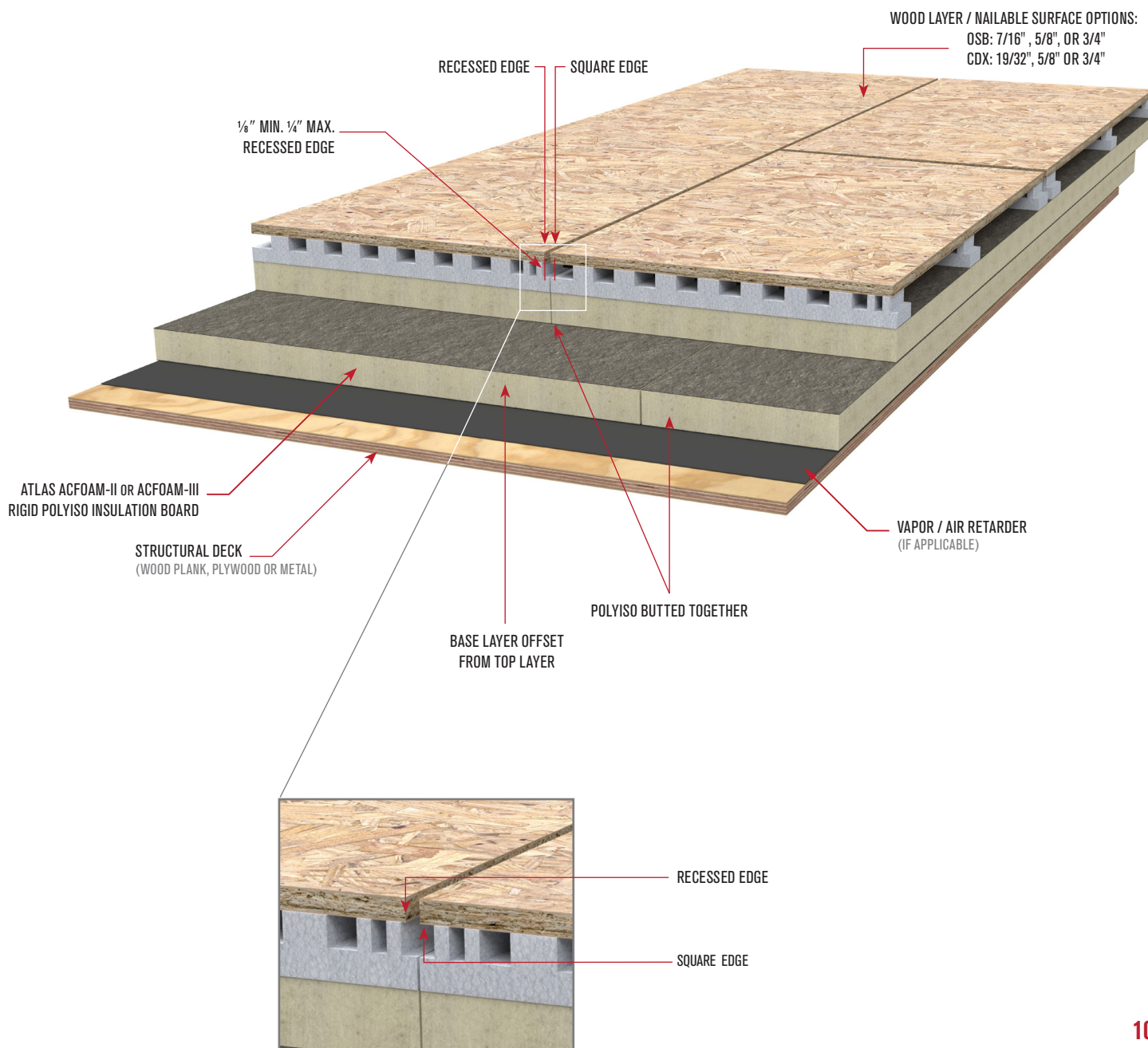
- Always orientate ACFoam CrossVent® panels with the 1/8" minimum recess edges against a square edge of an adjacent panel. This will yield a consistent nominal 1/8" gap in the OSB/CDX around all perimeter edges of the panel.

### CV-1.2

### RECESSED EDGE DETAIL

SCALE: NTS

For Illustration Purposes Only



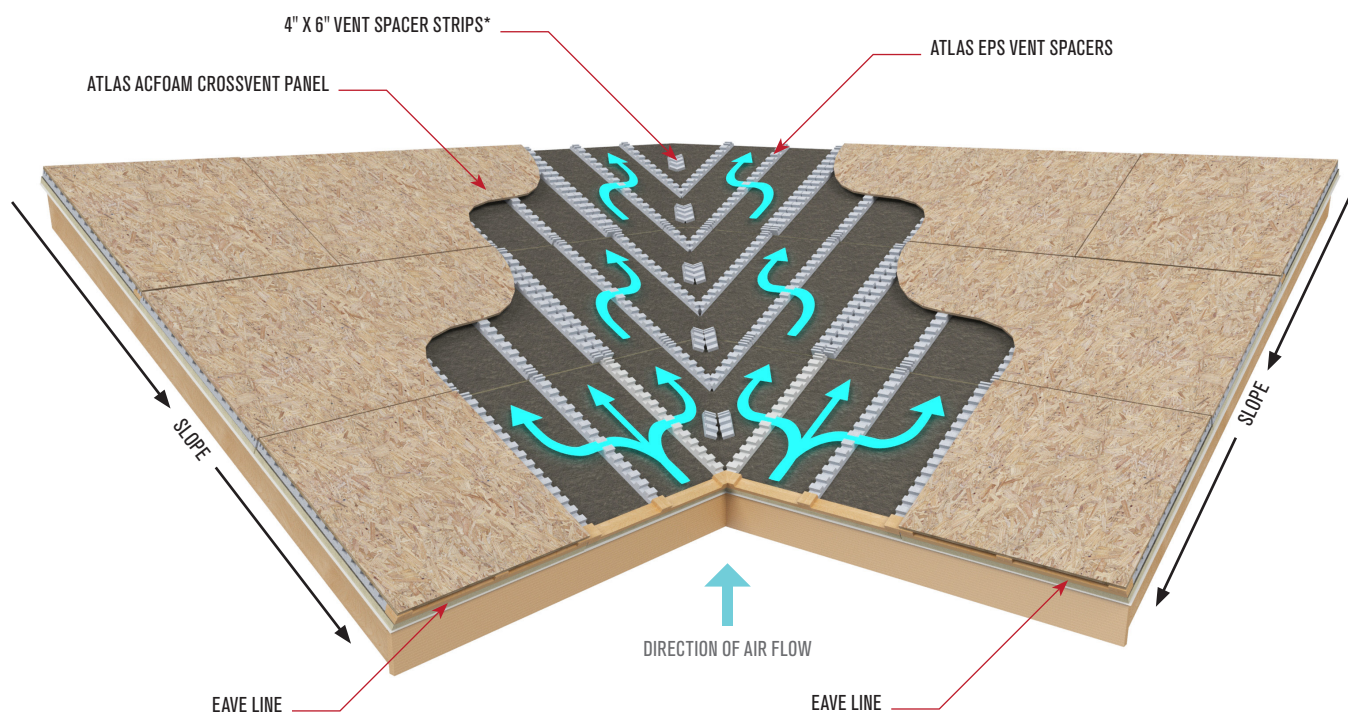
## Typical Roof Valley

CV-1.3

TYPICAL ROOF VALLEY INSTALLATION

SCALE: NTS

For Illustration Purposes Only



\* Install 4"x6" Atlas Integrity EPS vent spacers on both sides of valley center line as shown for OSB/CDX support. Fasten through each spacer strip into structural deck using Atlas Nailable Insulation Fasteners. Atlas vent spacers can be cut from unused ACFoam CrossVent spacer strips or obtained through an Atlas sales office.



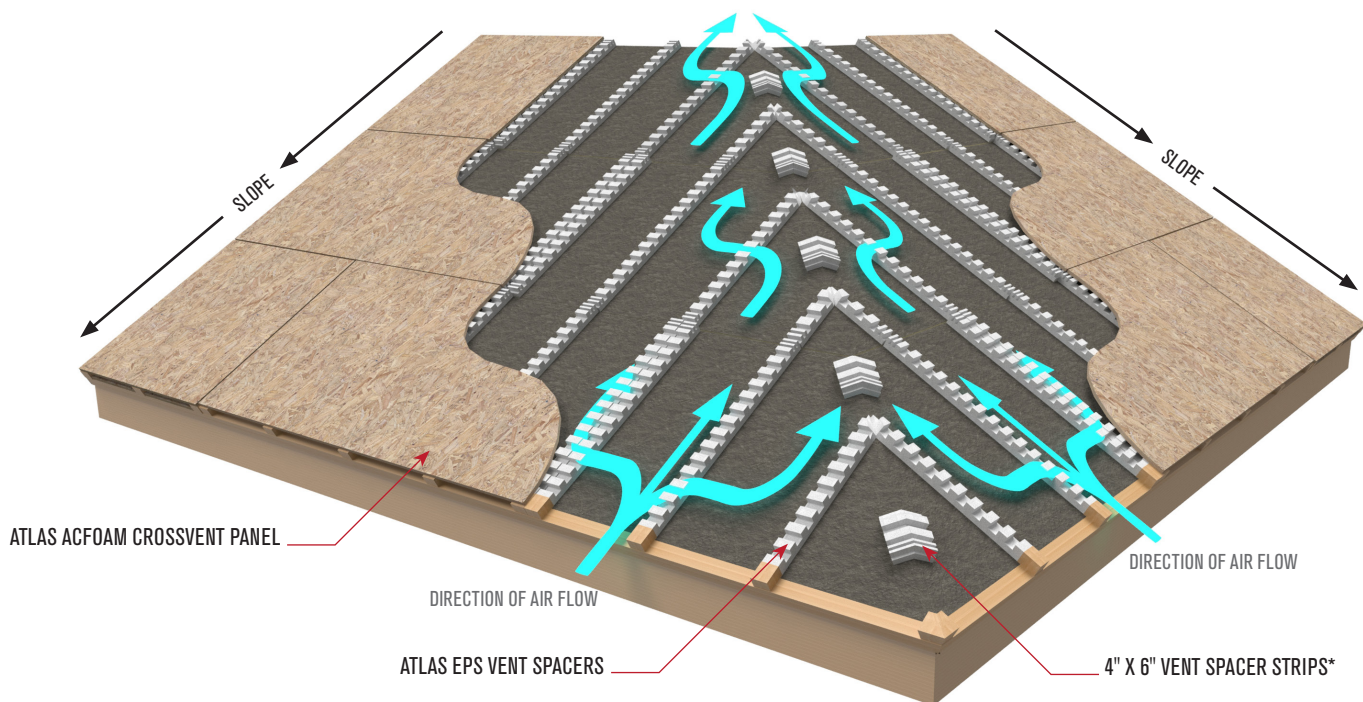
## Typical Roof Hip

CV-1.4

TYPICAL ROOF HIP INSTALLATION

SCALE: NTS

For Illustration Purposes Only



\* Install 4"x6" Atlas Integrity EPS vent spacers on both sides of hip center line as shown for OSB/CDX support. Fasten through each spacer strip into structural deck using Atlas Nailable Insulation Fasteners. Atlas vent spacers can be cut from unused ACFoam CrossVent spacer strips or obtained through an Atlas sales office.

## Typical Eave Nailer and Rake Edge

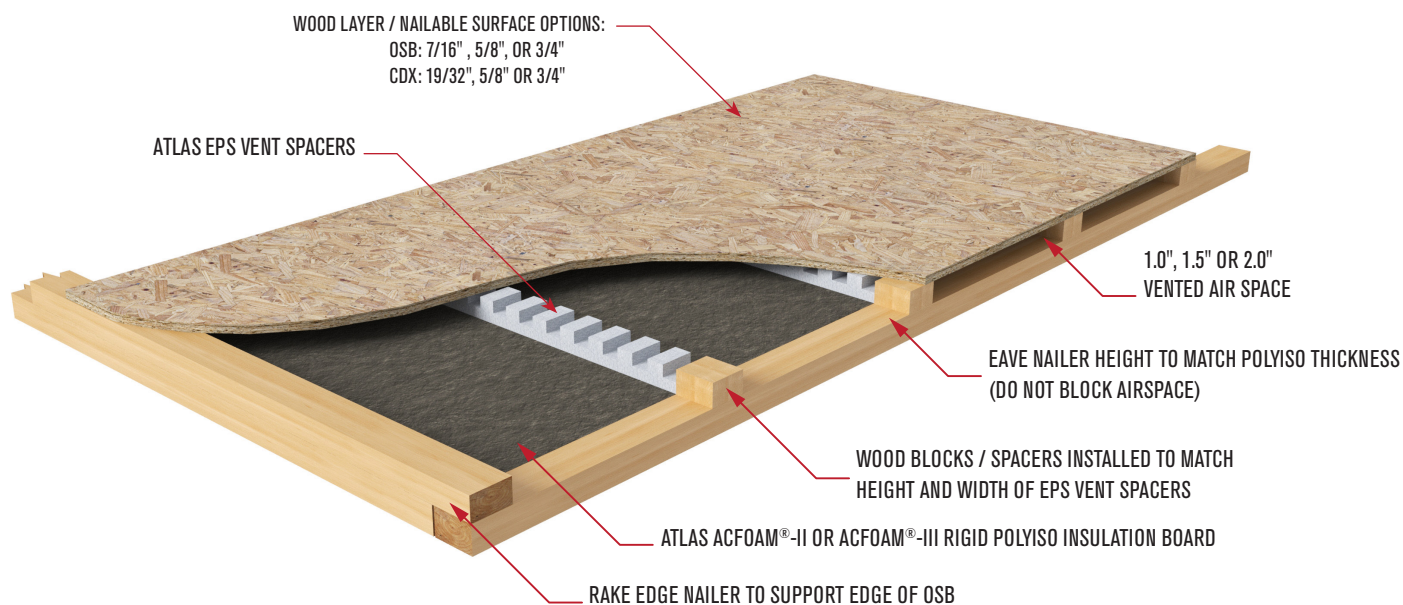
Insulation shall be trimmed from rake edge and eave to accommodate rake and eave nailers. OSB/CDX shall be supported on rake edge and eave by wood nailer.

CV-1.5

RAKE EDGE & EAVE NAILER INSTALLATION

SCALE: NTS

For Illustration Purposes Only



### Typical Eave Vent

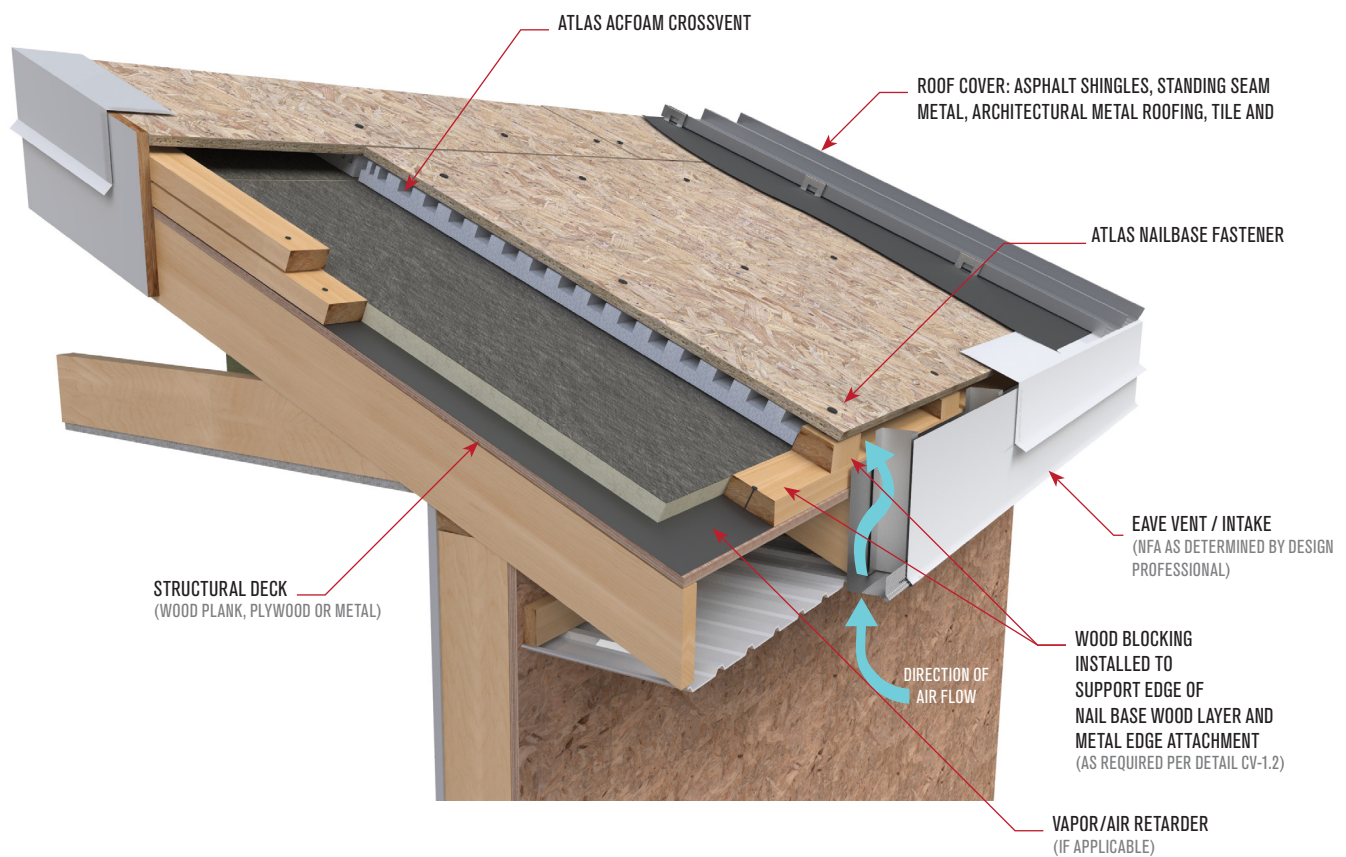
- The net free area of the vented eave fascia should meet or exceed the net free area of the air space of the ACFoam® CrossVent®. The net free area shall be determined by the design professional for the project.

CV-1.6

TYPICAL EAVE VENT

SCALE: NTS

For Illustration Purposes Only



### Typical Ridge Vent Detail

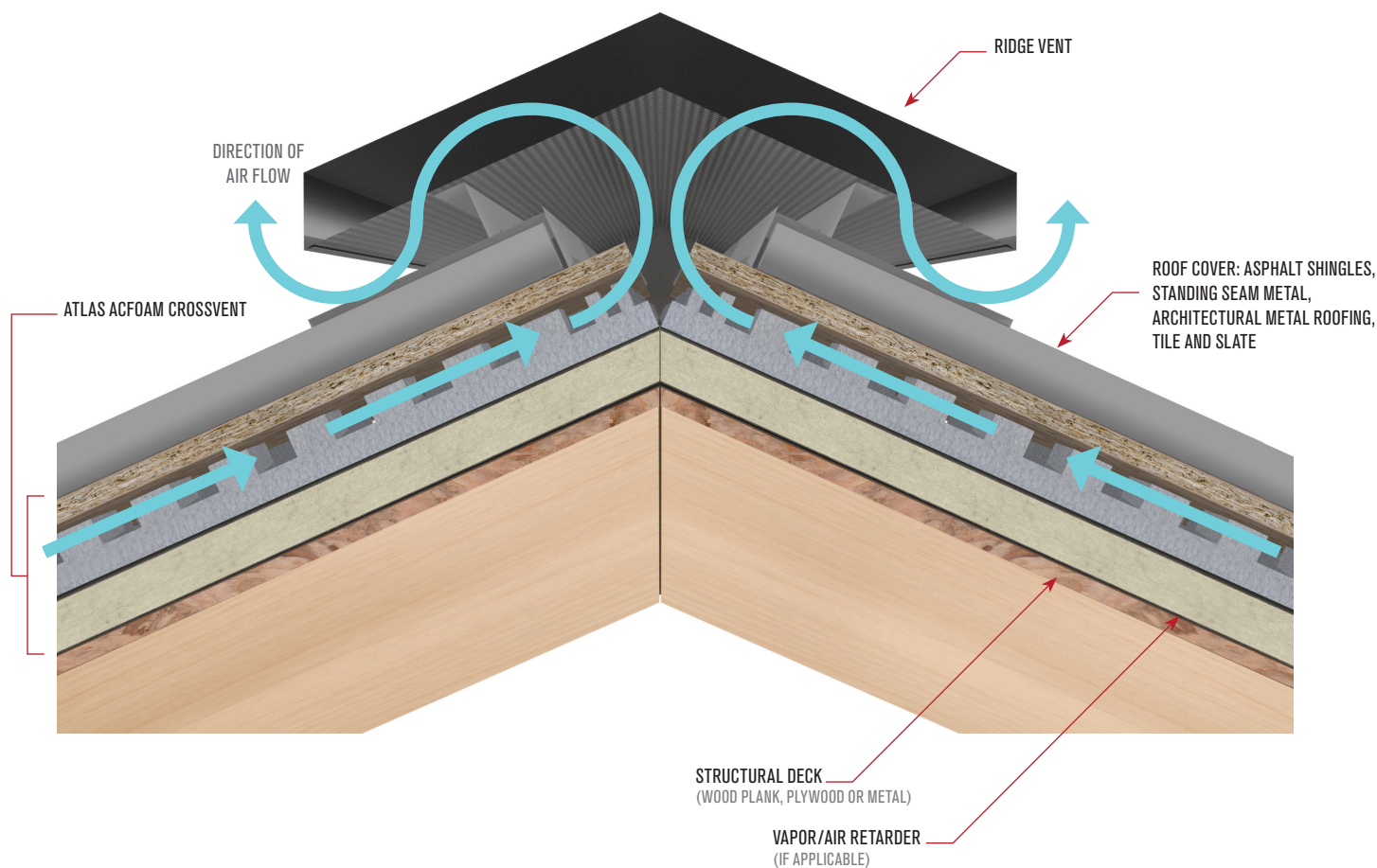
- To calculate the appropriate ridge gap opening: Divide the total eave (intake) linear footage by the total ridge (exhaust) linear footage and multiply that number by the air space dimension in ACFoam® CrossVent® (round down to the nearest 1/4").
- The net free area for the ridge vent should meet but not exceed the net free area of the air space in the ACFoam CrossVent.

CV-1.7

RIDGE VENT DETAIL

SCALE: NTS

For Illustration Purposes Only





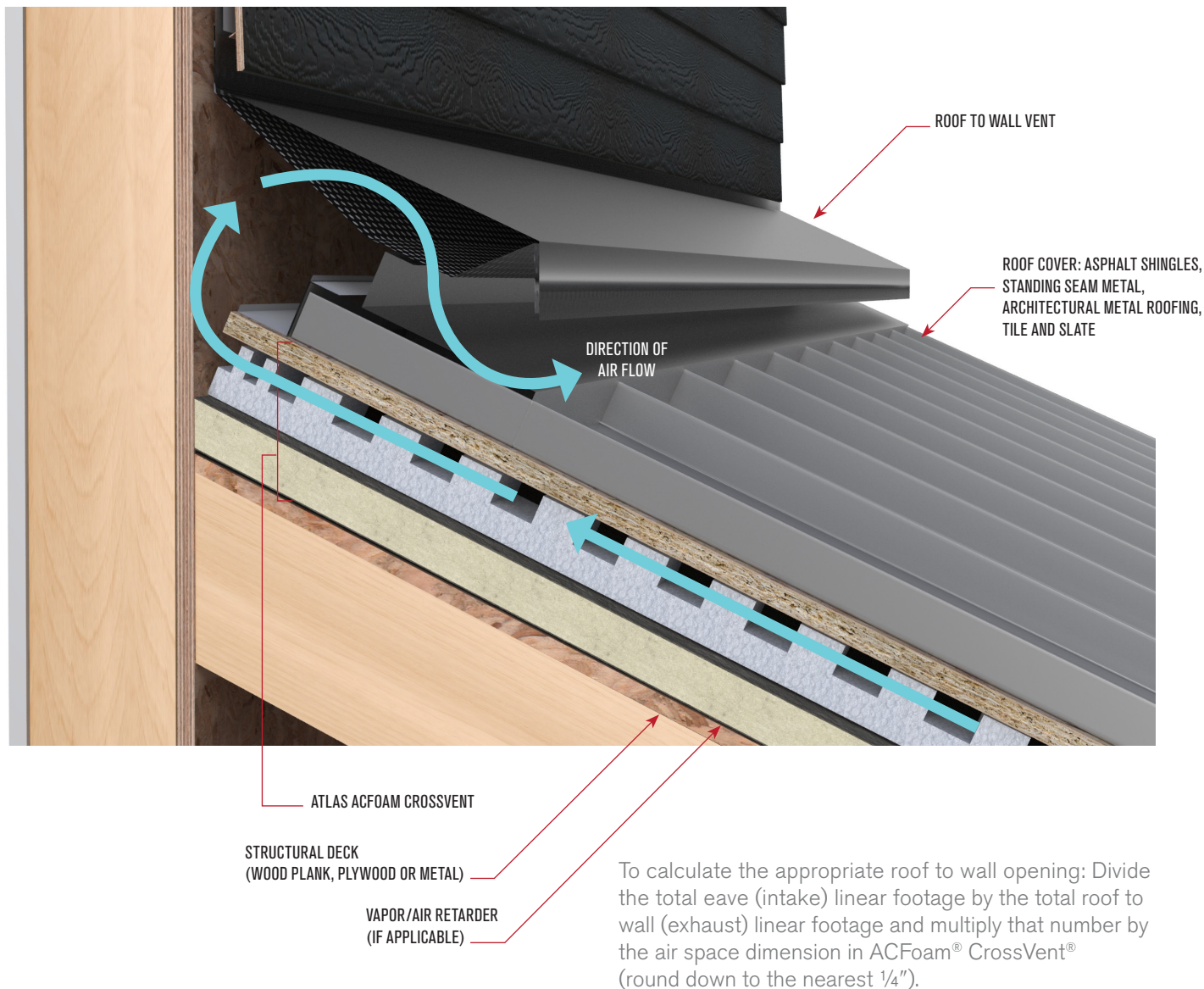
## Roof/Wall Vent Detail

CV-1.8

ROOF/WALL VENT DETAIL

SCALE: NTS

For Illustration Purposes Only



## Storage and Handling

- ACFoam® CrossVent shall be kept dry before, during and after installation. Refer to product packaging, Atlas Technical Bulletin #12 and PIMA Technical Bulletin #109 for storage and handling recommendations. Refer to Page 21 for additional information.

## ACFoam® Nail Base and ACFoam® CrossVent® Fastening Requirements (ASCE 7-10)

The required number of fasteners per 4' x 8' ACFoam Nailbase or ACFoam CrossVent panel is determined by selecting the larger value from the applicable snow load table (Table 1) and wind speed table (Table 2) below.

**TABLE 1:** SNOW LOAD (REQUIRED NUMBER OF ATLAS NAILABLE INSULATION FASTENERS PER 4' X 8' PANEL.)

| ROOF PITCH                                      |                | 3:12 to 6:12 |       |       |       |       |       |       |       | 7:12 to 12:12 |       |       |       |       |       |       |       |
|-------------------------------------------------|----------------|--------------|-------|-------|-------|-------|-------|-------|-------|---------------|-------|-------|-------|-------|-------|-------|-------|
| SNOW LOAD (PSF)                                 |                | 30           | 40    | 50    | 60    | 70    | 80    | 90    | 100   | 30            | 40    | 50    | 60    | 70    | 80    | 90    | 100   |
| <b>WOOD DECKS</b><br>(SEE APPROVED TYPES BELOW) | All Roof Zones | 15           | 15    | 15    | 15    | 15    | 15    | 15    | 15    | 15            | 15    | 15    | 15    | 20    | 20    | 20    | 25    |
|                                                 | Sds Max        | 2.819        | 2.314 | 1.898 | 1.55  | 1.255 | 1.001 | 0.78  | 0.586 | 3.015         | 2.411 | 1.894 | 1.446 | 2.295 | 1.877 | 1.505 | 2.126 |
| <b>18-22 GA. STEEL</b>                          | All Roof Zones | 15           | 20    | 25    | 25    | 30    | 30    | 35    | 35    | 30            | 25    | 25    | 30    | 35    | 35    | 40    | 45    |
|                                                 | Sds Max        | 0.51         | 0.729 | 0.91  | 0.642 | 0.802 | 0.579 | 0.722 | 0.532 | 0.815         | 1.022 | 0.604 | 0.797 | 0.966 | 0.626 | 0.786 | 0.928 |

**TABLE 2:** WIND SPEED (REQUIRED NUMBER OF ATLAS NAILABLE INSULATION FASTENERS PER 4' X 8' PANEL.)

| ROOF PITCH                                      |             | 3:12 to 6:12 |     |     |     |     |     | 7:12 to 12:12 |     |     |     |     |     |
|-------------------------------------------------|-------------|--------------|-----|-----|-----|-----|-----|---------------|-----|-----|-----|-----|-----|
| WIND SPEED (MPH)                                |             | ≤ 100        | 120 | 140 | 160 | 180 | 200 | ≤ 100         | 120 | 140 | 160 | 180 | 200 |
| <b>WOOD DECKS</b><br>(SEE APPROVED TYPES BELOW) | Roof Zone 1 | 15           | 15  | 15  | 15  | 15  | 20  | 15            | 15  | 15  | 15  | 15  | 15  |
|                                                 | Roof Zone 2 | 15           | 15  | 15  | 20  | 25  | 30  | 15            | 15  | 15  | 15  | 15  | 20  |
|                                                 | Roof Zone 3 | 15           | 15  | 20  | 30  | 35  | 45  | 15            | 15  | 15  | 15  | 15  | 20  |
| <b>18-22 GA. STEEL</b>                          | Roof Zone 1 | 15           | 15  | 15  | 20  | 25  | 30  | 15            | 15  | 15  | 15  | 20  | 20  |
|                                                 | Roof Zone 2 | 15           | 15  | 20  | 25  | 30  | 40  | 15            | 15  | 15  | 20  | 20  | 25  |
|                                                 | Roof Zone 3 | 15           | 25  | 30  | 40  | 50  | 60  | 15            | 15  | 15  | 20  | 20  | 25  |

### TABLE 1 AND 2 NOTES:

- For project designs that do not comply with the parameters stated in the Snow Load and Wind Speed charts, and footnotes herein, please contact Atlas Roofing Corporation Technical Department.
- Fastening requirements are based on ASCE 7-10 calculations. Tabulated values assume  $K_z=1.13$ ,  $K_{zt}=1.0$ , and  $K_d=8.5$ . Tabulated values may be adjusted to account for site-specific conditions.
- ASCE 7-10 Wind Components and Cladding Part 1 Low-Rise ( $h \leq 60$  ft) (Maximum mean roof height of 60 ft).
- Fastening requirements are based on 10 psf dead load.
- Fastening requirements are only applicable for use with Atlas Nailbase Insulation Fasteners.
- Steel deck minimum tensile strength 45,000 psi (45 ksi).
- Maximum above-deck component thickness is 10.5" for wood deck substrates and 14.0" for steel decks.
- Hip, gable, and mono-slope roofs (ASCE 7-10 figures 30.4-2A, 30.4-2B, 30.4-2C, 30.4-5A, and 30.4-5B).
- Wind Exposure Category B or C
- Building Occupancy Risk Categories I, II, and III.
- Seismic Design Sds Max per ASCE 7 Section 13.5.3 for  $W_p$ , assuming 10 psf dead load plus 0.2 snow load (sloped roof).
- Tabulated snow load is a design magnitude (sloped roof, drift, etc.).
- Friction assumed to resist a portion of dead load plus snow (0.15 coefficient of friction assumed).
- Roof perimeter zone area is defined as a band equal in width to 10% of the lesser roof plan dimension or 40% of the mean roof height, whichever is less (minimum band width is 3"). Corner zone is the intersection of the perimeter zones.
- Refer to pages 20-23 in the Atlas ACFoam® Nailable Insulation Guide for appropriate fastening patterns.
- For structural concrete roof decks, contact Atlas Roofing Corporation Technical Department.
- For ASCE 7-16 calculations please contact Atlas Roofing Corporation Technical Department.
- When plywood is used as the nailable surface of ACFoam Nailbase or ACFoam CrossVent, additional fastening may be required. See Atlas Technical Bulletin TB-1.

### ATLAS NAILABLE INSULATION FASTENERS INSTALLATION RECOMMENDATIONS:

- The fasteners should be installed using an 1800-2500 RPM (max) screw gun with a hardened drive bit. Standard electric drill guns are not recommended for installation of Atlas Nailable Insulation Fasteners.
- Steel decks are acceptable deck types provided they are between 18 ga.(max) and 22 ga.(min.). Be sure to determine the gauge of the deck. For 16 ga. or heavier, consult the Atlas Technical Department.
- Atlas requires the use of the Atlas Light Duty (LD) Nailable Insulation Fastener for steel deck applications, and either the Atlas Thread Point (TP) Nailable Insulation Fastener, or the Atlas Light Duty (LD) Insulation Fastener for approved wood deck applications.

### APPROVED DECK TYPES:

- 18-22 ga. Steel Deck ( $\frac{3}{4}$ " through deck [top flange]).
- Structural Concrete (2500 psi min.)  $\frac{3}{16}$ " pre-drilled pilot hole required (1" penetration into deck).
- 1" minimum wood plank and T&G (1" penetration into deck).
- $\frac{1}{2}$ " minimum plywood ( $\frac{3}{4}$ " through deck).
- For projects requiring an FM wind classification, refer to FM RoofNav, or contact the roof cover manufacturer for approved assemblies.

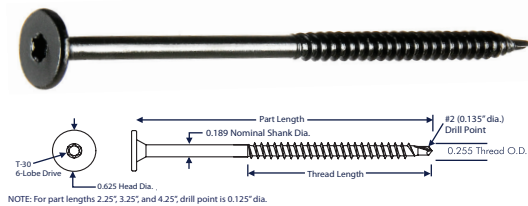
Job specific calculations with design summaries can be provided upon request, that include an engineer's seal, if required.

Please contact Atlas RWI Technical Department for details.

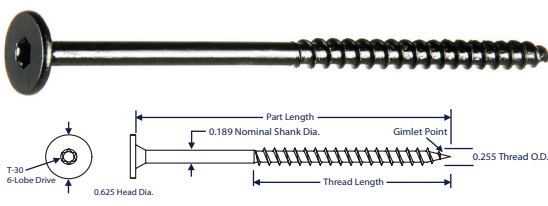


# Atlas Nail Base Fasteners

## Atlas Nail Base Fasteners LD



## Atlas Nail Base Fasteners TP



### DESCRIPTION:

Standard or Light Duty (LD) nailable insulation fasteners with #2 Light Duty Drill Point. Specifically engineered for attaching Atlas ACFoam Nail Base and ACFoam CrossVent to 18-22 ga. corrugated steel and approved wood deck substrates. Atlas Nail Base Fasteners are required for proper mechanical attachment of all ACFoam Nailable Insulation Systems.

**MATERIAL:** Case-Hardened and Tempered Carbon Steel  
**HEAD STYLE/DRIVE:** Large Diameter, Low Profile Pancake Head with T-30 6-Lobe Drive  
**HEAD DIAMETER:** 0.625"  
**SHANK DIAMETER:** 0.189"  
**THREAD LENGTH:** 2.750"  
**OVERALL LENGTH:** 3" thru 16"  
**POINT:** #2 (0.135" dia.) Drill Point  
**COATING:** Epoxy E-Coat (black)  
Passes more than 15 cycles (Kesternich) in accordance with DIN 50018

| PRODUCT SELECTION |     |           |
|-------------------|-----|-----------|
| IN                | MM  | PKG. QTY. |
| 3.0               | 76  | 500/PAIL  |
| 3.5               | 89  | 500/PAIL  |
| 4.0               | 102 | 500/PAIL  |
| 4.5               | 114 | 500/PAIL  |
| 5.0               | 127 | 500/PAIL  |
| 5.5               | 140 | 500/PAIL  |
| 6.0               | 152 | 500/PAIL  |
| 6.5               | 165 | 500/PAIL  |
| 7.0               | 178 | 500/PAIL  |
| 7.5               | 191 | 500/PAIL  |
| 8.0               | 203 | 500/PAIL  |
| 8.5               | 216 | 250/PAIL  |
| 9.0               | 229 | 250/PAIL  |
| 10.0              | 254 | 250/PAIL  |
| 11.0              | 279 | 250/PAIL  |
| 12.0              | 305 | 250/PAIL  |
| 13.0              | 330 | 250/PAIL  |
| 14.0              | 356 | 250/PAIL  |
| 15.0              | 381 | 250/PAIL  |
| 16.0              | 406 | 250/PAIL  |

NOTE: Two T-30 Driver Bits included in each package.

### DESCRIPTION:

Thread Point (TP) nailable insulation fasteners with Gimlet Thread Point. Specifically engineered for attaching Atlas ACFoam Nail Base and ACFoam CrossVent to wood and timber substrates. Atlas Nail Base Fasteners are required for proper mechanical attachment of all ACFoam Nailable Insulation Systems.

**MATERIAL:** Case-Hardened and Tempered Carbon Steel  
**HEAD STYLE/DRIVE:** Large Diameter, Low Profile Pancake Head with T-30 6-Lobe Drive  
**HEAD DIAMETER:** 0.625"  
**SHANK DIAMETER:** 0.189"  
**THREAD LENGTH:** 2.750"  
**OVERALL LENGTH:** 2" thru 14"  
**POINT:** Gimlet Point  
**COATING:** Epoxy E-Coat (black)  
Passes more than 15 cycles (Kesternich) in accordance with DIN 50018

| PRODUCT SELECTION |     |           |
|-------------------|-----|-----------|
| IN                | MM  | PKG. QTY. |
| 2.0               | 51  | 500/PAIL  |
| 2.5               | 64  | 500/PAIL  |
| 3.0               | 76  | 500/PAIL  |
| 3.5               | 89  | 500/PAIL  |
| 4.0               | 102 | 500/PAIL  |
| 4.5               | 114 | 500/PAIL  |
| 5.0               | 127 | 500/PAIL  |
| 5.5               | 140 | 500/PAIL  |
| 6.0               | 152 | 500/PAIL  |
| 6.5               | 165 | 500/PAIL  |
| 7.0               | 178 | 500/PAIL  |
| 7.5               | 191 | 500/PAIL  |
| 8.0               | 203 | 500/PAIL  |
| 8.5               | 216 | 250/PAIL  |
| 9.0               | 229 | 250/PAIL  |
| 10.0              | 254 | 250/PAIL  |
| 11.0              | 279 | 250/PAIL  |
| 12.0              | 305 | 250/PAIL  |
| 13.0              | 330 | 250/PAIL  |
| 14.0              | 356 | 250/PAIL  |

NOTE: Two T-30 Driver Bits included in each package.



## Atlas Nail Base LD and Nail Base TP Fastener Properties

All values provided are allowable values

### <sup>1</sup>PROPERTIES

| FASTENER | PROPERTY                   |                          |                                                |                                              |
|----------|----------------------------|--------------------------|------------------------------------------------|----------------------------------------------|
|          | TENSILE (LBS)<br>AISI S904 | SHEAR (LBS)<br>AISI S904 | BENDING YIELD STRENGTH<br>Fyb (psi) ASTM F1575 | CORROSION RESISTANCE<br>ASTM D6294, ETAG D06 |
| ATLAS TP | 1185                       | 860                      | 185,000                                        | < 15% RED RUST AFTER 30 CYCLES               |
| ATLAS LD | 1130                       | 830                      |                                                |                                              |

### <sup>1</sup>ATLAS LD AND TP FASTENER HEAD PULL-THROUGH VALUES

| SIDE MEMBER TYPE<br>NAILABLE SURFACE | SIDE MEMBER NOMINAL THICKNESS<br>NAILABLE SURFACE | HEAD PULL-THROUGH (LB.)<br>NAILABLE SURFACE |
|--------------------------------------|---------------------------------------------------|---------------------------------------------|
| OSB                                  | 23/32"                                            | 345                                         |
|                                      | 19/32"                                            | 145                                         |
|                                      | 7/16"                                             | 85                                          |
| CDX PLYWOOD                          | 23/32"                                            | 380                                         |
|                                      | 19/32"                                            | 265                                         |

### <sup>1</sup>ATLAS LD PULLOUT VALUES IN CORRUGATED STEEL DECK (lbs.)

| TENSILE STRENGTH | 22 ga. | 20 ga. | 18 ga. | 16 ga. |
|------------------|--------|--------|--------|--------|
| 45 ksi           | 96     | 115    | 180    | 230    |
| 70 ksi           | 135    | 165    | 250    | 330    |
| 90 ksi           | 145    | 190    | 285    | 375    |
| 110 ksi          | 175    | 225    | 320    | 415    |

### <sup>1</sup>WITHDRAWAL VALUES IN CDX PLYWOOD ROOF DECKS (lbs.)\*

| WOOD TYPE | CDX PLYWOOD |        |
|-----------|-------------|--------|
| Thickness | 19/32"      | 23/32" |
| ATLAS TP  | 130         | 155    |
| ATLAS LD  | 120         | 180    |

### <sup>1</sup>TENSION VALUES IN CONCRETE

| COMPRESSIVE STRENGTH | 2500 psi<br>CONCRETE | 4000 psi<br>CONCRETE | 5000 psi<br>CONCRETE |
|----------------------|----------------------|----------------------|----------------------|
| ATLAS LD             | 70                   | 155                  | 160                  |
| ATLAS TP             | 100                  | 165                  | 165                  |

\*Fastener penetrates through bottom side of the board by 3/4".

### <sup>1</sup>LATERAL LOAD RESISTANCE (lbs.)

| FASTENER            | MAIN MEMBER<br>ROOF DECK | SIDE MEMBER<br>NAILABLE SURFACE                                                | LOAD PER FASTENER<br>(lb.) |
|---------------------|--------------------------|--------------------------------------------------------------------------------|----------------------------|
| ATLAS LD            | 22 ga. Steel Deck        | *14" AC Foam Nail Base Insulation<br>*14" AC Foam CrossVent Insulation         | 55<br>40                   |
| ATLAS LD & ATLAS TP | CDX Plywood              | *10 1/2" AC Foam Nail Base Insulation<br>*10 1/2" AC Foam CrossVent Insulation | 90<br>90                   |
| ATLAS LD & ATLAS TP | 1" Minimum SPF           | *10 1/2" AC Foam Nail Base Insulation<br>*10 1/2" AC Foam CrossVent Insulation | 90<br>90                   |

Note: All tests were conducted by an independent testing laboratory. Test results are offered only as a guide and are not guaranteed in any way by Atlas Roofing Corporation.

<sup>1</sup>All Values are allowable values.

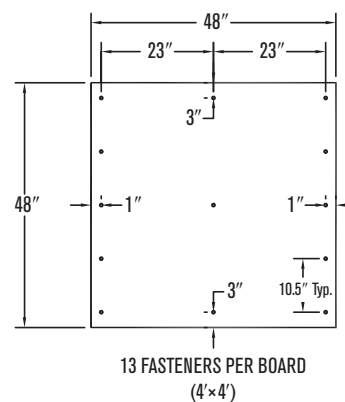
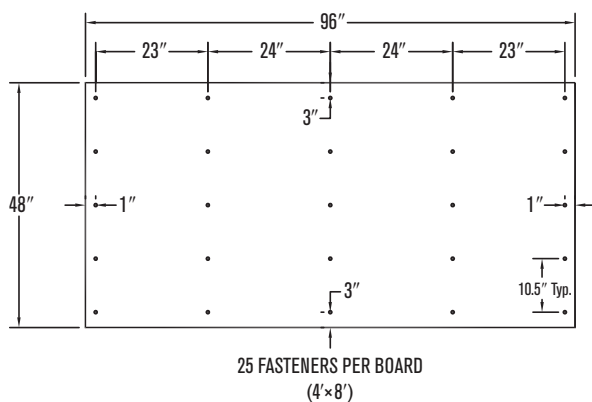
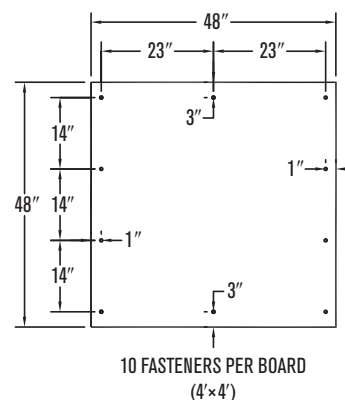
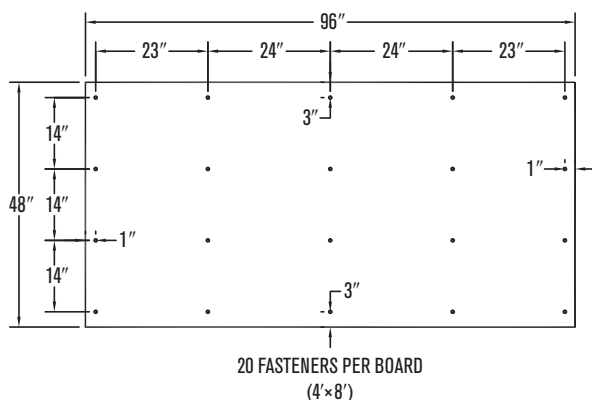
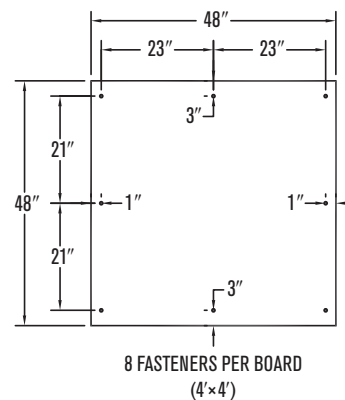
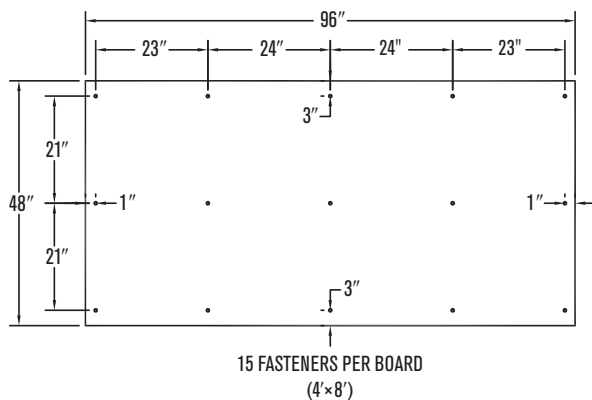
\*Thickness include base layer(s) of insulation.

Other than the aforementioned representations and descriptions, Atlas Roofing Corporation (hereafter, "Seller") makes no representations or warranties as to the insulation sold herein. The Seller disclaims all other warranties, express or implied, including the warranty of merchantability and the warranty of fitness for a particular purpose. Seller does, however, have a limited warranty as to the LTR-Value of the insulation, the terms of which are available upon request from the Seller. Seller shall not be liable for any incidental or consequential damages including but not limited to the cost of installation, removal, repair or replacement of this product. Buyer's remedies shall be limited exclusively to, at Seller's option, the repayment of the purchase price or resupply of product manufactured by Atlas in a quantity equal to that of the nonconforming product. Atlas distributors, agents, salespersons or other independent representatives have no authority to waive or alter the above limitation of liability and remedies.

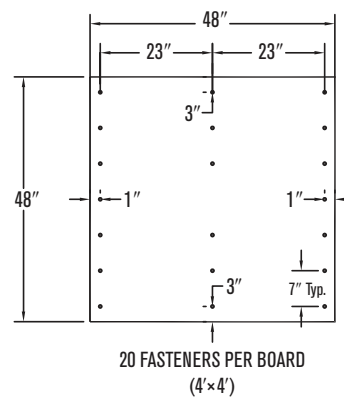
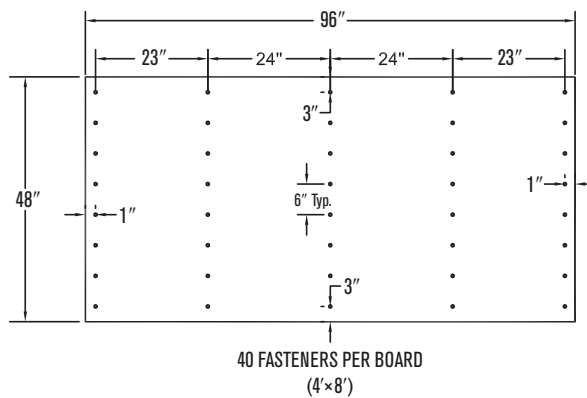
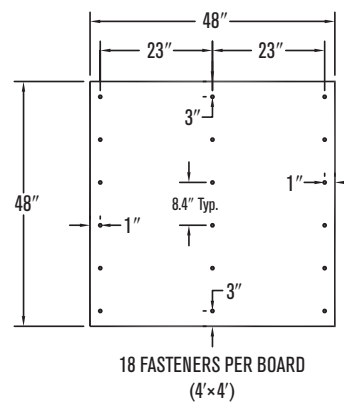
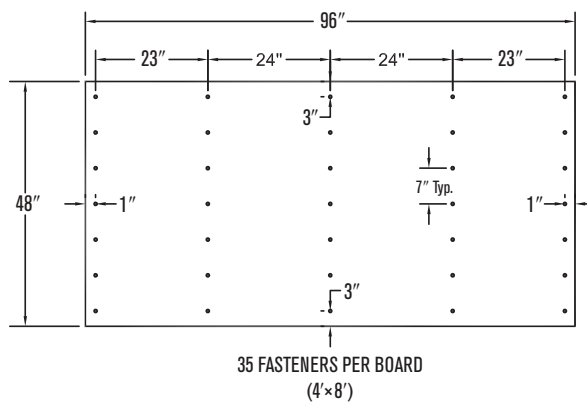
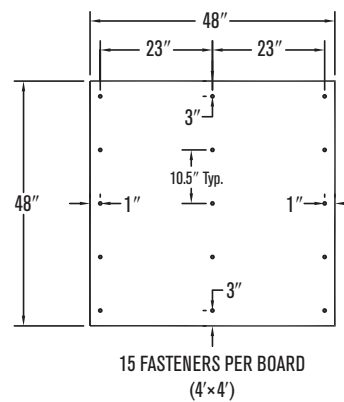
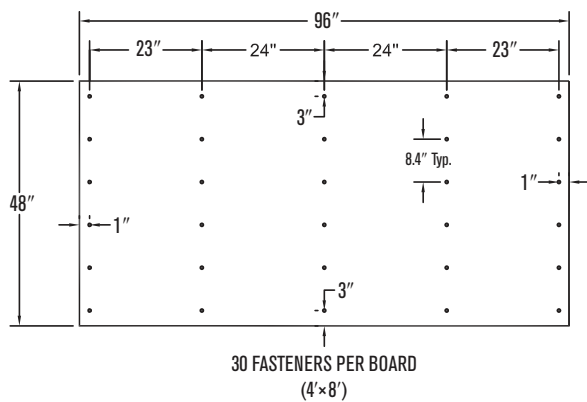


## Standard Fastening Patterns

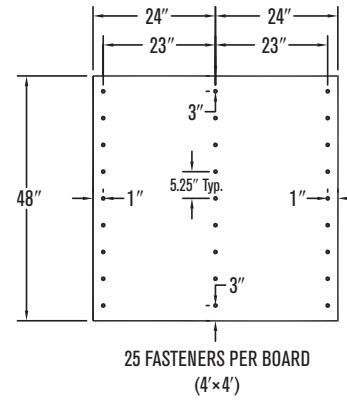
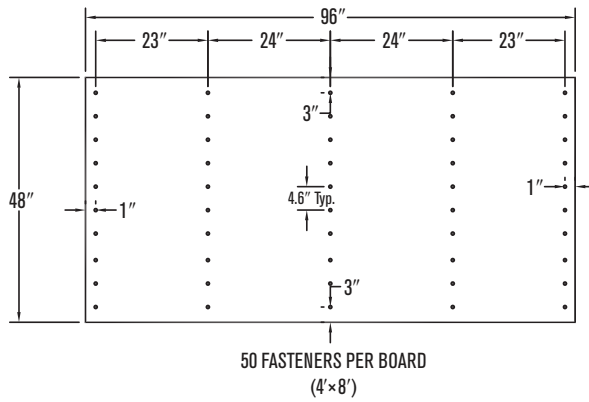
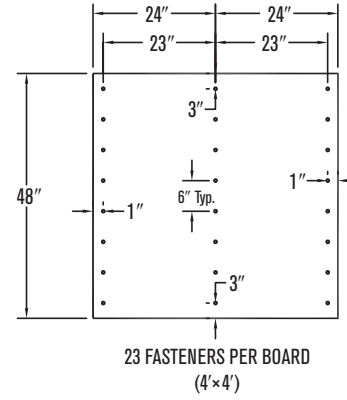
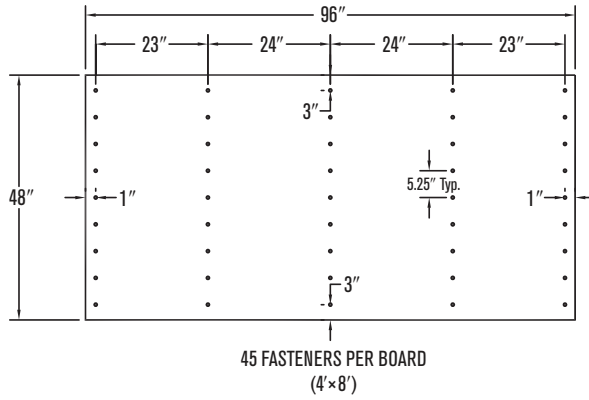
- Atlas Nailable Insulation Fasteners required as part of Atlas ACFoam® nailable insulation systems.



## Standard Fastening Patterns



## Standard Fastening Patterns



# GENERAL INSTRUCTIONS AND WARRANTY INFORMATION FOR ACFOAM® NAILABLE INSULATION PRODUCTS

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## STORAGE

Factory applied packaging is intended only for protection during transit. When stored outdoors or on the job site, the insulation should be stacked on pallets at least three inches above ground level and completely covered with a weatherproof covering such as a tarpaulin. The temporary factory-applied packaging should be slit or removed to prevent accumulation of condensation. Roof insulation which has become wet or damaged should be removed and replaced with solid, dry insulation, of the same type.

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## INSTALLATION

Before installation begins, the roof deck should be firm, well attached, even, clean and dry. Proper attachment of the insulation is necessary to prevent roof failures. Atlas is not responsible for any damage caused by improper attachment. ACFoam Nailable Insulation products can be attached to approved decks (see page 17). Atlas is not responsible for determining the suitability of the deck. ACFoam products shall be kept dry before, during and after installation. Install only as much ACFoam product as can be covered the same day with completed roofing, or that can be properly waterproofed prior to the roof cover installation. Although ACFoam products have been designed to withstand normal foot traffic, protection from damage by construction traffic and/or abuse is extremely important. Roof surface protection such as plywood shall be used in areas where storage and staging are planned and heavy or repeated traffic is anticipated during or after installation. Refer to Atlas Technical Bulletin TB-5.

## MULTI-LAYER INSTALLATION

A two-layer application of ACFoam products is strongly recommended. The joints in each layer should be offset in order to avoid a vertically continuous joint through the total insulation thickness. Two layers (or more) with joints staggered can provide improved insulation performance by eliminating thermal bridging. This method also reduces condensation potential and thermal stress on the roof cover. Refer to Atlas Technical Bulletin TB-5.

## MECHANICAL ATTACHMENT

Mechanical fastening is the only method of attachment for ACFoam Nailable Insulation Products. Refer to page 17 for fastening requirements and approved deck types. Refer to pages 20-22 for standard fastening patterns.

## VAPOR/AIR RETARDERS

Moisture vapor tends to migrate from warmer to cooler areas. In building construction, vapor/air retarders are used to inhibit or block the passage of warm, moisture laden air into walls or roofing assemblies. Determining the need for, and location of a vapor/air retarder remains the sole responsibility of the architect, engineer, or design professional. Special consideration should be given to construction generated moisture as well. For example, construction-generated moisture will be released when concrete floor slabs are placed after the roof has been installed, which can drive large quantities of moisture into the roof system. Therefore, Atlas is not responsible for damage to the insulation when exposed to construction-generated moisture or from moisture released from building materials. Refer to the appropriate NRCA Roofing Manual for recommendations for the use of a vapor retarder, and when construction-generated moisture is present. Consult vapor/air retarder manufacturer for recommended applications and details.

## WARNING-DO NOT EXPOSE TO IGNITION SOURCE

This product is a polyiso organic plastic foam and will burn if exposed to an ignition source of sufficient heat and intensity, or open flame, such as a welder's torch. Like other organic materials, this product will release smoke if ignited. Do not apply flame directly to ACFoam roof insulations. This product should be used only in strict accordance with Atlas recommended uses and application instructions.

## LIMITATION OF LIABILITY

Other than the aforementioned representations and descriptions, Atlas Roofing Corporation (hereafter, "Seller") makes no other representations or warranties as to the insulation sold herein. The Seller disclaims all other warranties, express or implied, including the warranty of merchantability and the warranty of fitness for a particular purpose. Seller does, however, have a limited warranty as to the LTTR-value of the insulation, the terms of which are available upon request from the Seller. The Seller shall not be liable for any incidental or consequential damages including the cost of installation, removal, repair or replacement of this product. The Buyer's remedies shall be limited exclusively to, at Seller's option, the repayment of the purchase price or resupply of product manufactured by Atlas in a quantity equal to that of the nonconforming product. Atlas distributors, agents, salespersons or other independent representatives have no authority to waive or alter the above limitation of liability and remedies.

## 20-YEAR LIMITED WARRANTY

In response to valid concerns of building designers regarding thermal efficiency of roof assemblies and the long-term insulating value of roof insulation, Atlas offers a 20-year, limited thermal warranty. The "ACFoam Limited Warranty" places Atlas ACFoam products above all others and supports the building owner, designer and contractor by backing up thermal performance. This warranty is available to the building owner at the time the building is completed and is transferable to any subsequent owner for the duration of the 20-year period. For additional information, please reference the Atlas ACFoam Limited Warranty at [www.atlasrwi.com](http://www.atlasrwi.com).



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