

Lamit Industries **NailBase Panels**

Work Smarter, Build Better, Save More!

ROOF APPLICATIONS **CONSTRUCTION MANUAL**

P.O. Box 07750, 710 Marion Rd. Columbus, Oh 43207
Phone (614)444-3010 Fax (614)444-4264
www.lamitindustries.com



**Structural Insulated
Panel Association**

Lamit Industries Nailbase Panels General Recommendations

Lamit Industries Nailbase Panels Sizes

Lamit Industries Nailbase Panels are made in a variety of sizes; most commonly 4' x 8'. Consult Lamit Industries for sizes, thickness, and fabrication services available in your area.

Environmentally Safe

Lamit Industries Nailbase Panels are compiled with EPS as the core material. This EPS contains no CFCs, HCFCs, HFCs or formaldehyde and it is recyclable. EPS is inert, non-nutritive and highly stable to support recycling and energy conservation is always recommended.

Warranty

Lamit Industries Nailbase Panels provides a 20 year warranty covering thermal performance. Contact Lamit Industries for details regarding the warranty guidelines.

Handling & Storage Protection

Lamit Industries Nailbase Panels should be stored in a fully supported manner and protected from the weather. Cover stored panels with tarps or similar protective wraps. Exposure 1 OSB facings are used in Lamit Industries Nailbase Panels; however, panels used for roof systems must have temporary roofing applied at the time of installation. Apply finished roofing when immediately practical.

Sealant and Splines

Lamit Industries Nailbase Panels are joined using splines. These attachments are made with nails, staples, or screws and sealant.

The sealant provided by Lamit Industries is safe for expanded polystyrene foam insulation. Apply the sealant in a continuous 3/8" bead as shown in Lamit Industries Nailbase details. This size bead will result in the optimum coating when the plates and splines are installed.

Vapor Retarders

Lamit Industries Nailbase Panels may require the use of a vapor retarder to ensure long term durable roof structures. Consult with design professionals for a recommendation.

Special Treatments

Lamit Industries Nailbase Panels are produced with Borate that protects the core insulation from potential termite damage.

Disclaimer

Lamit Industries Nailbase Panel details, illustrations, pictures and guidelines provided herein give basic information and illustrate examples of Lamit Industries Nailbase Panel installation. The basic information provided herein is not intended to cover every potential use and/or application of Lamit Industries Nailbase Panels. It is the responsibility of the installer to become familiar with their specific application and determine if Lamit Industries Nailbase Panels are suitable. By commencing work, the installer accepts full responsibility for the proper and safe installation of Lamit Industries Nailbase Panels at his jobsite. Adding an insulation component may change the behavior of a roof assembly with regard to air movement, water vapor transmittance, bulk water management and heating, cooling and ventilation systems. It is the responsibility of the owner or the owner's representative to design the insulated wall assembly to perform in a manner ensuring function and durability. Furthermore, it is the sole responsibility of the installer to meet all federal and local regulatory requirements for job site safety for themselves, workers and any others on the job site while in the execution of all phases of Lamit Industries Nailbase Panel installation.

Lamit NailBase Panel-Fastening Requirement for Sloped Roofs

Field Of Roof

Number of Fasteners for 4'x8' (1.2mx2.4m) Nailbase										
Total Load (Snow Load+Dead Load)	Roof Pitch									
	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12
30 PSF	8	8	8	8	8	8	8	8	8	8
40 PSF	8	8	8	8	8	8	8	8	12	12
50 PSF	8	8	8	8	12	12	12	12	12	12
60 PSF	8	8	8	12	12	12	12	12	12	12
70 PSF	8	8	12	12	12	12	16	16	16	16
80 PSF	8	12	12	12	16	16	16	16	16	16
90 PSF	8	16	16	16	16	16	16	16	16	16

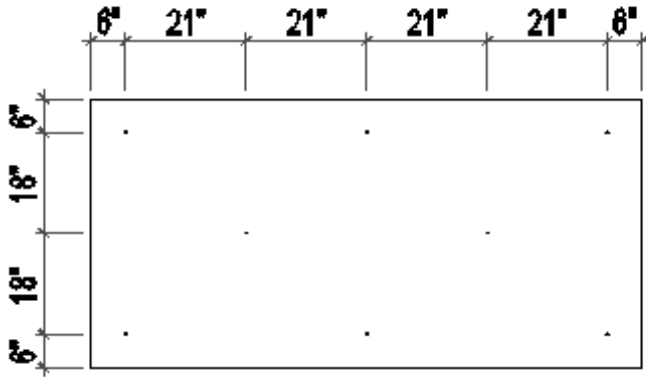
Perimeter of Roof

Number of Fasteners for 4'x8' (1.2mx2.4m) Nailbase										
Total Load (Snow Load+Dead Load)	Roof Pitch									
	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12
30 PSF	16	16	16	16	8	8	8	8	8	8
40 PSF	16	16	16	16	8	8	8	8	12	12
50 PSF	16	16	16	16	12	12	12	12	12	12
60 PSF	16	16	16	16	12	12	12	12	12	12
70 PSF	16	16	16	16	12	12	16	16	16	16
80 PSF	16	16	16	16	16	16	16	16	16	16
90 PSF	16	16	16	16	16	16	16	16	16	16

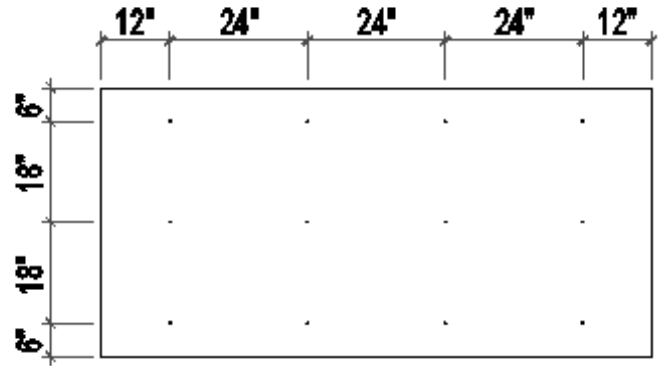
Fasteners must have 1" minimum penetration into structural deck

For projects with wind speeds in excess of 110 mph, consult a professional engineer for fastening requirements.

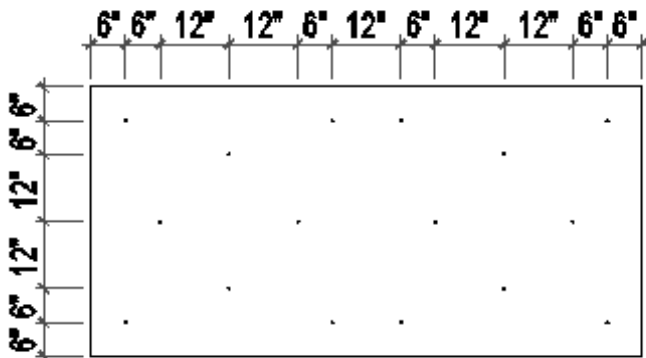
Lamit NailBase Panel-Fastening Patterns for 4'x8' NailBase Panels



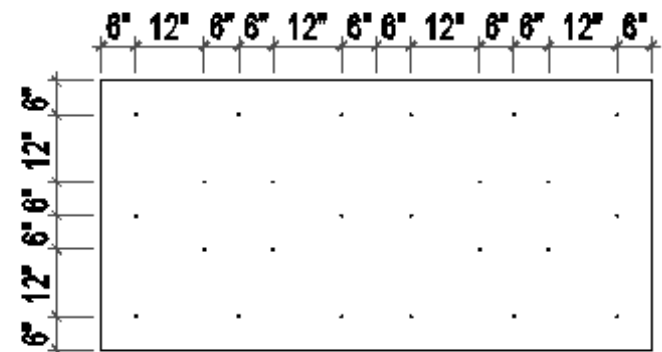
4' x 8'-(8) FASTENERS/BD.



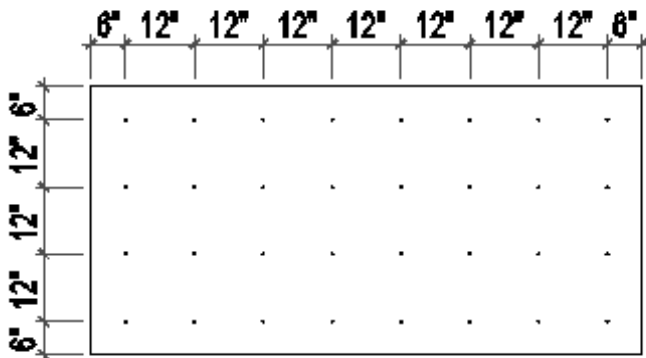
4' x 8'-(12) FASTENERS/BD.



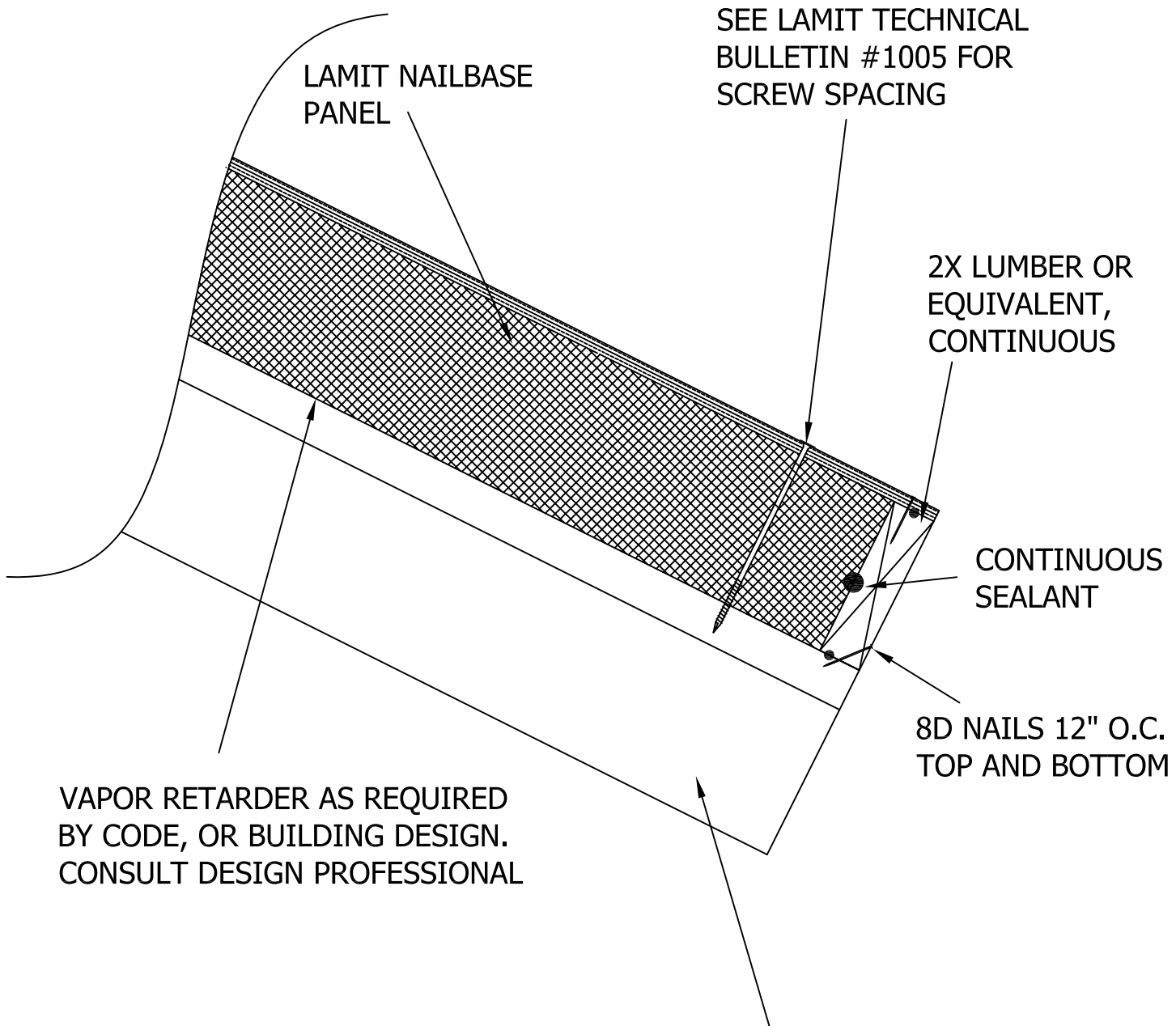
4' x 8'-(16) FASTENERS/BD.



4' x 8'-(24) FASTENERS/BD.



4' x 8'-(32) FASTENERS/BD.



LAMIT NAILBASE
PANEL

SEE LAMIT TECHNICAL
BULLETIN #1005 FOR
SCREW SPACING

2X LUMBER OR
EQUIVALENT,
CONTINUOUS

CONTINUOUS
SEALANT

8D NAILS 12" O.C.
TOP AND BOTTOM

VAPOR RETARDER AS REQUIRED
BY CODE, OR BUILDING DESIGN.
CONSULT DESIGN PROFESSIONAL

NOTE: STRUCTURAL DECK AND
SUPPORT MEMBERS BY OTHERS

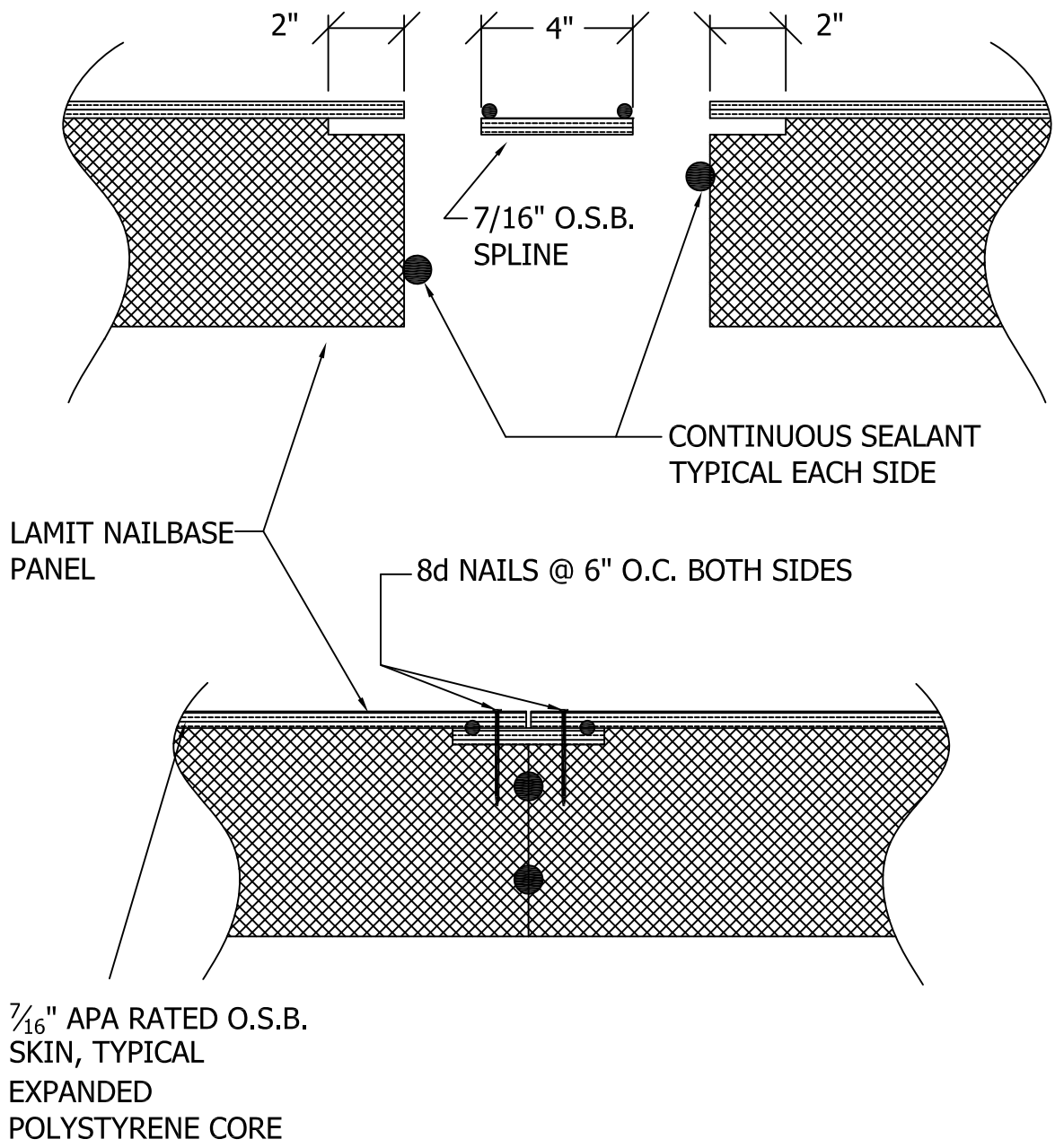
SQUARE CUT EAVE

LAMIT INDUSTRIES, INC.

DETAIL NUMBER:
1200

SCALE : NTS
Updated: 6/14/2012

STRUCTURAL INSULATED PANELS
FOR THE BUILDING INDUSTRY



SURFACE SPLINE CONNECTION

LAMIT INDUSTRIES, INC.

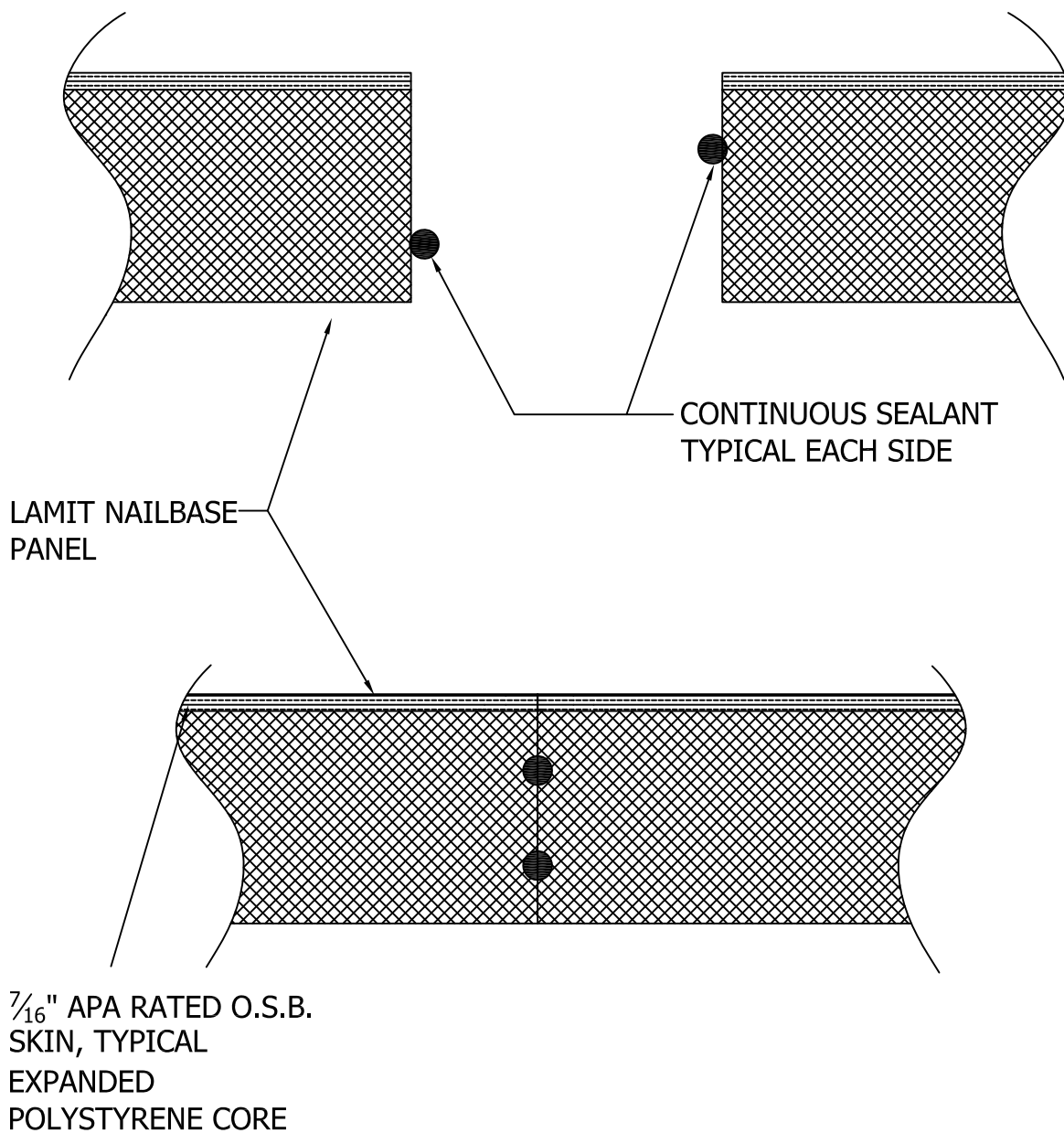
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SCALE : NTS

STRUCTURAL INSULATED PANELS
FOR THE BUILDING INDUSTRY

1201

Updated: 6/14/2012



NAILBASE BUTT CONNECTION

LAMIT INDUSTRIES, INC.

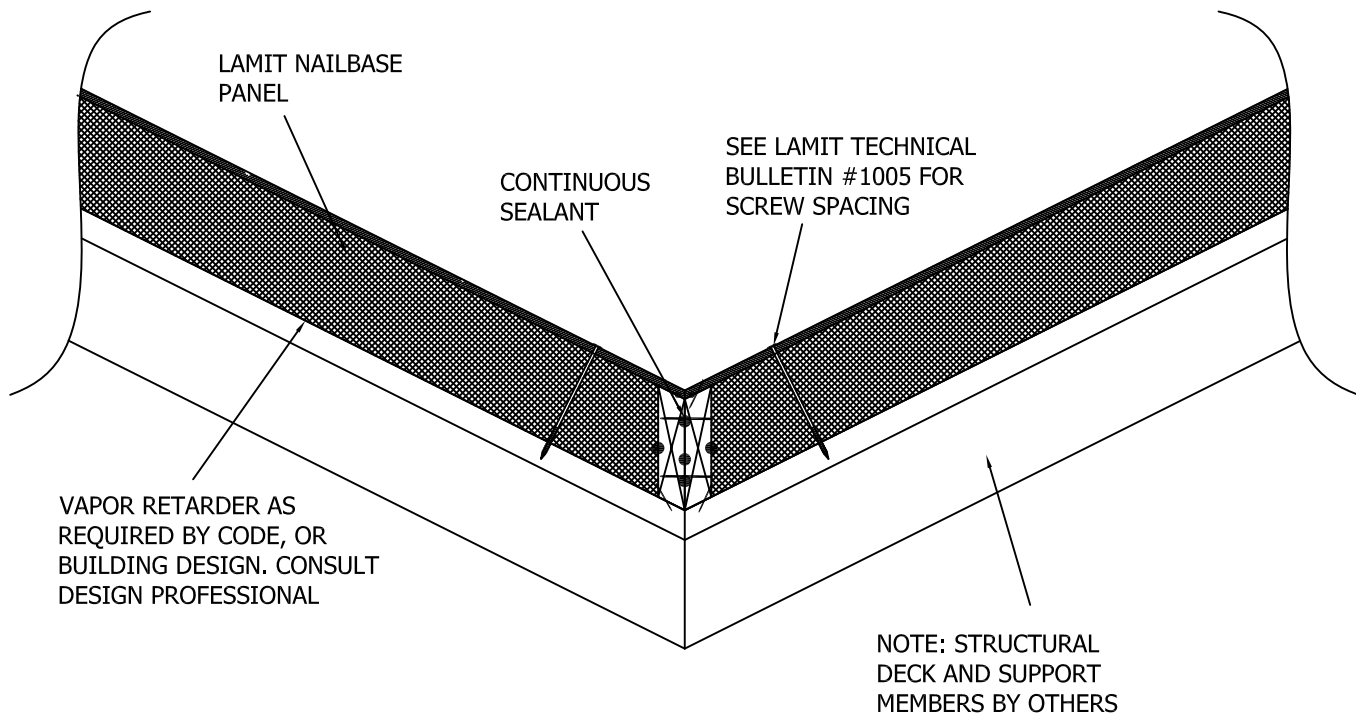
DETAIL NUMBER:

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SCALE : NTS

Updated: 6/14/2012

STRUCTURAL INSULATED PANELS
FOR THE BUILDING INDUSTRY



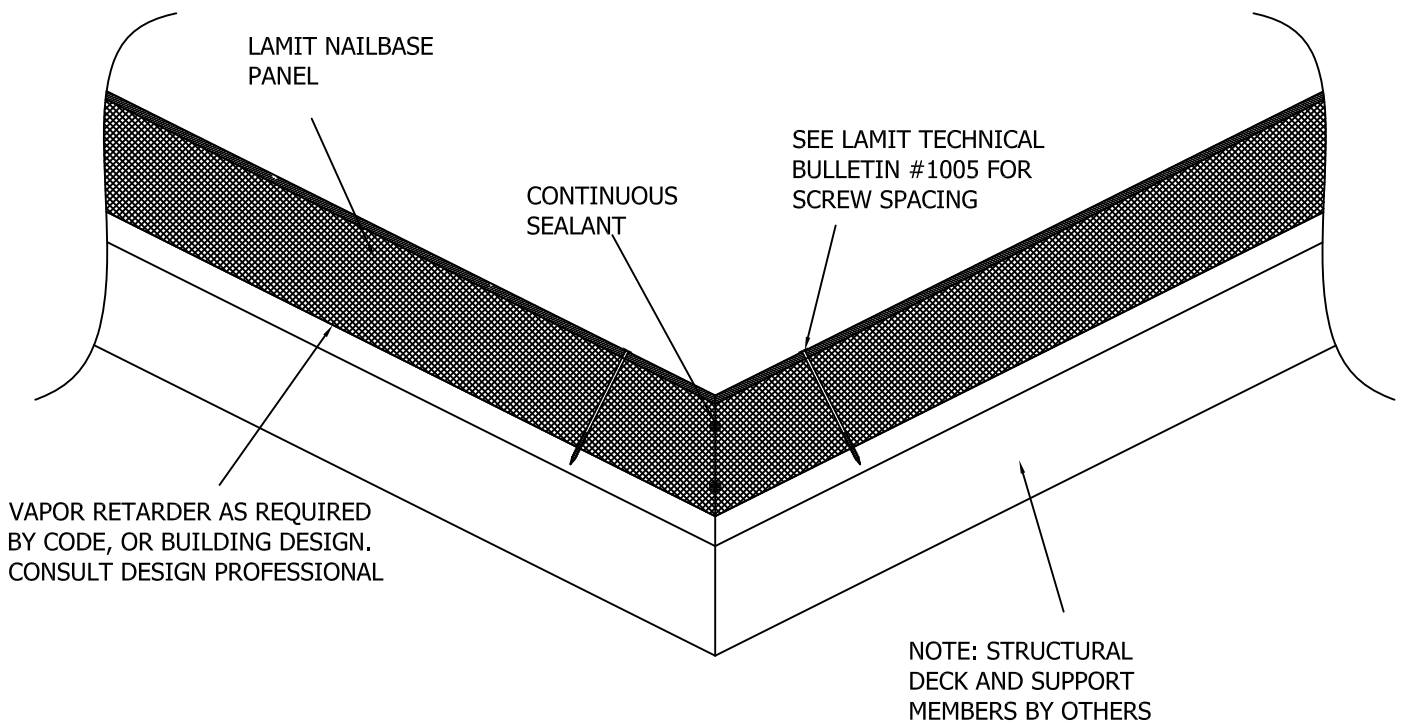
PLUMB CUT VALLEY W/BLOCKING

LAMIT INDUSTRIES, INC.

DETAIL NUMBER:
1203

SCALE : NTS
Updated: 6/14/2012

STRUCTURAL INSULATED PANELS
FOR THE BUILDING INDUSTRY



PLUMB CUT VALLEY DETAIL

DETAIL NUMBER:

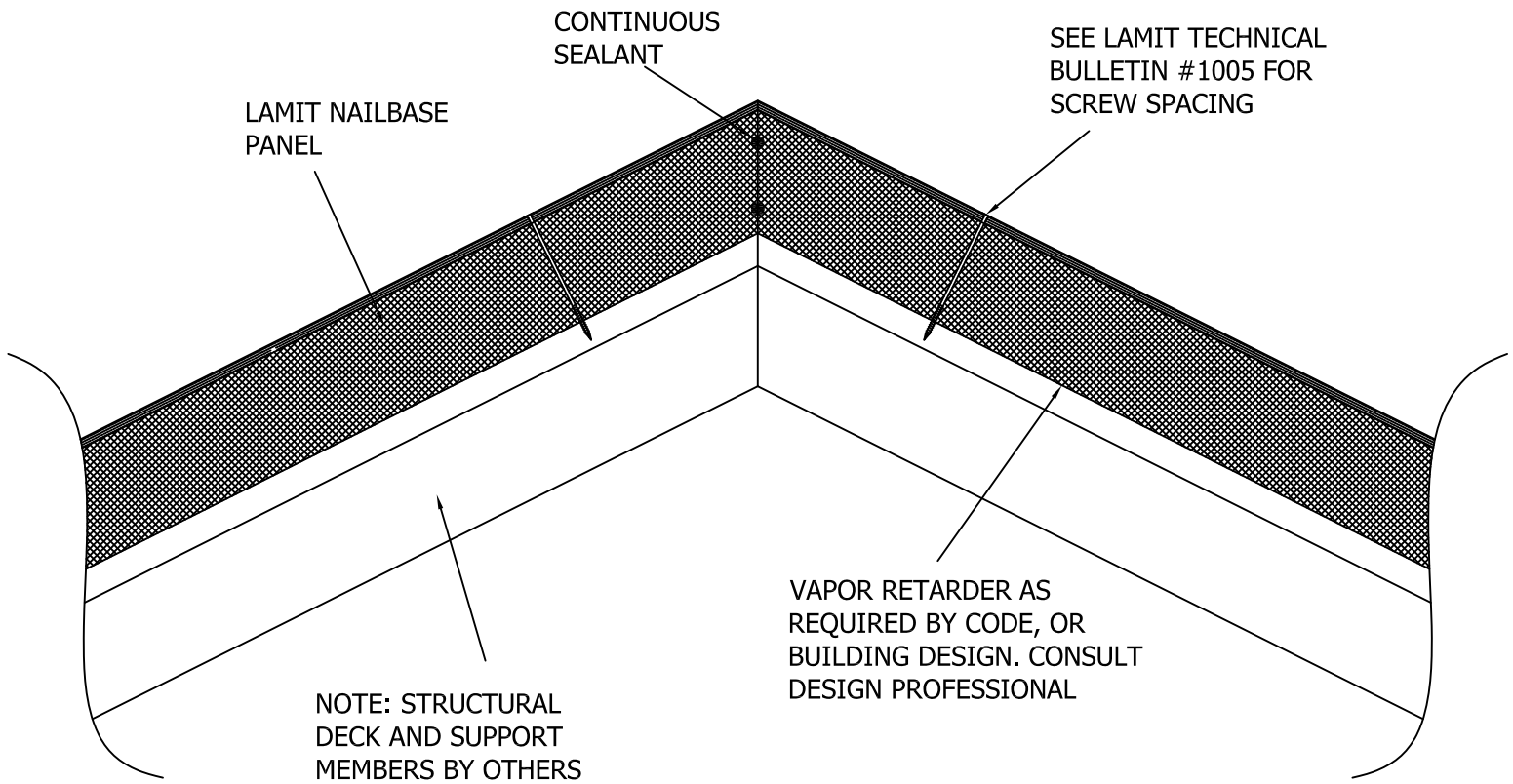
1204

SCALE : NTS

Updated: 6/14/2012

LAMIT INDUSTRIES, INC.

STRUCTURAL INSULATED PANELS
FOR THE BUILDING INDUSTRY



PLUMB CUT RIDGE / HIP

LAMIT INDUSTRIES, INC.

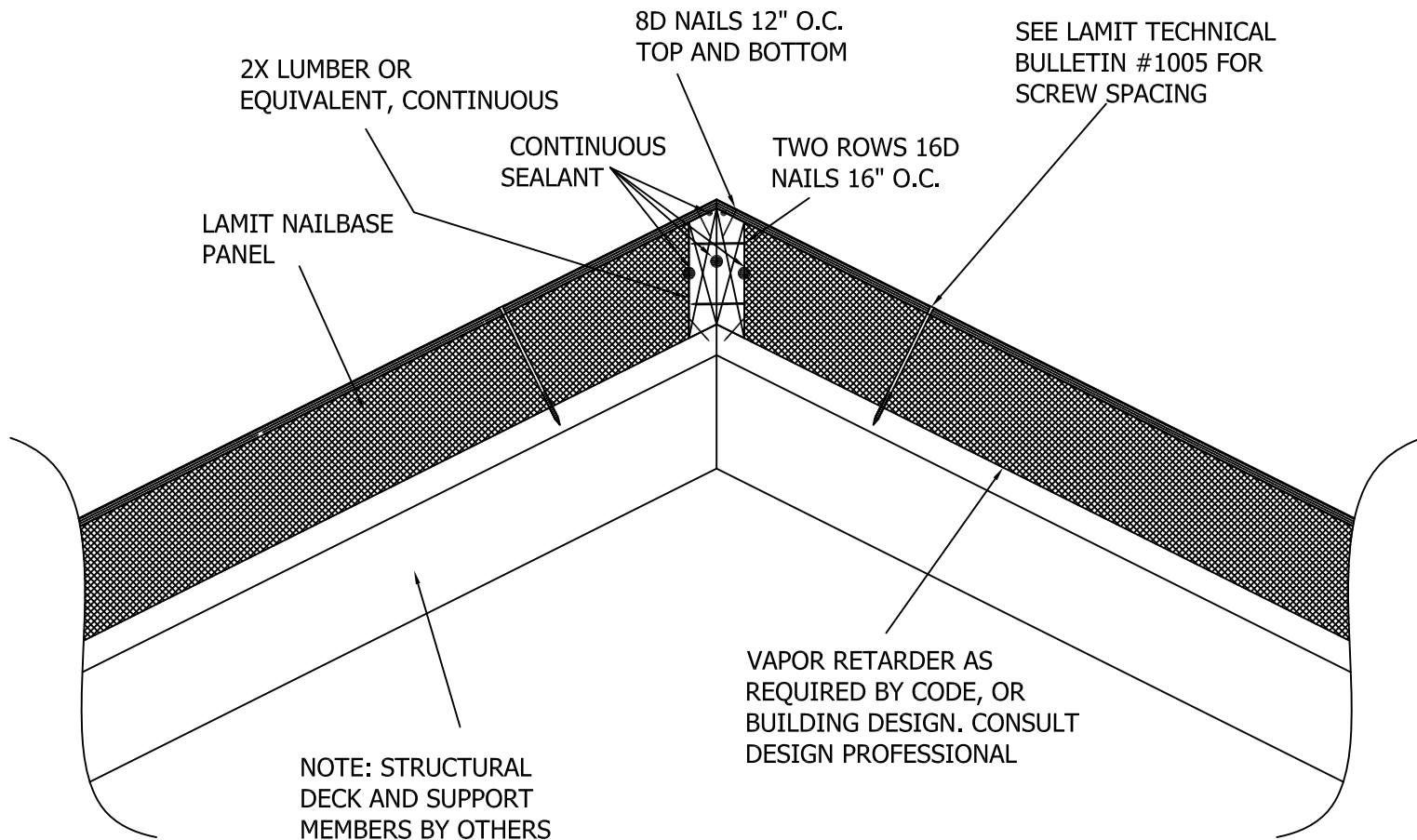
DETAIL NUMBER:

1205

SCALE : NTS

Updated: 6/14/2012

STRUCTURAL INSULATED PANELS
FOR THE BUILDING INDUSTRY



PLUMB CUT RIDGE / HIP WITH BLOCKING

LAMIT INDUSTRIES, INC.

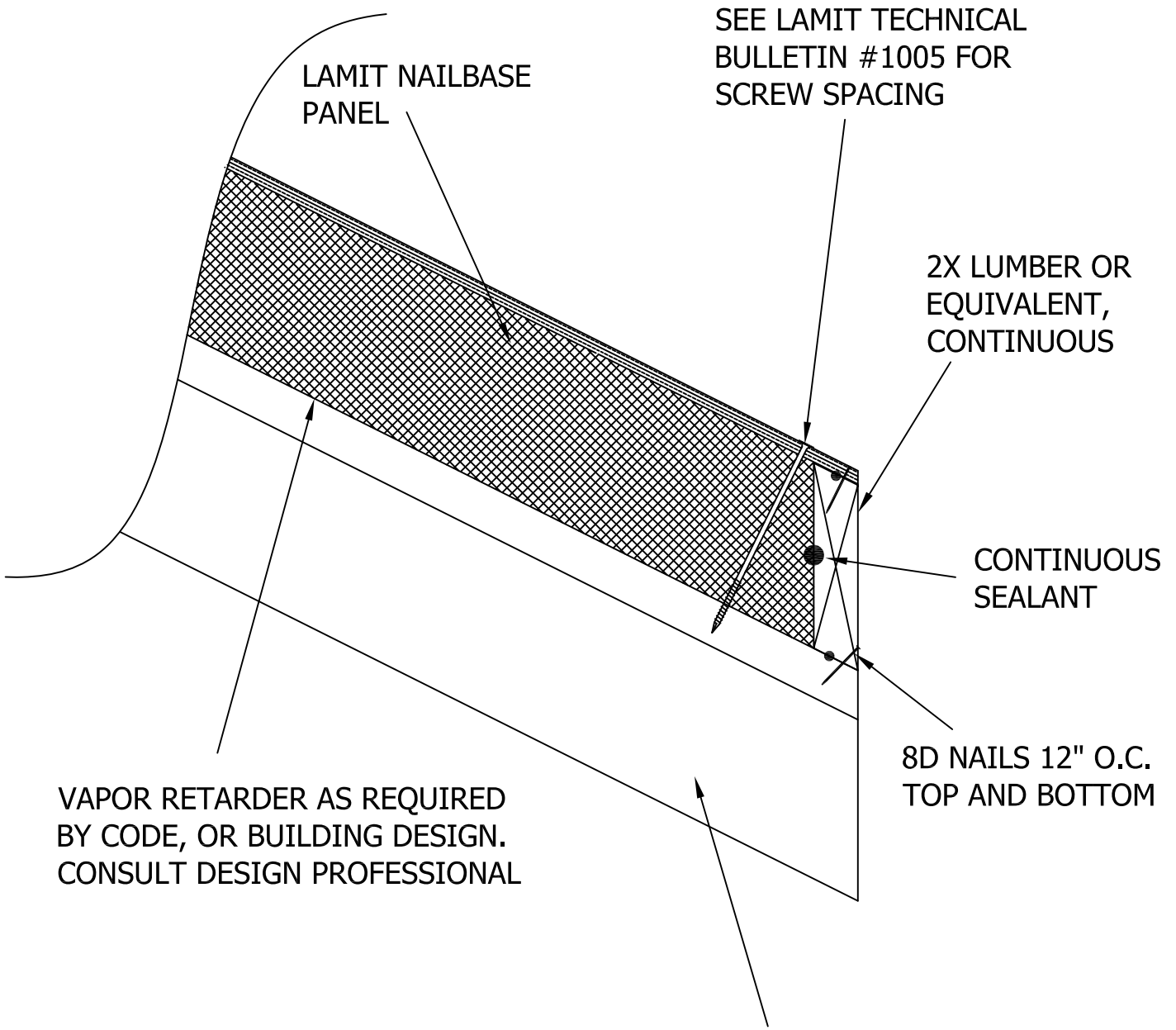
DETAIL NUMBER:

1206

SCALE : NTS

Updated: 6/14/2012

STRUCTURAL INSULATED PANELS
FOR THE BUILDING INDUSTRY



SEE LAMIT TECHNICAL BULLETIN #1005 FOR SCREW SPACING

LAMIT NAILBASE PANEL

2X LUMBER OR EQUIVALENT, CONTINUOUS

CONTINUOUS SEALANT

8D NAILS 12" O.C. TOP AND BOTTOM

VAPOR RETARDER AS REQUIRED BY CODE, OR BUILDING DESIGN. CONSULT DESIGN PROFESSIONAL

NOTE: STRUCTURAL DECK AND SUPPORT MEMBERS BY OTHERS

NAILBASE PLUMB CUT EAVE

LAMIT INDUSTRIES, INC.

DETAIL NUMBER:

1207

SCALE : NTS

Updated: 6/14/2012

STRUCTURAL INSULATED PANELS FOR THE BUILDING INDUSTRY

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SECTION 07 22 16

NAILBASE INSULATION

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Nailbase Insulation.
- B. Related Sections: Section(s) related to this section include:
 - 1. Section 06 10 00 Rough Carpentry

1.02 SYSTEM DESCRIPTION

Nailbase Insulation consisting of oriented strand board (OSB) laminated to an expanded polystyrene (EPS) insulation core.

1.03 REFERENCES

- A. ASTM C578 – Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
- B. PS2 - Performance Standard for Wood-based Structural-use Panels.
- C. ICC ES AC12 – Acceptance Criteria for Foam Plastic Insulation.

1.04 SUBMITTALS

- A. Product Data: Submit product data for specified products.
 - 1. EPS Code Compliance: Provide ICC ES code report for EPS foam with evidence of compliance with code. Code report shall include compliance with ICC ES AC12 (Foam Plastic) and dated July 2009.
 - 2. Manufacturer's Instructions: Nailbase Insulation manufacturer's installation guidelines.
- B. Quality Assurance Submittals: Submit the following:
 - 1. Certificate: certificate showing compliance of EPS insulation to Third Party Quality Control program of Underwriters Laboratories, Inc.
- C. Warranty: Warranty documents specified herein.

1.05 QUALITY ASSURANCE

- A. Source Limitations: Obtain all Nailbase Insulation through one source. All accessories to be as furnished or recommended by the Nailbase Insulation manufacturer.

1.06 DELIVERY, STORAGE & HANDLING

- A. Delivery: Deliver materials from Nailbase Insulation manufacturer with identification labels or markings intact.
- B. Storage: Store products off the ground, in dry conditions, under cover until ready for installation. Protect insulation from open flame and keep dry at all times.

PART 2 PRODUCTS

2.01 Manufacturers/Suppliers:

- A. Lamit Industries, Inc. 710 Marion Rd., Columbus, OH 43207 www.lamitindustries.com Phone 614-444-3010

2.02 Materials

- A. Nailbase Insulation consisting of the following:
 - 1. UL certified EPS core complying with ASTM C578 Type I insulation. Insulation manufacturer shall provide Third Party UL certificate.
 - 2. OSB identified with APA or PFS performance mark with Exposure I durability rating and performance in accordance with DOC PS-2 span rating 24/16 or greater.

2.03 Accessories

- A. Fasteners: corrosion resistant SIP screws compatible with the Nailbase Insulation shall be provided by the Nailbase Insulation manufacturer.
 - 1. Wood Screws for attachment to wood members
 - 2. Heavy Duty Metal Screws for attachment to metal members (16 gauge to 3/16")
 - 3. Light Duty Metal Screws for attachment to metal decks (18 gauge or thinner)
- B. Splines: As required, OSB splines shall be supplied by the Nailbase Insulation manufacturer.
- C. Sealant: As required, Sealant shall be specifically designed for use with Nailbase Insulation. Sealant shall be provided by the Nailbase Insulation manufacturer.
- D. Dimensional Lumber: SPF, #2 or better, or engineered equivalent unless otherwise required by architectural drawings.

2.04 Insulation Size

- A. Sizes: Nailbase Insulation shall be manufactured to sizes in accordance with the approved architectural drawings
- B. Thermal Resistance, R-value
 - 1. 4" thick (Nom.) Nailbase Insulation with R-value of 15 at 75°F (16 at 40°F)
 - 2. 6" thick (Nom.) Nailbase Insulation with R-value of 23 at 75°F (24 at 40°F)
 - 3. 8" thick (Nom.) Nailbase Insulation with R-value of 30 at 75°F (32 at 40°F)
 - 4. 10" thick (Nom.) Nailbase Insulation with R-value of 38 at 75°F (40 at 40°F)
 - 5. 12" thick (Nom.) Nailbase Insulation with R-value of 46 at 75°F (48 at 40°F)

2.05 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted without thirty day (30) prior approval.

2.06 SOURCE QUALITY

- A. Source Quality Assurance: All components (excluding dimensional lumber) required shall be supplied by Nailbase Insulation manufacturer or its approved supplier.
 - 1. Provide evidence of UL Third Party inspection and labeling of all EPS insulation used in manufacture of Nailbase Insulation.
 - 2. Nailbase Insulation manufacturer shall provide 20 year 100% R-Value warranty.
- B. Source Quality: Obtain Nailbase Insulation from a single manufacturer.

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Install in accordance with manufacturer's instructions.
- B. Deviations from standard detail and design values shall be approved by the architect/engineer for the project.

3.02 EXAMINATION

- 1. Site Verification of Conditions: Verify substrate conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions.

3.03 INSTALLATION

A. Nailbase Insulation Installation:

1. Fastening: Attach Nailbase Insulation with OSB facing up, to structural deck/substrate, using SIP screws as shown on drawings. SIP screw to have a minimum of 1" (25.4 mm) penetration into structural deck/substrate.
2. Vapor Retarders: Provide vapor retarders as mandated by building code or engineering analysis.

3.04 PROTECTION

A. Protection: Protect installed product and finish surfaces from damage during construction.

1. Protect Nailbase Insulation from weather by installing roofing materials to provide temporary protection at the end of the day or when rain or snow is imminent.
2. Install weather resistant roofing and/or cladding materials per roofing and/or cladding manufacturers' specifications and recommendations.
3. Nailbase Insulation shall be protected from exposure to solvents and their vapors.

END OF SECTION