

BARRICADE THERMO-PRO EPS INSTALLATION GUIDE

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For more information, or to contact a Barricade representative, visit our website at www.BarricadeBP.com and click "Contact Us".

This manual will be updated regularly. Current updates will be available at www.BarricadeBP.com



1. PRECAUTIONS FOR HANDLING, STORAGE & INSTALLATION

Precautionary measures taken in packaging, storage, transportation and installation of Barricade products can help minimize the potential for damage to the products.

1.1 - JOBSITE STORAGE AND HANDLING

Barricade products should be protected from reflective sunlight or prolonged solar exposure.

Always keep stored Barricade products tarped or covered to protect from weather. Do not use a clear plastic covering film. If possible, store indoors.

1.2 - INSTALLATION

Until cladding is installed over Thermo-Pro the following recommendations will help ensure installed Barricade products are restored to its original dimensions in the event of thermal expansion, and minimize damage due to reflective sunlight or prolonged solar exposure.

- Remove or cover the surface that is casting a reflection on installed Barricade products, or shield the affected Barricade products.
- Cover Thermo-Pro if left exposed for more than 30 days. Faded printing on Barricade laminates is normal and will not degrade the Barricade properties.
- Ensure all butt joints are tightly fitted. "5.6 SEALING JOINTS AND FASTENER PENETRATIONS" on page 12.
- Immediately tape seal or temporarily cover all joints of inside corners until tape sealant is applied. Edges of Subterra products installed on subgrades and adjacent to Thermo-Pro should also be immediately covered until proper sealant method is applied along the perimeter between Thermo-Pro and Subterra.

For more information contact your local Barricade representative.



2. USEFUL TOOLS & MATERIALS

Recommended for sealing joints, penetrations, perimeter edges and flashing details

- Barricade Sheathing Tape
- Vapor barrier blue or red Tuck Tape
- 3M peel and stick membrane
- Blueskin flashing tape
- Expandable foam.

Recommended for fastening or gluing

- Weather resistive construction glue, such as PL 300
- Plastic cap nails
- Roofing nails with at least 1/2" diameter washers
- Cap staples
- Wood screws with metal roof washers.

When fastening to metal studs use self-drilling screws with at least 1" diameter metal washers.

Additional tools:

- Hammer and cordless drill
- Utility knife and straight edge

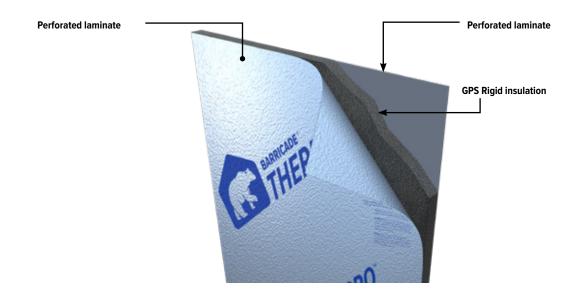
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3. PRODUCT DESCRIPTION

3.1 - FEATURES

Thermo-Pro is a rigid foam sheathing insulation faced with a polypropylene laminate that is perforated to allow the sheathing to breath. The Insulation is made from Expanded Polystyrene (EPS foam).



3.2 - BENEFITS

When installed as exterior insulation Thermo-Pro offers the following functional benefits.

- Provides continuous insulation, which reduces thermal breaks.
- Increases the R-value of wall assemblies that cannot be achieved with cavity insulation alone.
- Acts as a water-resistive barrier eliminates the need for house wrap when the joints are sealed and taped. This reduces air leakage and ensures moisture transmission through the cladding will drain to the outside.
 A house wrap is not required with Thermo-Pro for thicknesses 9/16" or greater.
- Contains perforations, which allow Thermo-Pro to breathe.
 Because Thermo-Pro is breathable, a vapor barrier may be required for the wall assembly.
 Thermo-Pro remains breathable with thicknesses up to 2 inches.
- Reduces heat gains in warm climates when an air gap is provided between Thermo-Pro and the cladding (applicable only where Thermo-Pro is available with a reflective laminate).

3.3 - AVAILABLE SIZES

Available in 4ft x 8ft sheets, 1/2", 9/16", 5/8", 1", 1.5" and 2" thickness. Custom sizes and thicknesses are available. Contact your local Barricade representative for availability.



4. APPLICATION

Suitable for use for new construction and existing buildings, Barricade Thermo-Pro is designed to completely insulate exterior above-grade walls in residential, multi-residential, commercial, and industrial buildings while providing a breathable water-resistive barrier.

5. INSTALLATION

The following illustrations are typical for the installation of Barricade Thermo-Pro as interior insulation.

Installation may vary depending on project specific requirements. Before starting, make sure all installation complies with local building code requirements.

Thermo-Pro consists of a perforated laminate allowing the sheathing to breath. Therefore, an additional vapor barrier may be required for the wall assembly.

NOTE: Where Thermo-Pro is available with a reflective or white laminate on one side of the insulation it is recommended that Thermo-Pro is installed with these laminates facing the exterior.

5.1 - FASTEN THERMO-PRO TO THE WALL SUBSTRATE

Thermo-Pro is fastened directly to the wall substrate or framing members, such as wood sheathing, wood or steel stud framing, concrete or masonry walls.

Attach Thermo-Pro at corners, as a minimum, to the substrate or framing members. A minimal number of fasteners is required to tack Thermo-Pro sheets in place – the attachment of cladding, or strapping will fully secure Thermo-Pro sheets.

Place Thermo-Pro against the wall substrate either vertically or horizontally. For tall walls installing vertically is preferable.

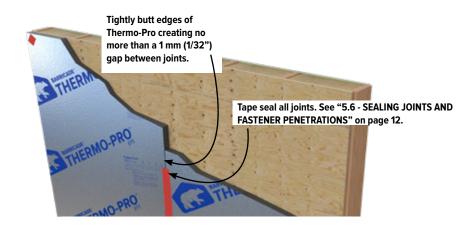
For information on fastener information see "6.0 – FASTENING Thermo-Pro" on page 18.



BARRICADE INSTALLATION GUIDE: RIGID FOAM INSULATION

5.2 - FRAMED WALLS WITH WOOD SHEATHING

Fasten Thermo-Pro directly over the wood sheathing. For existing framed wall buildings remove the cladding material and house



wrap to expose the wood sheathing.

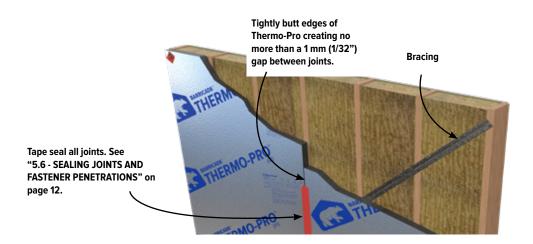
For information on fastening Thermo-Pro over wood sheathing see "6.0 – FASTENING" on page 18.

5.3 - FRAMED WALLS WITHOUT WOOD SHEATHING

Thermo-Pro can be installed directly over wall studs. Since Thermo-Pro is not structural sheathing the walls will require bracing, per local building codes.

5.3.1 - DIAGONAL BRACING

Some examples of typical bracing include metal T-straps, or 1x4 wood let-in. Typical corner bracing includes wood sheathing at the corners, such as OSB or plywood.





Barricade

studs.

Thermo-Pro

- thicker over

5.3.2 - WOOD SHEATHING BRACING

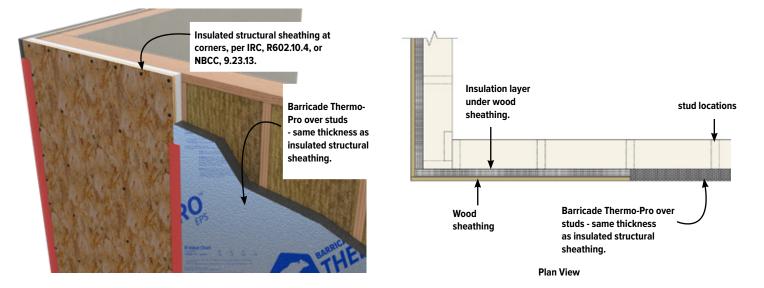
Thermo-Pro is installed over the entire home after the structural sheathing are installed as corner bracing. The panels add thickness to the framed wall at the corner regions so Thermo-Pro will be thinner over the sheathing than areas without sheathing. This ensures the exterior face of Thermo-Pro remains flush along the walls.



Barricade Thermo-Pro - thinner over wood sheathing.

5.3.3 - INSULATED WOOD SHEATHING BRACING

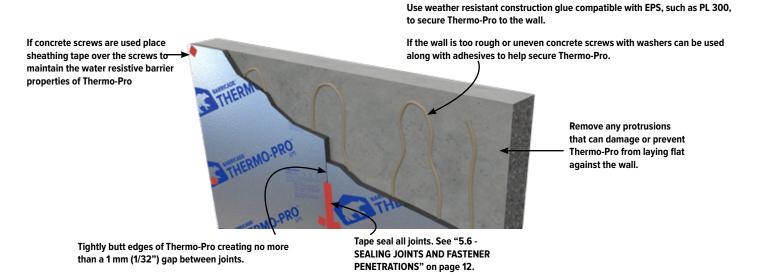
Insulated wood structural panels, such as Zip System R-Sheathing, used as corner bracing offers continuous insulation built into the structural sheathing. In this case, Thermo-Pro is not required over the structural panel but should be thick enough to match the thickness of the structural sheathing and its underlying insulation layer throughout the entire wall.





For more information on fastening Thermo-Pro direct to wall studs and corner bracing see "6.0 – FASTENING Thermo-Pro" and online Technical Bulletin No.12, respectively.

5.4 - CONCRETE OR MASONRY WALLS

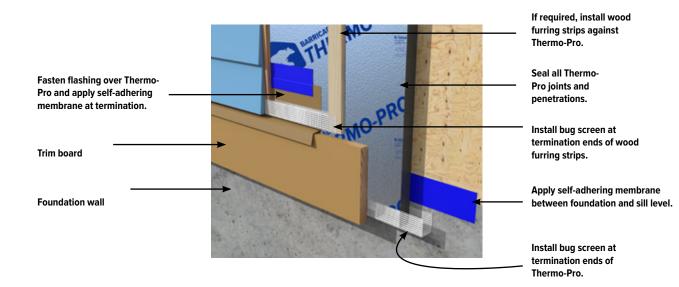


5.5 - TRANSITIONS

There are different methods to ensuring Thermo-Pro performs as a water-resistive barrier, and properly drains moisture to the exterior.

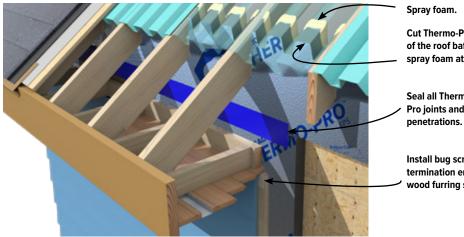
The following illustrations are detail examples for transitions the foundation and roof level.

5.5.1 - FOUNDATION TRANSITION





5.5.2 - ROOF TRANSITION



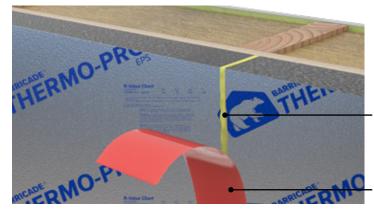
Cut Thermo-Pro to underside of the roof baffles. Apply spray foam at termination.

Seal all Thermo-Pro joints and

Install bug screen at termination ends of wood furring strips.

5.6 - SEALING JOINTS AND FASTENER PENETRATIONS

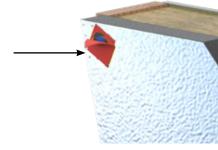
Joints between Thermo-Pro boards, and fastener penetrations, should be sealed. This will maintain the water-resistive barrier properties of Thermo-Pro, especially when Thermo-Pro is intended to be used as the water-resistive barrier, in lieu of a separate membrane such as house wrap.



Joints should be tight and snug. Foam fill and tape over joints with gaps 1/16" or larger.

Seal all joints with sheathing or flashing tape.

Place sheathing tape over fasteners to maintain the water resistive barrier properties of Thermo-Pro

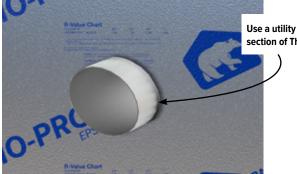




5.6.1 - PENETRATIONS

Measure and cut Thermo-Pro to suit the rough opening for penetrations. Thermo-Pro boards can be cut using a utility knife. The following illustrations provide a typical example of addressing proper drainage and insulation around a penetration.

Step 1: Cut a rough opening.

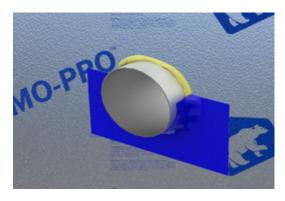


Use a utility knife to cut a section of Thermo-Pro.

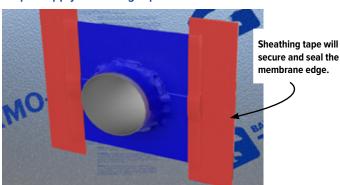
Step 2: Apply spray foam to fill gaps.



Step 3: Apply self-adhesive membrane at bottom half.



Step 5: Apply sheathing tape.

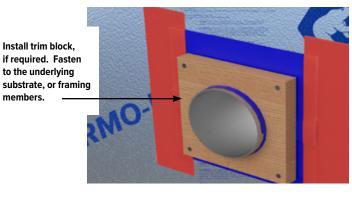


Provide overlap to maintain proper drainage.

1/8".

Applying the membrane around the pipe or conduit will provide additional prevention against air ingress.

Step 6: Install trim block.

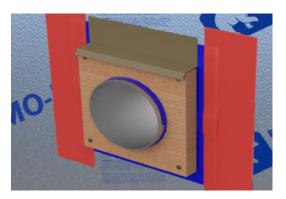




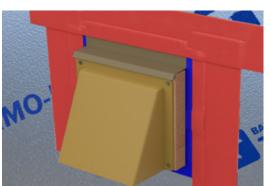
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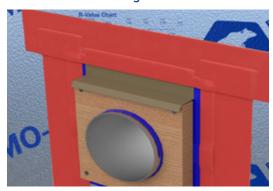
Step 7: Install flashing.



Step 9: Fasten cover to trim block.



Step 8: Apply sheathing tape to seal edge of membrane and flashing.

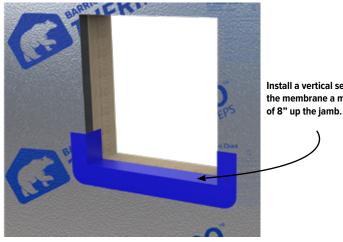




5.6.2 - OPENINGS

The following illustrations provide a typical example of addressing proper drainage and insulation around a flanged window. For additional window opening details refer to "10.0 - EXAMPLE CAD DETAILS" on page 38.

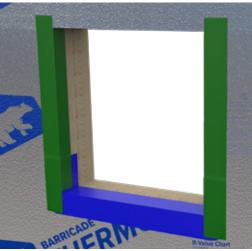
Step 1: After cutting a section of Thermo-Pro to match the rough opening, install a self-adhering flashing membrane at the sill.



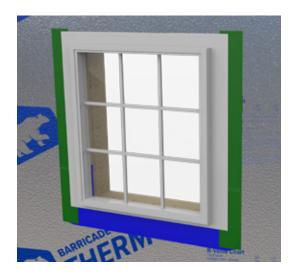
Install a vertical section of the membrane a minimum

the jam.

Step 2: Install a self-adhering membrane along the length of



Step 3: Install the flanged window and fasten to the substrate.



Step 4: Install a self-adhering membrane along the length of the jam over the flanges.



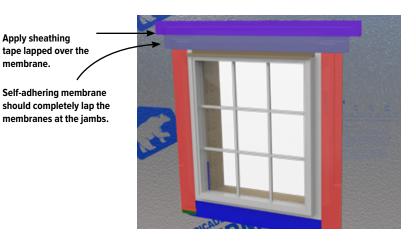


Step 5: Install the head flashing.



Step 7: if required, install furring strips around the opening.

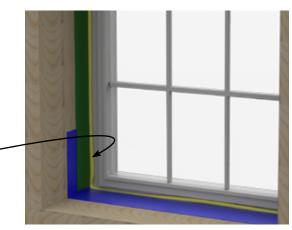




Step 8: Install trim boards and fasten to the furring strips or substrate.



Step 10: Apply spray foam.





Step 9: Install cladding, as required.

Find more information at: barricadebp.com 1-877-832-0333

Apply a compatible sealant between cladding and trim boards.

Apply spray foam between rough opening and window.

5.7 - CLADDING

Cladding and wood strapping can be installed directly over Thermo-Pro with the use of fasteners.



Fasten cladding to the substrate, or if required to the wood furring strips. See "8.0 - CLADDING OVER Thermo-Pro" on page 33.

5.8 - CAVITY WALLS

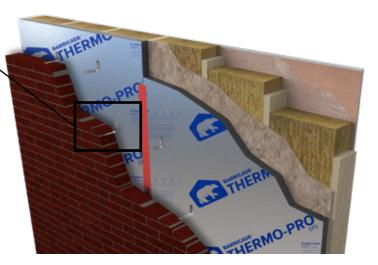
Fasten Thermo-Pro directly to the wall substrate using appropriate fasteners.

There are a number of available brick ties designed to be compatible for foam sheathing. Below is a list of compatible brick ties.

• Slotted Stud Tie, Fero Corp., ferocorp.com

Fasteners for brick ties must penetrate the Thermo-Pro layer and at least 3/4" into the wall substrate.





- Pos-i-Tie, Heckmann Building Products, heckmannbuildingprods.com
- X-Seal Anchor, Hohmann & Barnard, H-b.com
- Dur-O-Wal Veneer Anchors, Dayton Superior, daytonsuperior.com.



6. FASTENING THERMO-PRO

This section is a guide to fastening:

- Thermo-Pro to wall substrate
- Cladding or wood strapping over Thermo-Pro.

Thermo-Pro is not structural so a minimal number of fasteners is required to tack Thermo-Pro sheets in place – the attachment of cladding, strapping, and housewrap will fully secure Thermo-Pro boards.

6.1 - TYPICAL FASTENER TYPES

Fasteners with washer types are recommended to secure Thermo-Pro boards with the top of the fasteners flush to the surface of Thermo-Pro boards.

Typical fastener types include, but are not limited to:

- Plastic cap nails,
- roofing nails with at least ½" diameter washers,
- cap staples,
- or wood screws with metal roof washers.

When fastening to metal studs use screws with at least 1" diameter metal washers.

6.2 - TYPICAL NAILING PATTERNS OVER WOOD SHEATHING & OPEN STUD ASSEMBLY

The following provides suggested nailing patterns when installing Thermo-Pro over wood sheathing or direct to wood studs. Guide lines printed on the Thermo-Pro boards can be used to locate studs and fastening points.

To maintain the water resistive barrier and continuous insulation properties all fasteners and joints should be covered with sheathing tape. In addition, large gaps should be foam filled prior to covering with sheathing tape. For more information refer to "5.6 - SEALING JOINTS AND FASTENER PENETRATIONS" on page 12.

For information on recommended fastener lengths refer to "6.4 - RECOMMENDED FASTENER LENGTHS" on page 30.



BARRICADE INSTALLATION GUIDE: RIGID FOAM INSULATION

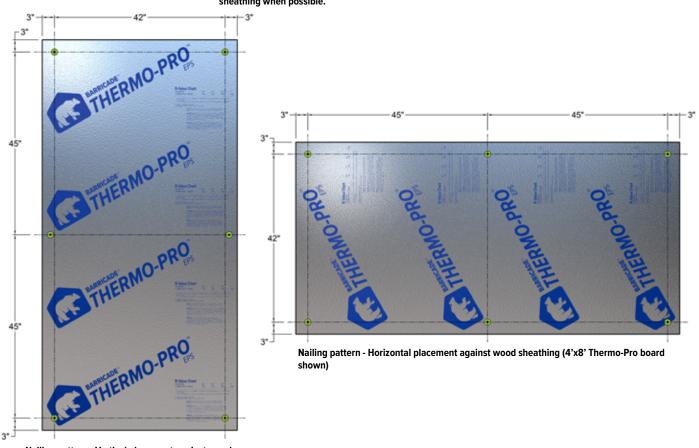
6.2.1 - OVER WOOD SHEATHING

Fastening into wood studs is not required when installing Thermo-Pro over wood sheathing - the wood sheathing will provide sufficient backing for fasteners.

Thermo-Pro can be placed either horizontally or vertically without the need to stagger vertical joints in a running bond pattern. However, offsetting the joints in Thermo-Pro to that of the wood sheathing is recommended to minimize air gaps and improve air tightness.



Offset horizontal and vertical joints between Thermo-Pro and wood sheathing when possible.



Nailing pattern - Vertical placement against wood sheathing (4'x8' Thermo-Pro board shown)

TYPICAL NAILING PATTERNS OVER WOOD SHEATHING

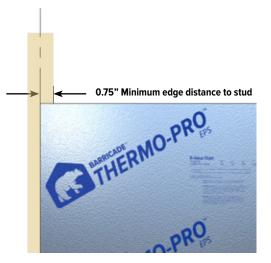


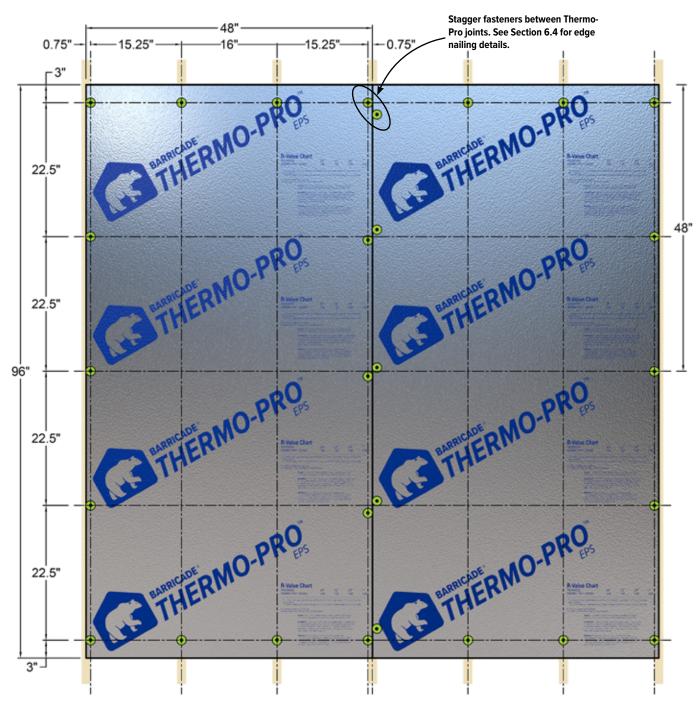
6.2.2 - OVER OPEN STUD ASSEMBLY

Thermo-Pro boards are fastened direct to the wood studs in an open stud wall assembly.

Since Thermo-Pro boards are non-structural, the stud wall assembly must be properly braced, as required by building codes or structural specifications.

Thermo-Pro can be placed either horizontal or vertically. The vertical joints of Thermo-Pro boards should rest fully or halfway on a stud to ensure proper fastening to the stud. [show image]

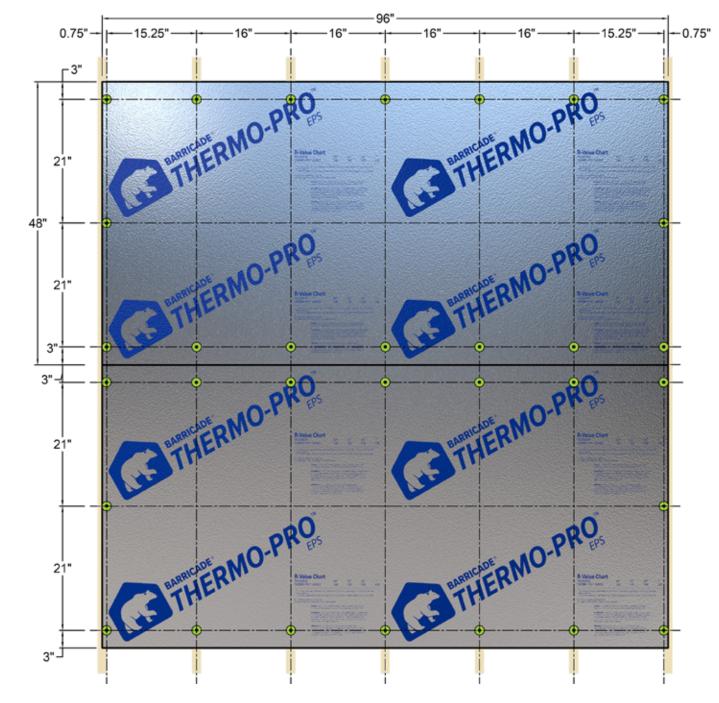




Nailing pattern - Vertical placement against 16" wood stud spacing (4'x8' Thermo-Pro boards shown). Use printed guidelines on Thermo-Pro boards to approximate vertical spacing of fasteners.

TYPICAL NAILING PATTERN OVER OPEN STUD ASSEMBLY VERTICAL INSTALLATION OVER 16" STUD SPACING

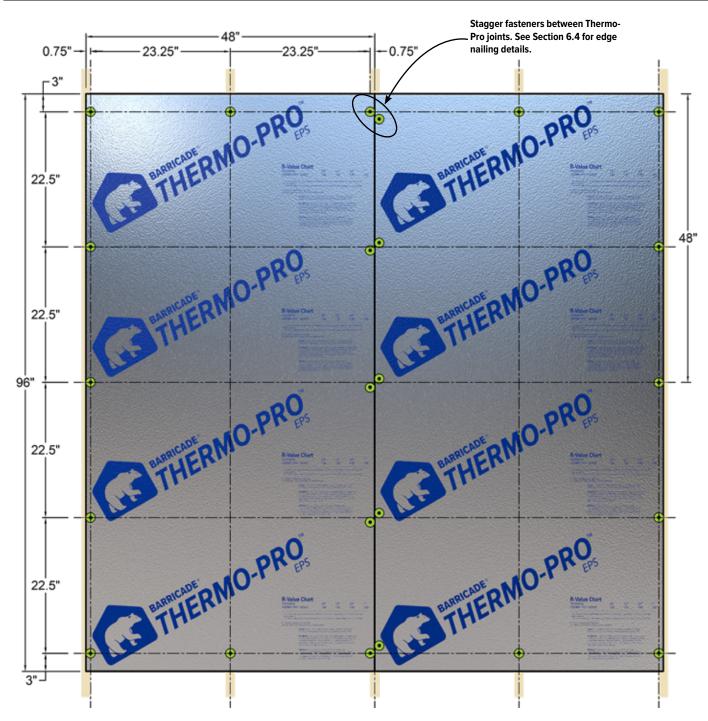




Nailing pattern - Horizontal placement against 16" wood stud spacing (4'x8' Thermo-Pro boards shown). Printed guidelines on Thermo-Pro boards can be used to locate studs.

TYPICAL NAILING PATTERN OVER OPEN STUD ASSEMBLY HORIZONTAL INSTALLATION OVER 16" STUD SPACING

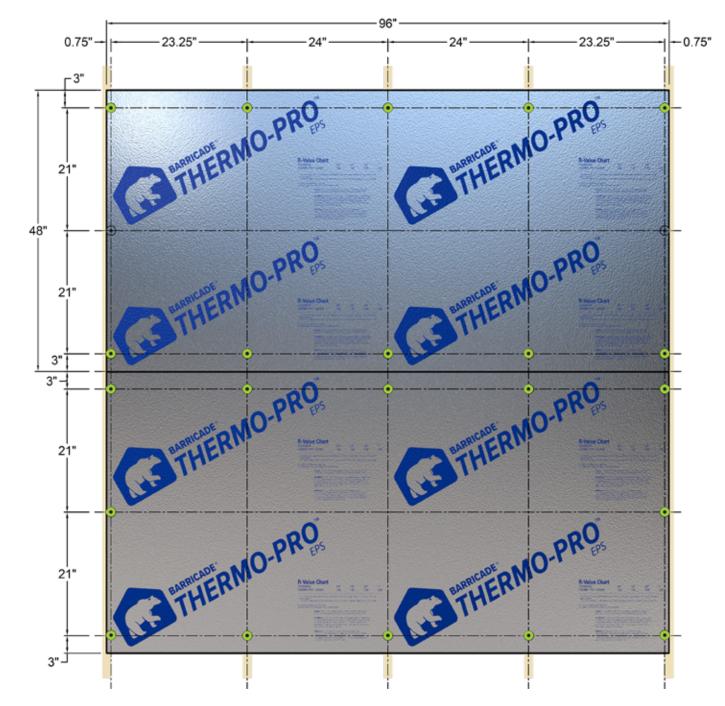




Nailing pattern - Vertical placement against 24" wood stud spacing (4'x8' Thermo-Pro boards shown). Use printed guidelines on Thermo-Pro boards to approximate vertical spacing of fasteners.

TYPICAL NAILING PATTERNS OVER OPEN STUD ASSEMBLY VERTICAL INSTALLATION OVER 24" STUD SPACING





Nailing pattern - Horizontal placement against 24" wood stud spacing (4'x8' Thermo-Pro boards shown). Printed guidelines on Thermo-Pro boards can be used to locate studs.

TYPICAL NAILING PATTERNS OVER OPEN STUD ASSEMBLY HORIZONTAL INSTALLATION OVER 24" STUD SPACING



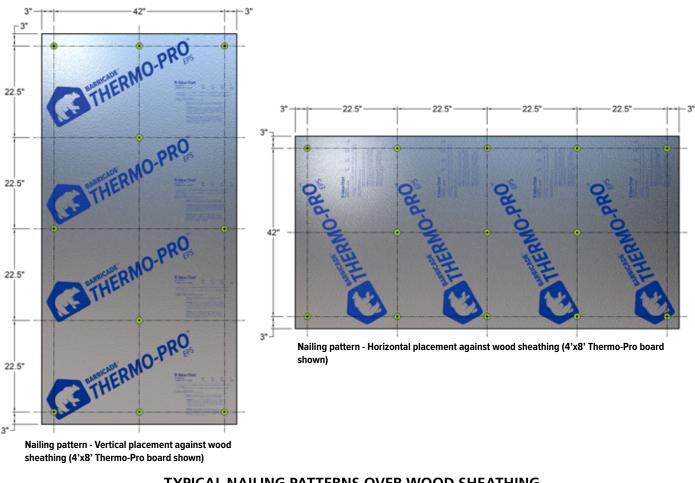
6.3 - NAILING PATTERNS FOR PREFABRICATED WALL ASSEMBLIES

When Thermo-Pro is installed in a factory-built wall system additional fasteners are required to secure Thermo-Pro boards due to handling and transportation of the prefabricated wall assembly.

Since Thermo-Pro boards are non-structural, the wall assembly must be properly braced, as required by building codes or structural specifications.

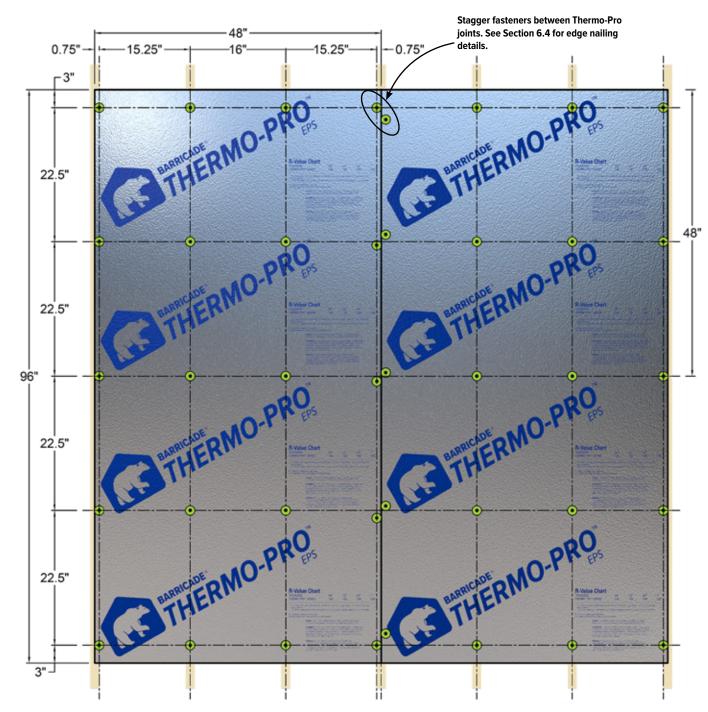
Before cladding is installed over Thermo-Pro inspect the Thermo-Pro boards for any visible signs of damage, and to ensure all taped joints and penetrations are properly adhered to Thermo-Pro.

For information on inspecting and repairing installed Thermo-Pro boards, refer to "7.0 - INSPECTION & REPAIRS" on page 32.



TYPICAL NAILING PATTERNS OVER WOOD SHEATHING PREFABRICATED WALL ASSEMBLIES

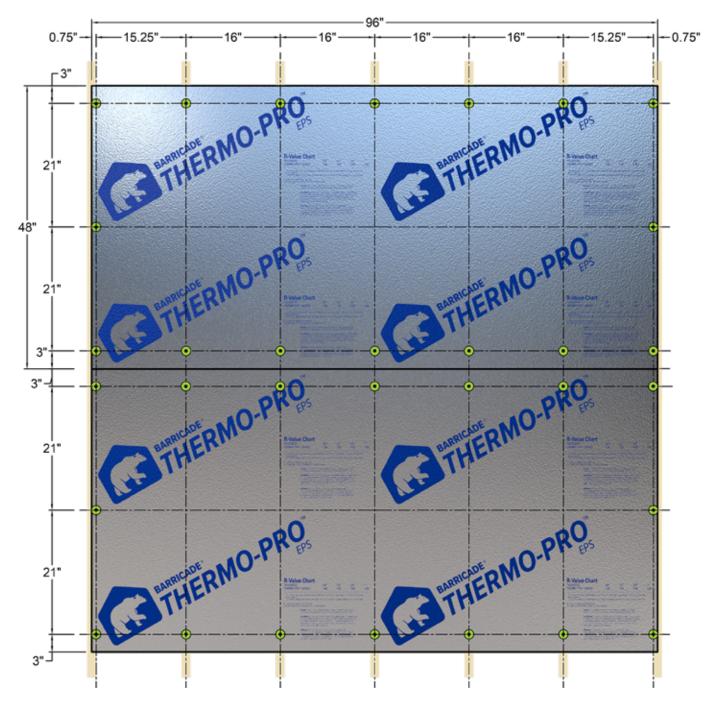




Nailing pattern - Vertical placement against 16" wood stud spacing (4'x8' Thermo-Pro boards shown). Use printed guidelines on Thermo-Pro boards to approximate vertical spacing of fasteners.

PREFABRICATED WALL ASSEMBLIES TYPICAL NAILING PATTERN OVER OPEN STUD ASSEMBLY VERTICAL INSTALLATION OVER 16" STUD SPACING

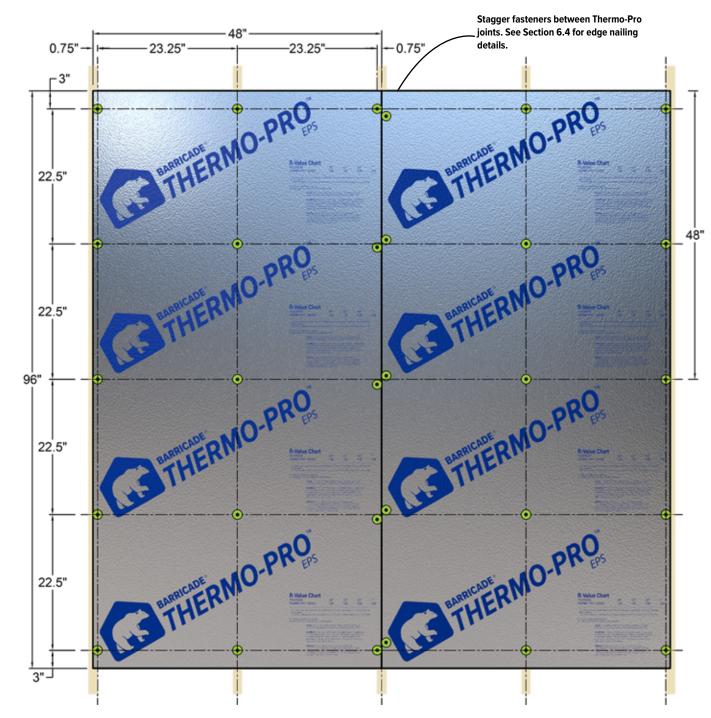




Nailing pattern - Horizontal placement against 16" wood stud spacing (4'x8' Thermo-Pro boards shown). Printed guidelines on Thermo-Pro boards can be used to locate studs.

PREFABRICATED WALL ASSEMBLIES TYPICAL NAILING PATTERN OVER OPEN STUD ASSEMBLY HORIZONTAL INSTALLATION OVER 16" STUD SPACING

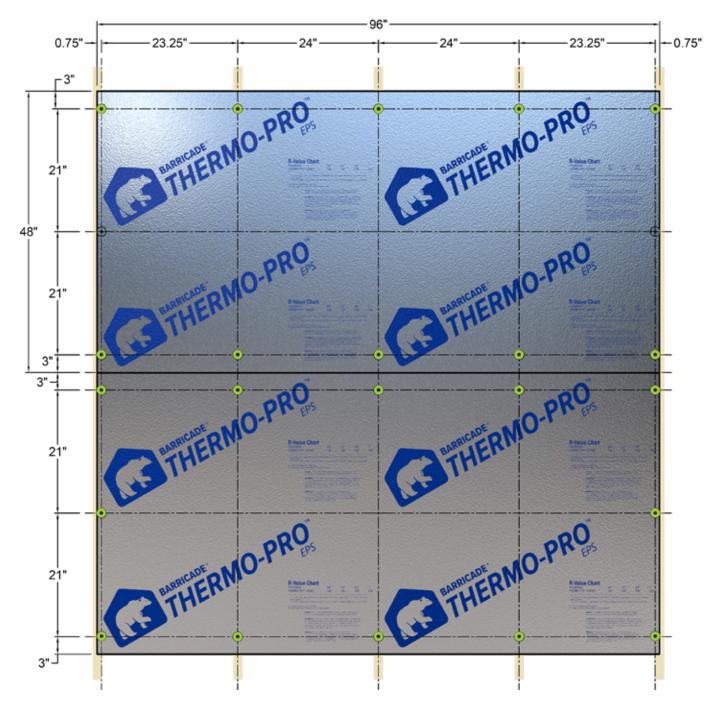




Nailing pattern - Vertical placement against 24" wood stud spacing (4'x8' Thermo-Pro boards shown). Use printed guidelines on Thermo-Pro boards to approximate vertical spacing of fasteners.

PREFABRICATED WALL ASSEMBLIES TYPICAL NAILING PATTERN OVER OPEN STUD ASSEMBLY VERTICAL INSTALLATION OVER 24" STUD SPACING





Nailing pattern - Horizontal placement against 24" wood stud spacing (4'x8' Thermo-Pro boards shown). Printed guidelines on Thermo-Pro boards can be used to locate studs.

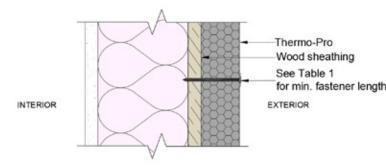
PREFABRICATED WALL ASSEMBLIES TYPICAL NAILING PATTERN OVER OPEN STUD ASSEMBLY HORIZONTAL INSTALLATION OVER 24" STUD SPACING



6.4 - RECOMMENDED FASTENER LENGTHS

6.4.1 - OVER WOOD SHEATHING

Fasteners should be long enough to penetrate Thermo-Pro and completely through the wood sheathing substrate.

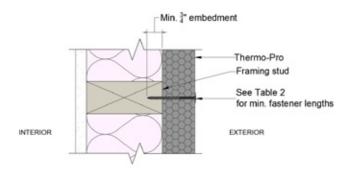


	Sheathing					
		Minimum Fastener Lengths				
hs	Thermo-Pro Thickness	1/2" Wood Sheathing	5/8" Wood Sheathing	3/4" Wood Sheathing		
	9/16" or 5/8"	1 1/8″	1 1/4″	1 3/8″		
	1″	1 1/2″	1 5/8″	1 3/4″		
	1 1/2″	2″	2 1/8″	2 1/4″		
	2″	2 1/2″	2 5/8″	2 3/4″		

Table 1: Thermo-Pro Fastened to Wood

6.4.2 - OVER WOOD STUD ASSEMBLY

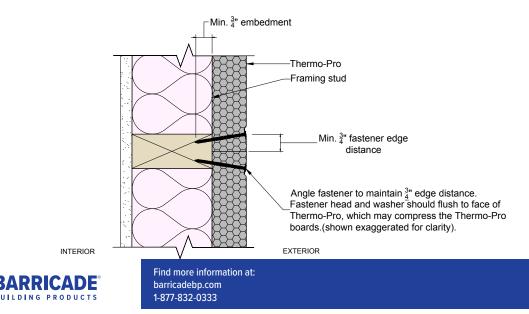
Fasteners should be long enough to penetrate Thermo-Pro and at least ³/₄" into the framing studs or blocking between studs.



Tab	le 2:	Therm	o-Pro	Fastened	Direct to	Framing
-						

Studs				
Thermo-Pro Thickness	Minimum Fastener Lengths			
9/16" or 5/8"	1 3/8″			
1″	1 3/4"			
1 1/2″	2 1/4"			
2″	2 3/4"			

To maintain minimum 3/4" edge distance at vertical joints angle the fasteners.



6.5 - OVER CONCRETE OR MASONRY WALLS

Use weather resistant construction glue compatible with expanded polystyrene, such as PL 300, to secure Thermo-Pro sheets to the wall. If the wall is too rough or uneven concrete screws with washers can be used along with adhesives to help secure the sheets.

Use weather resistant construction glue compatible with EPS, such as PL 300, to secure Thermo-Pro to the wall.

If the wall is too rough or uneven concrete screws with washers can be used along with adhesives to help secure Thermo-Pro.

Remove any protrusions that can damage or prevent Thermo-Pro from laying flat against the wall.

If concrete screws are used place sheathing tape over the screws to maintain the water resistive barrier properties of Thermo-Pro

6.4 - CAVITY WALLS

For cavity walls, Thermo-Pro will either be placed over wood, concrete or masonry substrates. Refer to Sections 5.8, 6.2 to 6.5 for appropriate fastening requirements.



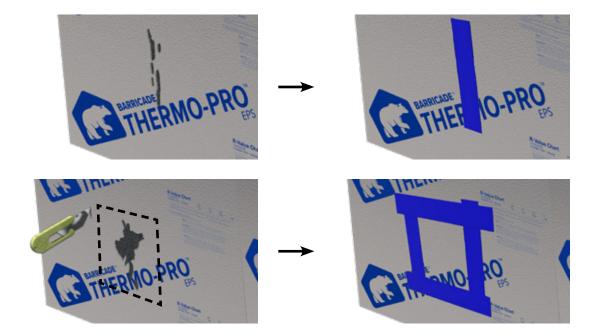
7. INSPECTION & REPAIRS

Thermo-Pro is designed to be durable and flexible. However, inspecting the condition of installed Thermo-Pro boards prior to the attachment of cladding or strapping will ensure Thermo-Pro performs as designed.

Inspect installed Thermo-Pro boards sufficiently in advance of cladding or strapping placement to ensure

- taped seams are not broken
- joints, penetrations and perimeter are properly sealed
- damaged areas are marked and properly repaired.

In most cases repairing damaged Thermo-Pro boards simply requires tape sealing over the damaged area. If the foam and laminate are damaged then removing the damaged section and replacing with a new section will be required.





8. CLADDING OVER THERMO-PRO

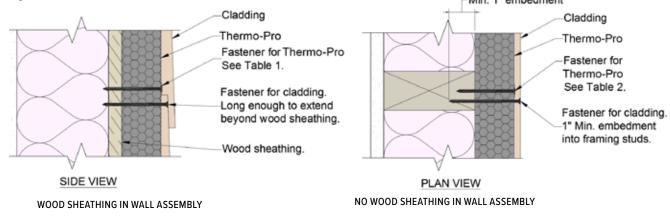
This section is a guide to fastening cladding or wood strapping over Barricade Thermo-Pro.

NOTE: Where Thermo-Pro is available with a reflective or white laminate on one side of the insulation it is recommended that Thermo-Pro is installed with these laminates facing the exterior.

8.1 - CLADDING OVER THERMO-PRO WITHOUT WOOD STRAPPING

When cladding is attached without wood strapping, nails or screws used to attach cladding directly over Thermo-Pro should penetrate Thermo-Pro and completely through the wood sheathing. The thickness of the wood sheathing should be structurally adequate to resist the lateral and pull-out loads the cladding may be subjected to. Check with your local cladding supplier to confirm.

In cases where wood sheathing is not present, or will not provide adequate strength, the fasteners should be fastened into the framing members. The nails or screws should penetrate Thermo-Pro and at least 1" into the framing studs, or blocking between framing studs.



8.2 - CLADDING OVER THERMO-PRO WITH WOOD STRAPPING

When using wood strapping over Thermo-Pro, the cladding will be fastened to the strapping.

1. Wood Strapping Size:

Minimum ³/₄" thick. 1 x 3 strapping is recommended.

2. Wood Strapping Location:

Place vertically or horizontally, as required, and should be spaced a maximum of 16" on center. If placing vertically, align the strapping to the framing studs.

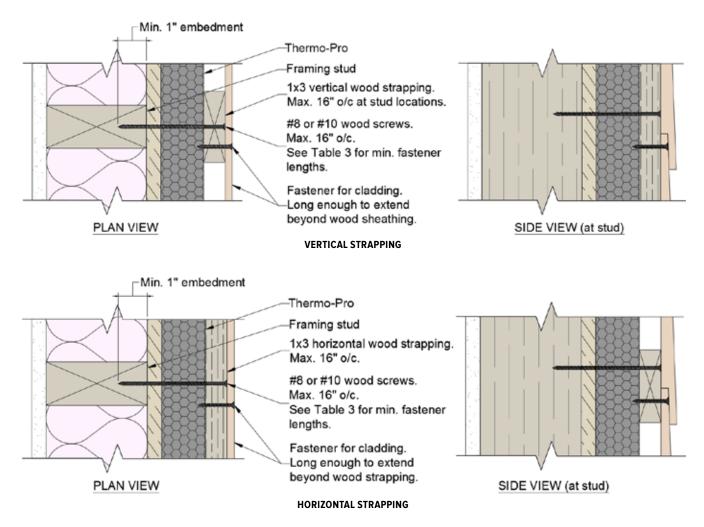
3. Fastener Types:

Use #8 or #10 non-corrosive wood screws spaced maximum 16" on center.

4. Fastener Length:

Screws should be long enough to penetrate wood strapping, Thermo-Pro, and at least 1" into the framing studs.





5. Attach cladding to wood strapping. Ensure the nails or screws fully penetrate the strapping.

Table 3: 1x3 Wood Strapping Over Thermo-Pro				
	Minimum Fastener Lengths			
Thermo-Pro Thickness	1/2" Wood Sheathing	5/8" Wood Sheathing	3/4" Wood Sheathing	
9/16" or 5/8"	2 7/8″	3″	3 1/8″	
1″	3 1/4″	3 3/8″	3 1/2″	
1 1/2″	3 3/4″	3 7/8″	4″	
2″	4 1/4"	4 3/8″	4 1/2"	

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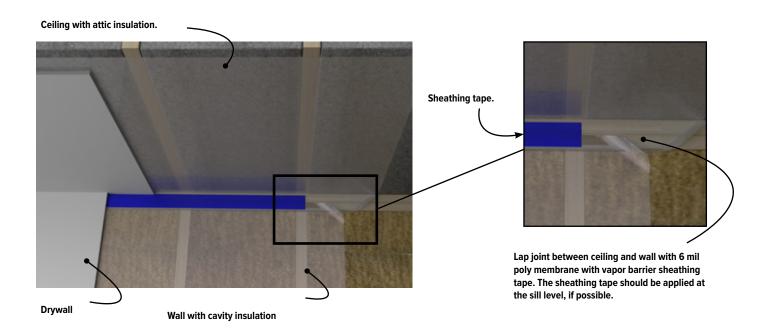
9. AIR BARRIER

Thermo-Pro wall assemblies require a separate air barrier system. The air barrier system can be from the exterior, interior, or anywhere in between as long as the continuity of the air barrier system is maintained.

Since 6 mil polyethylene membranes are typically required as the controlling vapor barrier for exterior wall assemblies, it can also provide the controlling air barrier. The following illustrations are examples of a polyethylene air barrier approach for Thermo-Pro wall assemblies. Careful attention should be paid to transitions and penetrations.

9.1 - ROOF/CEILING TRANSITION

Lap the 6 mil poly membranes in the ceiling and walls with vapor barrier sheathing tape.





Install rigid insulation between floor joists against the rim

9.2 - WALL PERIMETER AND RIM BOARDS

Seal the 6 mil poly membrane to the framing members. Install rigid insulation against the rim board between floor joists. The insulation should be sealed to maintain the air barrier, and thick enough to act as a vapor/air barrier.



Acoustic sealant.

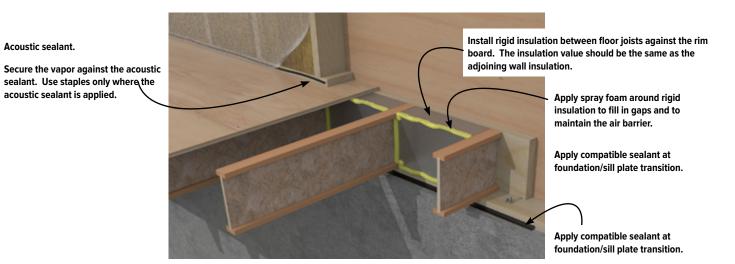
Secure the vapor against the acoustic sealant. Use staples only where the acoustic sealant is applied.

9.3 - FOUNDATION

Acoustic sealant.

acoustic sealant is applied.

Install rigid insulation against the rim board between floor joists. The insulation should be sealed to maintain the air barrier. A sealant should also be applied between the sill and top of foundation wall.



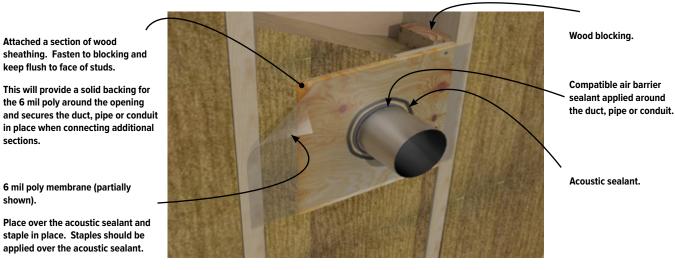


9.4 - PENETRATIONS

sections.

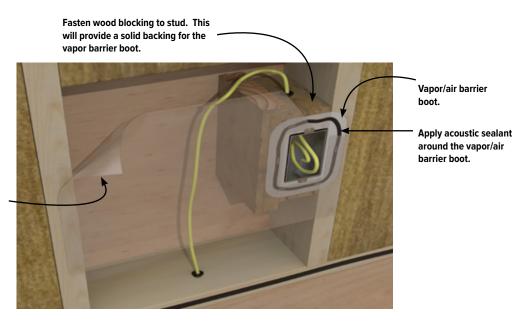
shown).

Providing a section of plywood sheathing around the penetration provides the required solid backing for 6 mil poly members.



9.5 - INTERIOR ELECTRICAL RECEPTACLES

Vapor/air barrier polyethylene boots should be used to maintain the air barrier around electrical receptacles.



6 mil poly membrane (partially shown).

Place over the acoustic sealant and staple in place. Staples should be applied over the acoustic sealant.



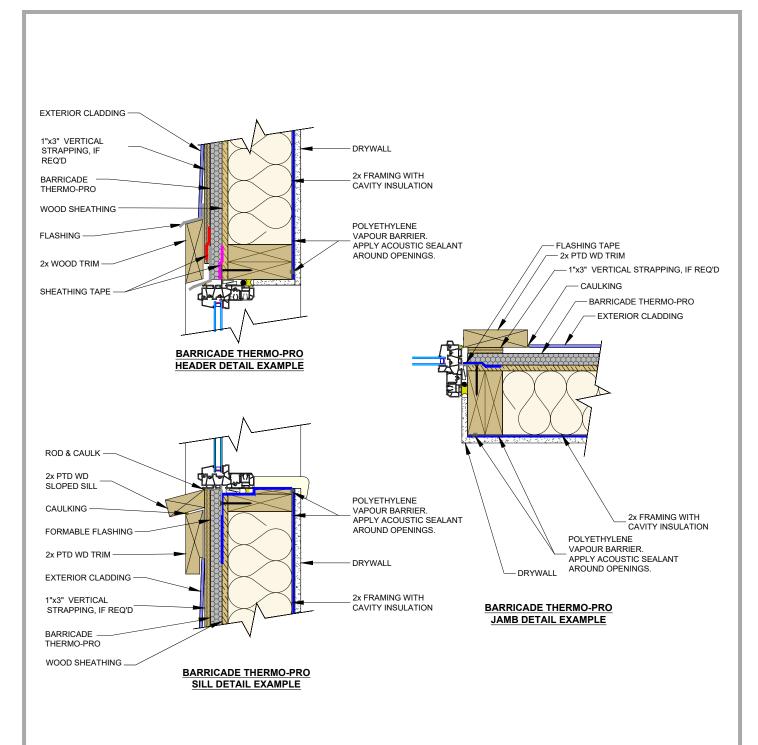


10. EXAMPLE CAD DETAILS

THE DRAWINGS REPRESENTED HEREIN ARE BELIEVED TO BE ACCURATE AND CONFORMING TO CURRENT DESIGN AND CONSTRUCTION PRACTICES. HOWEVER, THE DRAWINGS SHOULD BE USED AS A REFERENCE GUIDE ONLY. THE USER SHALL CHECK TO ENSURE THE DRAWING MEETS LOCAL BUILDING CODES, DESIGN AND CONSTRUCTION PRACTICES BY CONSULTING LOCAL BUILDING OFFICIALS AND PROFESSIONALS, INCLUDING ANY ADDITIONAL REQUIREMENTS. BARRICADE RESERVES THE RIGHT TO MAKE CHANGES TO THE DRAWINGS WITHOUT NOTICE AND ASSUMES NO LIABILITY IN CONNECTION WITH THE USE OF THE DRAWINGS INCLUDING MODIFICATION, COPYING OR DISTRIBUTION.



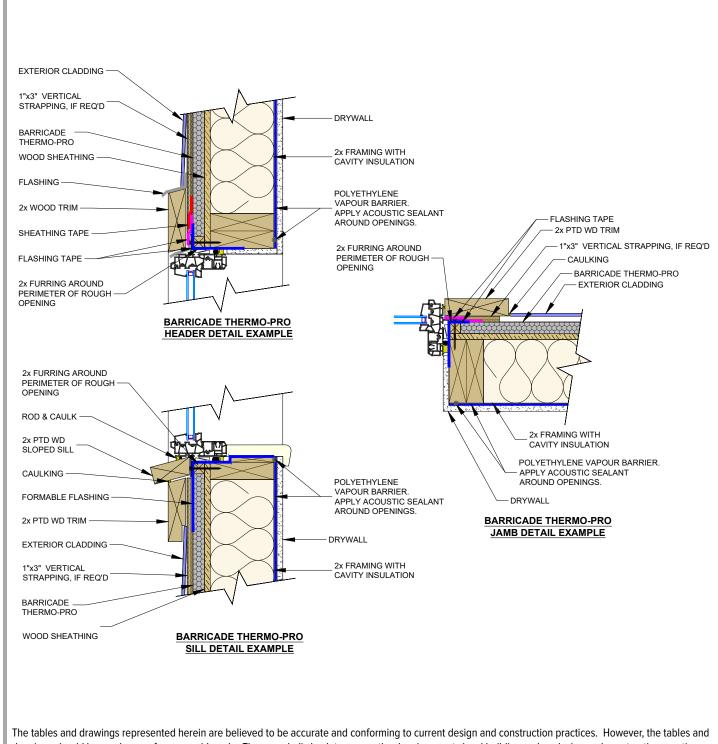
10.1 - FLANGED WINDOW INSTALLED AGAINST WOOD SHEATHING



The tables and drawings represented herein are believed to be accurate and conforming to current design and construction practices. However, the tables and drawings should be used as a reference guide only. The user shall check to ensure the drawing meets local building codes, design and construction practices by consulting local building officials and professionals, including any additional requirements. Logix reserves the right to make changes to the tables and drawings without notice and assumes no liability in connection with the use of the tables and drawings including modification, copying or distribution.



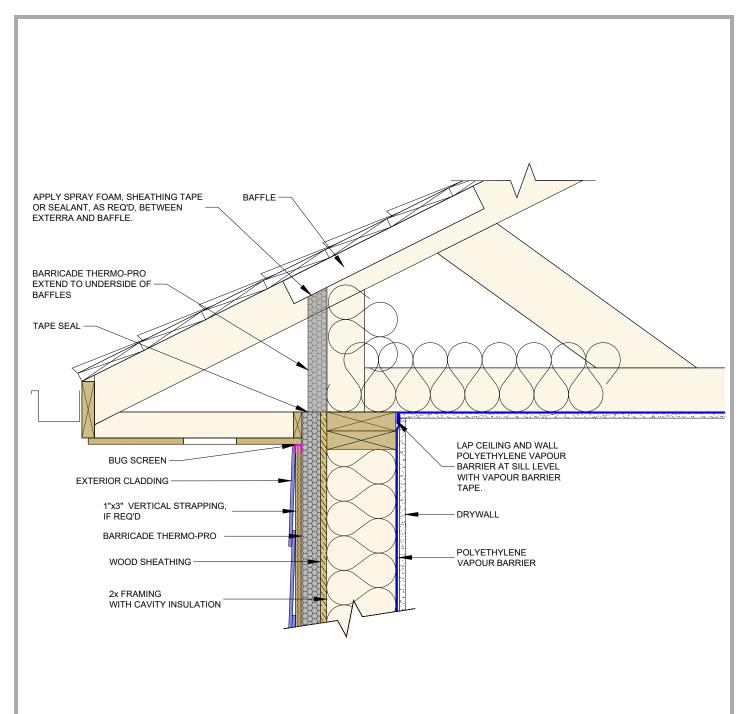
10.2 - FLANGED WINDOW INSTALLED AGAINST THERMO-PRO



The tables and drawings represented herein are believed to be accurate and conforming to current design and construction practices. However, the tables and drawings should be used as a reference guide only. The user shall check to ensure the drawing meets local building codes, design and construction practices by consulting local building officials and professionals, including any additional requirements. Logix reserves the right to make changes to the tables and drawings without notice and assumes no liability in connection with the use of the tables and drawings including modification, copying or distribution.



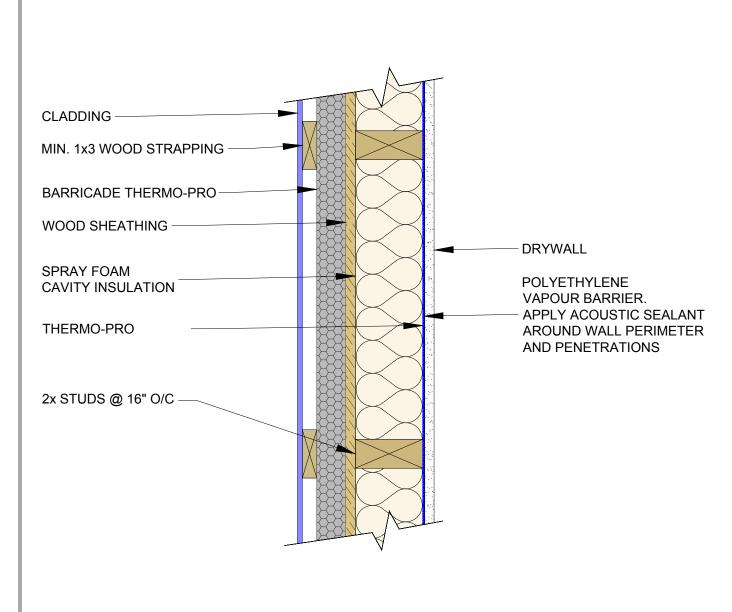
10.3 - ROOF TRANSITION



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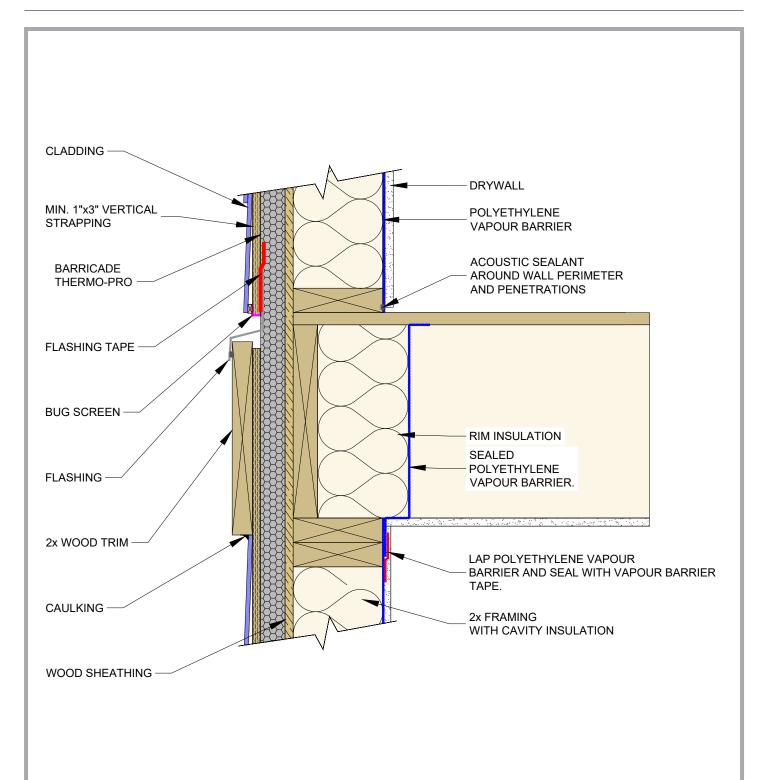
10.4 - TYPICAL WALL ASSEMBLY



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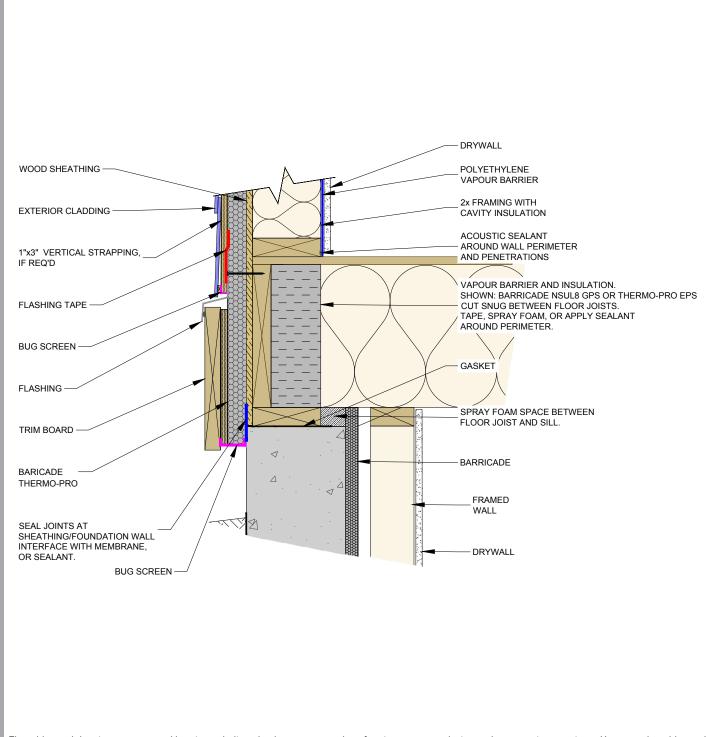
10.5 - FLOOR TRANSITION



The tables and drawings represented herein are believed to be accurate and conforming to current design and construction practices. However, the tables and drawings should be used as a reference guide only. The user shall check to ensure the drawing meets local building codes, design and construction practices by consulting local building officials and professionals, including any additional requirements. Logix reserves the right to make changes to the tables and drawings without notice and assumes no liability in connection with the use of the tables and drawings including modification, copying or distribution.



10.6 - FOUNDATION TRANSITION



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