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thermoPLY®

Structural Sheathing

Installation Guide

The stable pricing, lightweight design, water resistance and best-in-class air barrier make ThermoPLY structural sheathing a high-performance alternative to OSB.

Made in USA 

Easy to Install

The light weight design allows for individual installation.

Water Barrier

Code-approved water resistive barrier.

Air Barrier

Best in class air barrier performance.

IRC & IBC Compliant

Meets lateral shear resistance requirements for Type V light frame construction.

CONTENTS

02	General Notes, Guidelines, Storage	07	Corner Taping
03	ThermoPLY Installation Overview	08	Window Installation
04	Panel Orientation	09	Door Installation/ Roof Installation
05	Panel Fastening	10	Exterior Cladding Installation
06	Water Resistive Barrier Options	11	Vents and Openings Installation
		12	Damage Repair Guideline

Attention:

For complete specifications and installation instructions, refer to DrJ Technical Evaluation Report.

This installation guide is intended to provide general information for the end user. The following guidelines will help you properly install ThermoPLY®. We encourage you to read these guidelines in order to minimize any risk of safety hazards and to prevent voiding any applicable warranties. This manual is a general installation guide and does not cover every installation situation. Customer is responsible for complying with all applicable laws, regulations, and building codes (collectively, "Laws") of the location where any products (individually, "Product" and collectively, "Products") manufactured by Ox Engineered Products, LLC ("Ox") are actually used, specially including, but not limited to, Laws regarding use and disposal of the Products by Customer. Ox expressly disclaims all liability for the Products other than as expressly provided in the applicable warranty for the Product (the "Product Warranty") which is available from Ox at the address below. OX EXPRESSLY DISCLAIMS ANY OTHER WARRANTY EXPRESSED OR IMPLIED INCLUDING SPECIFICALLY, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. None of the information contained in this brochure shall act as a waiver of any patent, trademark, copyright or other intellectual property right of Ox, nor shall any such information expand any rights or remedies set forth in the applicable Product Warranty. Ox shall not be liable for compliance of the Products with any test results obtained by third parties that may be included in this brochure. Actual results may vary. Not all Products

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Storage:

Maintain packaging protection until using the product. If stored exposed without protective packaging, cover with a waterproof tarpaulin. Do not store directly on the ground unprotected or in standing water. Normal care should be taken to avoid excessive moisture exposure (soaking) to unpackaged product.

Safety Guidelines:

- Follow all OSHA regulations and any other safety guidelines and safety practices.
- Use approved safety belts and/or harnesses or other fall protection equipment

03 | Installation Overview

Overview

The ThermoPly system shall be defined to be ThermoPly Red, Green or Blue, ThermoPLY AMG (Advanced Moisture Guard), Ox Seam Tape, Arctic Flash Synthetic Flashing Tape or Titan Butyl Flashing Tape. In addition to being subject to the other limitations contained in this warranty, the water and air barrier warranties are expressly contingent upon the use of only ThermoPly component products. The use of any other sheathing, other than ThermoPly or any tape other than OX-Seam Tape, Titan Butyl Flashing, or Arctic Flash flashing tape will void the air and water resistive barrier warranty.

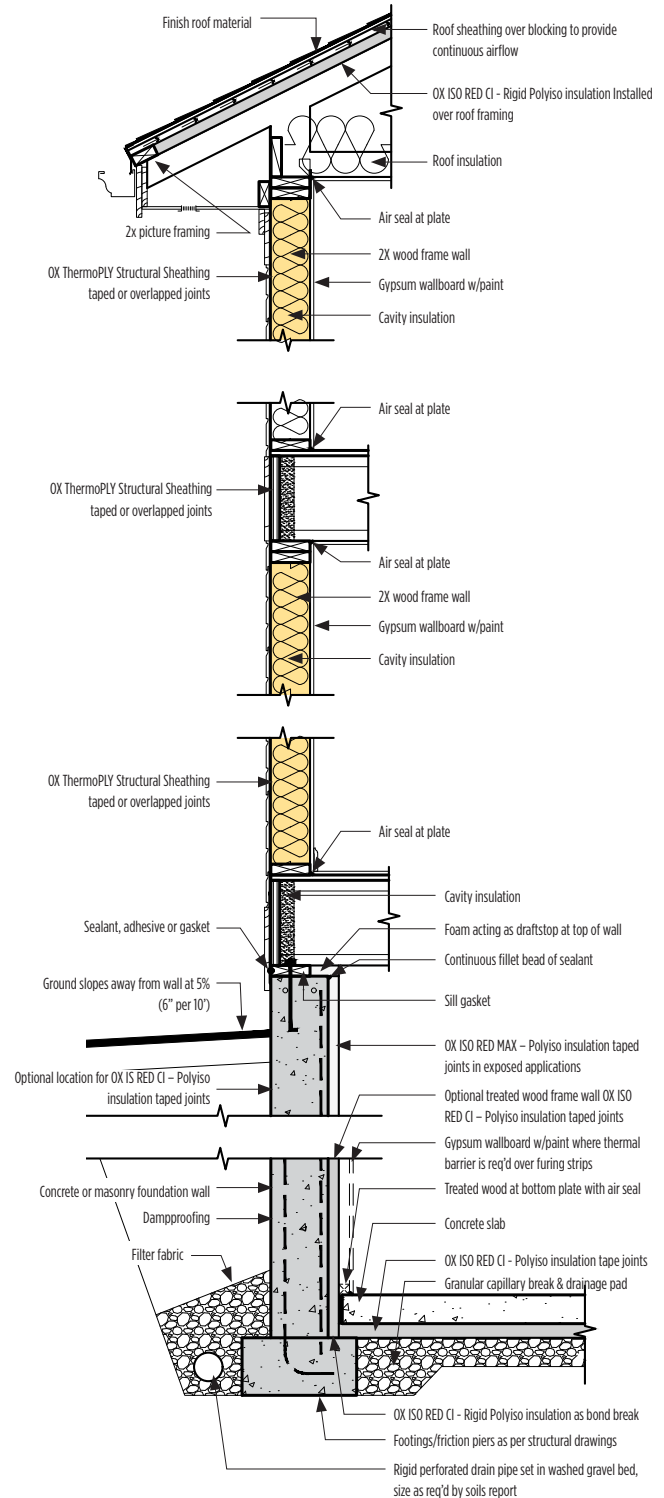
Structural Prep

Install any necessary mechanical strapping directly to framing.

- While it is recommended that metal strapping may be installed over or under the ThermoPly, installation must follow the recommendation of the engineer design professional.
- The requirement for mechanical uplift connections shall be determined by the responsible parties.
- Detail A should not be considered typical and only applies when mechanical uplift connections are required.

TIP: Straps, ties and connectors installed on the exterior face of the stud will not be visible after the ThermoPLY Structural Sheathing panels are installed. Schedule necessary inspections accordingly.

Detail A

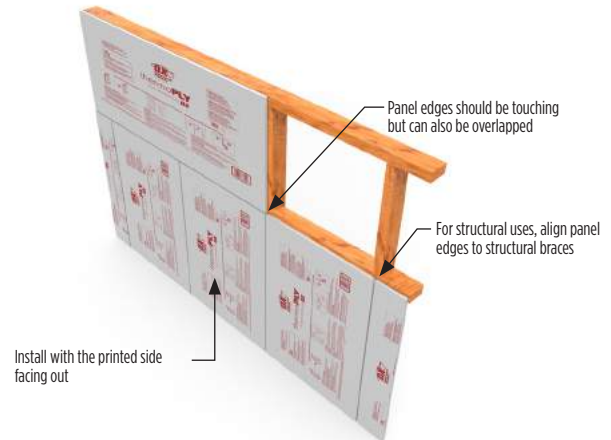


04 | Panel Orientation

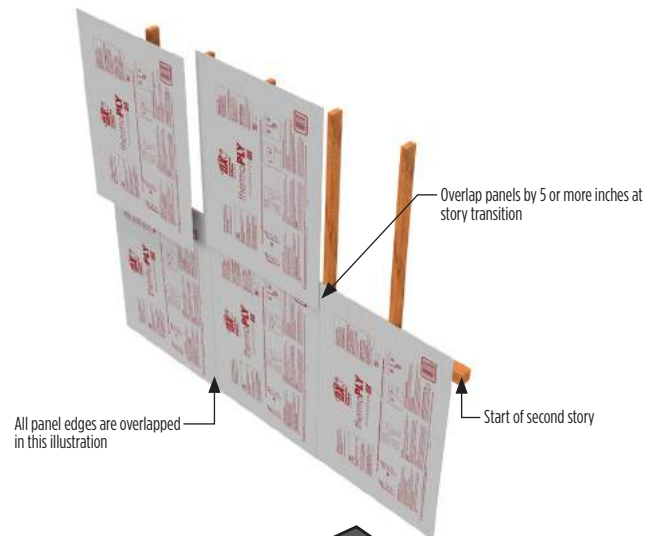
Orient Panels

- Install ThermoPLY Structural Sheathing panels with the printed side facing out
- The panels may be installed with the long side of the panels oriented either horizontally or vertically to the framing members
- All panel edges/seams must be fastened and blocked by framing
- Panels can be installed with edges touching or overlapping by a minimum of 3/4 inch (see page 05)
- Cut panels with standard circular saw with a fine tooth finish blade, router or rotozip tool.
- On two stories, in areas with less than 5-inches of overlap of the first floor, a 9-inch 6-mil poly or non-adhesive straight flashing must be installed under top sheets. Overlaps of 5-inches or greater do not need flashing as shown in Detail C.
- When attaching, do NOT fasten at corners first. Start at number 1 and move across panel as shown in Detail D.

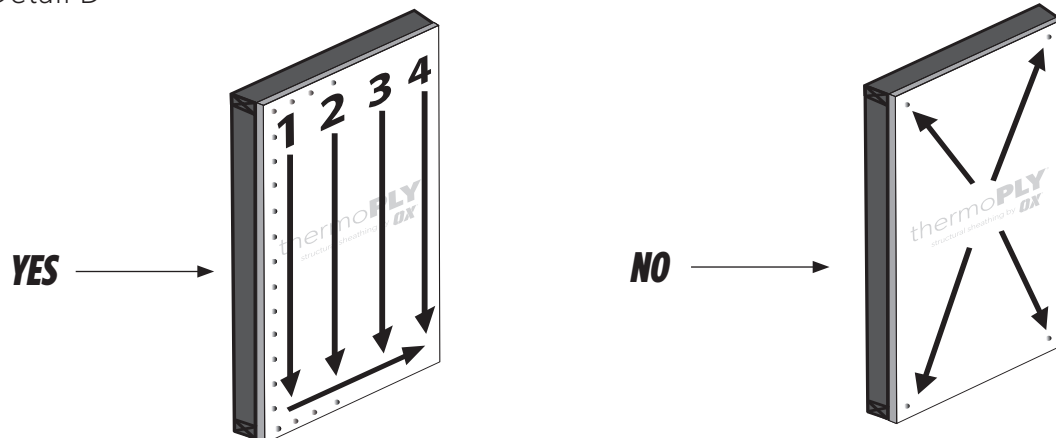
Detail B



Detail C



Detail D



05 | Panel Fastening

Fasten Panels

- **Wood studs:** Around perimeter and in the field of the board, fasten ThermoPLY every 3-inches. Minimum embedment of 1-inch into structural framing:
 - minimum 15/16" crown, 16 gauge staple
 - .120 in min diameter head, galvanized nail.
 - Staple crown should be flush. Do not countersink.
 - Staples may run parallel with wood grain of framing studs at sheathing seams
- **Metal studs:** No. 8-18 x 1-1/4 Phillips modified truss head self-drilling screws

NOTES: OX offers three grades of ThermoPLY. This guide shows the red or Standard Structural Grade in the detail illustrations. Installation instructions, as shown in this guide, are the same for all grades.

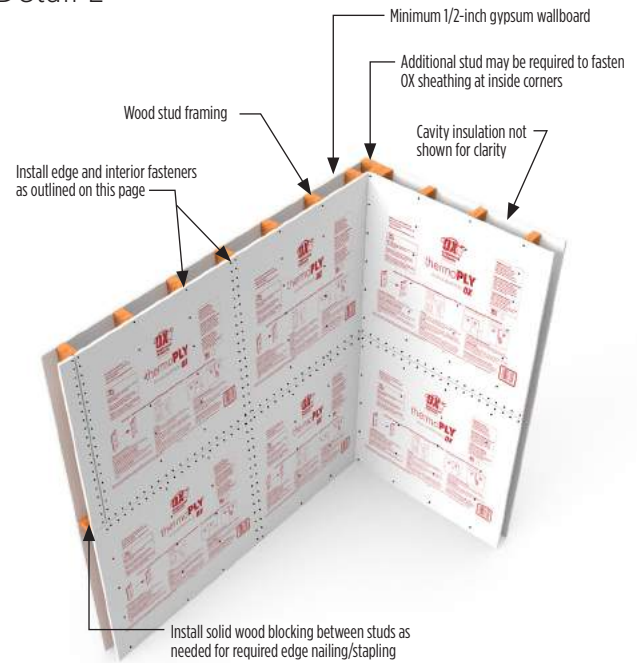
For seismic application requirements please refer to the DRJ Technical Evaluation Report.

Strap Hold Downs

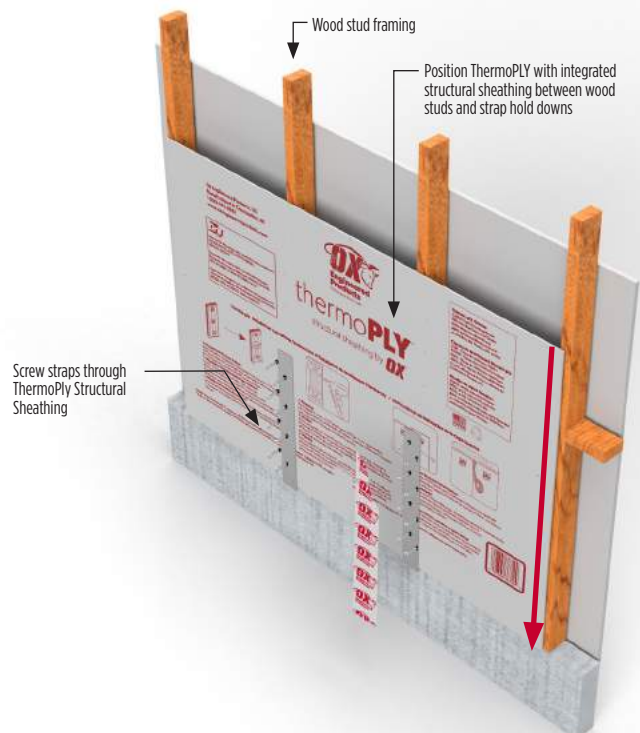
- Slide the ThermoPLY sheet between the studs and strap hold downs
- Screw straps through the ThermoPly structural layer to the stud behind
- Apply Arctic Flash flashing tape to fully cover the strap hold downs and screws
- Install edge and interior fasteners as described above

NOTE: The red arrow indicates where the sheet should be positioned before being screwed into place.

Detail E



Detail F



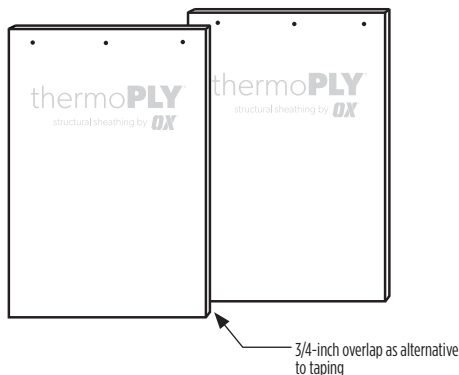
06 | Water Resistive Barrier Options

Taping

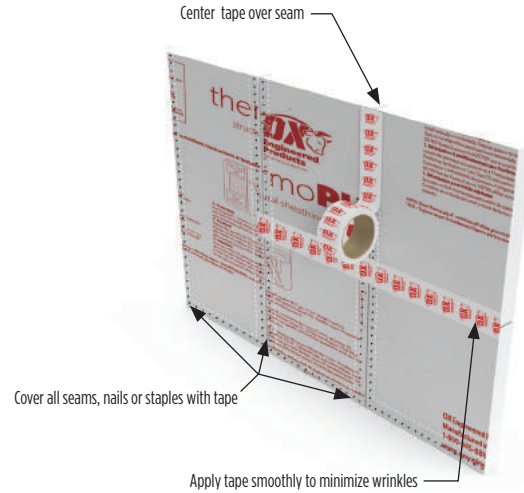
- Install tape per manufacturer’s instructions on a clean/dry surface
- Center the tape over the joints/seams
- Apply pressure to the tape to ensure a secure bond. Smooth out any wrinkles to insure proper adhesion.
- When taping joints, use shingle fashion technique as shown in Detail H
- At T-joints, the tape pieces should overlap by a minimum of 1-inch as shown in Detail I and Detail J.
- Building wrap is not required to meet WRB requirements if all joints are taped
- **Use only OX approved tapes:**
 - **Seam tape:** OX Seam Tape
2 1/2-inch nominal width
 - **Arctic Flash Synthetic Flashing Tape or Titan Butyl Flashing Tape:**
 - 6-inches at all penetrations
 - 4-inches at interior and exterior corners

Lapped Panels

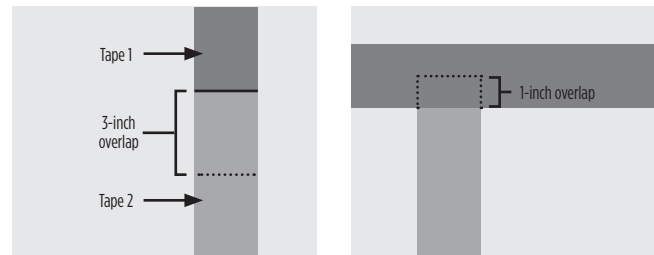
- Overlapping of panels by a minimum of 3/4 and fastening at 3 in. will provide approved water resistive protection.
- Fasten lapped panels, edges and interior field at 3in intervals



Detail G



Detail H - Shingle fashion technique

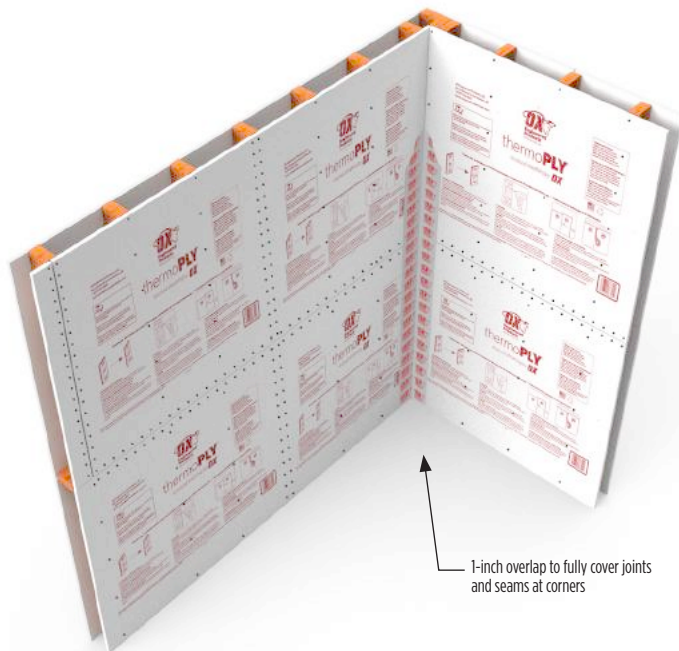


07 | Corner Taping

Detail J - Exterior corner flashing tape



Detail J - Interior corner flashing tape

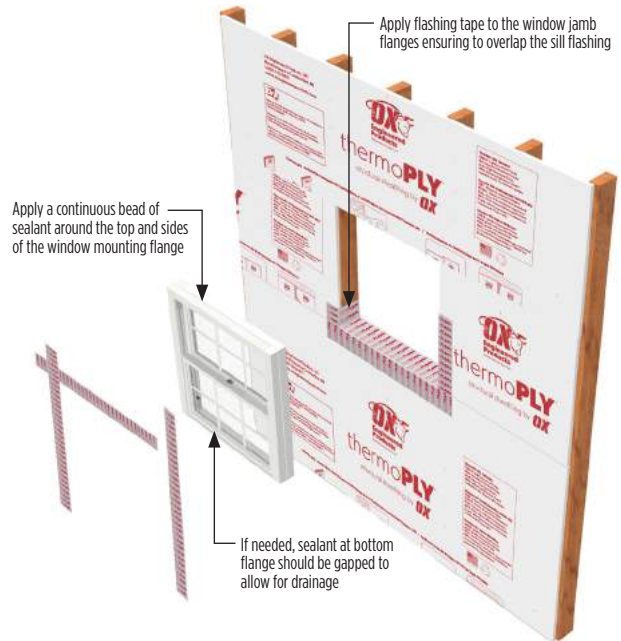


08 | Window Installation

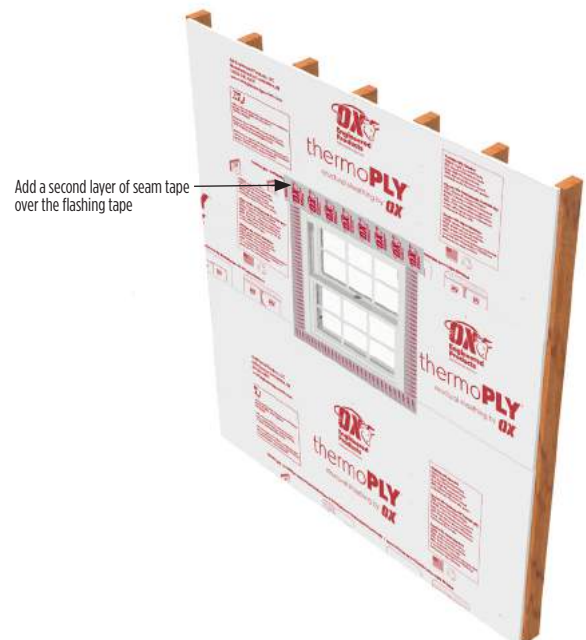
Window Installation

- Install approved OX sill/pan flashing as shown in Detail I on a clean/dry surface
- Apply sealant around inside face of window mounting flange. If needed, gap sealant at the bottom flange to permit drainage. Install and level window per manufacturer's instructions.
- Cut two pieces of approved OX flashing tape and apply each to the window jamb flanges. Be sure the jamb flashings overlap the sill flashing.
- Cut a length of approved OX flashing tape and apply to the head flange on the window. Be sure the head flashing overlaps the jamb flashing a minimum of 1 in.
- Apply pressure to the tape to ensure a secure bond and smooth out any wrinkles to insure proper adhesion
- From the interior of the rough opening, apply low-pressure polyurethane foam for windows between the rough opening and the window frame.
- **DO NOT TAPE BOTTOM WINDOW FLANGE**

Detail K-



Detail L- Completed installation

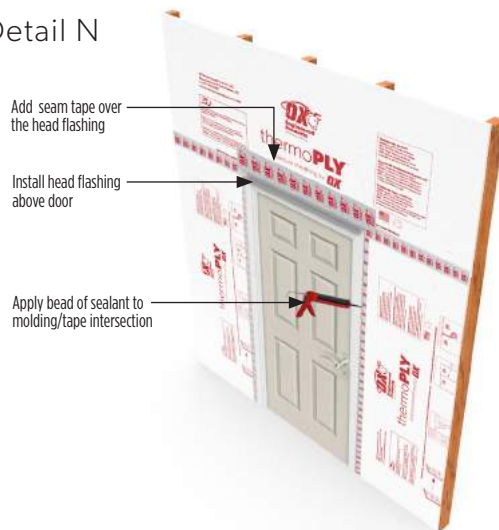


09 | Door Installation

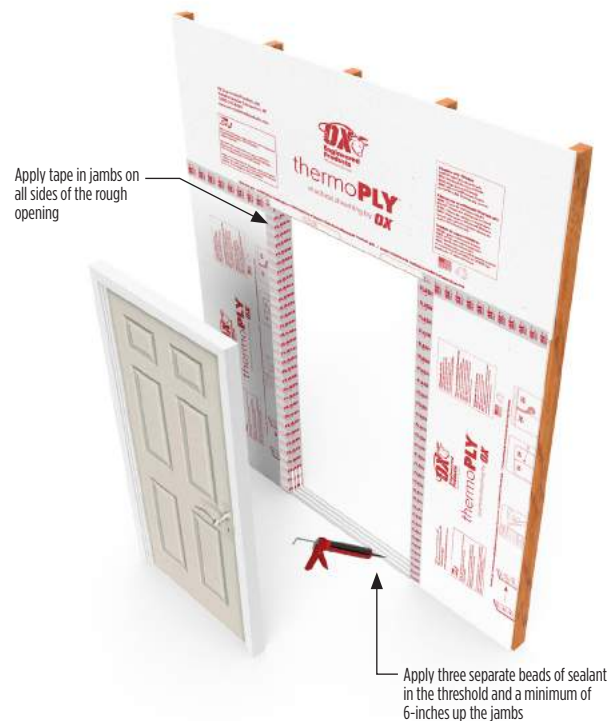
Brick Mould Door Installation

- Install approved OX Arctic Flash flashing tape or Titan Butyl Flashing Tape in jambs of the rough opening as shown in Detail L on a clean/dry surface
- Apply three separate beads of sealant in the threshold and a minimum of 6-inches up the jambs
- Once the door has been installed into the rough opening in accordance with the manufacturer's installation instructions, apply a bead of sealant at the molding/tape intersection
- Install head flashing above door and then tape top of head flashing with OX approved tape

Detail N



Detail M

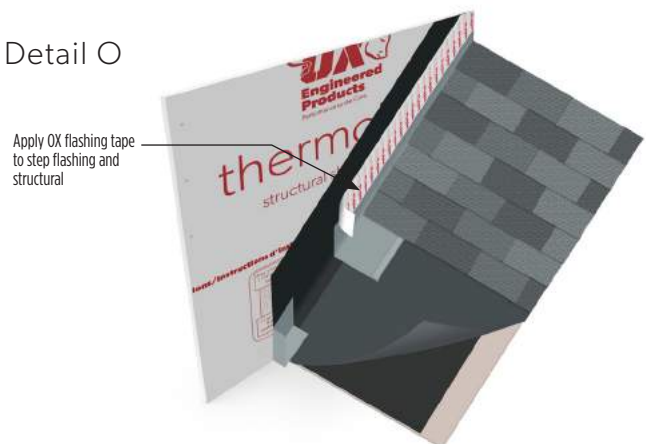


Roof Installation

Rake Roof-to-Wall Intersection

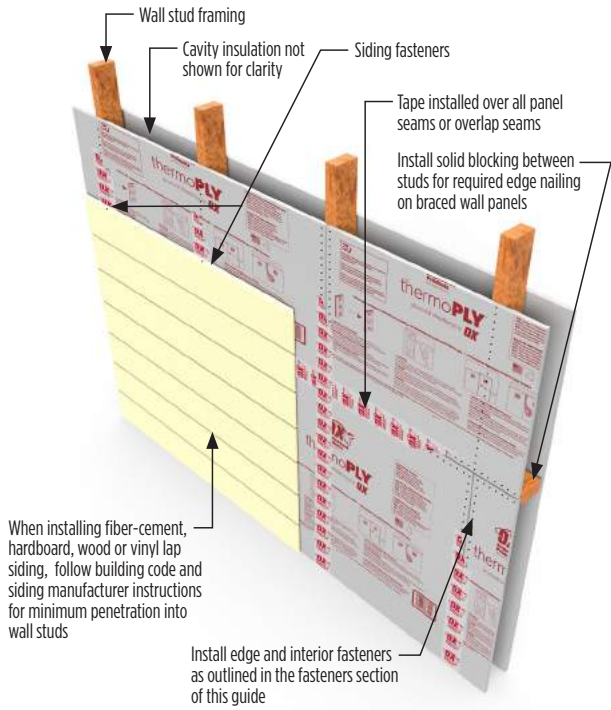
- Wrap adjacent wall with underlayment at rake roof-to-wall intersections
- Install pan flashing with a rolled hem at rake roof-to-wall intersections on top of a layer of protective underlayment. The underlayment should extend 12-inches over the intersection and 24-inches across the roof.
- Apply approved OX Arctic Flash flashing tape or Titan Butyl Flashing Tape to step flashing and underlayment to complete seal

Detail O

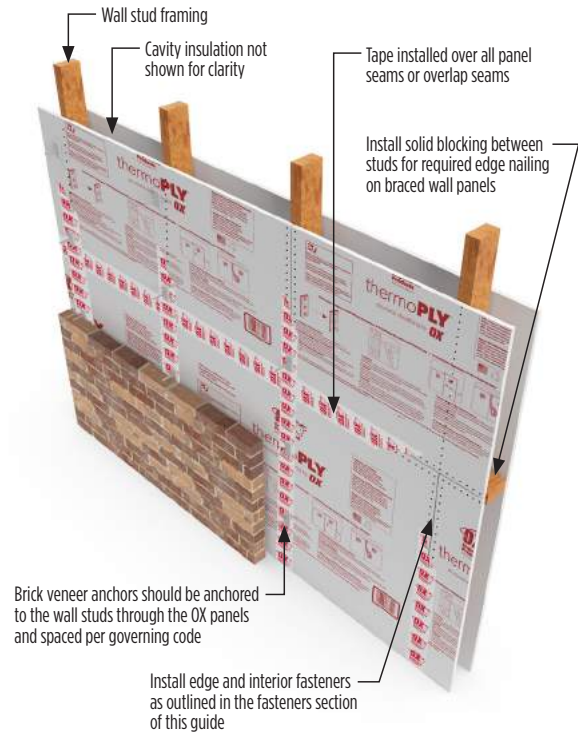


10 | Exterior Cladding Installation

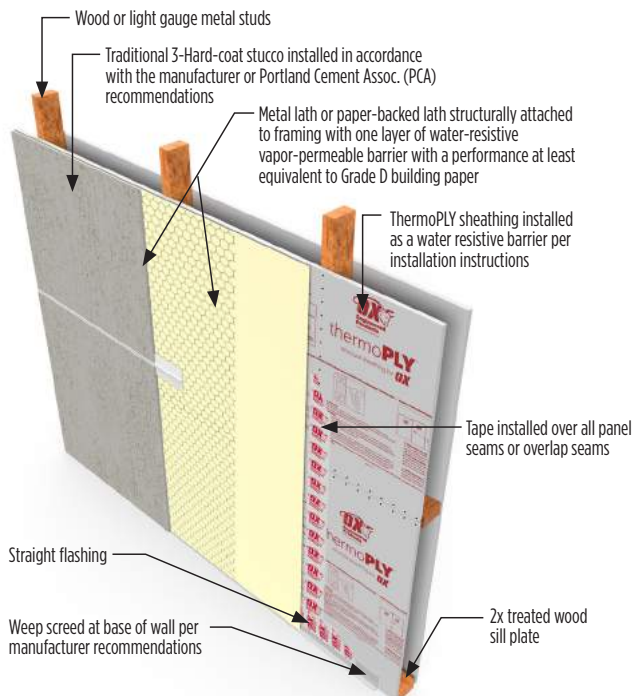
Lap Siding



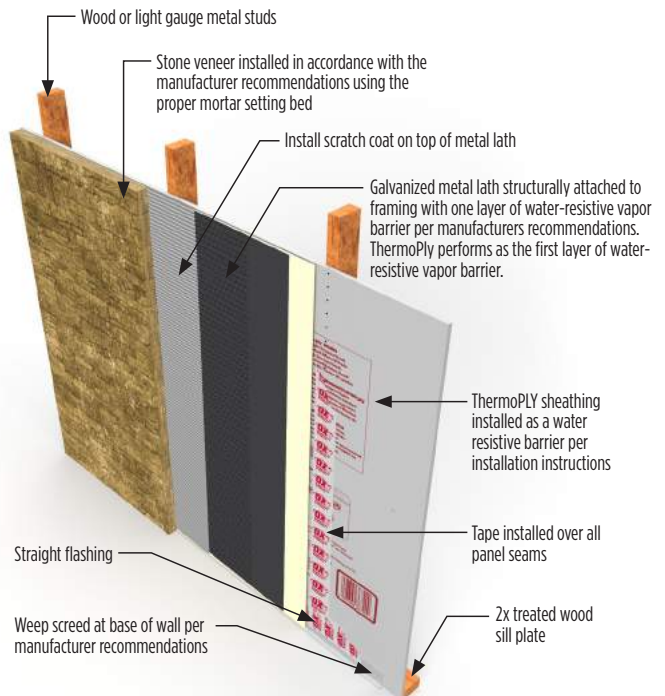
Anchored Masonry Brick Veneer



Stucco



Stone Veneer



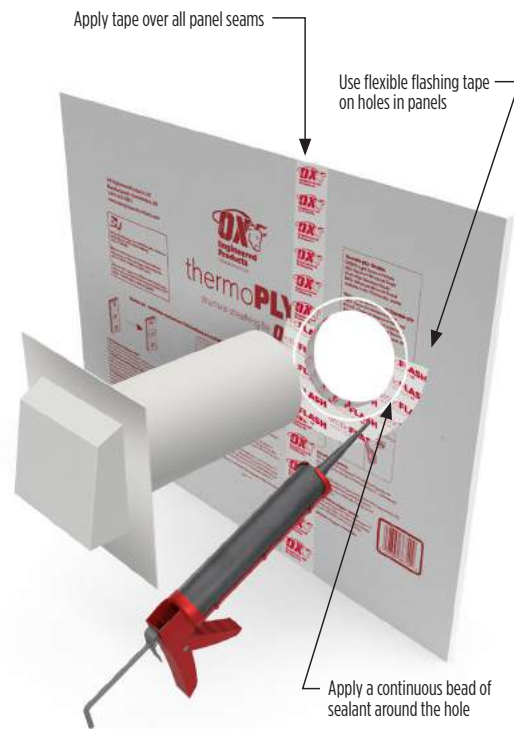
DISCLAIMER: The diagrams in this guide represent a general overview for the proper exterior cladding installation. Defer to the installation instructions of your cladding manufacturer and local code requirements to ensure best results.

11 | Vents and Openings Installation

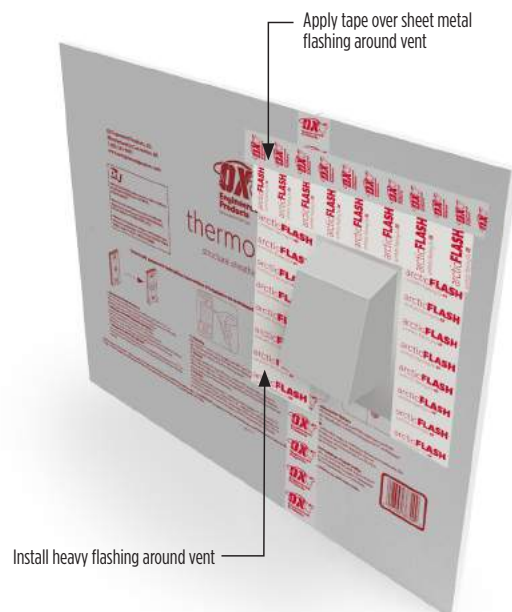
Typical Vent Installation

- Install approved OX Arctic Flash flashing tape or Titan Butyl Flashing Tape in holes in ThermoPLY panels as shown in Detail P on a clean/dry surface
- Use Arctic Flash flashing tape or Titan Butyl Flashing Tape on lower side of holes covering the panel interior
- DrJ approved boot flashings may be used at penetrations.
- Apply a continuous bead of sealant on top of flexible flashing tape
- Install heavy flashing on top and sides of vent and then tape top of heavy flashing with OX approved tape
- All vents and penetrations should be properly blocked per manufacturer recommendations

Detail P



Detail Q - Completed installation





thermoPLY[®]
structural sheathing by OX

GREEN, RED, BLUE, & AMG

Damage Repair Guidelines

Damage to Panel Description	Repair Guideline
Facer Delaminations	Small Areas: Sheathing Tape (3M 8087 or equal) Large Areas: Liquid House Wrap (StoGuard or equal)
Tears or holes in Thermo-Ply less than 1" in length or diameter (non-structural)	4" Self-Adhering Flashing Tape meeting AMMA 711-07 (Arctic Flash Flashing Tape, Titan Butyl Flashing or equal)
Tears or holes up to 3" in length or diameter.	Back with 2x6 blocking (min), fasten to blocking, and apply Self-Adhering Flashing Tape meeting AMAA 711-07 (Arctic Flash Flashing Tape, Titan Butyl Flashing or equal)
Tears or holes greater than 3" in length or diameter	Replace Panel

**These guidelines should be used with good judgement to ensure sheathing maintains intended structural, moisture, and air barrier requirements.*