

FULLERTON FINISH SYSTEMS, INC



FFS ENDURAWAL DESIGN GUIDE

Corporate Office:
Fullerton Companies
13605 1st Ave North
Plymouth, MN 55441

Manufacturing Plant:
Fullerton Finish Systems, Inc.
8645 W. 21st Street
Sand Springs, OK 74062

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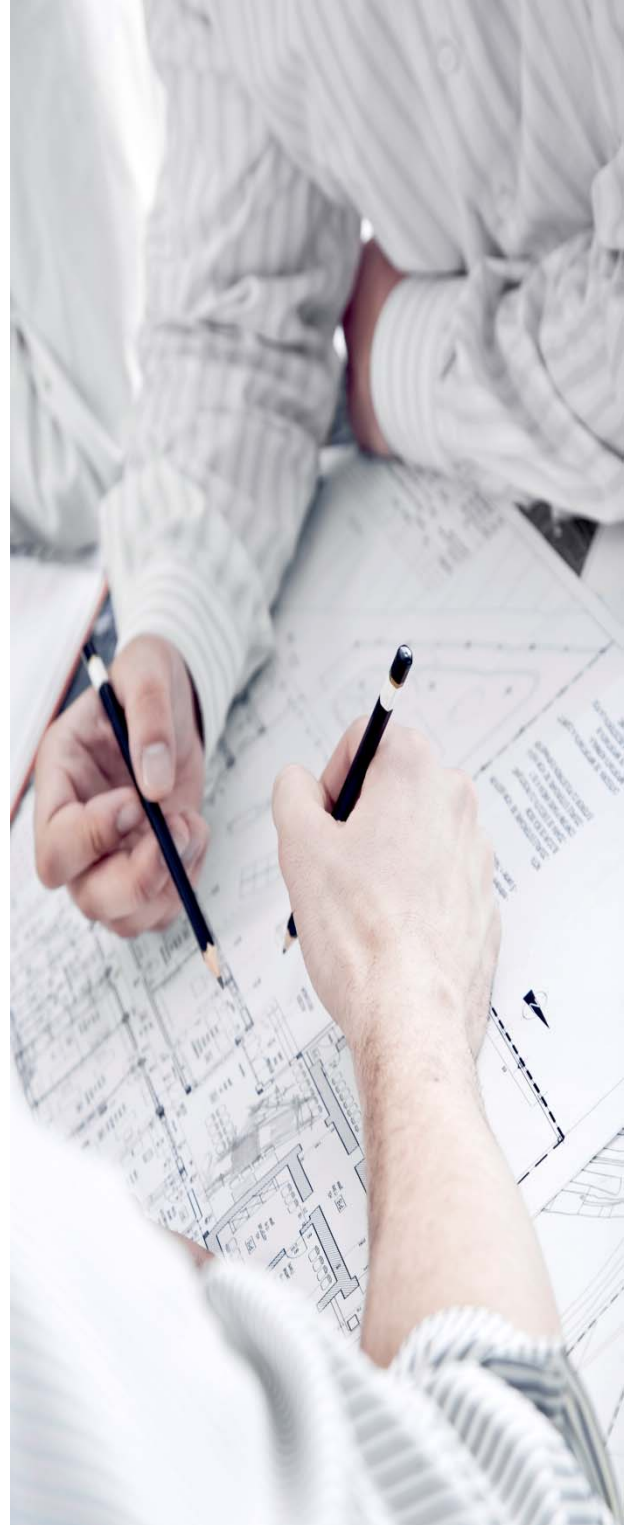
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SECTION ONE - Company History

History

Fullerton Lumber Company was established in 1882 in Mitchell, South Dakota as a retail lumber and building materials company. Today, Fullerton has a corporate office in Plymouth, MN that operates three (3) corporate divisions with six (6) total facilities in three states.

Fullerton Companies Corporate Office
13605 1st Avenue North, Suite 200
Plymouth, MN 55441



1. **Fullerton, The Builder's Choice (TBC)** Continuing the historic tradition operating a chain of building supply yards throughout the upper Midwest, predominantly in Minneapolis/St. Paul and the 12 county area. Our four (4) building centers surrounding the Minneapolis/St. Paul and surrounding area include:

Ellsworth	Wisconsin	(TBC)
Glencoe	Minnesota	(TBC)
Osceola	Wisconsin	(TBC)
Watertown	Minnesota	(TBC)



2. **Fullerton Building Systems (FBS)** Located in Worthington, MN, FBS is a wholly-owned subsidiary. Building on a century of success, FBS has one of the longest records of manufacturing building wall panels with factory applied finishes in the nation. In 1962, Fullerton consolidated the production of residential wall panels from a variety of locations throughout the Midwest into the former site of Fleetwood Homes in Worthington, MN. During the major housing recession of 1979-1981, Fullerton began specializing in commercial buildings. FBS has been manufacturing commercial panels with factory-applied exterior finishes exclusively for the commercial market.



Fullerton Building Systems
34620 250th Street
Worthington, MN 56187

SECTION ONE - Company History



3. **Fullerton Finish Systems (FFS):** Fullerton's third division is the nation's premier provider of factory applied finishes to the light commercial building industry. FFS, in addition to supplying finish veneer panels to FBS, services the restaurant, convenience, light commercial, modular and industrial markets across the country. FFS carries trade rights to a number of patented exterior finish products (E.g. BrickWal® and CastWal®) as well as the manufacturing facility to produce these products. This facility has the equipment and experience to manufacture building wall panels, both wood and steel, as needed in the future, greatly expanding FBS' total capacity.



Fullerton Finishing Systems
8645 West 21st Street
Sand Springs, OK 74063

Vision

Fullerton Building Systems vision is to be the premier provider of panelized buildings with factory-applied external finishes in the United States.

Mission

Fullerton Building Systems mission is to become the premier provider of panelized buildings with factory-applied external finishes for restaurants, convenience stores, and other light commercial applications by providing the best lead times, highest quality, and best warranties in the industry.

The company's driving goal is to provide clients with quality building components at reasonable prices for faster and better results. Through our ongoing commitment to innovation, technology and service, we design, engineer, deliver and assemble panelized building packages with factory applied finishes - in record time.

Over the years, our reputation for excellence has attracted architects, designers, engineers, and builders whose common goal is to deliver excellence at the speed of business.



SECTION TWO - CLIENT FOCUSED RESULTS



Problem Solving

We built our company's reputation on our ability to consistently deliver Quality Exterior Finishes to companies across the nation. Our manufacturing methods and problem solving approach to today's construction design challenges sets us apart from more traditional approaches. Every day we work with franchisees, developers, general contractors and architects to help make the remodeling and construction process simpler and more cost effective.

Solutions

FFS provides real results with no surprises. Our service offerings include, but are not limited to:

- High Quality Exterior Finishes
- Faster Turn Around Times
- Superior Service and Craftsmanship
- Design flexibility

Simplicity

Simplify your project with the FFS exterior finishes. FFS exterior finish panels allow you to remodel or build and open more facilities in less time thus controlling your building costs. Our factory finishes approach reduce the number subcontractors on-site and provides factory made finishes that are not subject to exterior weather conditions which result in more consistency and higher quality.



SECTION THREE - FAQ

Questions & Answers

Our company is a little different and being able to understand what FFS can provide you is critical in your decision making process. The following is a list of some of the more frequently asked questions relating to the Fullerton Finish System.

EnduraWal

1. What is EnduraWal?

3 part polymer stucco hard coat system consisting of base coat, fiberglass mesh & finish coat on cement board.

2. How are panels attached to the exterior wall?

Mechanical fasteners are required for proper installation of panels.

3. How do you cut panels?

Panels can be cut with a standard circular saw equipped with a masonry blade. Always cut panels from the back side. Blow the dust off the face of the panel after cutting or drilling.

4. What is the thickness of panel & how much does it weigh?

EnduraWal panels are ½" thick and estimated weight is 3# per square foot.

5. How are the panel to panel joints sealed?

We suggest putting bond breaker tape down at the seams. After installation of all panels caulking should be performed to seal all edges. Also metal flashing is an option used in conjunction of sealing edges of panels.

6. What sizes do the panels come in?

Our standard sizes are 8' x 4', 9' x 4' & 10' x 4' but we can do custom sizes for your project.

7. What is the standard colors & textures?

40 standard colors & 3 textures. Custom colors are available.

General Questions

1. Where can I use your products?

Our products can be used on Exterior and Interior walls. Anywhere there is a need for a masonry finish.

2. Do you provide factory corners?

Yes

3. Can I get custom designs, utilizing more than one product on one panel?

Yes we can customize your panels with different finishes and textures.

SECTION THREE - FAQ



4. **Can you provide panel layout or shop drawings?**
Yes drawings can be provided for easy installation.
5. **What is your mailing address?**
Fullerton Finish Systems Inc., 8645 W 21st Street / P.O. Box 609, Sand Springs, OK 74063
6. **What is the cost per square foot?**
Pricing per square foot varies due to the many differences from building to building. Depending on the type of project, location, wall heights and finishes selected. Please feel free to contact our office (866)915-9995 and speak with Ray Buchanan, Gina Ogburn or Jack Vermillion for a budgetary number.
7. **What do you need to provide a formal quote?**
If you can send us a drawing we can do square footage take off or give us your building dimensions, height, width, length along with finish type and we can give you a quote from that information. Plans can be emailed to: ray.buchanan@fullertonfinishsystems.com, gina.ogburn@fullertonfinishsystems.com, jack.vermillion@fullertonfinishsystems.com.
8. **Will product be OK transporting on a modular building?**
Yes, we provide materials to modular customers over the United States that apply our products in their plant and ship all over the country.
9. **How are the products packages?**
Depending on products and quantity we build special skids\crates to protect our panels during shipping.
10. **How do you need to store materials on the site?**
Store pallets and/or crates on a suitable flat surface above grade after removal from shipping vehicle.
11. **What will I need to receive your product from shipping?**
4,000 lb Forklift, depending on the size and weight of the panel crate.
12. **What's the approximate lead time to receive your product?**
Our CastWal products can be shipped in about 2 – 3 weeks, our other product lines lead time is about 3 – 4 weeks. If quicker response is needed let us know and we will check production schedule for time to meet your schedule.
13. **Do you have a local distributor of your products?**
No, Sales & Production is handled from our Sand Springs, OK plant facility.
14. **How far do you ship your products?**
We have shipped all over the US, Canada and the Caribbean.

SECTION THREE - FAQ



15. Can you provide installation of the products?

Yes, we have a network of installers that we can price product installed.

16. Can you provide misc. metal trims and accessories?

Yes, we can provide all accessories needed for your project using our panels.

SECTION FOUR – Similar Experience



Experience

FFS has been providing exterior finish wall panels/materials to various markets (retail, restaurant, convenience, hospitality, professional buildings, etc...) throughout the United States since 2005. We work with our clients to supply exterior finish panels custom made to suit their needs for remodel, upgrades or new construction.

FFS continuously works on product modifications and improvements that increase operational performance and improve the value we bring to each customer.

*Similar Project Profiles are attached for your review.



ENDURAWAL



Project Summary:

McDonald's used FFS EnduraWal to update this location in Chesaning, MI. FFS supplied the EnduraWal veneer panels utilizing worm trail texture and the colors were matched per McDonald's specifications. The FFS Exterior Finish veneers updated the look of this restaurant.

ENDURAWAL



Project Summary:

Taco Bell in Michigan updated their exterior appearance with the FFS EnduraWal veneer. FFS supplied the 4x8 EnduraWal veneer panels in worm trail texture and Taco Bell colors.

ENDURAWAL



Project Summary:

Sonic Restaurant in Baton Rouge, LA updated their exterior finish by adding the FFS EnduraWal and Stonewal veneer to the restaurant. The EnduraWal was done in worm trail texture, #449 Buckskin was the color. FFS also supplied the StoneWal finish in Southwest Blend around the entire perimeter of the restaurant. The FFS exterior finishes completely transformed this restaurant's appearance.

ENDURAWAL



Project Summary:

FFS provided the EnduraWal Veneer on this new building near Glendale, AZ. The EnduraWal panels were done in a Sand Float Texture in the color - Sands of Time. FFS also provided the CastWal material in Sand Finish texture and were done in the colors of Autumn and Bone.

ENDURAWAL



Project Summary:

Clear Channel used FFS EnduraWal and Stonewal for this project in Euless, TX. The EnduraWal color is sand pebble texture, #442 Cotton color and the StoneWal is Castle Stone in Chardonnay.

ENDURAWAL



Project Summary:

Casey's used FFS EnduraWal and BrickWal to update this location in Iowa. FFS supplied the 4x8 EnduraWal veneer panels utilizing worm trail texture in a light tan for exterior walls and brown worm trail for the entrance canopy. By adding the FFS Exterior Finish veneers updated the look to this convenience store.

ENDURAWAL



Project Summary:

FFS manufactured this Fuel Kiosk for HEB. This Kiosk was delivered to Katy, TX. The FFS EnduraWal veneer was done in worm trail texture and in the colors of White, Yellow and Red.

SECTION FIVE — EnduraWal Exterior Finish Spec Sheets & Details



The following are the EnduraWal Exterior Finish Spec Sheets and sample detail sections showing different configurations that FFS has utilized in the past for both new construction and renovation projects.

The following are sample finish detail sections that show generally how our EnduraWal exterior finishes are applied to panel sections.



EnduraWal™

From Fullerton Finish Systems, Inc.



Engineered For An Attractive, Durable Exterior Finish.

EnduraWal™ from Fullerton Finish Systems is a reinforced cement board product, distinctive acrylic stucco finish coat. EnduraWal™ is designed with a base coat, fiberglass mesh and strong polymer finish, ensuring you a great look that won't break, shift or crack.

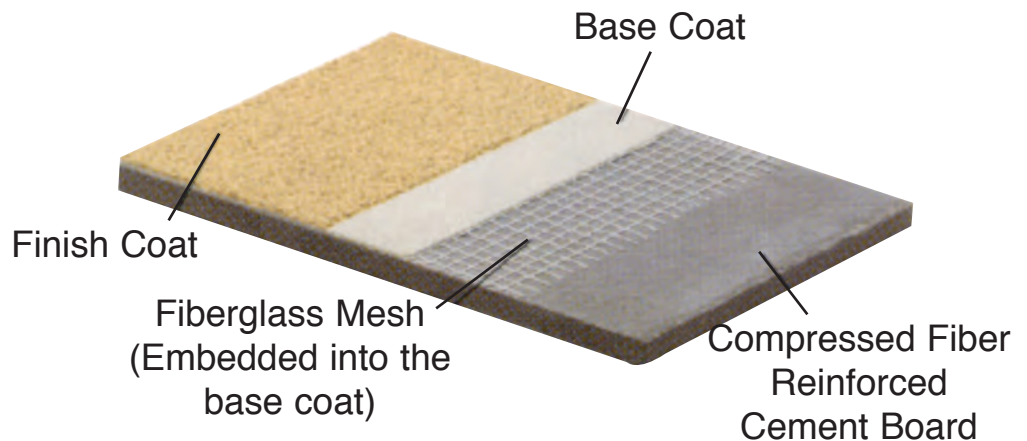
The Fullerton Finish Systems Advantage...

- Installs easily -- no specialist subcontractors are required
- Wide choice of color and textures -- custom matches possible
- Available in sand float, wormtrail and blown textures
- You are free to design the look you want - at a price you can afford
- Easy and quick installation by your crew - quicker project completion
- To obtain architectural distinction you can incorporate other products offered by Fullerton Finish Systems onto the same panel, or add special shapes

EnduraWal™ For Great Exteriors.

EnduraWal™ Advantage

EnduraWal™ is engineered for durability because the substrate is compressed fiber reinforced cement board. You can easily add architectural features to achieve design objectives. EnduraWal™ is made for an intensive-use facility. Panelized, EnduraWal™ gives you flexibility for fast, easy erection.



The Fullerton Finish System Advantage.

What is the Fullerton Finish System advantage? It is the combination of experience and superior service. Our skilled architectural and engineering staff will assist you with detailed information on attachments and erection. With EnduraWal™ from Fullerton Finish Systems, you get durability, speed and your desired look.



The Quality Solution for New & Remodel Exterior Finishing

PO Box 609, Sand Springs, OK 74063 • Phone 918.246.9995 • Toll Free 866.915.9995 • Fax 918.246.9976
www.fullertonfinishesystems.com

EnduraWal™

From Fullerton Finish Systems, Inc.

Veneer Panel Specification

Part 1 - General

1.1 Description

A. Work described herein consists of furnishing factory fabricated veneer panels with an exterior face of textured polymer finish on mineral fiber reinforced cement board as manufactured in Sand Springs, Oklahoma by Fullerton Finish Systems, Inc. - (918) 246-9995

B. Manufacturer shall have been continuously engaged in the manufacture of exterior wall panels for 35 or more years.

1.2 Warranty - Manufacturer to warranty from date of purchase against defective materials or workmanship in fabrication for a period of five years.

Part 2 - Products

2.1 Description

A. Textured polymer finish shall be _____ per approved sample. All material shall be obtained from one source to match in color as nearly as possible.

B. Textured polymer finish shall conform to requirements of ASTM tests: E108 (modified), E84 (tunnel test), D968 (abrasion resistance) and Mil. Std. 810 Method 508.

C. Mineral fiber reinforced cement board (M.F.B.) substrate shall meet the following minimum requirements:

Compressive Strength (lb/in²)	7000
Flexural Strength (lb/in²)	2000
Percent Moisture Movement	
50% to 90% RH	0.06%
Thermal "R" Value	0.15
Burn Character	
Flame / Smoke	0/5

D. Product samples and shop drawings, if required, shall be submitted for approval before panel fabrication.

2.2 Performance

A. Panel substrate and textured polymer finish shall withstand the following tests without noted change in appearance or material failure:

1,000 hours in Atlas Twinarc weatherometer.

14 cycles salt fog and thermal shock.

100 cycles -50 to +150 degrees F.

B. All testing shall have been performed by an independent testing facility.

Part 3 - Execution

3.1 Erection

A. Panels shall be erected plumb and true by qualified workman.

B. Panels shall be aligned and spaced as shown on manufacturer's shop drawings, if required.

C. Panels shall be handled and attached to building structure as per manufacturer's shop drawings, if required, installation procedure and/or architectural drawings.

D. All horizontal or vertical panel joints shall be filled with sealant over bond breaker tape.

E. Accessories

1. Sealant (Equal to Sashco Big Stretch) shall be applied in accordance with sealant manufacturer's recommendations.

2. Bond breaker tape (slick faced polyvinyl chloride tape) minimum of 3/4" wide and equal to #50 by All Type. Tape shall be field applied to surface behind panel joint before panel erection.

3. Fasteners shall be low profile self drilling stainless steel or zinc and clear chromate plated for rust resistance. Fasteners may be color coated to match finish color, if required.

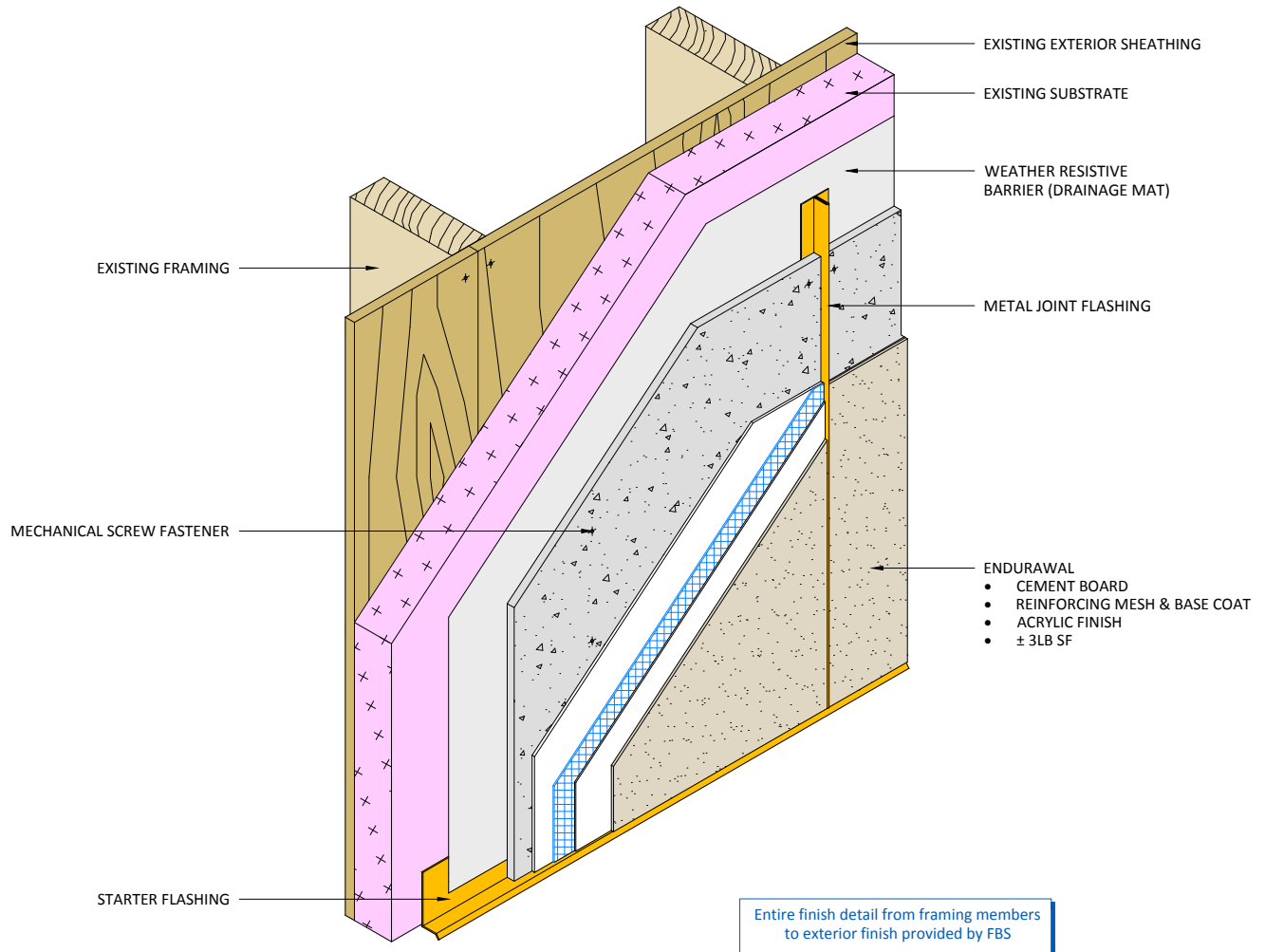
4. All the accessories shall be of size, shape and spacing as shown on manufacturer's shop drawings, if required, and/or listed in manufacturer's Installation Guide.



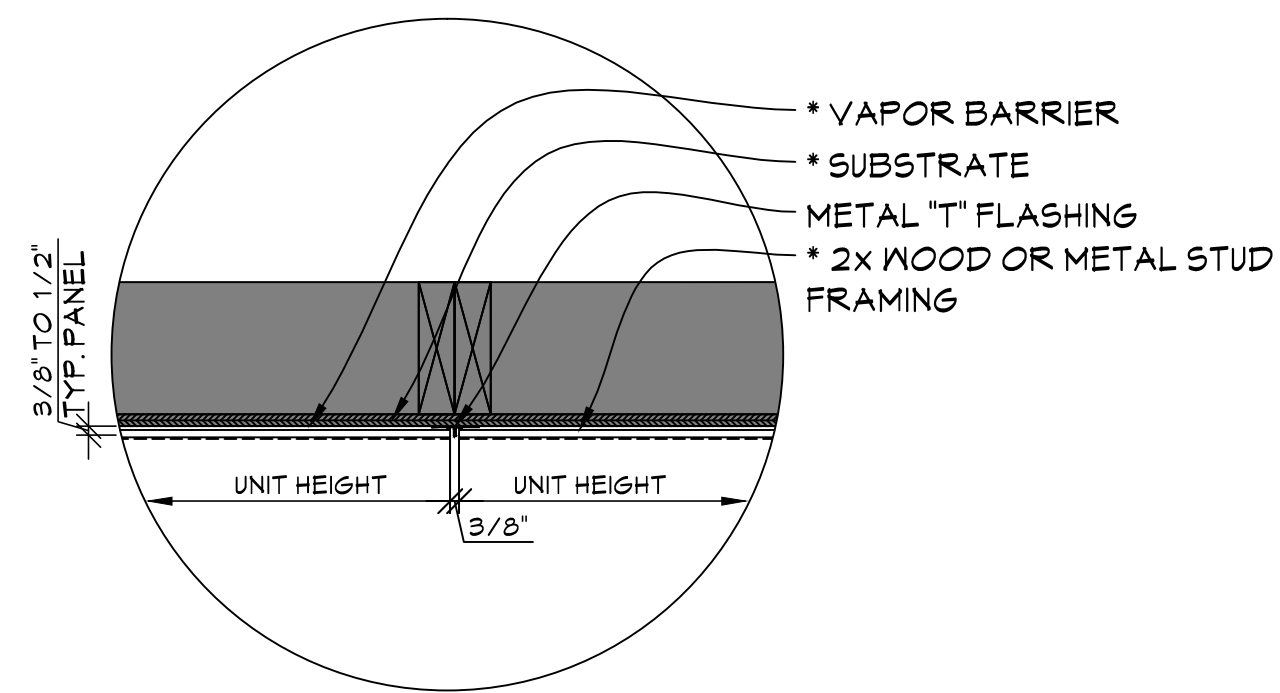
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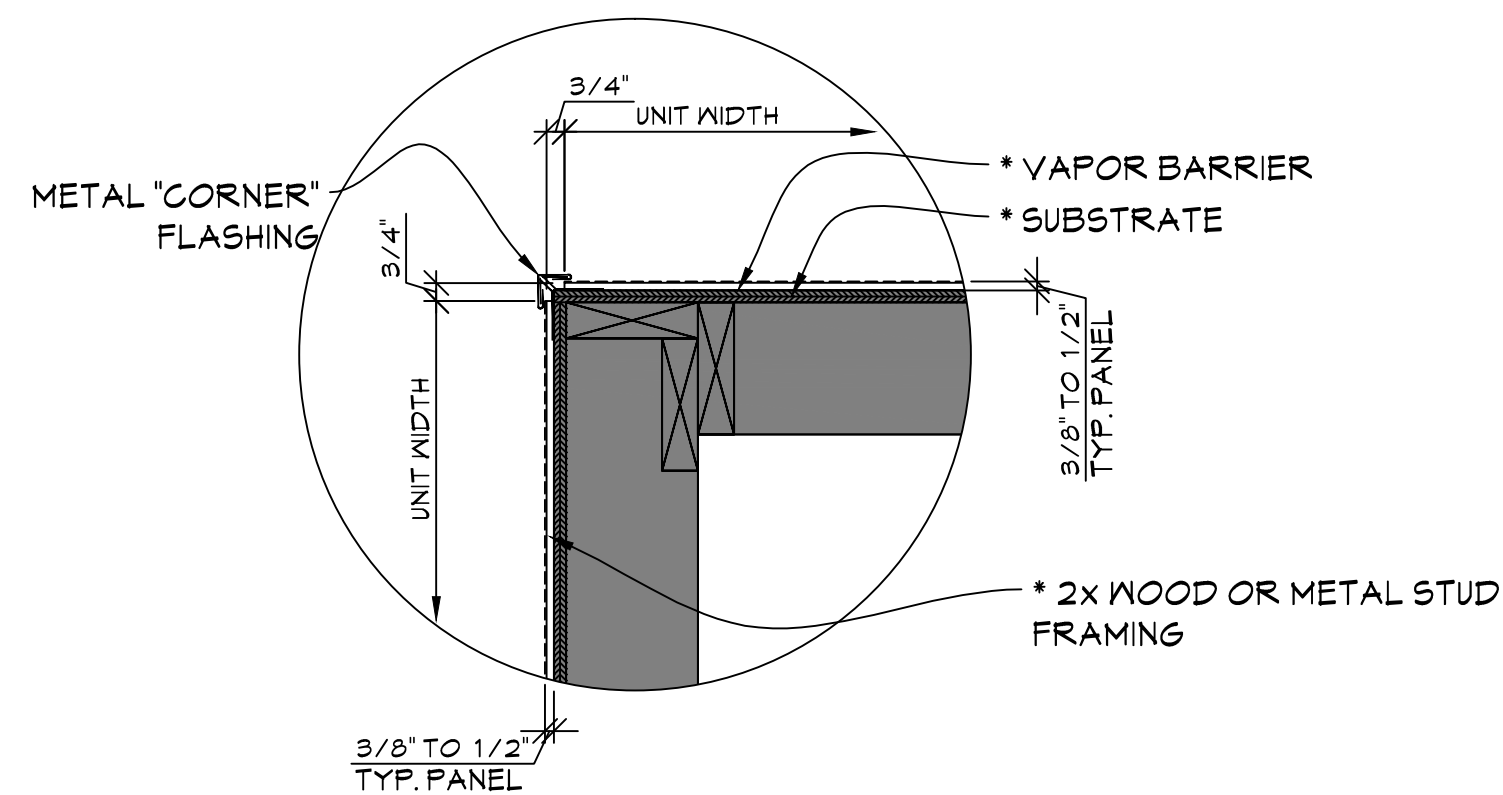
DETAIL SECTION - EnduraWal Hardcoat System (Renovation)



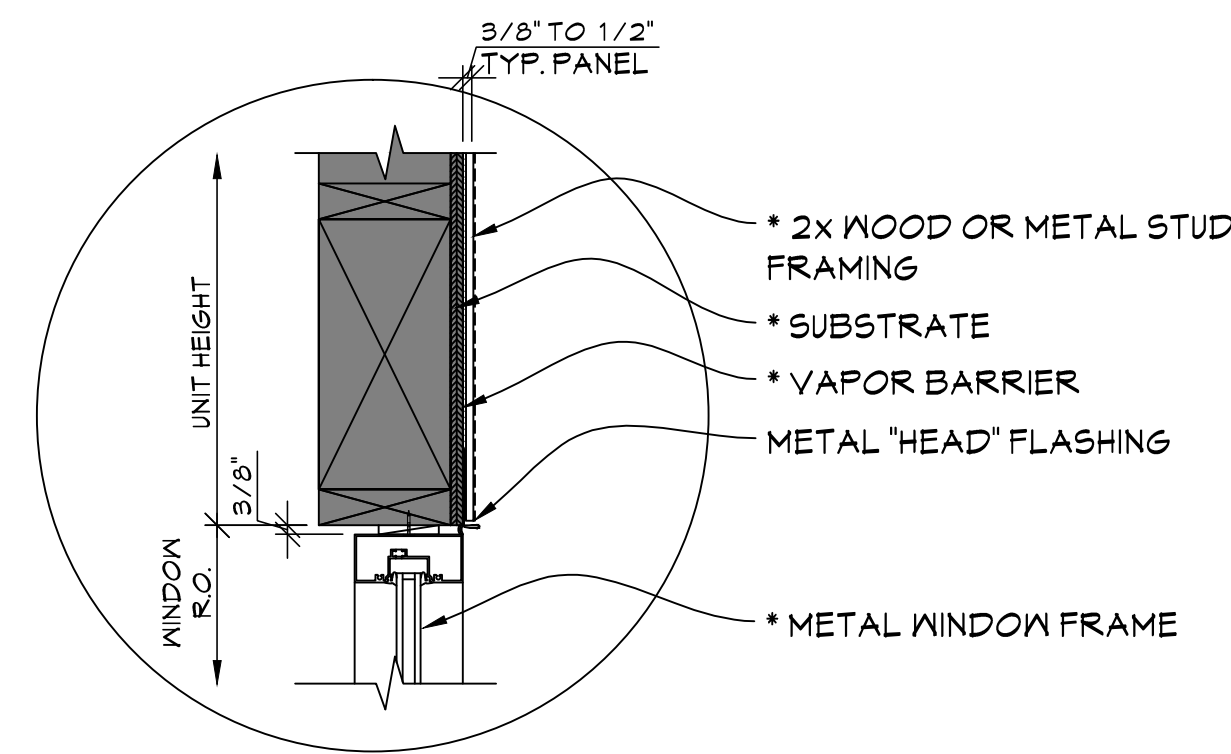
This drawings represents a generic sample detail for illustration purposes only.
Actual details utilized may vary due to specific project requirements.



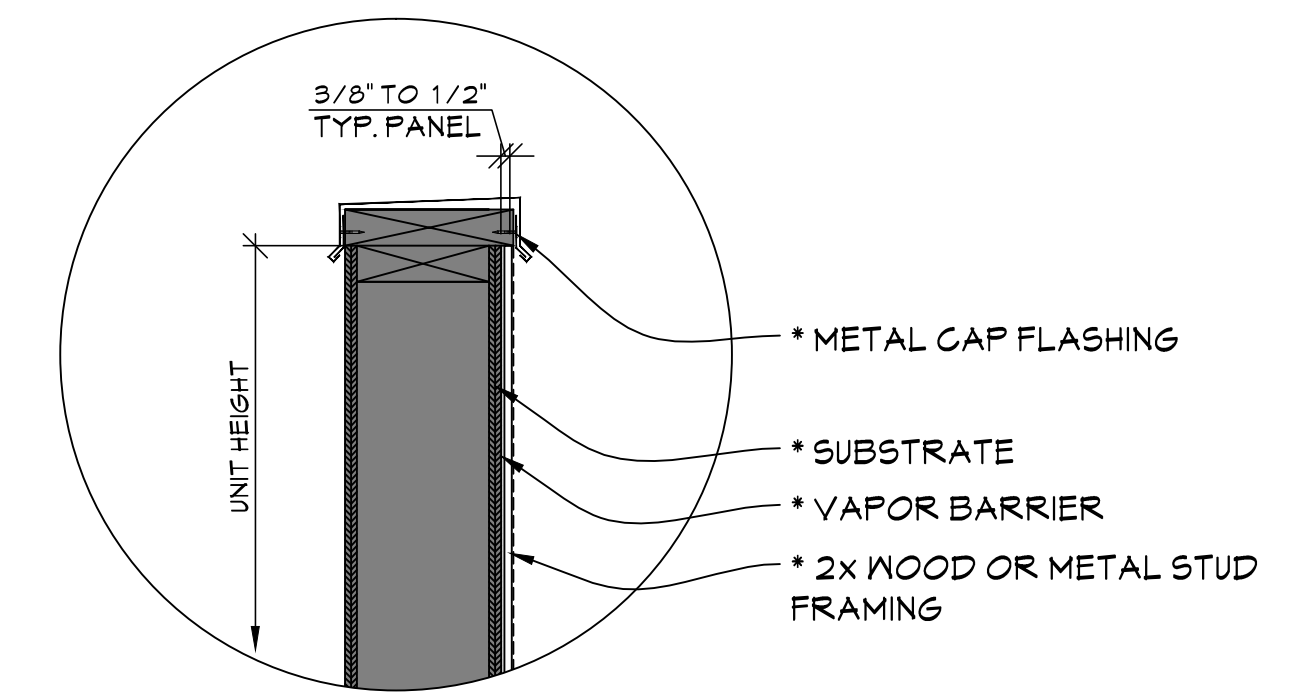
A VERTICAL JOINT
SCALE 1-1/2" = 1'-0"



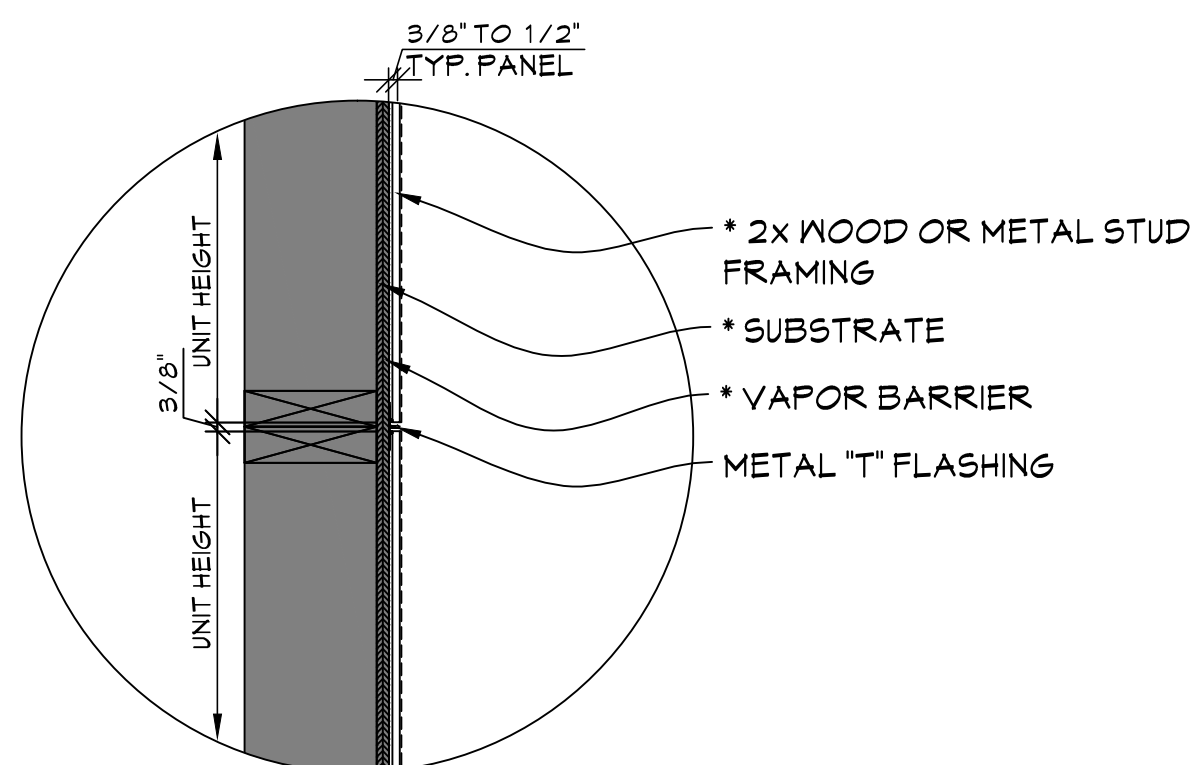
E OUTSIDE CORNER
SCALE 1-1/2" = 1'-0"



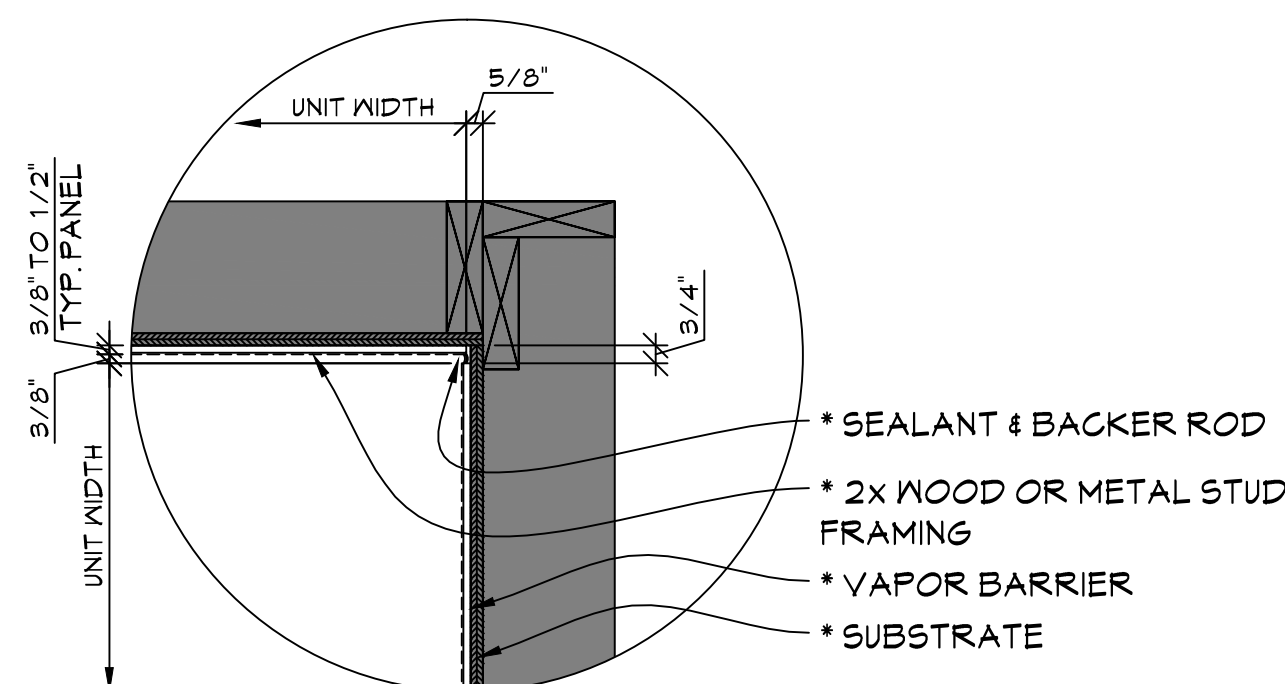
J WINDOW HEAD
SCALE 1-1/2" = 1'-0"



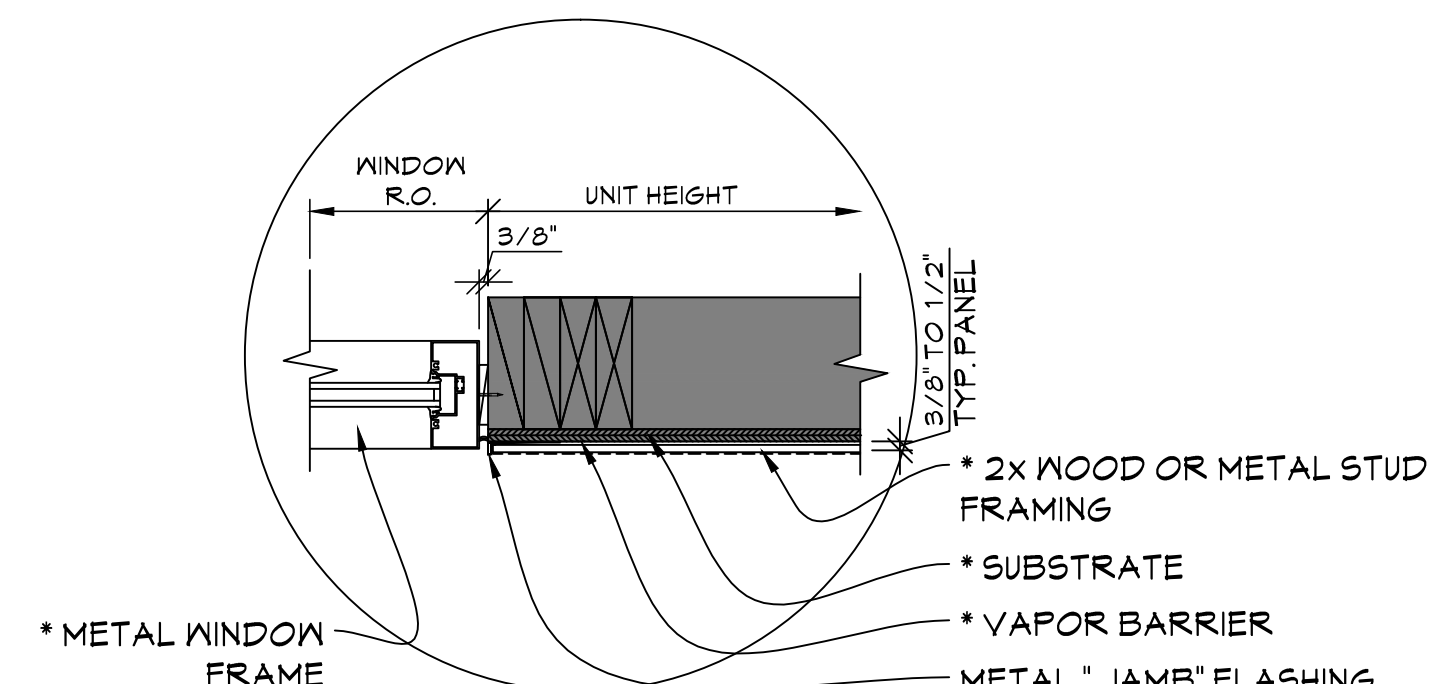
M PARAPET OF WALL
SCALE 1-1/2" = 1'-0"



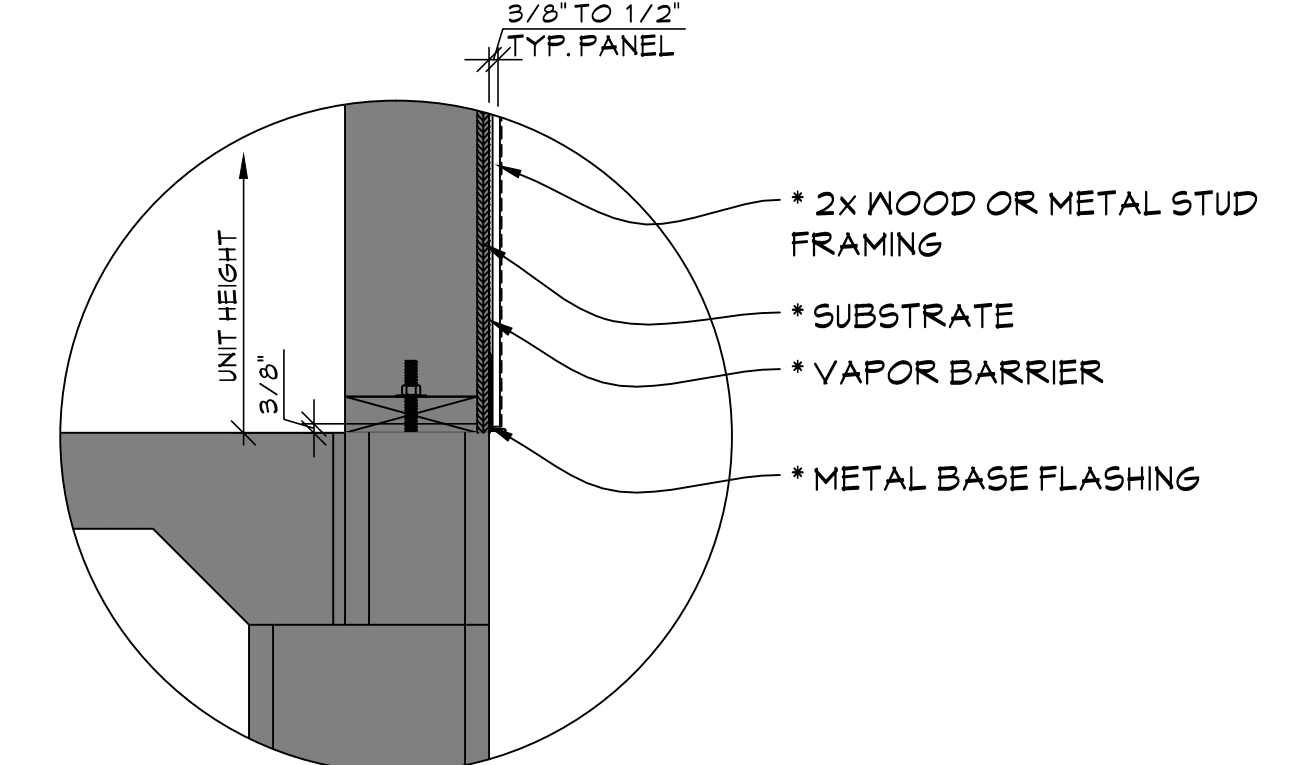
B HORIZONTAL JOINT
SCALE 1-1/2" = 1'-0"



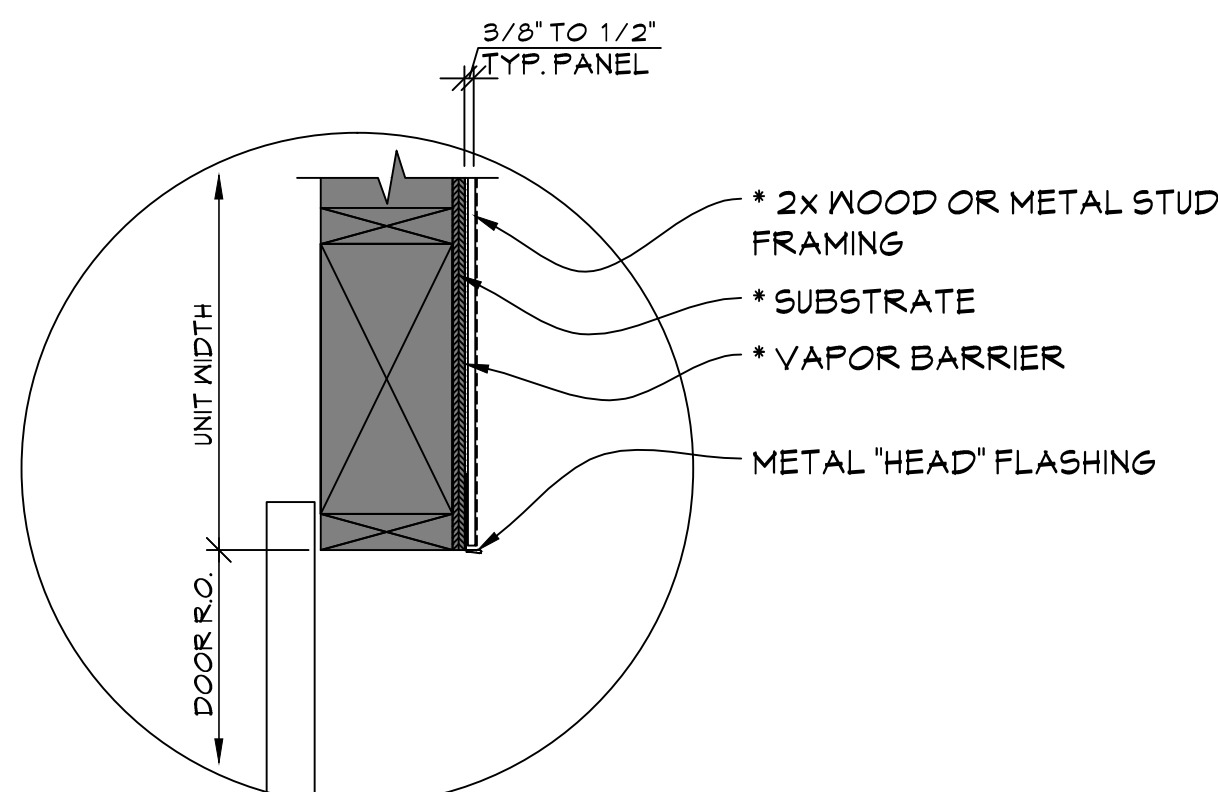
F INSIDE CORNER
SCALE 1-1/2" = 1'-0"



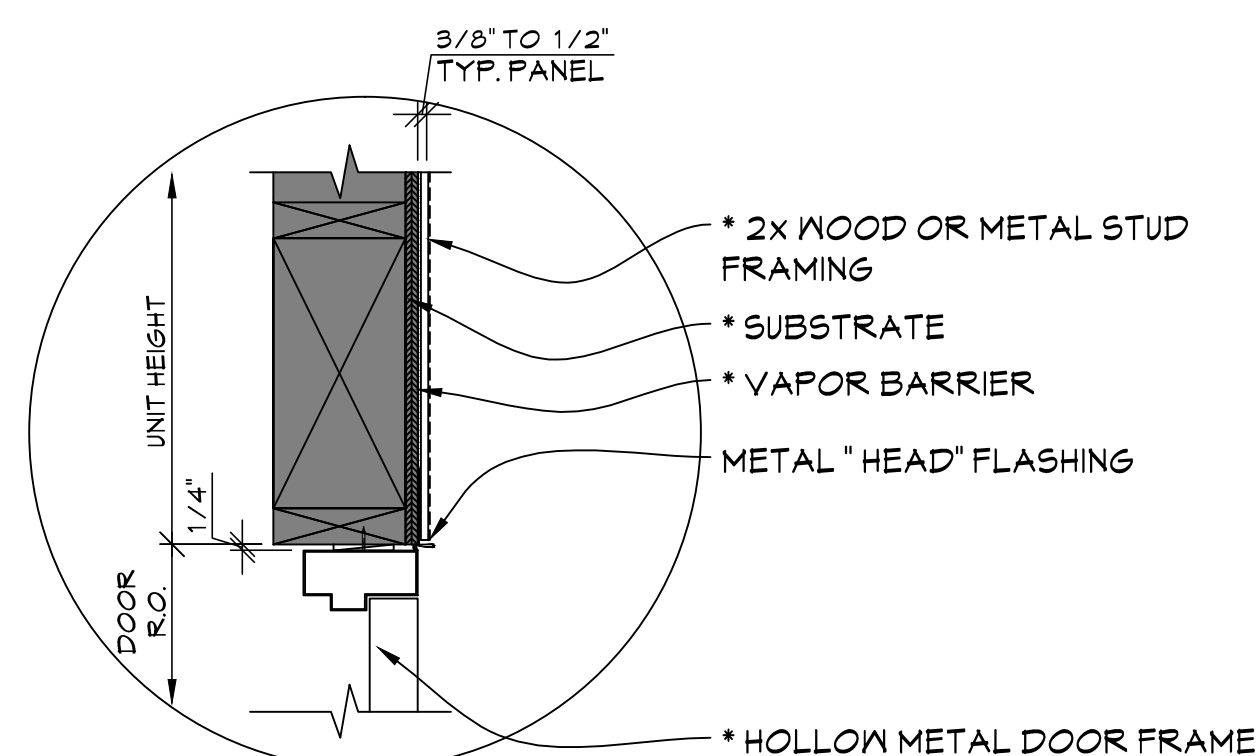
K WINDOW JAMB
SCALE 1-1/2" = 1'-0"



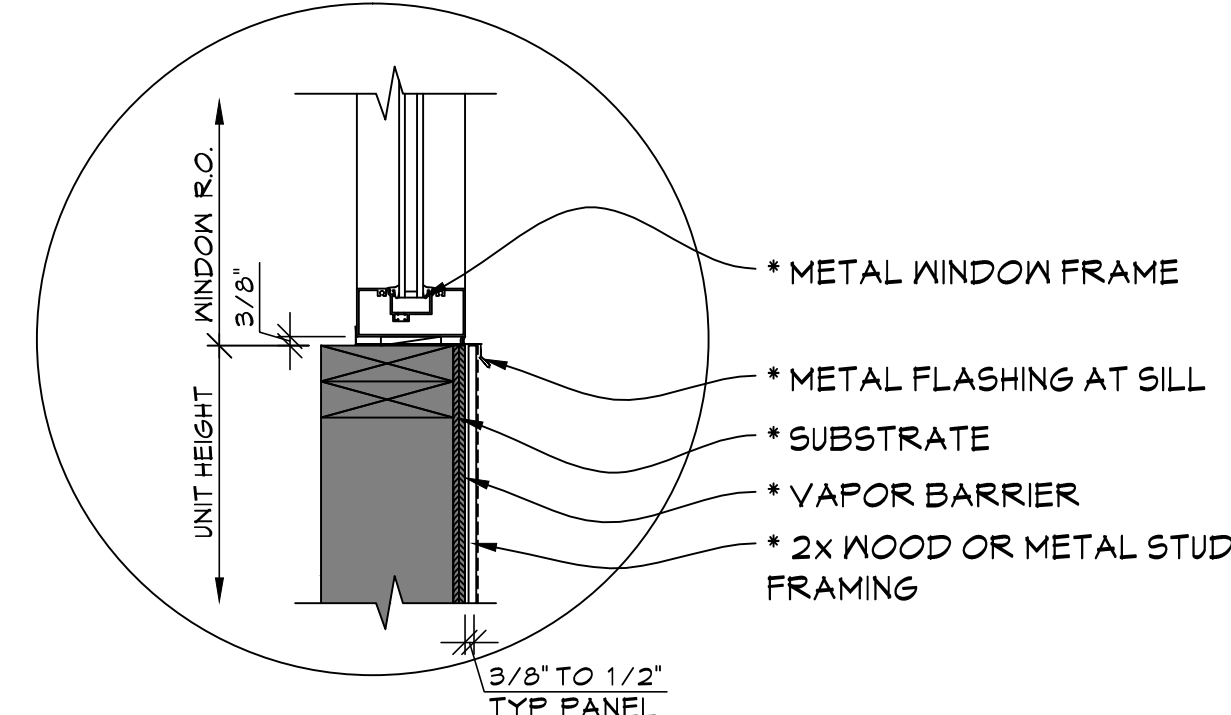
N BASE OF WALL
SCALE 1-1/2" = 1'-0"



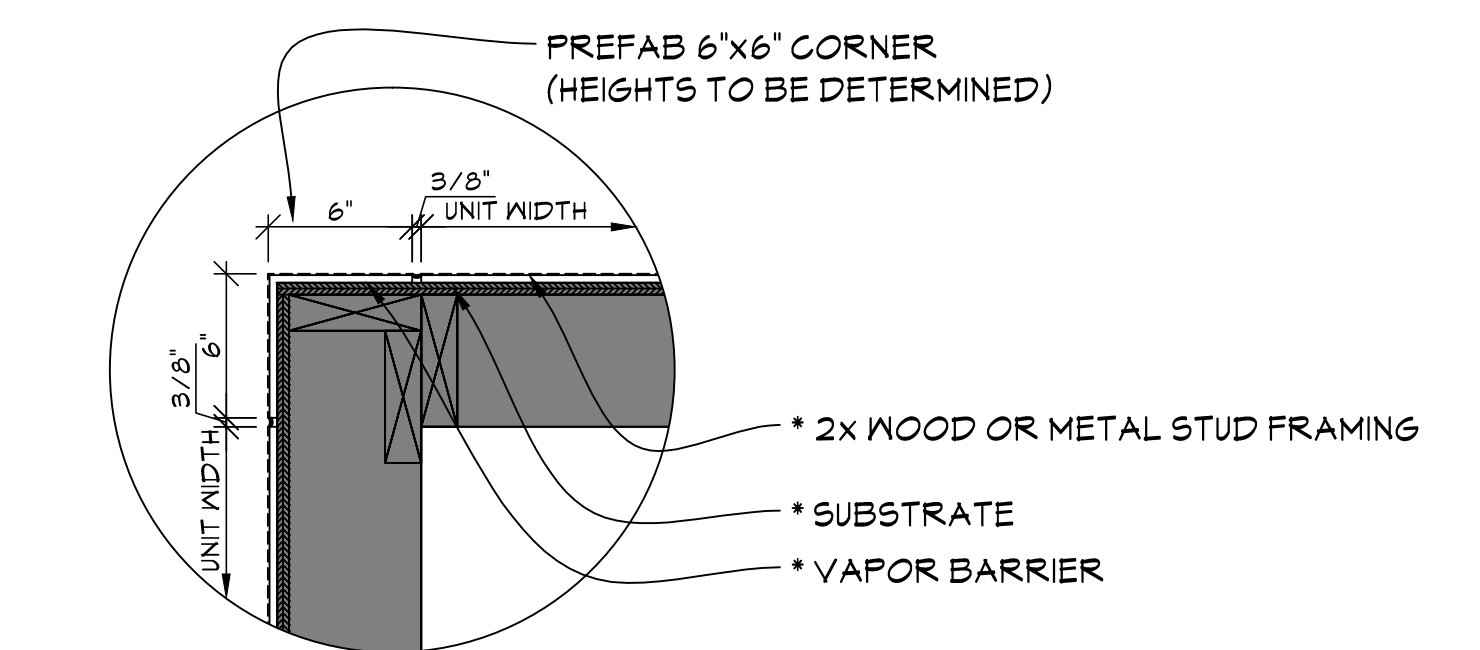
C OVERHEAD DOOR HEAD
SCALE 1-1/2" = 1'-0"



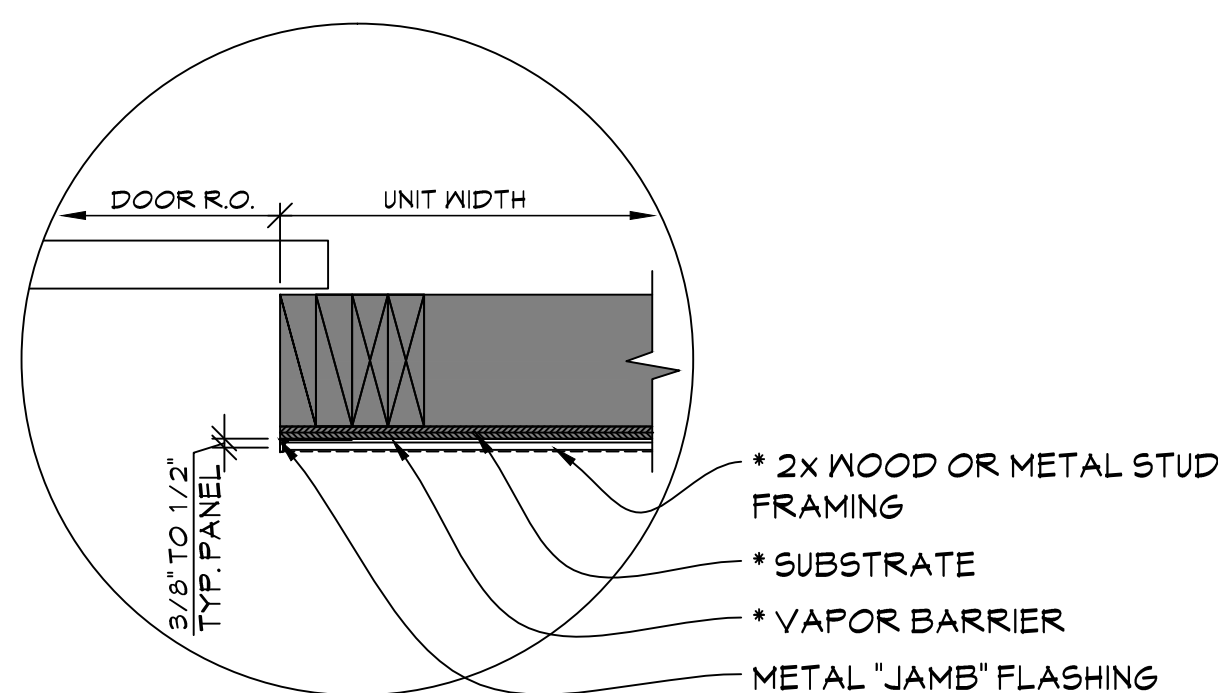
G HOLLOW METAL DOOR HEAD
SCALE 1-1/2" = 1'-0"



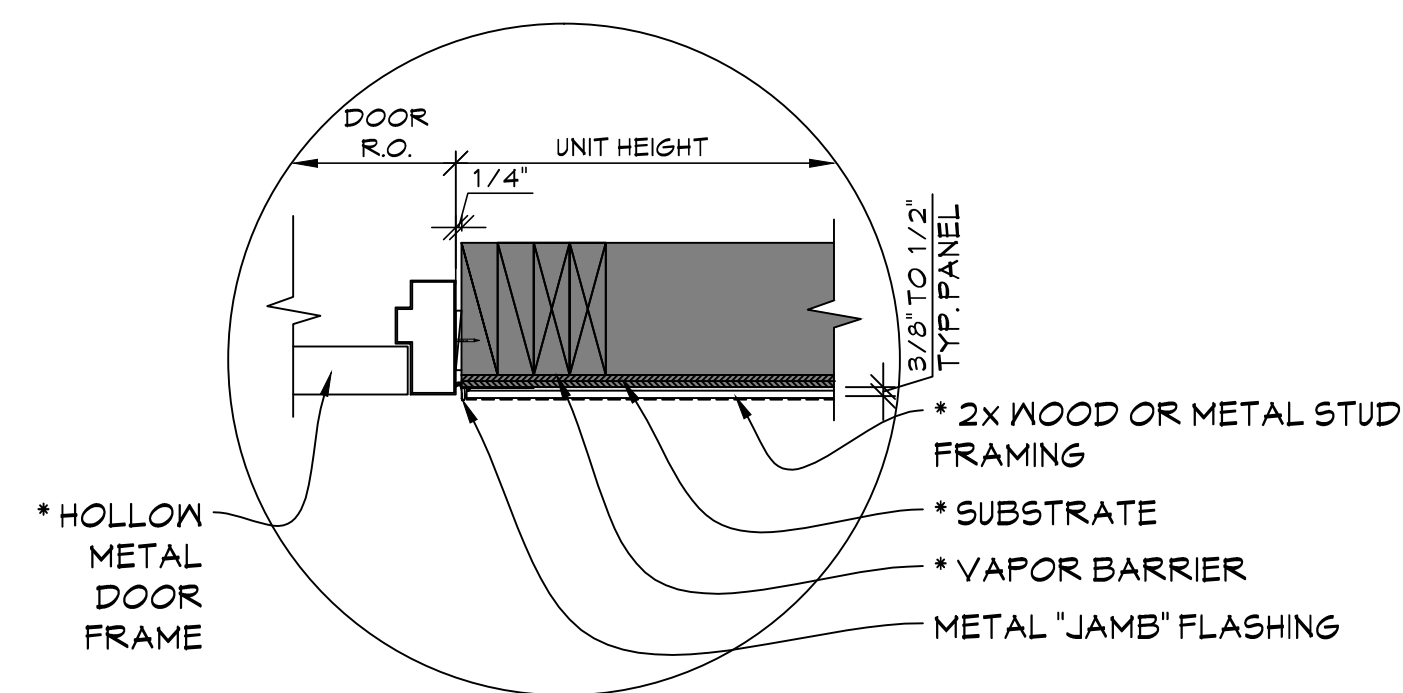
L WINDOW SILL
SCALE 1-1/2" = 1'-0"



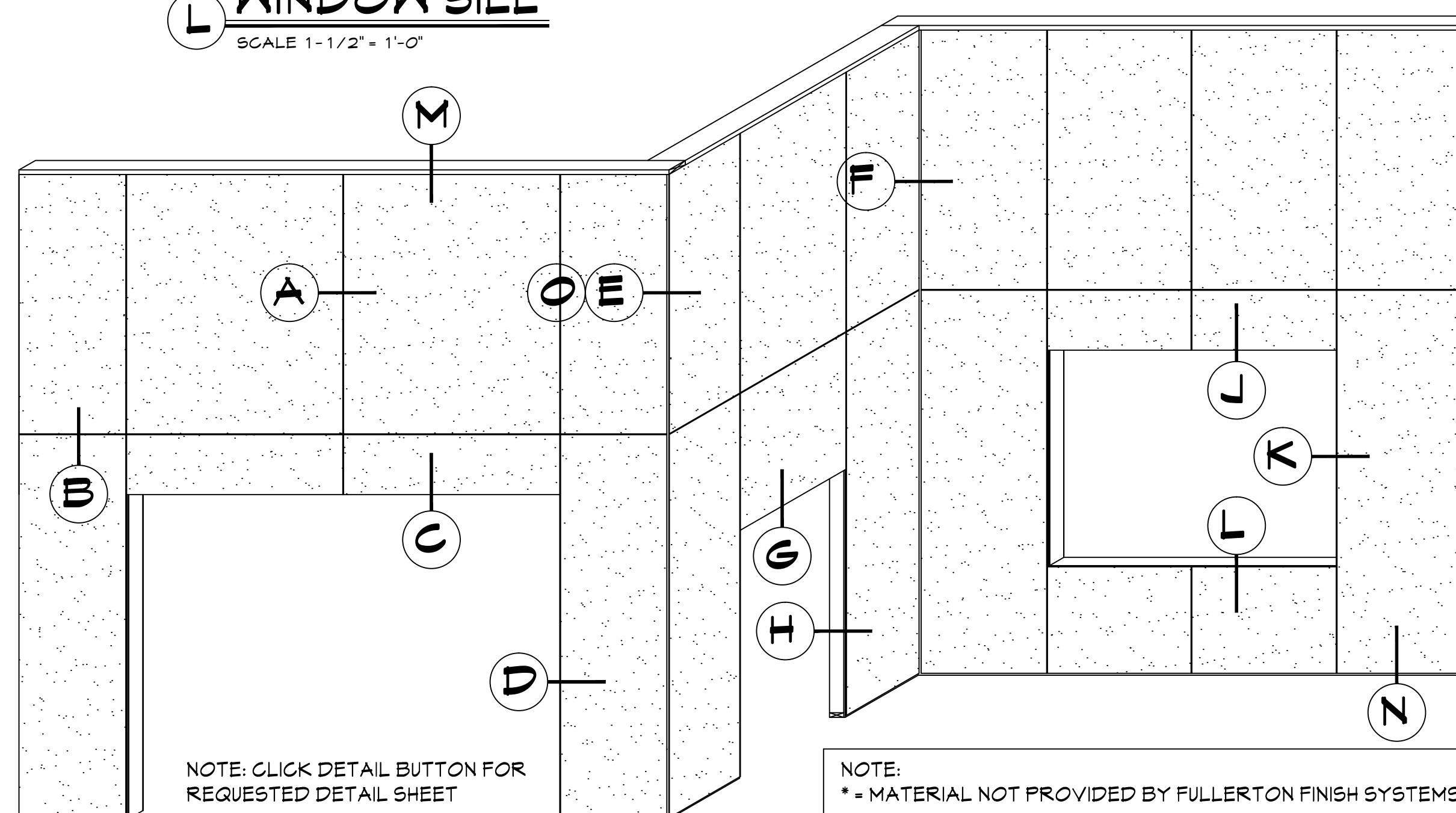
O OPTIONAL OUTSIDE CORNER
SCALE 1-1/2" = 1'-0"



D OVERHEAD DOOR JAMB
SCALE 1-1/2" = 1'-0"



H HOLLOW METAL DOOR JAMB
SCALE 1-1/2" = 1'-0"



NOTE: CLICK DETAIL BUTTON FOR REQUESTED DETAIL SHEET

NOTE:
* - MATERIAL NOT PROVIDED BY FULLERTON FINISH SYSTEMS

ENDURAWAL

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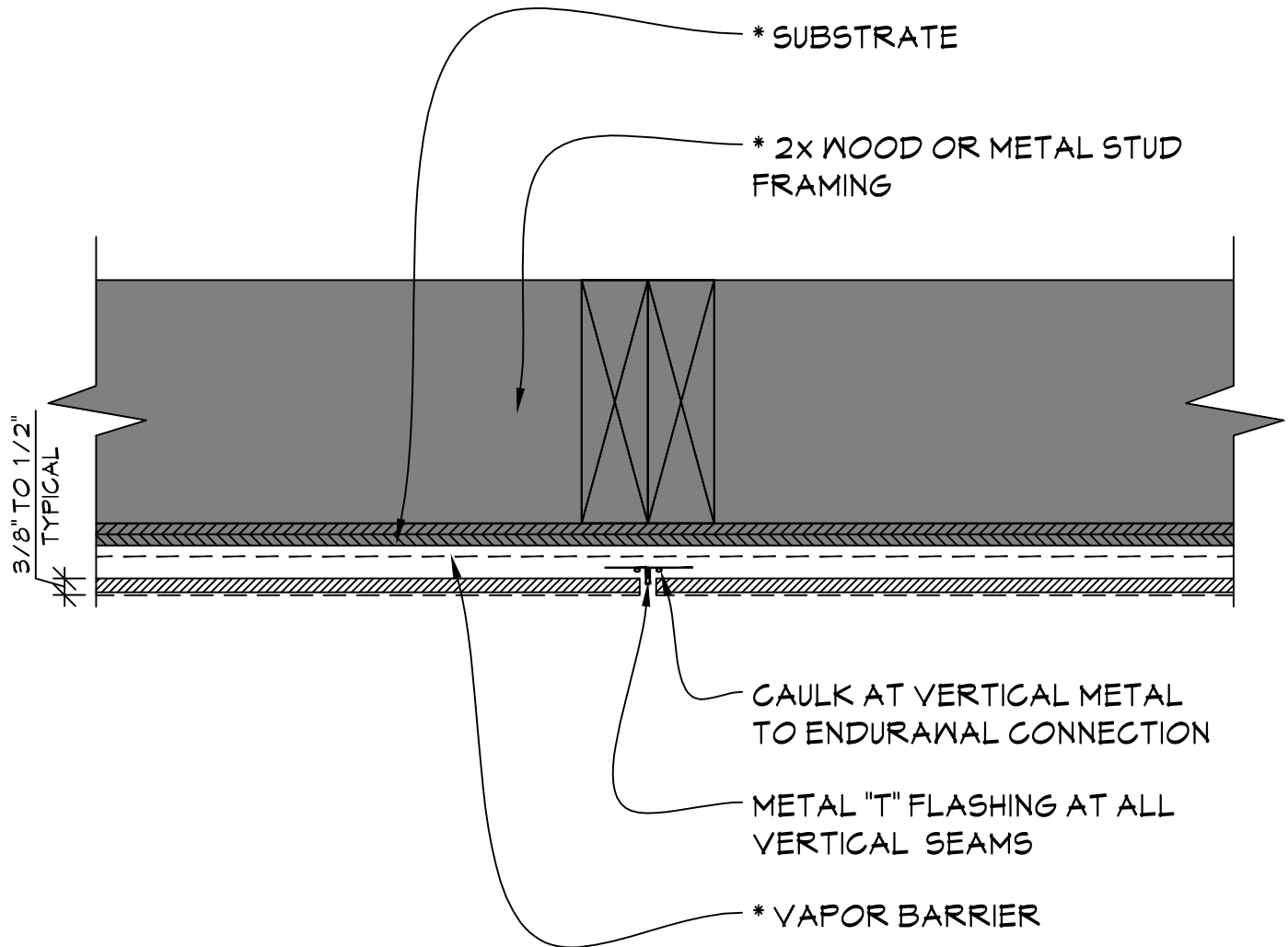


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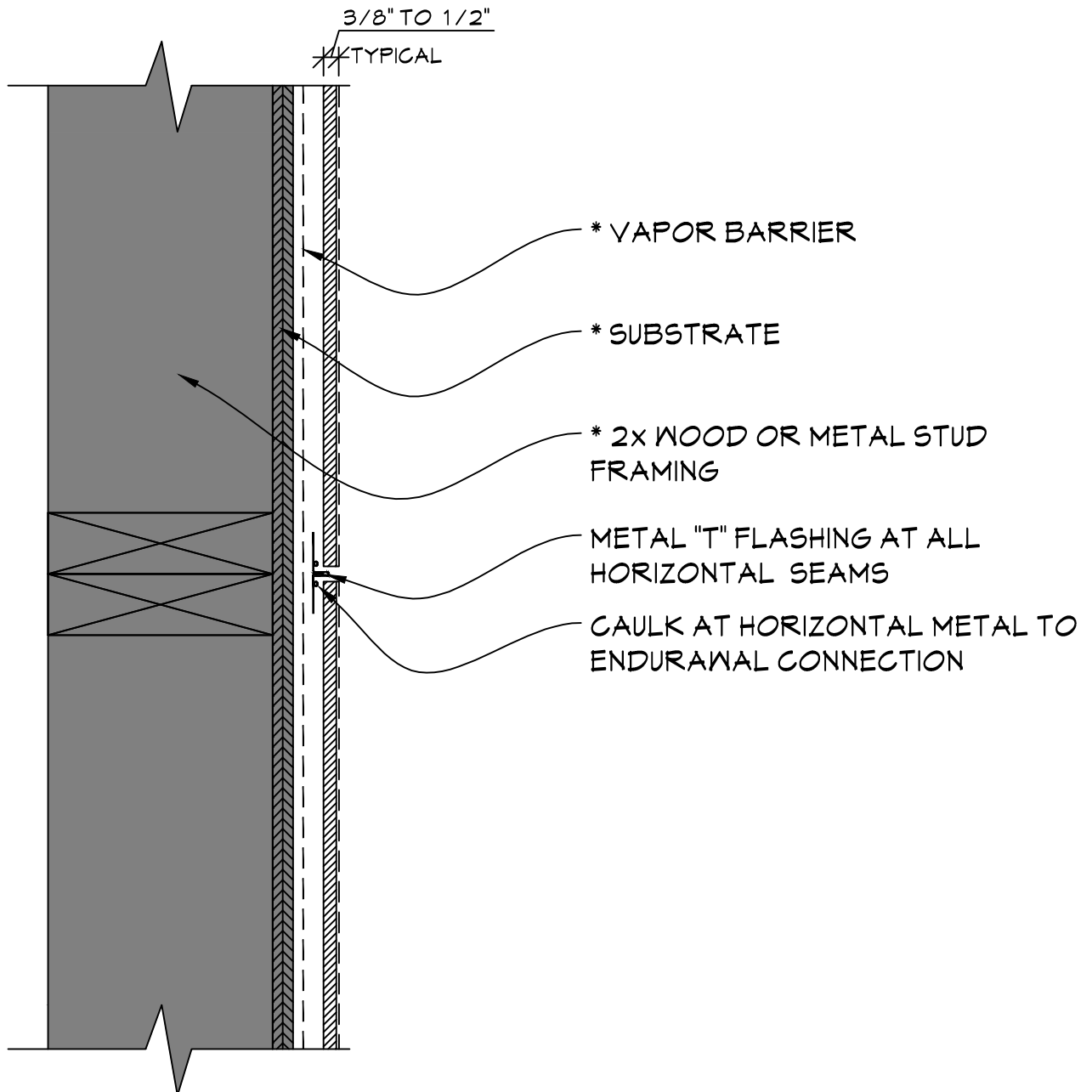


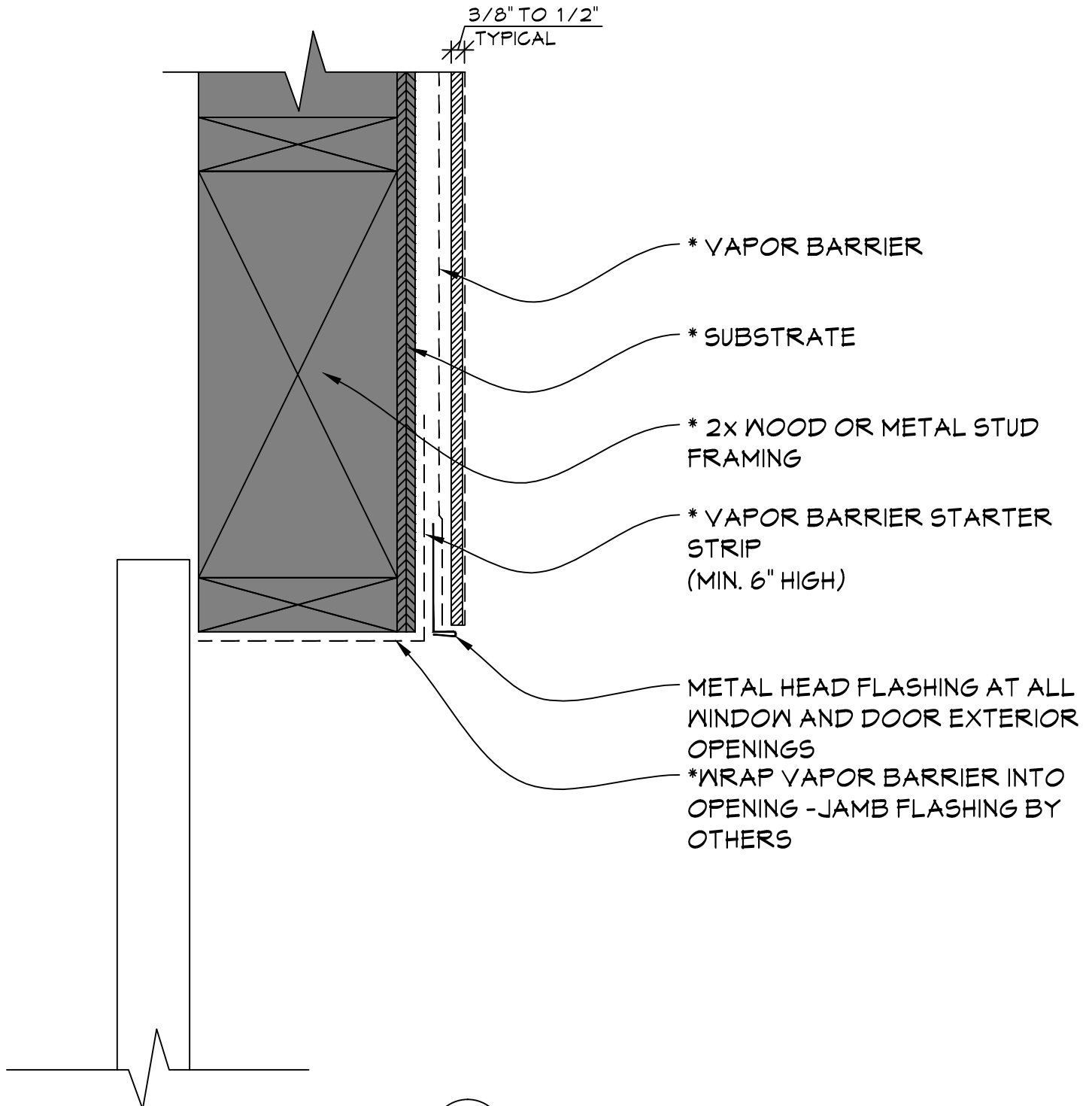
TYPICAL VERTICAL DETAIL

SCALE: 3" = 1'-0"

NOTE:

* = MATERIAL NOT PROVIDED BY FULLERTON FINISH SYSTEMS





TYPICAL OVERHEAD DOOR DETAIL

SCALE: 3" = 1'-0"

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*WRAP VAPOR BARRIER INTO OPENING
-JAMB FLASHING BY OTHERS

* SUBSTRATE

* 2x WOOD OR METAL STUD
FRAMING

CAULK AT JAMB FLASHING TO
ENDURAWAL CONNECTION

METAL JAMB FLASHING

* VAPOR BARRIER

3/8" TO 1/2"
TYPICAL



TYPICAL OVERHEAD DOOR JAMB DETAIL

SCALE: 3" = 1'-0"

NOTE:

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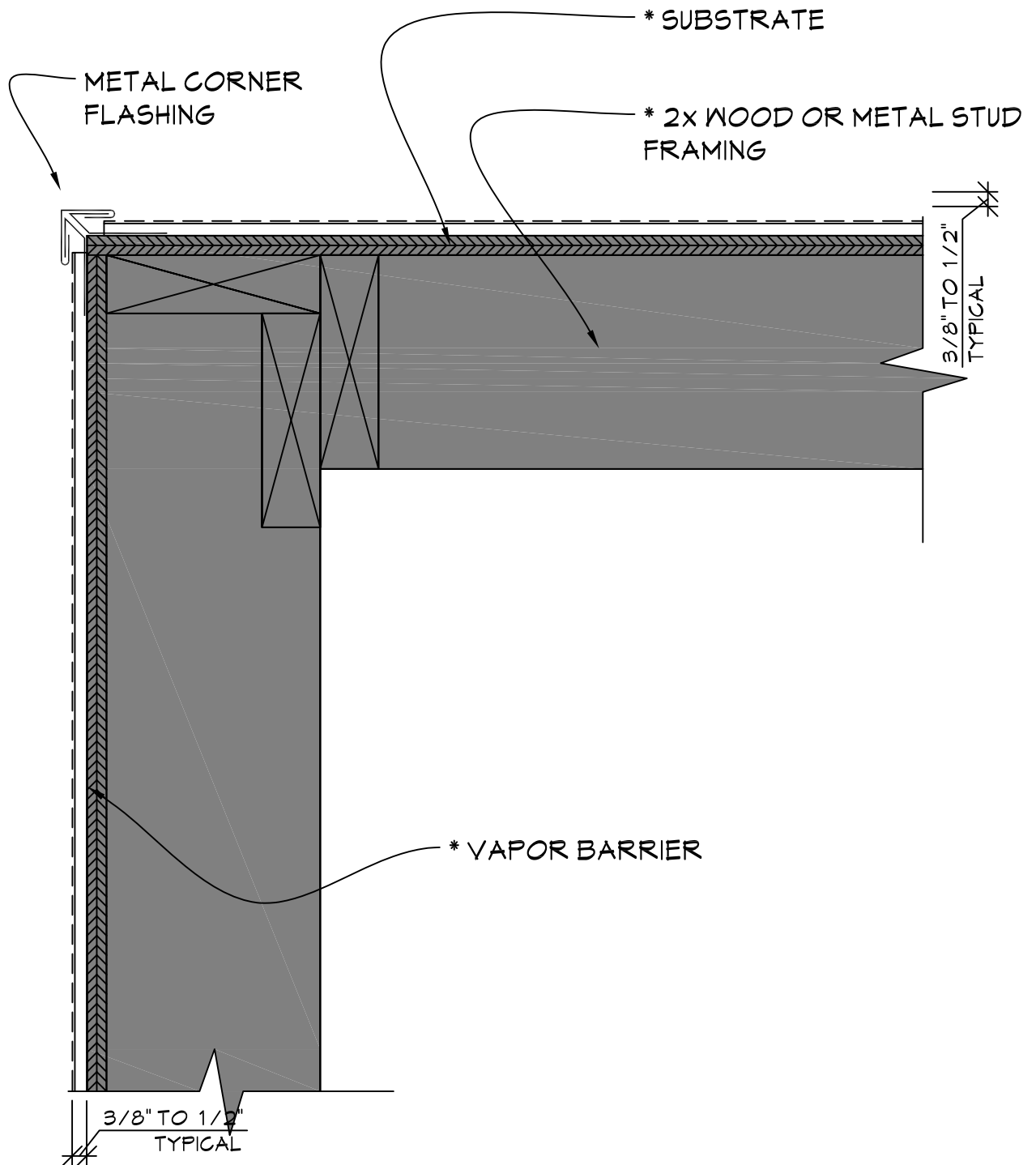


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ENDURAWAL

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TYPICAL OUTSIDE CORNER DETAIL

SCALE: 3" = 1'-0"

NOTE:

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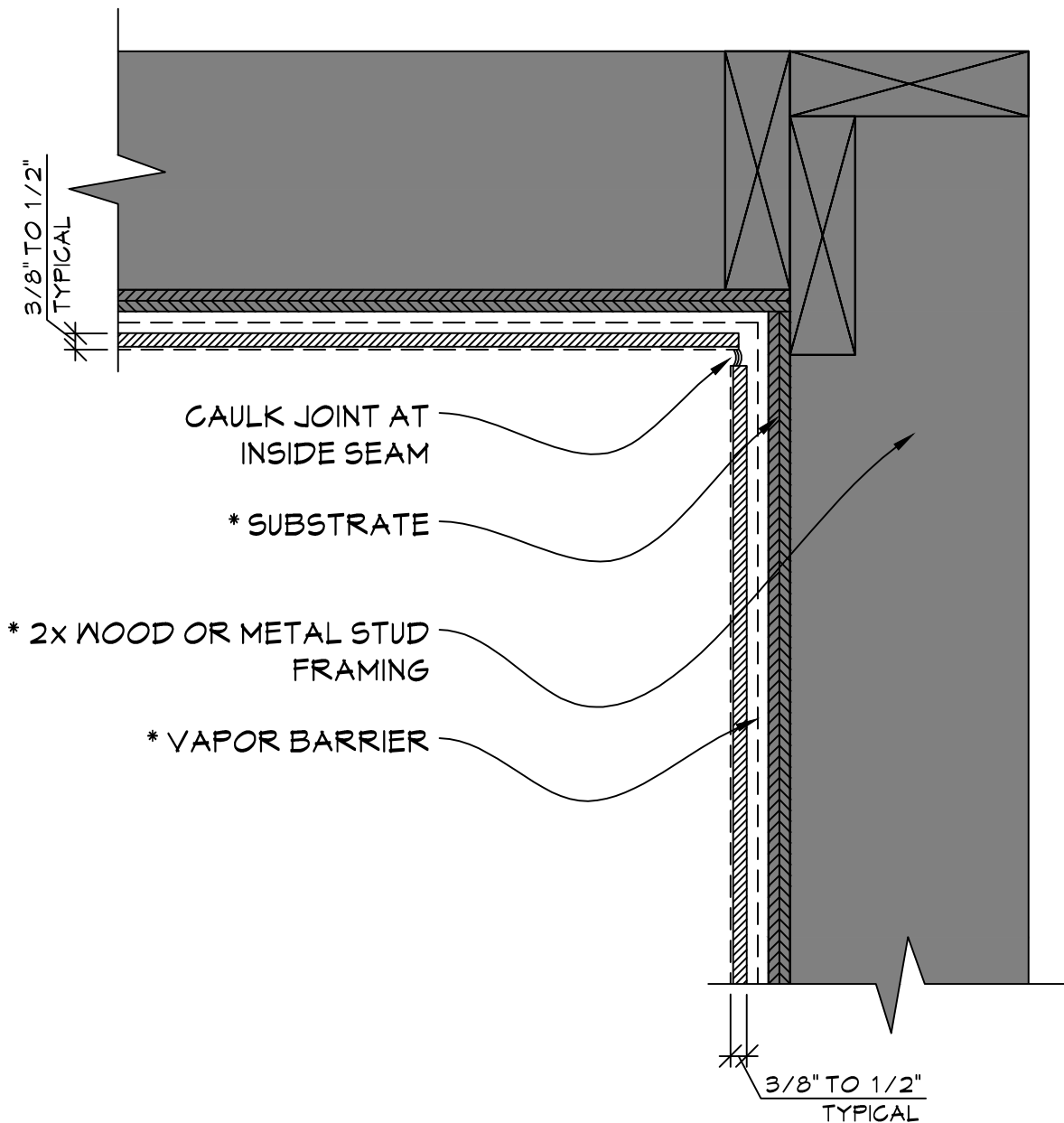


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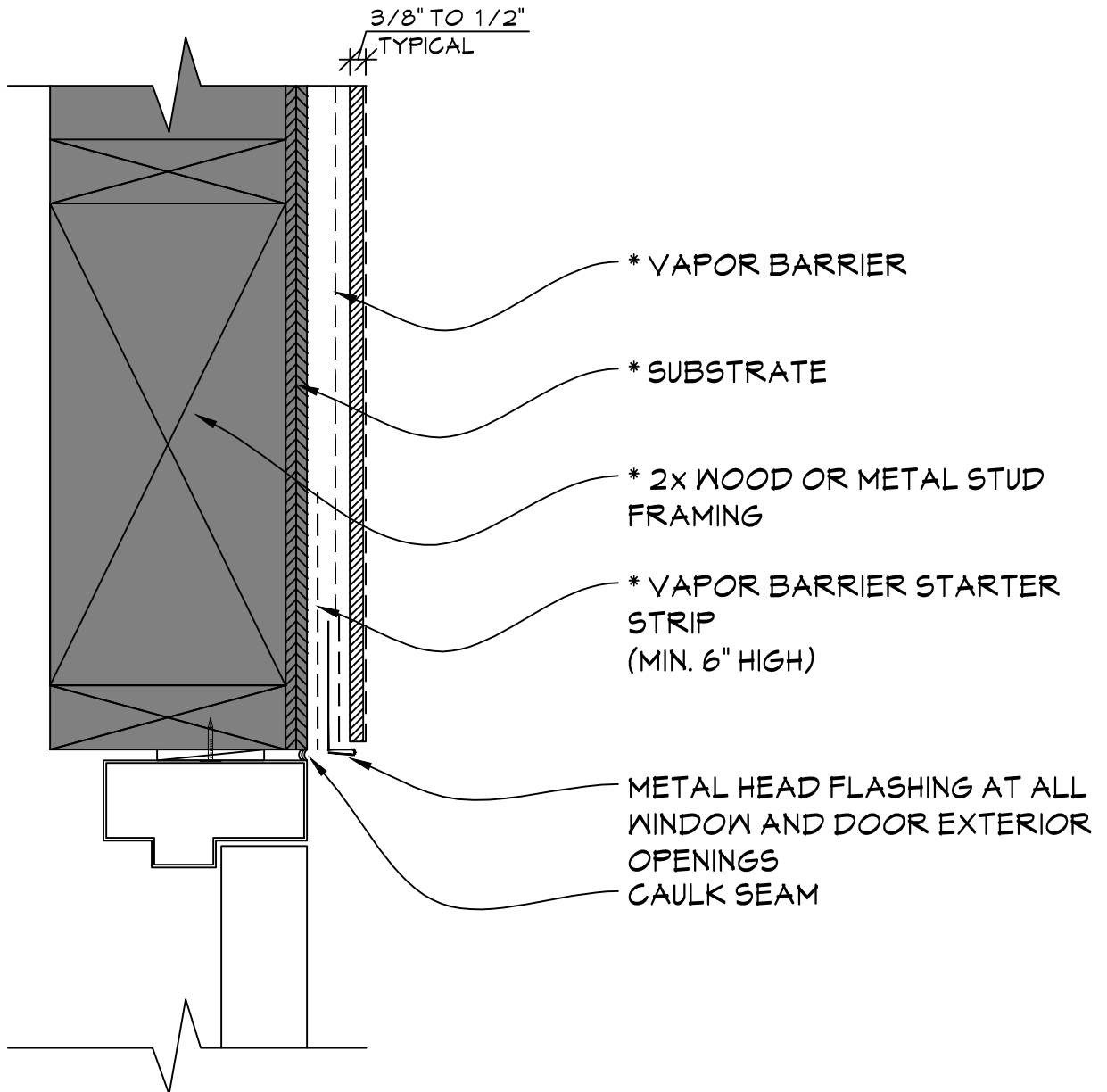
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TYPICAL INSIDE CORNER DETAIL

SCALE: 3" = 1'-0"

NOTE:
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TYPICAL DOOR HEAD DETAIL

SCALE: 3" = 1'-0"

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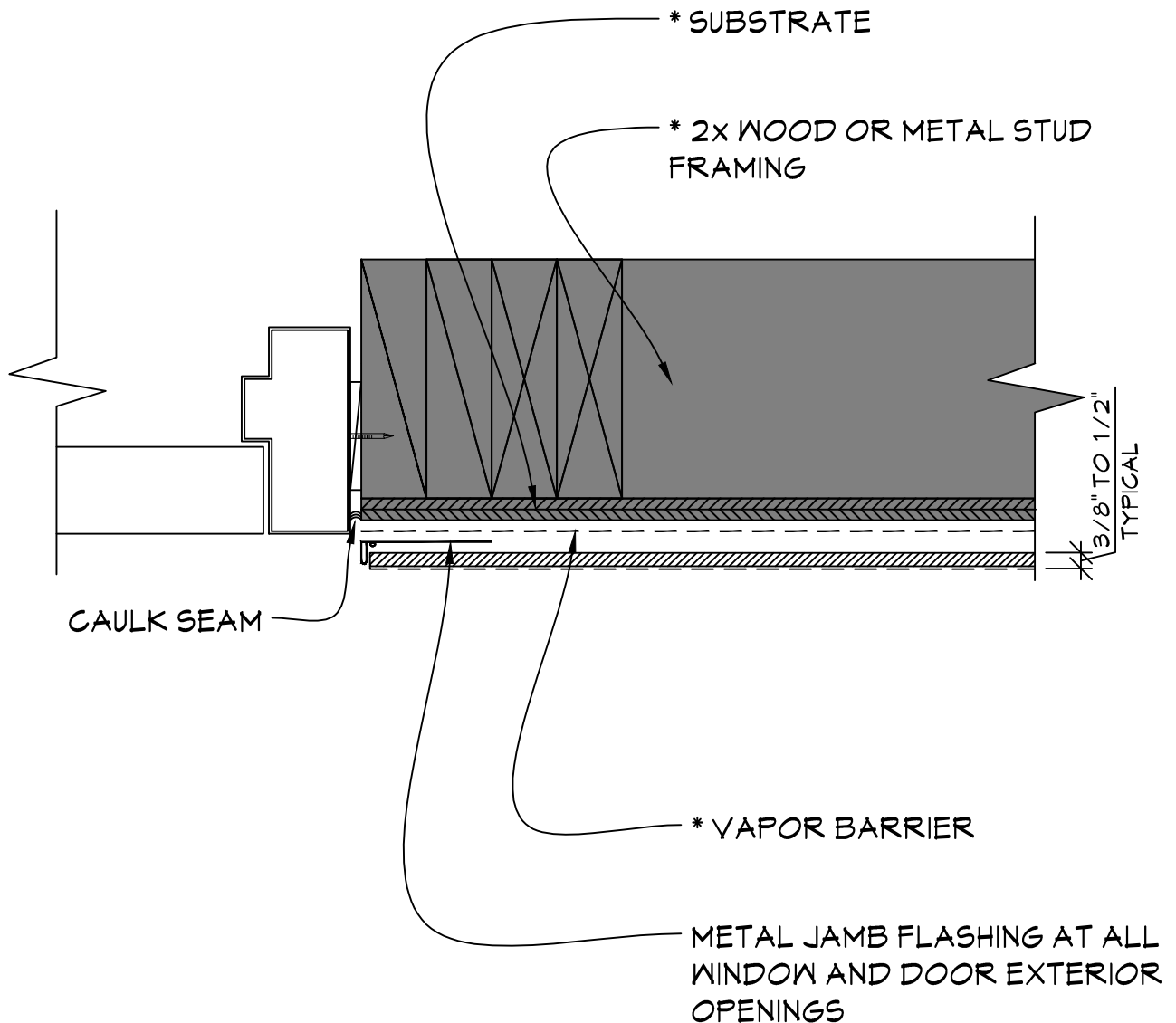


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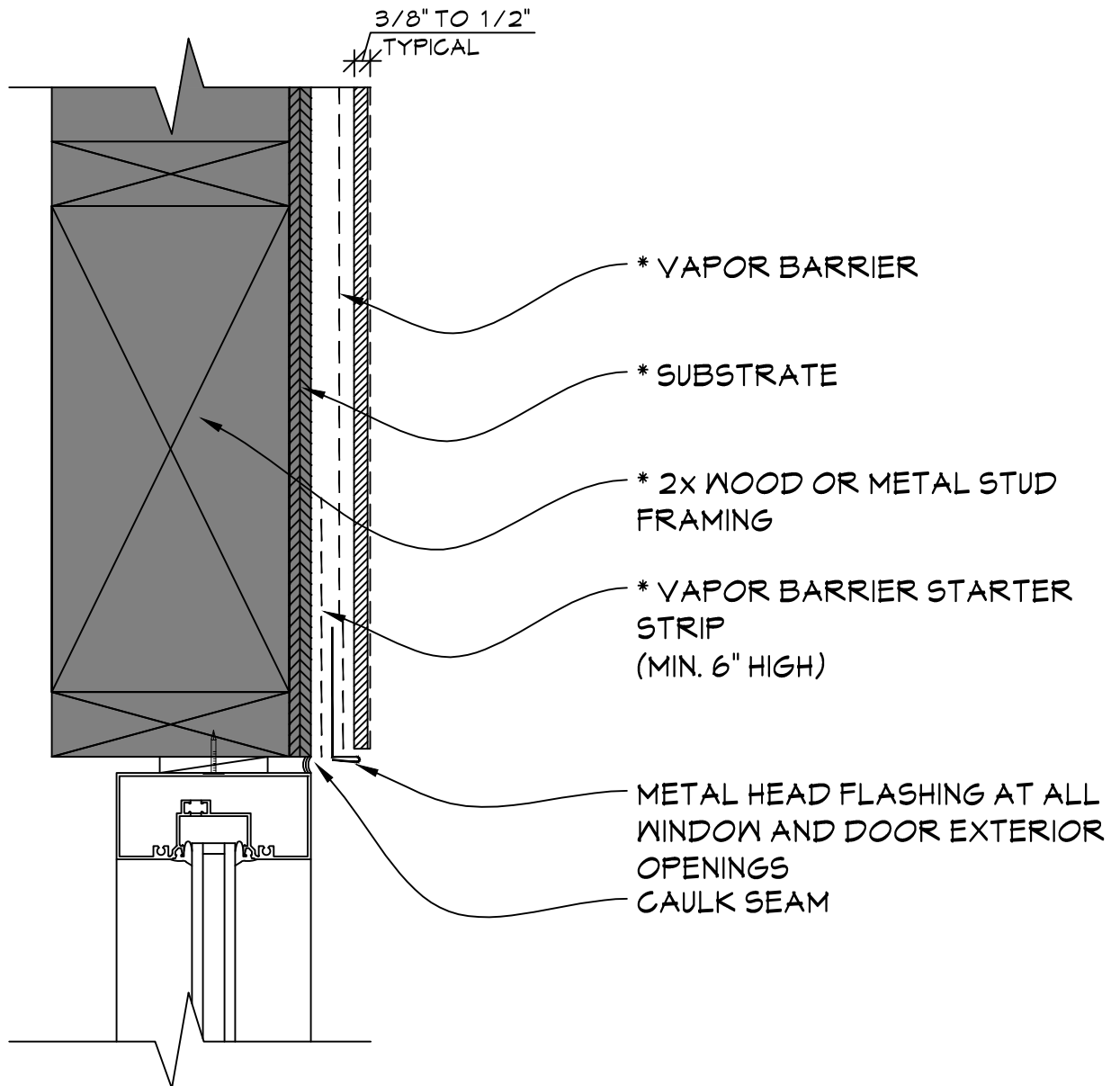


TYPICAL DOOR JAMB DETAIL

SCALE: 3" = 1'-0"

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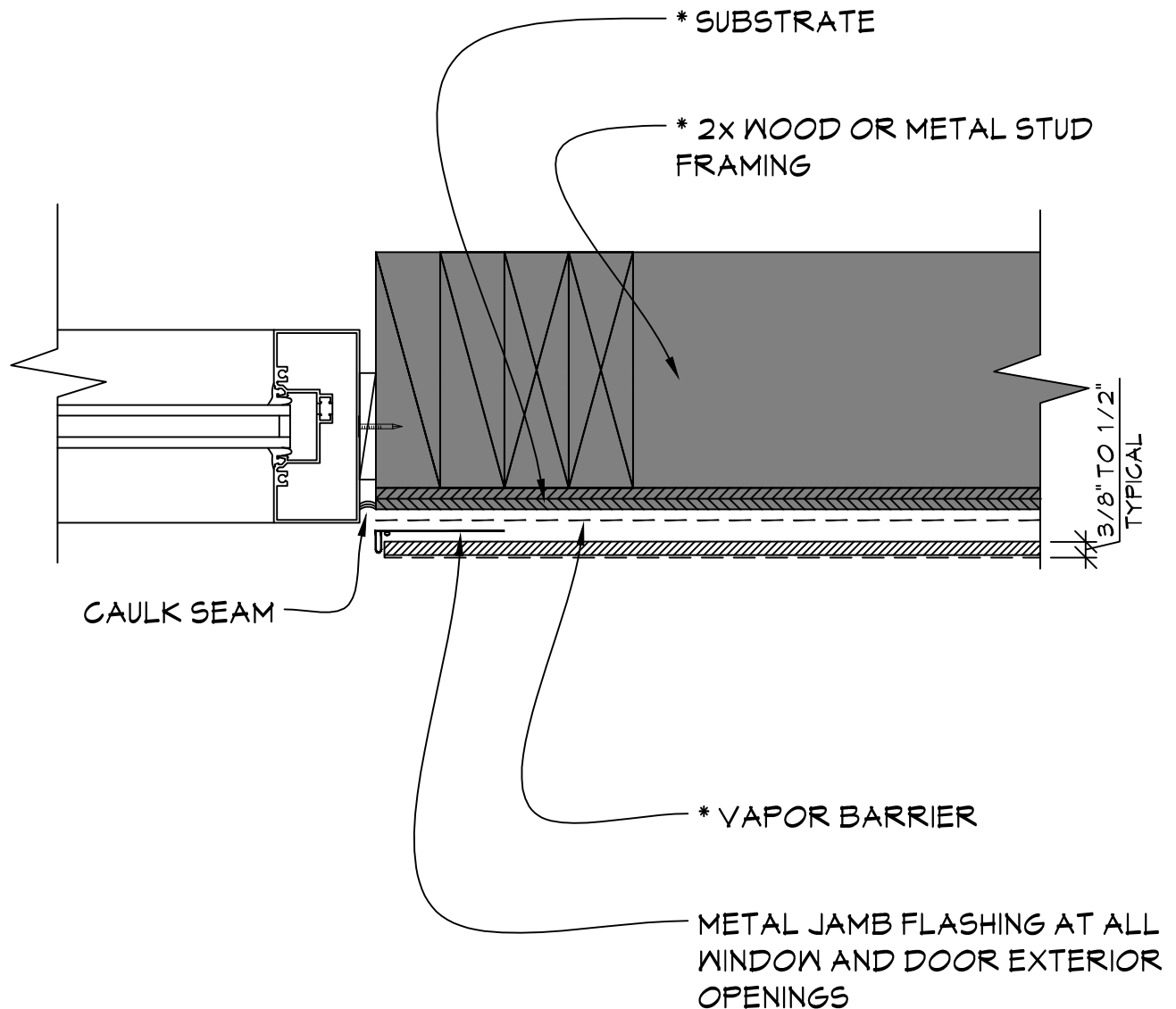


TYPICAL WINDOW HEAD DETAIL

SCALE: 3" = 1'-0"

NOTE:

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TYPICAL WINDOW JAMB DETAIL

SCALE: 3" = 1'-0"

NOTE:

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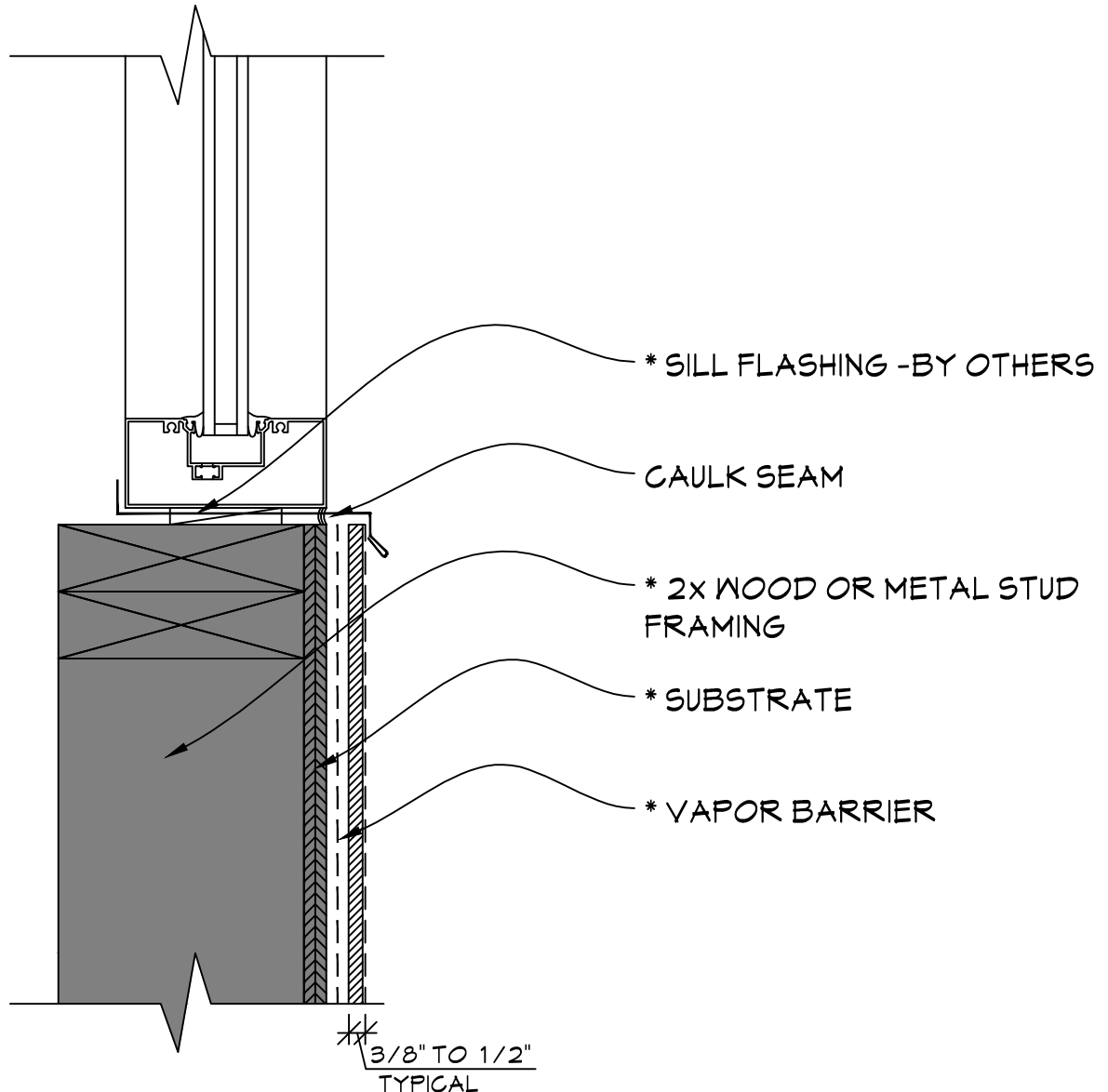
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ENDURAWAL



TYPICAL WINDOW SILL DETAIL

SCALE: 3" = 1'-0"

NOTE:
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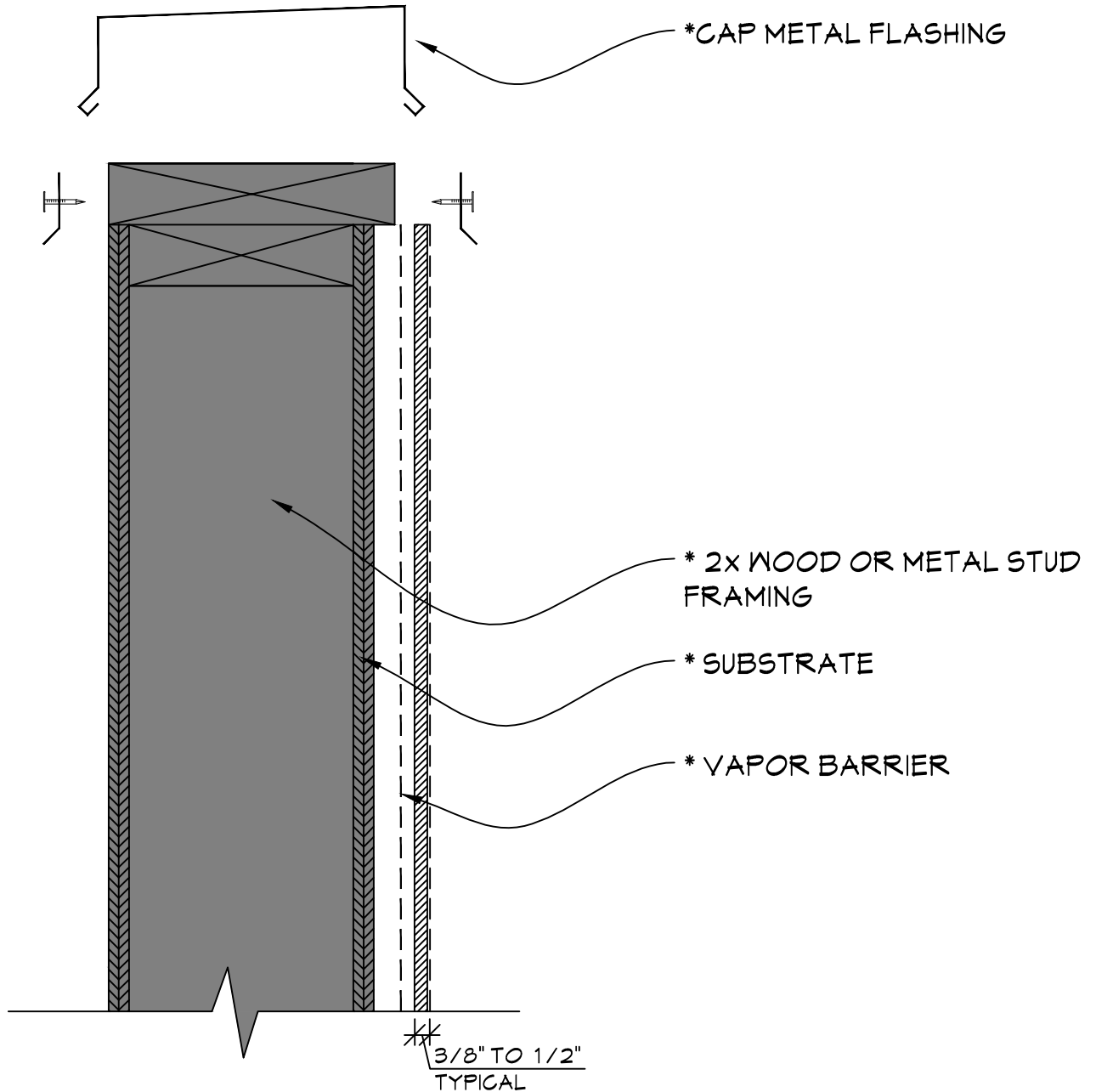


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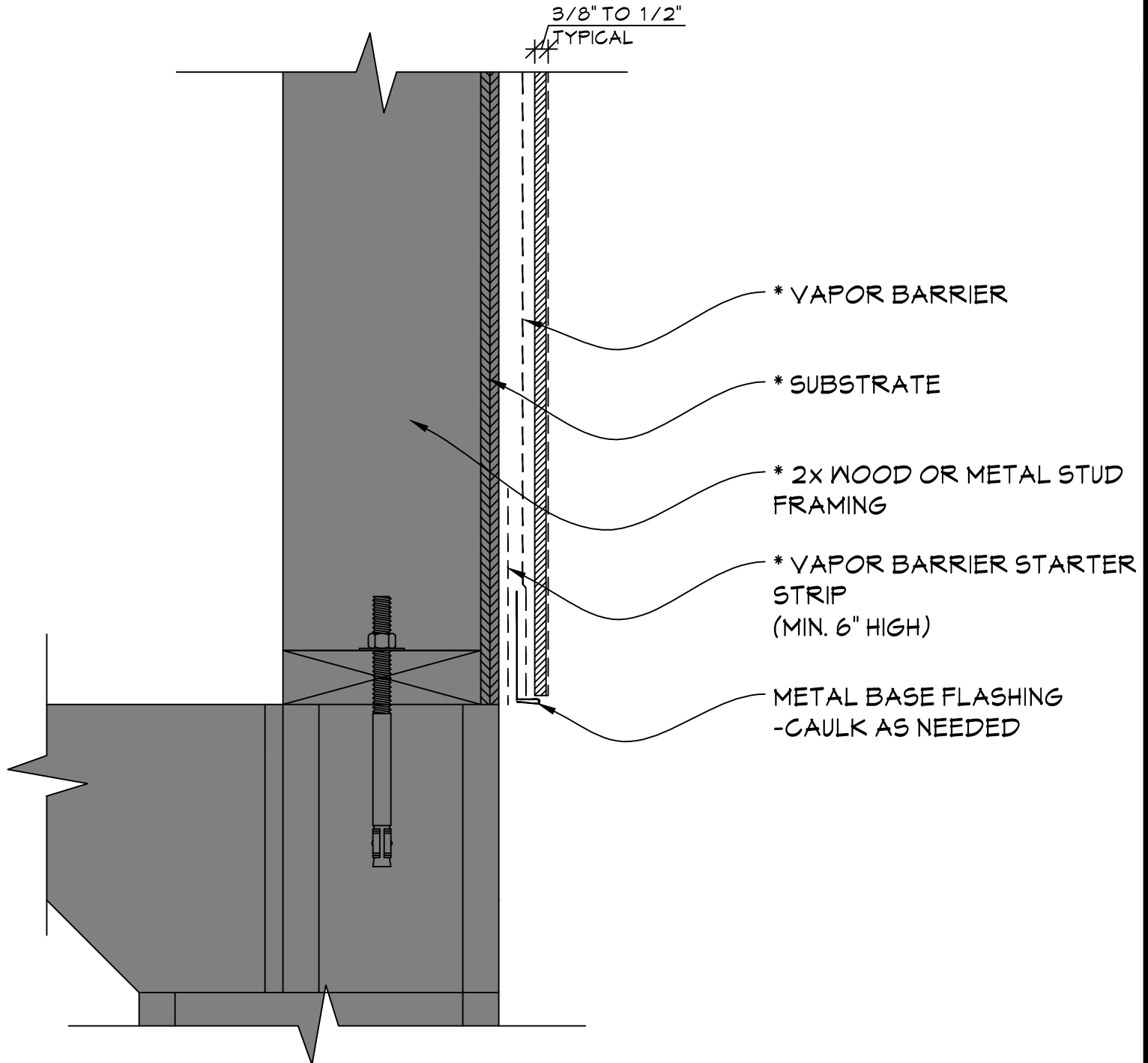


TYPICAL PARAPET DETAIL

SCALE: 3" = 1'-0"

NOTE:

* = MATERIAL NOT PROVIDED BY FULLERTON FINISH SYSTEMS

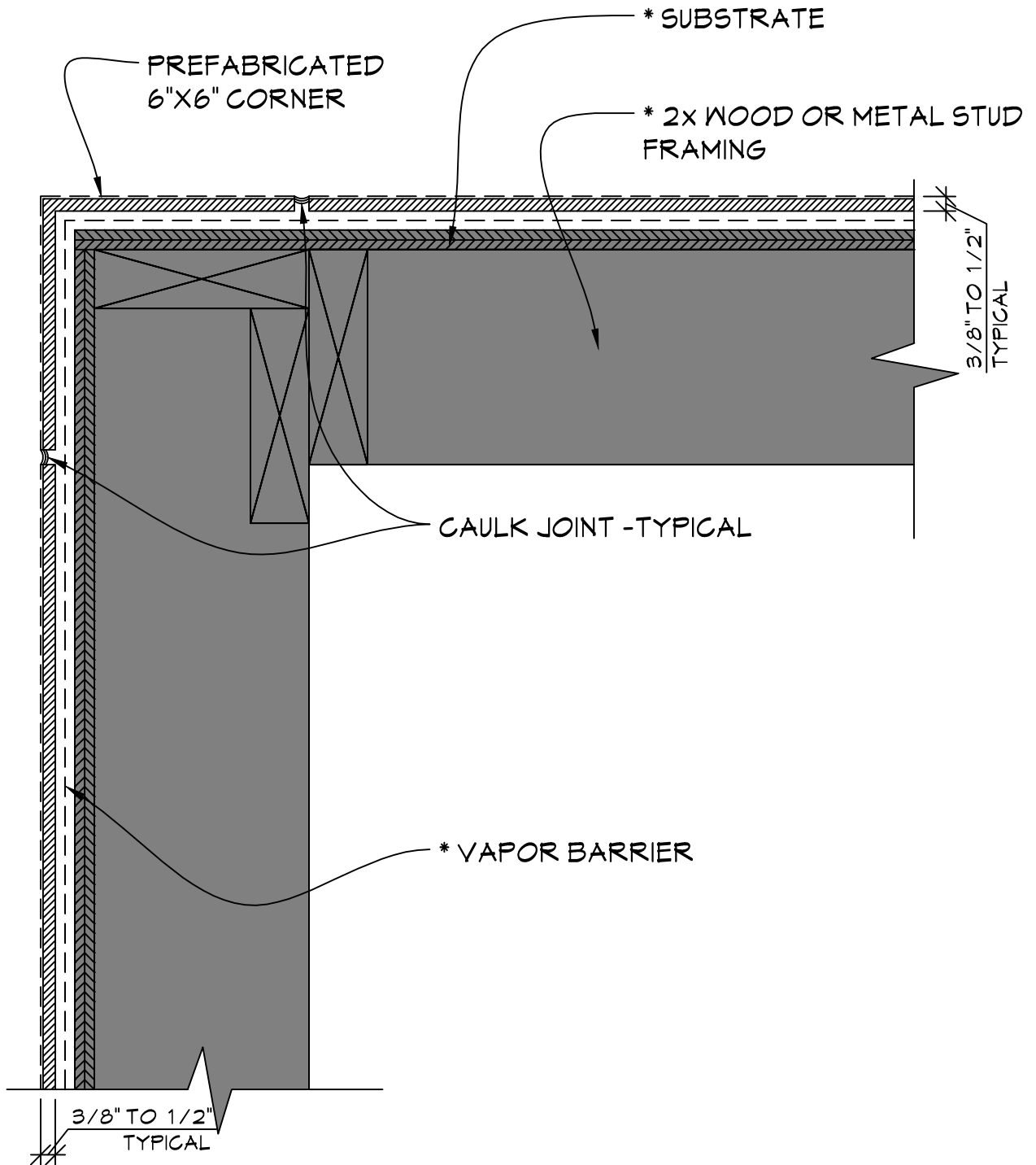


TYPICAL BASE DETAIL

SCALE: 3" = 1'-0"

NOTE:

* = MATERIAL NOT PROVIDED BY FULLERTON FINISH SYSTEMS



OPTIONAL OUTSIDE PREFAB CORNER DETAIL

SCALE: 3" = 1'-0"

SECTION SIX – Installation Instructions



Attached are general guidelines for installing each type of exterior finish panels.
It is recommended to check with local authorities to determine the code requirements for your area.



ENDURAWAL

Exterior veneer finish system

New Building code requirements vary and it is suggested that you check with local authorities to determine requirements for your area. Carefully read all installation instructions before proceeding with installation. Observe all safety precautions.

The installation information in this manual is a guide for the builder to use in conjunction with FULLERTON installation drawings (if required) supplied with the veneer panels. This manual is designed to help plan and organize the project by establishing an installation sequence.

Panels referred to in this guide must be installed by qualified personnel and in accordance with the manufacturer's instructions. FULLERTON FINISH SYSTEMS will provide training for the installation and handling of the panels at no charge at their plant in Sand Springs, Oklahoma (918) 246-9995. Field assistance is available upon request by Fullerton at a minimal charge.

HANDLING AND STORAGE

Panel pallets or crates will arrive on flat bed trailers or LTL trucks. If panels arrive without a tarp or stretch wrap protective cover, it should be noted on the driver's freight bill. Note any panel damage on the freight bill and file a claim if needed.

Caution should be taken when unloading from shipping vehicles as each crate can weigh up to 3800#. A maximum of 30 panels will be included in one crate with each panel weighing approximately 115# based on a standard 4x8 sheet.

Panels should be unloaded as pallets or crates and not as individual pieces. Store pallets and/or crates on a suitable flat surface above grade after removal from shipping vehicle. See fig. 1

Individual pieces should be carried vertically to avoid excessive flex and possible damage. When transporting in the horizontal position additional care should be taken to ensure proper support is provided under the finish sheet to prevent droop and possible damage.

CAUTION

WHEN REMOVING BANDING AND OPENING CRATE THE MATERIAL INSIDE CAN FALL FORWARD IF NOT STORED PROPERLY. PALLET SHOULD BE FLAT OR TILTED TO THE REAR

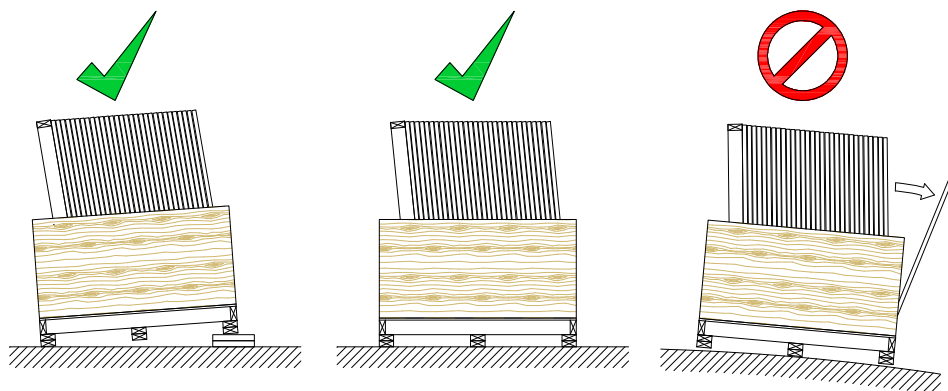


Fig. 1 – Crate Storage

Do NOT remove rear support framing.

Do Leave min one side of crate attached to support framing

SURFACE PREPERATION

Inspect the areas where panels will be installed. Determine that the framing will be sufficient to accept proper fastening needed for panel application. A minimum $\frac{7}{16}$ " OSB or $\frac{1}{2}$ " plywood sheathing is required if fastening directly to substrate. Verify that the appropriate weather barrier, flashing and caulking have been installed, or that they will be as part of your installation package. Check to ensure that walls are plumb and square and identify any defects or protrusions. Contact the builder, registered design professional or contractor to correct any deficiencies before you proceed.

BEFORE YOU BEGIN

1. Before doing anything, review the Fullerton shop drawings (if supplied) that came with your panels. Get familiar with all the details and sections. These drawings will best illustrate how veneer panels are attached and joints are caulked.
2. Decide on which elevation to begin the panel installation process. Typically the rear is a good place to start as you may hide any mistakes that may occur while getting familiar with the panel installation.
3. Only place enough panels to the side of the project currently being worked on. Minimizing the amount of times the panels are moved will reduce the possibility of damage. Refer to the Fullerton shop drawings (if supplied) for schedule, quantity and identification markers. Identification markers are provided on the drawings for proper placement of each panel.
4. Determine if you have the correct fasteners need for the project. See the fastener section of this manual for additional information.

INSTALLATION

Preparation

1. Install flashings, weather barriers and seal exterior wall surface prior to beginning panel installation. If panels are to be installed directly onto metal there must be bond breaker tape installed at panel joints for proper caulk performance.
2. Ensure that a straight, level, horizontal reference line has been established to follow during installation.
3. Panels should be installed one row at a time working upward toward the designated height.

Corners

1. Work should begin with installation of pre-fabricated corner panels or with standard panels that will butt or miter into the corners. This is typically the most visual location and the corners should not be cut unless absolutely necessary. Refer to fig. 2,3,4 for corner detail.

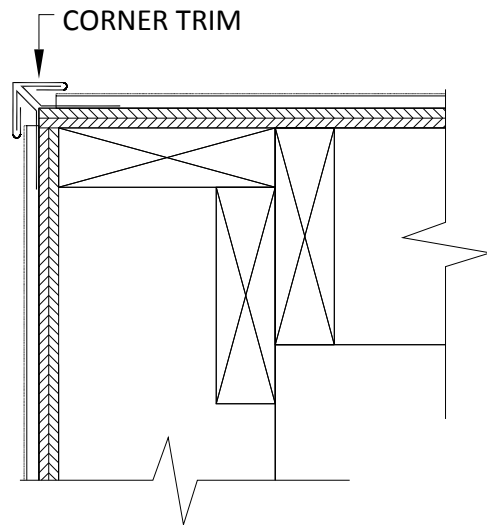


Fig. 2 - Outside Corner (Flashed)

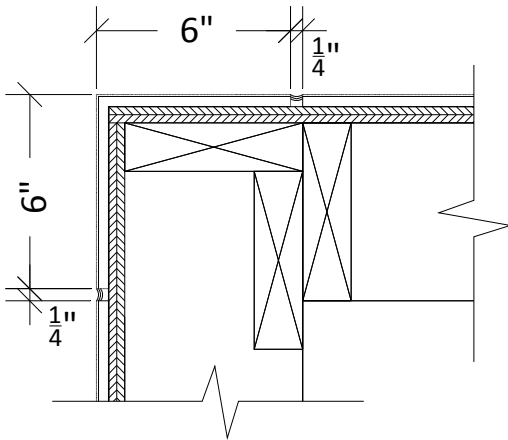


Fig. 3 - Outside Corner (Pre-Made)

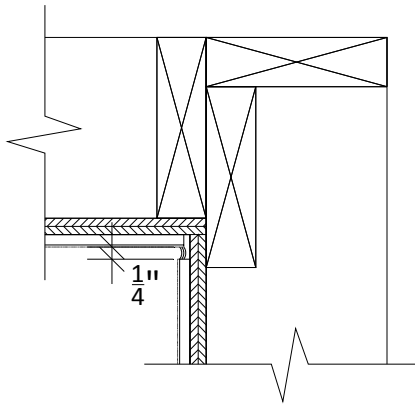


Fig. 4 - Inside Corner
(Overlap direction may vary)

2. Identify the corner and install panels to the left and right side if applicable. If only one outside corner is available, start install at that location. Install panels as shown on the Fullerton shop drawings or as shown in this manual.

Panels

1. Continue installation with the intermediate panels filling the space in-between corner panels. Special care should be taken with the planning and the installation of these panels. To provide the best overall look, measure the distance between corner panels and decide if the final panel install will provide the look required. Ensure that you have provided the correct spacing between panel edges. See fig. 5 – 5.2

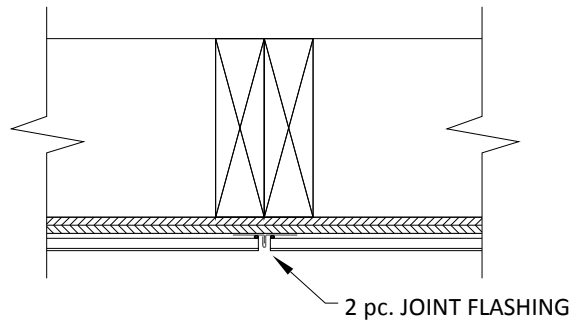


Fig. 5 - Vertical Panel Joint

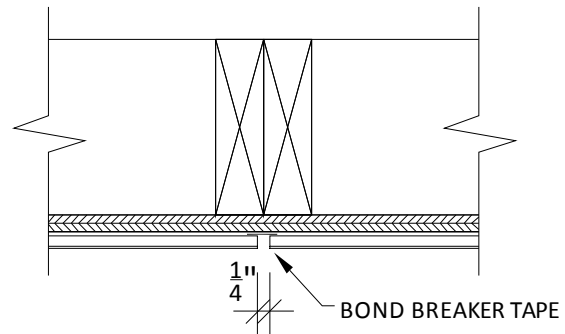


Fig 5.1 – Caulk Joint w/ Bond Breaker Tape

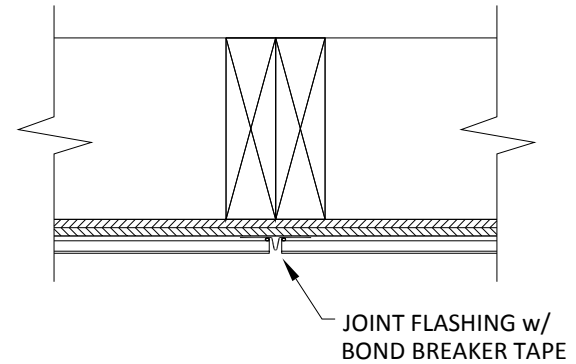


Fig. 5.2 – Flashed Joint w/ Bond Breaker Tape

2. By planning you should be able to avoid visually unpleasant joints.
3. Cutting panels should be completed on a stable surface with proper support members for the panels. Allowing the material to droop or sag will result in damage to the product. Cutting should be performed with the product facing down while using a circular saw to prevent chipping. When marking the cut location care should be taken to ensure that the resulting cut is visually acceptable. Cutting can also be performed using a grinder if preferred. Below are possible types of equipment

- a. Circular saw w/ dry cut diamond blade
- b. 4" handheld grinder w/ dry cut diamond blade

Note: dust produced by cutting should be removed as soon as possible to avoid damage to the product.

Fasteners

Mechanical fasteners are required for proper installation of panels. To determine the proper fasteners the base material will need to be identified. It is suggested that you consult with your local design professional to ensure that the wall structure will be able to accept the additional weight of the panels. Below is a list of fasteners typically used during installation.

Wood Fastener

#6x 1 ⁵/₈" trim head square drive with needle point

Metal Fastener

#6 x 1 ³/₈" trim head square drive with drill point

Masonry Fastener

³/₁₆" x 1 ³/₄" Philips head (Tapcon)

Note that the above fasteners are used for a general guide, your project may require specific fasteners. Please consult a Fullerton representative with any questions.

Fastening

1. Place required panel into position following all guidelines to ensure proper installation.
2. Ensuring that there are proper attachment points at fastener locations. See fig. 6-6.4 for typical wall type construction.

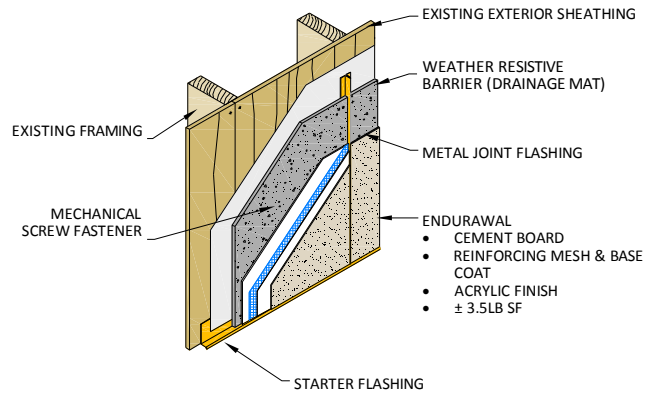


Fig. 6 – Standard Wall Construction

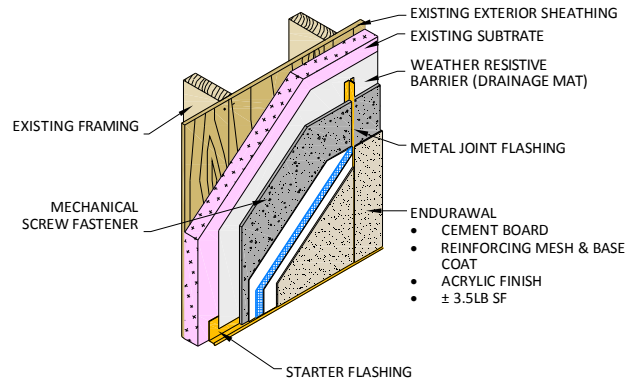


Fig. 6.1 – Standard Wall with Rigid Insulation

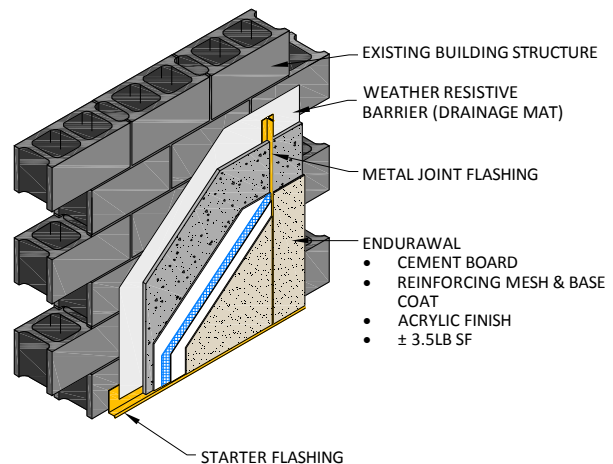


Fig. 6.2 – Block Wall No Furring

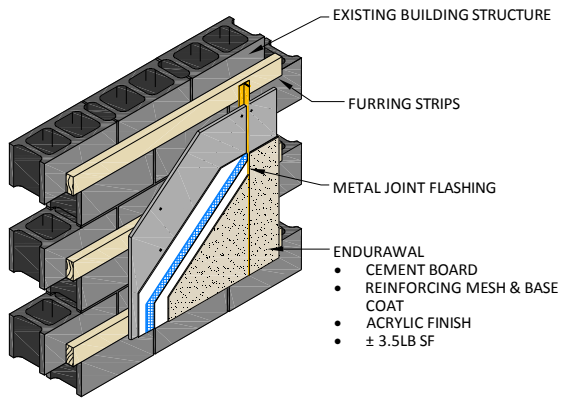


Fig. 6.3 – Block Wall with Furring

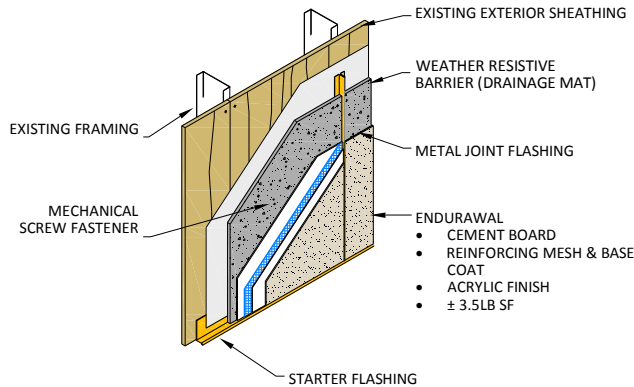


Fig. 6.4 – Light Gauge Metal Stud Wall

3. Fastener spacing is typically 12" on center along all edges of the panel and 16" on center throughout the middle of the panel. To ensure that the edges do not become damaged fasteners should remain a minimum $\frac{3}{4}$ " from panel edges. See fig. 7
4. Pre-drill holes into panel with $\frac{1}{8}$ " masonry bit. It may be required to relieve the surface with a countersink bit at fastener locations to flush the fastener head with the face of the panel surface. The type of fastener used will determine if a countersink is needed.

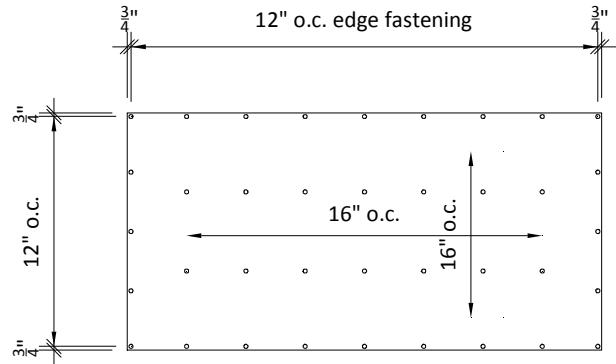


Fig. 7 - Fastener Spacing Diagram

5. Once finished with the first level of panel installation continue to the second level. Installation will be the same as the first level. Caution should be taken as your height of installation increases as the panels are very heavy. If necessary equipment can be utilized to help during the installation. It is the responsibility of the installer to determine the proper use and attachments of panels to such equipment. (Fullerton can suggest types and uses of equipment if requested) Be sure to allow for horizontal joint spacing unless noted otherwise. See fig. 8

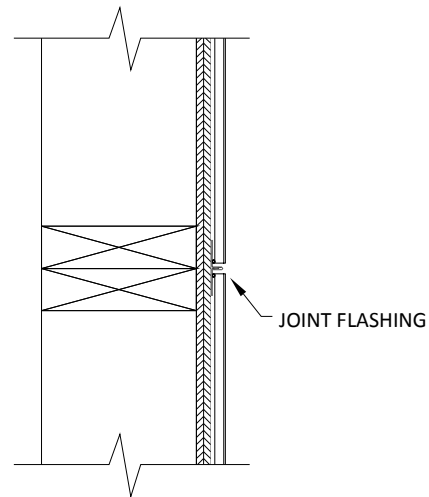


Fig. 8 – Horizontal Panel Joint Spacing

CAULKING

After installation of all panels caulking should be performed to seal all edges.

CLEANING

After installation of panels and installation of caulking the finished exterior should be washed to remove any loose or foreign materials produced during installation. The use of a standard water hose should be enough to clean the surface. If there are any stains on the exterior surface that cannot be removed with standard water pressures please consult a Fullerton representative.

SECTION SEVEN – Warranty

Due to our factory setting and exacting process, we provide you with panels that are outstanding in quality and more consistent in quality than typically provided with a field framed approach. Fullerton Finish Systems offers warranties on the following product line:

- **EnduraWal**

Manufacturer to warranty from date of purchase against defective materials or workmanship in fabrication for 5 years



SECTION EIGHT – EnduraWal Care & Maintenance



On the following pages, please find the EnduraWal Care and Maintenance for your reference.

SECTION EIGHT – EnduraWal Care & Maintenance



Care and Maintenance of the EnduraWal Product is as follows:

- The entire exterior wall surface should be cleaned at least once every year to remove any dirt, airborne pollutants, or foreign materials from the surface. Any foreign materials or stains that cannot be removed using a garden hose should then be cleaned with a soft-medium bristle brush to remove isolated surface spots, in conjunction with spraying the area with water and a cleaning solution. The cleaning solution consist of 1-2 cups trisodium phosphate (TSP) detergent, 1 gallon of warm water and add ½ to 1 quart of bleach to remove algae (usually green stains on the surface of the finish) or mildew (generally black stains that look like dirt). Bleach is necessary to kill micro-organisms that create the algae or mildew on the finish. If no bleach is used or if it is not allowed sufficient time (about 15 minutes) to sit on the surface and kill the micro-organisms, algae or mildew can recur. Always test clean an inconspicuous area to be sure of desired results and follow precautions on handling and disposal of cleaning materials.



Apply the cleaning solution to the wall surface by brush or spray and allow to soak for a period of 15-20 minutes. For heavy deposits, lightly scrub the affected area with a soft-medium brush.

After the cleaning solution has soaked the surface, rinse thoroughly with clean water and allow to dry.

Do Not: a) Use solvent based cleaners-acetone, gasoline, ketones, mineral oils, or turpentine. b) Use excess scrubbing, stiff bristle brushes or wire brushes can damage the finish. c) Use high pressure washing (in excess of 500 psi), or sandblasting, finish can be damaged with excess pressure or abrasion.

- Inspect the entire exterior surface of the building at least every year for any damage to the exterior panels. If there is any damage noted notify Fullerton Finish Systems for the appropriate support and technical expertise for repairs that may be needed to correct the damage.
- Inspect all sealant joints on panels every year making sure they are not cracked, loose, or missing in some areas at the panel to panel joints and where other products intersect or different substrates meet. Inspect sealant around doors, windows, electrical equipment, outlets, pipes or any other penetrations in the panel system making sure that they are secure and no moisture can penetrate into building. Any deteriorated or damaged sealant should be removed and replaced as soon as it appears. Contact Fullerton Finish Systems for the appropriate sealant required.
- Heavy traffic areas should be monitored more frequently due to exposure to automobiles, lawn equipment and other elements. Heavy foliage or landscape areas with frequent watering schedules should be checked more frequently as they can develop mold or algae growth. Contact Fullerton Finish Systems for cleaning recommendation.

SECTION Nine – MSDS Sheets



On the following pages, please find the Material Safety Data Sheets on our product line for your reference.



Date Revised: May 27, 2014

Section 1 – Product Identification and Use

PRODUCT NAME: EnduraWal		PRODUCT IDENTIFICATION NUMBER.: Not Applicable
PRODUCT USE:		
MANUFACTURER	SUPPLIER	
Fullerton Finish Systems, Inc. 8645 W. 21 st Street Sand Springs, OK 74063 Phone No: (866) 915-9995	Fullerton Finish Systems, Inc. 8645 W. 21 st Street Sand Springs, OK 74063 Phone No: (866) 915-9995	

Section 2 – Hazardous Ingredients

Hazardous Ingredients	Common Name	CAS #	OSHA PEL	ACGIH TLV
None				

Section 3 – Physical/Chemical Characteristics

Boiling Point: Not Applicable	Specific Gravity (H₂O=1) 3.0
Vapor Pressure (mm Hg.) Not Applicable	Melting Point Not Applicable
Vapor Density (AIR=1) Not Applicable	Evaporation Rate Not Applicable (Butyl Acetate=1):
Solubility in Water: None on EnduraWal side, slight on raw side	
Appearance: Stucco look	Odor: None

Section 4 – Fire and Explosion Data

Flash Point (Method Used): Not Applicable	Flammable Limits: Not Applicable	LEL: Not Applicable	UEL: Not Applicable
Extinguishing Media: Same as surrounding fire or class A			
Special Fire Fighting Procedures: Not Applicable			
Unusual Fire and Explosion Hazards: Not Applicable			

Section 5 – Reactivity Data

Stability: Unstable Stable X	Hazardous Polymerization: May Occur Will Not Occur X
Incompatibility (Materials to Avoid): Not Applicable	
Hazardous Decomposition or Byproducts: Not Applicable	
Conditions to Avoid: Not Applicable	

Section 6 – Health Hazard Data

Route(s) of Entry:	Inhalation? Yes	Skin? Yes	Ingestion? No
Health Hazards (Acute and Chronic): Dust from product while cutting may cause minor dermatitis and/or respiratory irritations. Excessive inhalation of dust can produce pneumoconiosis, commonly called silicosis.			
Carcinogenicity:	NTP? N/A	LARC Monographs? N/A	OSHA Regulated? N/A
Signs and Symptoms of Exposure: Rash			
Medical Conditions Generally Aggravated by Exposure: Exposure to dust while cutting may cause aggravation to sinus allergies and bronchitis.			
Emergency and First Aid Procedures: Should dust cause a rash or get in eyes wash and flush with water.			

Section 7 – Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled: Not Applicable
Waste Disposal Method: Dispose according to state and federal regulations or in ordinary approved land fill.
Precautions to be Taken in Handling and Storing: Not Applicable
Other Precautions: When cutting material wear gloves, particle mask and goggles

Section 8 – Control Measures

Respiratory Protection (Specify Type): OSHA approved particle mask.							
Ventilation:	Local Exhaust? Yes		Mechanical General (General)?		Special N/A	Other N/A	
Protective Gloves: Yes			Eye Protection: OSHA approved goggles				
Other Protective Clothing or Equipment: None							
Work/Hygienic Practices Use standard hygienic practices.							

This information is given without a warranty or representation. We do not assume any legal responsibility for same, nor do we give permission, inducement, or recommendation to practice any patented invention without a license. It is offered solely for your consideration, investigation and verification, before using any product, read its label.

SECTION TEN – Contacts



Looking for Consistant Results?

Give FFS a call to see how we can help you deliver results with our exterior finish panels and or materials.

Phone: 866-915-9995 (toll free)

918-246-9995 (local)

918-246-9976 (fax)

Contacts:



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