

Installation Guidelines for Adhered Concrete Masonry Veneer



Masonry Veneer Manufacturers Association

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This guide is for builders, architects, designers, masons, installers and other construction professionals to illustrate typical applications of Adhered Concrete Masonry Veneer.

It is the sole responsibility of any architectural or construction professional to apply any detail to any specific project.

Disclaimer

This guide addresses acceptable methods and details for installation of Adhered Concrete Masonry Veneer. The purpose is to serve as a guideline, and is not intended for any specific construction project. The MVMA makes no express or implied warranty or guarantee of the techniques, construction methods or materials identified herein.

This guide addresses acceptable methods and details for installation of Adhered Concrete Masonry Veneer. It is understood there are alternative ways that might be required and/or recommended based on project conditions.

Details in this guide that address the Adhered Concrete Masonry Veneer and its interface with the building components are not intended as a specific resource for the construction of the interfacing building components.

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To the best of our knowledge, the information in this Adhered Concrete Masonry Veneer Guide is correct and up to date.

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Masonry Veneer Manufacturers Association (MVMA) represents the adhered concrete masonry veneer industry's manufacturing companies and their suppliers. The mission of the organization is: To advance the growth of the manufactured masonry veneer products industry through proactive technical, advocacy, and awareness efforts.

Definitions

Wall System- The constructed exterior or interior framework and substrate of the building.

Water Resistive Barrier- A material used to restrict the transmission of moisture to the surface behind.

Flashing- Material used to restrict the seepage of moisture around any intersection or projection of materials in an assembly.

Lath- Corrosion resistant mesh building material fastened to the substrate to act as base for adhering plaster or mortar.

Fasteners- Corrosion resistant hardware used to secure lath and flashing material to wall system.

Mortar- A workable paste mixture of cementitious material, water, and aggregate used to bond masonry construction materials together, and fill spaces between.

Mortar Scratch Coat - Base coat of mortar used in installation. Cross raked to improve bond with following mortar layers.

Mortar Setting Bed - Mortar used to adhere the ACMV to the substrate or scratch coat.

Adhered Concrete Masonry Veneer (ACMV)- lightweight, architectural, non-load bearing product that is manufactured by wet cast blending cementitious material, aggregate, iron oxide pigments, and admixtures to simulate the appearance of natural stone.

Note: The MVMA recognizes there are many names used to describe Adhered Concrete Masonry Veneer products. Manufactured Stone Veneer is used commonly throughout the industry and among manufacturers. In the International Building Code, Adhered Concrete Masonry Veneer products are referred to as Adhered Masonry Veneer. In the ICC-ES Acceptance Criteria, AC51, the product is called Precast Stone Veneer. This guide will use ACMV (Adhered Concrete Masonry Veneer) when referencing the product.

Mortar Grout - Mortar mixture used to fill joints and cavities in masonry construction.

Sealer- Liquid material used over ACMV to protect against staining and moisture penetration.

Abbreviations

ACMV - Adhered Concrete Masonry Veneer

Blk'g - Blocking

GSM - Galvanized Sheet Metal

Lbs. Pounds

Mfr's - Manufacturer's

Min - Minimum

O.S.H.A. Occupational Safety and Hazard Association

psi. Pounds per square inch

Req'd - Required

SAF - Self Adhering Flashing

WRB - Water Resistive Barrier

References

International Building Code-(IBC) Building code that provides minimum requirements for safety, health, and welfare of life and property from hazards of the built environment. The provisions of this code apply to the construction, alteration, addition, replacement, repair, use and occupancy of all buildings except one and two family dwellings, and multi single-family townhomes not more than three stories in height.

International Residential Code-(IRC) Building code that provides minimum requirements for safety, health, and welfare of life and property from hazards of the built environment. The provisions of this code apply to the construction, alteration, addition, replacement, repair, use and occupancy of detached one and two story dwellings and multi single-family townhomes not more than three stories in height.

International Code Council - Evaluation Service-(ICC-ES) A non-profit organization that performs technical evaluations on building products, components, and construction methods for building code compliance. In cases where no building code covers a product or construction method, ICC-ES develops "Acceptance Criteria" (AC) for the product or construction method.

AC38- The ICC-ES Acceptance Criteria for Water Resistive Barriers.

AC51- The ICC-ES Acceptance Criteria for Pre-Cast Stone Veneer.

AC275- ICC-ES Acceptance Criteria for Glass Fiber Lath used in Cementitious Exterior Wall Coating or Exterior Cement Plaster (Stucco)

ACI530- Building code requirements for masonry structures (TMS402\ACI530\ASCE5).

ASTM International- American Society for Testing and Materials. ASTM is one of the largest developers of technical standards of products, systems and services.

ASTM C144- Standard Specification for Aggregate for Masonry Mortar

ASTM C270- Standards Specification for Mortar for Unit Masonry

ASTM C482- Standard Test Method for Bond Strength of Ceramic Tile to Portland Cement

ASTM C847- Standard Specification for Metal Lath

ASTM C1032- Standard Specification for Woven Wire Plaster Base

ASTM C1063- Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement Based Plaster

ASTM D226- Standard Specification for Asphalt Saturated Organic Felt Used in Roofing and Water Proofing

Summary Table

Wall System	Water Resistive Barrier	Lath	Fastening	Scratch Coat
<p>Wall Type: Wood or steel stud, no more than 16" O.C.</p> <p>Rigid Sheathing: Gypsum wall board</p> <p>Plywood</p> <p>OSB</p> <p>Concrete Board</p> <p>Fiber Board</p> <p>Note: Non-rigid insulation board over rigid sheathing is limited to max 1/2" thick.</p>	<p>Minimum 2 separate layers #15 felt (ASTM D 226 No. 15, Type 1)</p> <p>Or</p> <p>Minimum 2 separate layers Grade D paper (ICC-ES Acceptance Criteria AC 38)</p> <p>Or</p> <p>1 layer house wrap (ICC-ES Acceptance Criteria AC 38), and 1 layer Grade D paper (ICC-ES Acceptance Separate Criteria AC 38), or #15 felt ASTM D 226 No. 15, Type 1)</p> <p>Note: One layer of paper backed lath meeting the requirements of Grade D paper may qualify for one layer of WRB.</p>	<p>2.5 lb. or 3.4 lb. self-furring corrosion-resistant lath (ASTM C 847)</p> <p>Or</p> <p>18 gauge woven wire mesh (ASTM C 1032)</p>	<p>Corrosion resistant fasteners (ASTM C 1063) min. 1" into wood framing member or 3/8" through metal framing member.</p>	<p>Mortar, nominal 3/8" thick, Type N or Type S meeting ASTM C270.</p> <p>"Scratch" surface when "thumbprint hard"</p>

Wall System	Water Resistive Barrier	Lath	Fastening	Scratch Coat
<p>"Open Stud" construction</p> <p>Wood or steel, no more than 16" O.C.</p> <p>No sheathing or Insulation Board only (open studs):</p> <p>Note: Non-rigid insulation board over rigid sheathing is limited to max 1/2" thick.</p>	<p>Minimum 2 separate layers #15 felt (ASTM D 226 No. 15, Type 1)</p> <p>Or</p> <p>Minimum 2 separate layers Grade D paper (ICC-ES Acceptance Criteria AC 38)</p> <p>Or</p> <p>1 layer house wrap (ICC-ES Acceptance Criteria AC 38), and 1 layer Grade D paper (ICC-ES Acceptance Separate Criteria AC 38), or #15 felt ASTM D 226 No. 15, Type 1)</p> <p>Note: One layer of paper backed lath meeting the requirements of Grade D paper may qualify for one layer of WRB.</p>	<p>3.4 lb. self-furring 3/8" ribbed corrosion-resistant lath (ASTM C 847)</p> <p>Alternate lath acceptable. Verify.</p>	<p>Corrosion resistant fasteners (ASTM C 1063) min. 1" into wood framing member or 3/8" through metal framing member.</p>	<p>Mortar, nominal 3/8" thick, Type N or Type S meeting ASTM C270.</p>

Wall System	Water Resistive Barrier	Lath	Fastening	Scratch Coat
<p>Clean Concrete, Masonry / CMU, or Stucco</p> <p>Note: walls / surfaces must be clean and free from release agents, paints, stains, sealers, or other bond-break materials, that may reduce strength of mortar adhesion.</p>	<p>Note: When installing stone on an inhabited area one may need to use a WRB to prevent moisture from penetrating the wall.</p>	<p>Install lath if any question or concern regarding ability of veneer to adhere to wall</p>	<p>If lath applied: Use corrosion resistant fasteners</p>	<p>If a scratch coat is required use a nominal 3/8" thick Type N or Type S mortar, meeting ASTM 270.</p> <p>"Scratch" surface when "thumbprint hard"</p>

Wall System	Water Resistive Barrier	Lath	Fastening	Scratch Coat
<p>Existing Concrete, Masonry / CMU, Stucco, or Brick (structurally sound)</p> <p>(e.g. painted or not clean)</p>	<p>Note: When installing stone on an inhabited area one may need to use a WRB to prevent moisture from penetrating the wall.</p>	<p>2.5 lb. or 3.4 lb. self-furring 3/8" ribbed corrosion-resistant lath (ASTM C 847)</p> <p>Or</p> <p>18 gauge woven wire mesh (ASTM C 1032)</p>	<p>Corrosion resistant</p>	<p>If a scratch coat is required use a nominal 3/8" thick Type N or Type S mortar, meeting ASTM 270.</p> <p>"Scratch" surface when "thumbprint hard"</p>

Wall System	Water Resistive Barrier	Lath	Fastening	Scratch Coat
<p>Metal Buildings or other surfaces / wall construction not listed above.</p> <p>See manufacturer for recommendations regarding sheathing.</p>	<p>See manufacturer for recommendations.</p>			

Workmanship

This Installation Guideline is prepared with the consideration that appropriate construction personnel have knowledge of the materials described and the proper methods of installation of the materials referenced.

Prior to commencing activity related to the scope of this Guideline, review all adjacent products and other subcontractor's work that precedes the installation of ACMV to ensure that proper workmanship has been exercised and there are no recognizable errors or deficiencies.

Building Code Requirements

Building code requirements vary from area to area. Check with local authorities for building code requirements for your area and application. Carefully read all sections of this guide and follow the manufacturers Installation Instructions before proceeding with your ACMV application. In the event the manufacturers' Installation Instructions conflict with the intent of statements made in this document, contact the manufacturer for additional guidance.

Project Site Requirements

Always follow proper job site safety requirements when installing ACMV . Follow all OSHA requirements when installing ACMV products.

Material Requirements

Flashing

All flashing and flashing accessories must be corrosion resistant materials and integrated with the WRB materials. Flashing must be installed at all through wall penetrations and at terminations of ACMV installations.

Rainscreen Drainage Plane Systems (Optional)

Rainscreen products (such as drainage mats or formed polymer sheeting) or construction techniques (such as strapping or furring) that create a defined capillary break space can be effectively incorporated into ACMV applications to improve the escape of incidental water from the wall. The system should create a minimum gap of 3/16" (5mm) and a maximum gap of 3/4" (19mm).

Weep Screed

Weep screeds must be of corrosion resistant material with a minimum vertical attachment flange of 3 1/2" and a minimum No. 26 corrosion resistant metal.

Lath

The MVMA recommends using the following lath materials:

- 2.5lb/yd² metal lath meeting ASTM C 847
- 3/8" rib, 3.4lb/yd² metal lath meeting ASTM C 847
- 18 gauge (or heavier) woven wire mesh meeting ASTM C 1032
- Other code approved lath: Alternate lath products not listed above are acceptable for use with ACMV provided the lath product has an ICC-ES Evaluation Service Report (ESR) and is approved for use by the ACMV manufacturer

All lath and lath accessories must be made of corrosion resistant material. All lath material must be self-furred or use self-furring fasteners. Refer to the Summary Table on page 5 and 6 for specific lath and fastener recommendations.

Fasteners

Corrosion resistant fasteners are used to secure flashing and lath. A variety of fasteners are available such as staples, screws, and nails. For specific fastener selective criteria, refer to ASTM 1063 Sec. 7.10.2.

- Wood framing - Corrosion resistant staples, corrosion resistant roofing nails, or corrosion resistant screws and washers, all to be of sufficient length to penetrate a minimum of one inch into framing members with a 6d common nail with a 7/16 inch head.
- Metal framing or panels - Corrosion resistant, self-tapping screws with a 7/16 inch head with sufficient length penetrate 3/8 inch through metal studs or panels, with heads or washers large enough to not pull through lath.
- Masonry walls or panels - Corrosion resistant concrete screws or powder actuated fasteners (or cap fastener), which are shot into the wall surface.

Mortar

Mix 1:

- 1 part portland Cement (ASTM C 150)
- 1 part Lime (ASTM C 207)
- 4.5 parts Sand (ASTM C 144)
- potable water

Mix 2:

- 1 part Type S Masonry Cement (ASTM C 91)
- 2.25 parts Sand (ASTM C 144)
- potable water

Mix 3:

- 1 part Type N Masonry Cement (ASTM C 91)
- 2.25 parts Sand (ASTM C 144)
- potable water

Mix 4

- Premixed mortars must also meet the above requirements. Check with the mortar manufacturer to determine if their product is suitable for installation manufactured stone veneer and it meets the building code requirement of 50 psi shear bond when tested in accordance with ASTM C 482.

Check with the ACMV manufacturer on additional requirements and recommendations if using color pigments, integral bonding agents, or other admixtures in your mortar mix.

Mortars mixed with higher amounts of sand will tend to be less workable. Mortar mixed with higher amounts of cement will provide a greater bond strength but may be prone to increased dry-shrinkage cracking. Type N mortars are generally easier to grout with than Type S. For the scratch coat, installation of ACMV, and grouting, Type N or Type S mortar meeting the above requirements are acceptable.

Surface Preparation

Wall system

Verify structural and surface integrity of existing wall prior to installation. ACMV units must only be applied to structurally sound walls or other structures.

Wall systems not mentioned below (e.g. structural insulated panels and insulated concrete forms) are outside the scope of this document and may require the need of a designed system.

Wall systems shown on these details are wood frame with rigid sheathing unless otherwise noted. Other wall systems that can be successfully used with ACMV include all standard wood and metal framing, rigid sheathing, and cementitious stucco scratch or brown coat that has not been slicked or burned.

Other wall systems are acceptable with qualifications.

- **Masonry walls, poured-in-place concrete walls, and concrete tilt up panels** must be free of dirt, waterproofing, paint, form oil, or any other substance that could inhibit the mortar bond. These surfaces must have a rough texture to ensure a mortar bond. Acid washing, sand/bead blasting, pressure washing, or a combination of these methods may be necessary to achieve the required bondable surface. If a bondable surface cannot be achieved, attach lath and scratch coat before installing ACMV.
- **Existing masonry surfaces** must be evaluated for mortar and face integrity and must be free of dirt, waterproofing, paint, or any other substance that could inhibit the mortar bond. Surfaces may be cleaned by pressure washing, acid washing, sand/bead blasting, or a combination of these methods to achieve a bondable surface. If the surface cannot be cleaned, attach metal lath before applying the mortar scratch coat.
- **Open studs, non-rigid sheathing and metal siding** must be prepared with 3.4 lb paper backed lath with a minimum ½" thick scratch coat and allowed to cure for a minimum of 48 hours prior to AMV installation.

The following substrates are considered unacceptable and may require designed systems: existing siding in unsound condition; EIFS; deteriorating or unsound masonry surfaces.

Water Resistive Barrier

Where a WRB is required, the MVMA recommends installing two separate layers in shingle fashion, starting from the bottom of the wall. The upper layers of the WRB should lap on top of the lower layers by a minimum of two inches. The vertical joints of the WRB must be lapped a minimum of six inches. The WRB should be installed in accordance with the manufacturer's recommendations and be integrated with all flashing accessories, adjacent WRBs, doors, windows, wall penetrations, and wall transitions.

Lath

Lath should be applied horizontally with the cups up, and should overlap a minimum of one inch on the horizontal and vertical seams. The ends of adjoining lath pieces should be staggered.

Lath should be wrapped around inside and outside corners with attachment every six inches at the next stud allowing a 16 inch overlap. Lath should be fastened every six inches vertically on each stud or similar spacing on concrete wall surfaces. Lap metal lath around all inside and outside corners. Do not end lath at corner framing. Effort should be made so that lath fasteners do not penetrate through the exterior sheathing between the studs.

Flashings/Weep Screeds/Casing Bead/Movement Joints

All flashing and metal detail pieces should be manufactured of corrosion resistant material.

Verify that all flashing including roofing kickout flashing has been properly installed. Although roof flashings are not part of the wall cladding system, they are necessary for proper moisture management. Flashing material should extend above horizontal terminations, roofing material, and drainage planes or vent mat products. Weep Screeds and other base flashings should be held a minimum of 4" above grade and a minimum of 2" above hard surfaces such as driveways, patios, etc. All flashing material should be integrated with water resistive barrier to prevent moisture penetration into structure.

- **Movement Joints** -Do not install ACMV over these joints.

Installation of Adhered Concrete Masonry Veneer

Prior to commencing installation of ACMV, ensure that the WRB and flashing are properly installed and integrated with each other. Refer to the flashing details, referenced in the Guideline, for detailing around windows, doors, through-wall penetrations, and ACMV terminations.

Before installing ACMV, lay out a minimum of 25 square feet at the jobsite so that you have a variety of sizes, shapes, and colors to choose from. Mixing ACMV sizes, shapes, textures and color will allow for variety and contrast in your design to achieve the desirable finished project.

Mortar Scratch Coat

After the lath is installed, apply a nominal 1/2" thick layer of mortar over the lath, ensuring the lath is completely covered with mortar to allow for scoring of the surface. The mortar should be applied with sufficient pressure and thickness to fully embed the lath in mortar. Once the mortar is thumb-print hard, scratch (score) the surface horizontally to create the mortar scratch coat.

Moist curing the mortar scratch coat will ensure there is minimal cracking and proper hydration. Before applying ACMV, the mortar scratch coat should be dampened so that the surface appears wet but without free standing water.

Grouted Adhered Concrete Masonry Veneer Application

Tip: Installing ACMV from the top down will minimize cleanup requirements.

Prior to the application of mortar to the backs of the ACMV or the scratch coat, the back of the ACMV and the scratch coat should be moistened so that the surfaces appear damp but without free standing water.

The back of each ACMV should be entirely buttered with mortar to a nominal thickness of 1/2". It is important to cover the entire back of the ACMV, not just the perimeter.

Buttered ACMV should be firmly worked onto the scratch coat and slid slightly back and forth or with a slight rotating motion to set the ACMV. With the proper mortar mix, moisture content, and scratch coat preparation, the installer will feel the mortar start to grab within a few seconds of the setting movement process. At this point, no further movement of that ACMV should be made as bonding will be broken. If the ACMV is inadvertently moved after initial set has begun, it should be removed, mortar scraped off the back of the ACMV and scratch coat, and then reinstalled following the application process.

Grouting the joints should be completed only after there is sufficient cure time of the installation of ACMV units, when mild contact will not break the bonding. Grouting may be done with a grout bag, filling joints to the desired depth, ensuring that mortar is forced into all voids. Grout should be "thumbprint" hard" before any raking is done. This curing time before the grout is ready will vary significantly with temperature and humidity. Use a wooden raking stick, or pointed tool to rake the joints to the desired depth. Extra precaution should be taken while raking so the surface of the ACMV is not damaged. Clean off remaining grout debris on the ACMV surface with a dry, soft-bristled brush.

To prevent mortar smearing, DO NOT use a wet brush to treat uncured mortar joints.

Tight Fitted Adhered Concrete Masonry Veneer Application

The back of the ACMV and the scratch coat should be moistened with the surfaces appearing damp but without free standing water.

The back of each ACMV should be entirely buttered with mortar to a nominal thickness of 1/2". It is important to cover the entire back of the ACMV, not just the perimeter. Buttered ACMV should be firmly worked onto the scratch coat and slid slightly back and forth to set the ACMV. With the proper mortar mix, moisture content and scratch coat preparation, the installer will feel the mortar start to grab within a few seconds of the setting movement process. At this point, no further movement of that ACMV should be made as bonding will be broken. If the ACMV is inadvertently moved after initial set has begun, it should be removed, mortar scraped off the back of the ACMV and scratch coat, and then reinstalled following the application process.

Tight fitted ACMV should be applied from the corners toward the middle of a wall, and from the bottom toward the top of the wall.

Cold Weather Application

Applications should be protected from temperatures below 40 degrees F (4 degrees C). The use of anti-freeze admixtures to lower the freezing point of the mortar is not recommended. Accelerating admixtures shall comply with C 1384; accelerating admixtures containing calcium chloride are not recommended. ACMV pieces containing visible frozen moisture shall not be installed.

The installation area should be sheltered and heated to keep the temperature above 40 degrees F (4 degrees C).

Hot Weather Application

If the environmental conditions during installation exceed 90 degrees F (32 degrees C) additional water may be needed on the scratch coated surface and the backs of the ACMV being applied. Providing shade and/or frequent misting of the wall may be required. Consult with mortar manufacturer to determine if mortar mix hot weather mix options are available. Local building code hot weather methods should be followed.

Cleaning the Adhered Concrete Masonry Veneer

Refer to ACMV manufacturer recommendations on cleaning and maintenance. Do not use harsh chemicals for cleaning, such as muriatic acid, or abusive tools, such as wire brushes to clean the surface.

Sealing Adhered Concrete Masonry Veneer

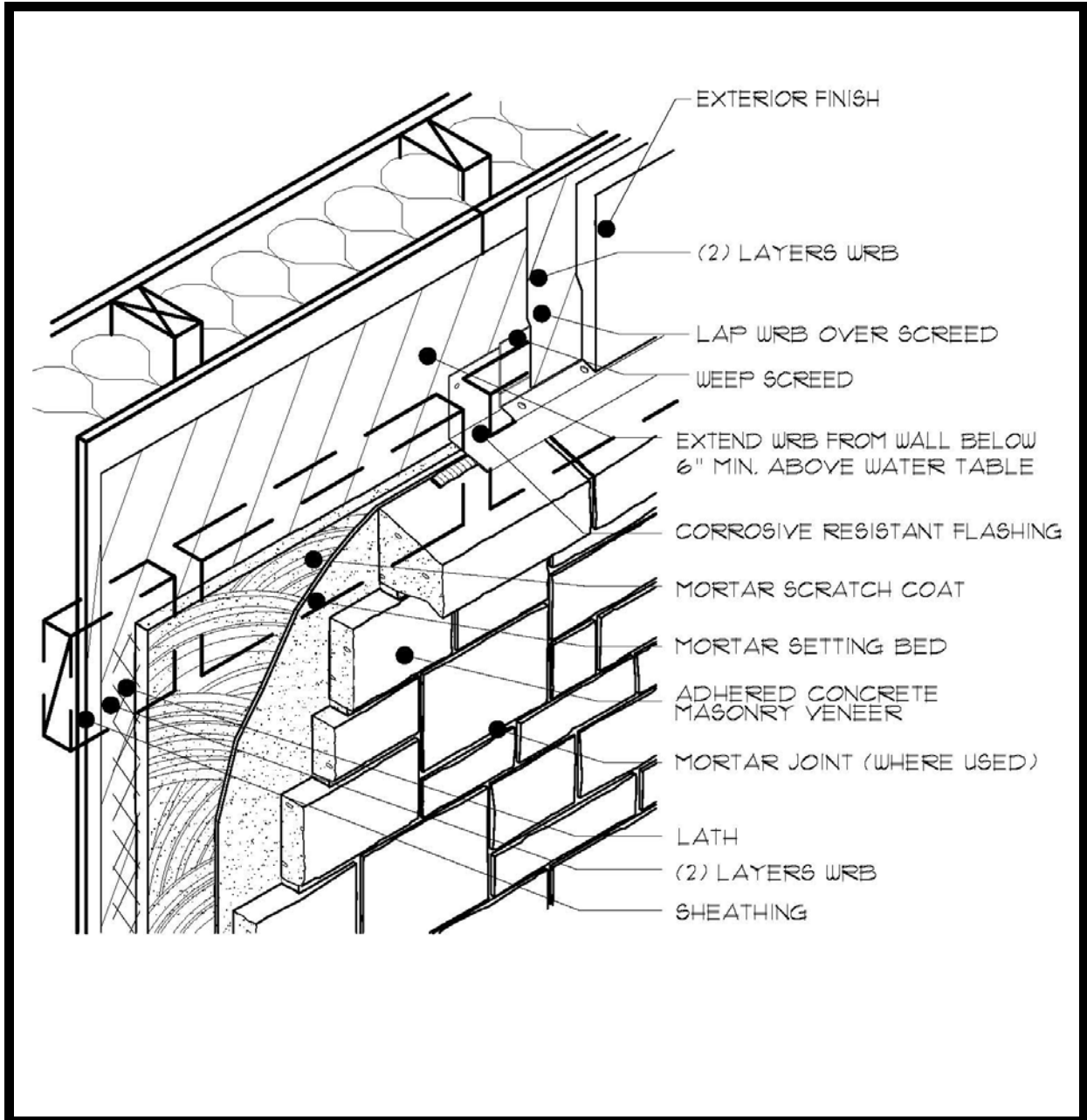
Refer to the ACMV manufacturer for recommendations regarding the use of sealants or topically applied water or graffiti-resistant coatings.

Caution

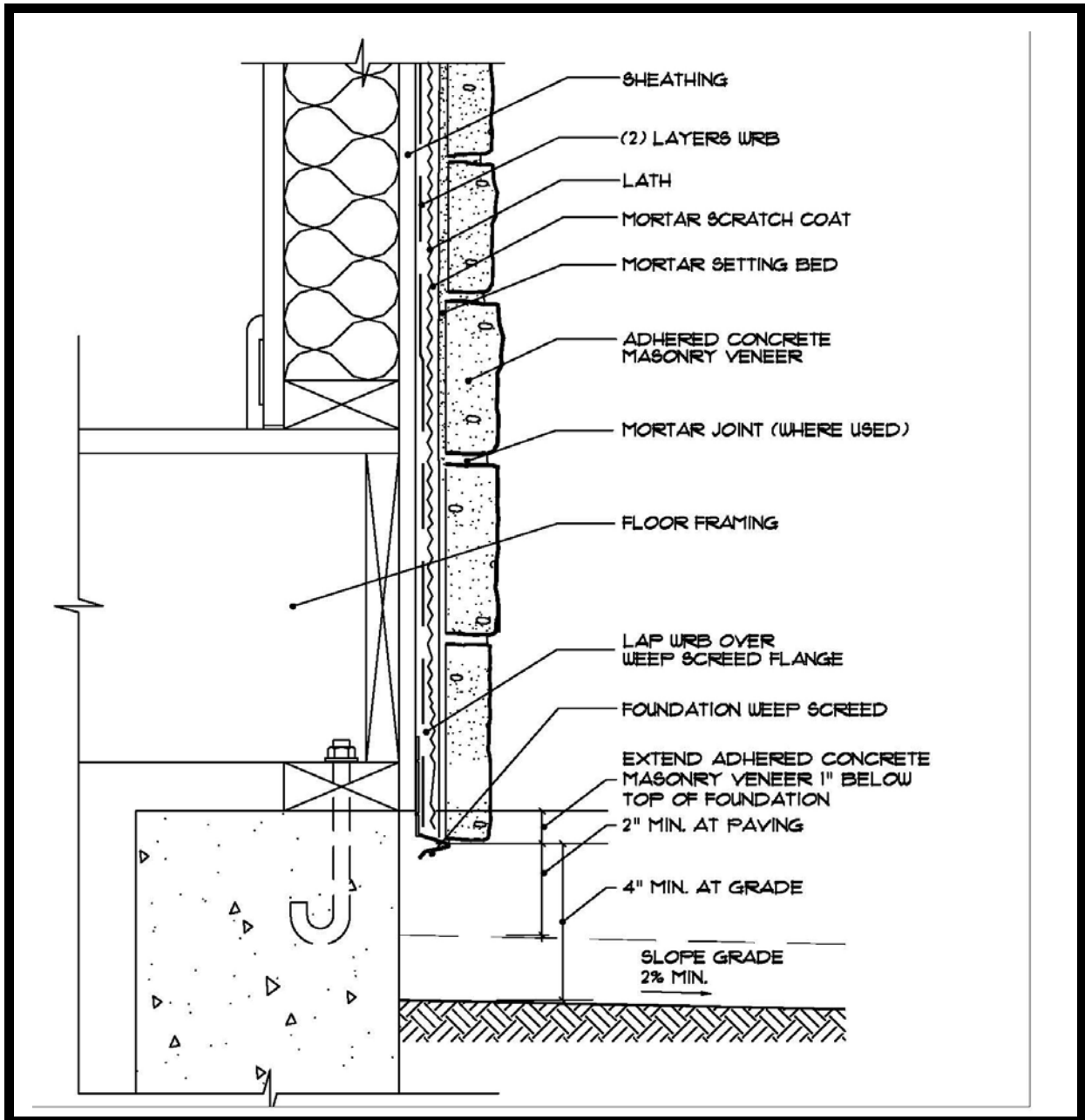
The following precautions should be taken to ensure a successful and durable ACMV installation.

- Do not subject ACMV to direct water contact. For example, avoid allowing sprinklers to directly spray onto the surface. Also, downspouts or drainage pipes should be placed so that water is not constantly saturating the ACMV units.
- Do not subject ACMV to contact with de-icing materials, salt, or other harsh chemicals. Prolonged exposure to these conditions may discolor the ACMV or result in surface damage.

Wall Assembly

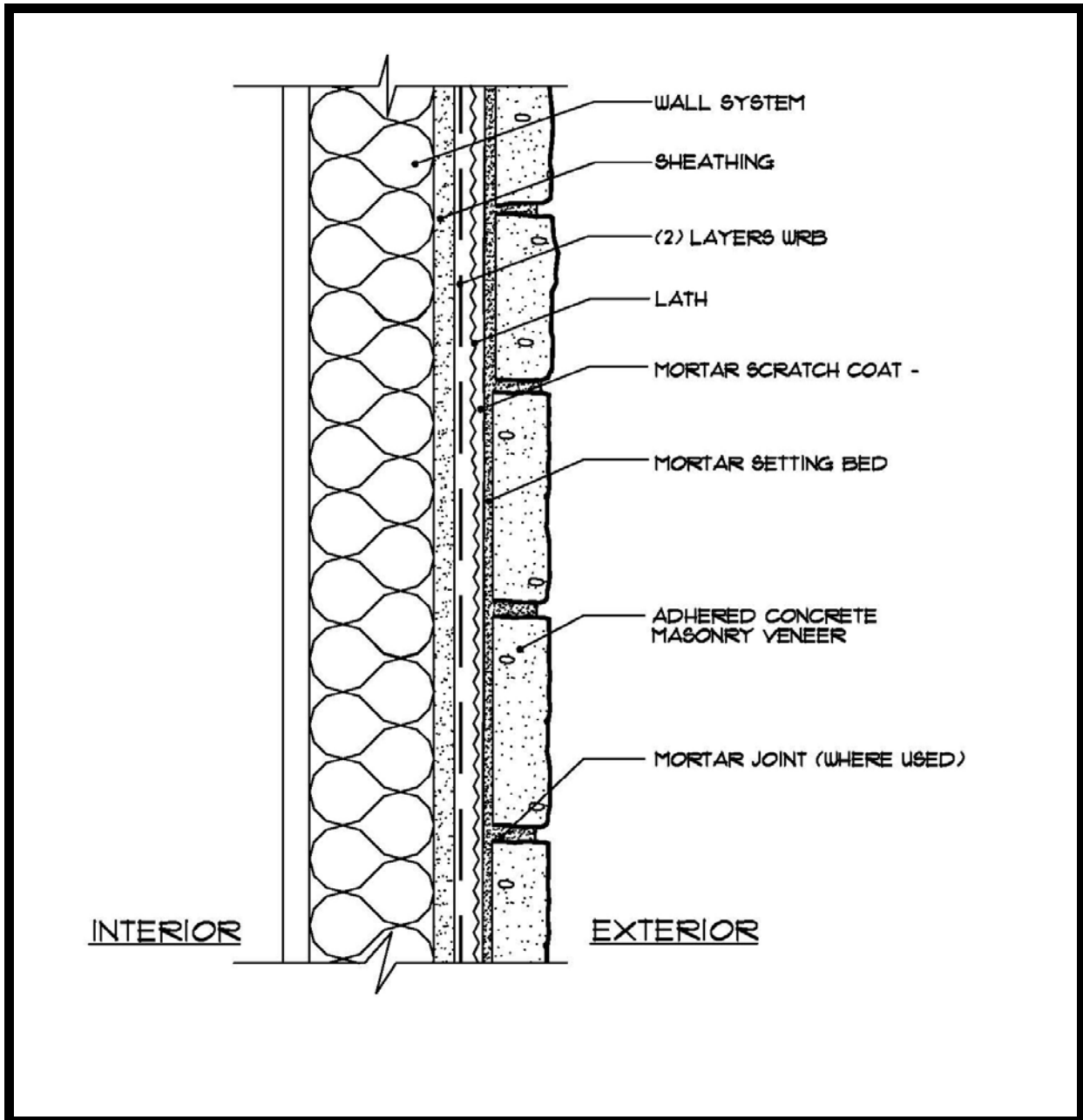


Foundation Wall Base



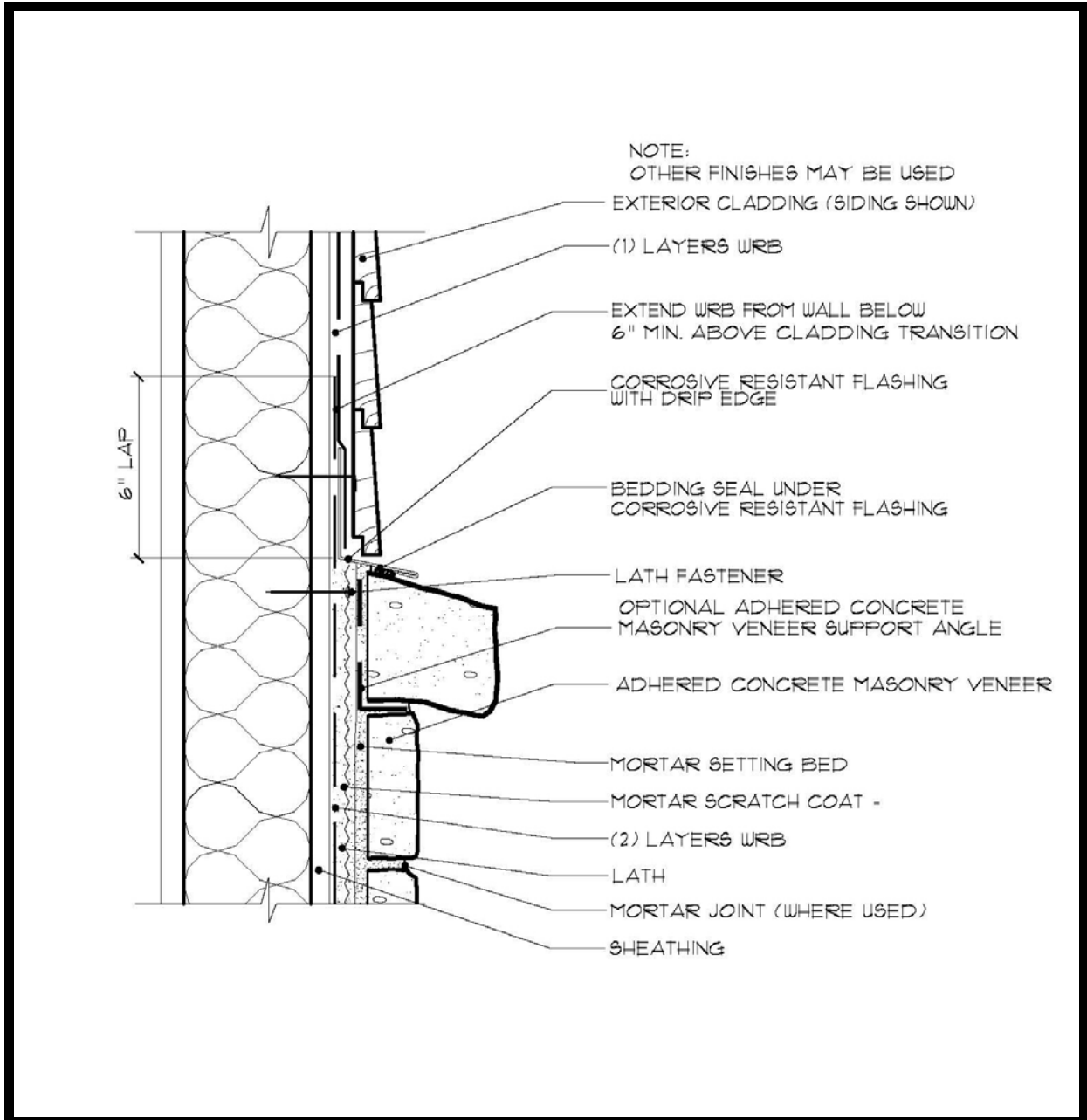
A minimum of a four inch gap is required at the base of the wall for proper drainage and to avoid water intrusion into the assembly.

Typical Wall Section



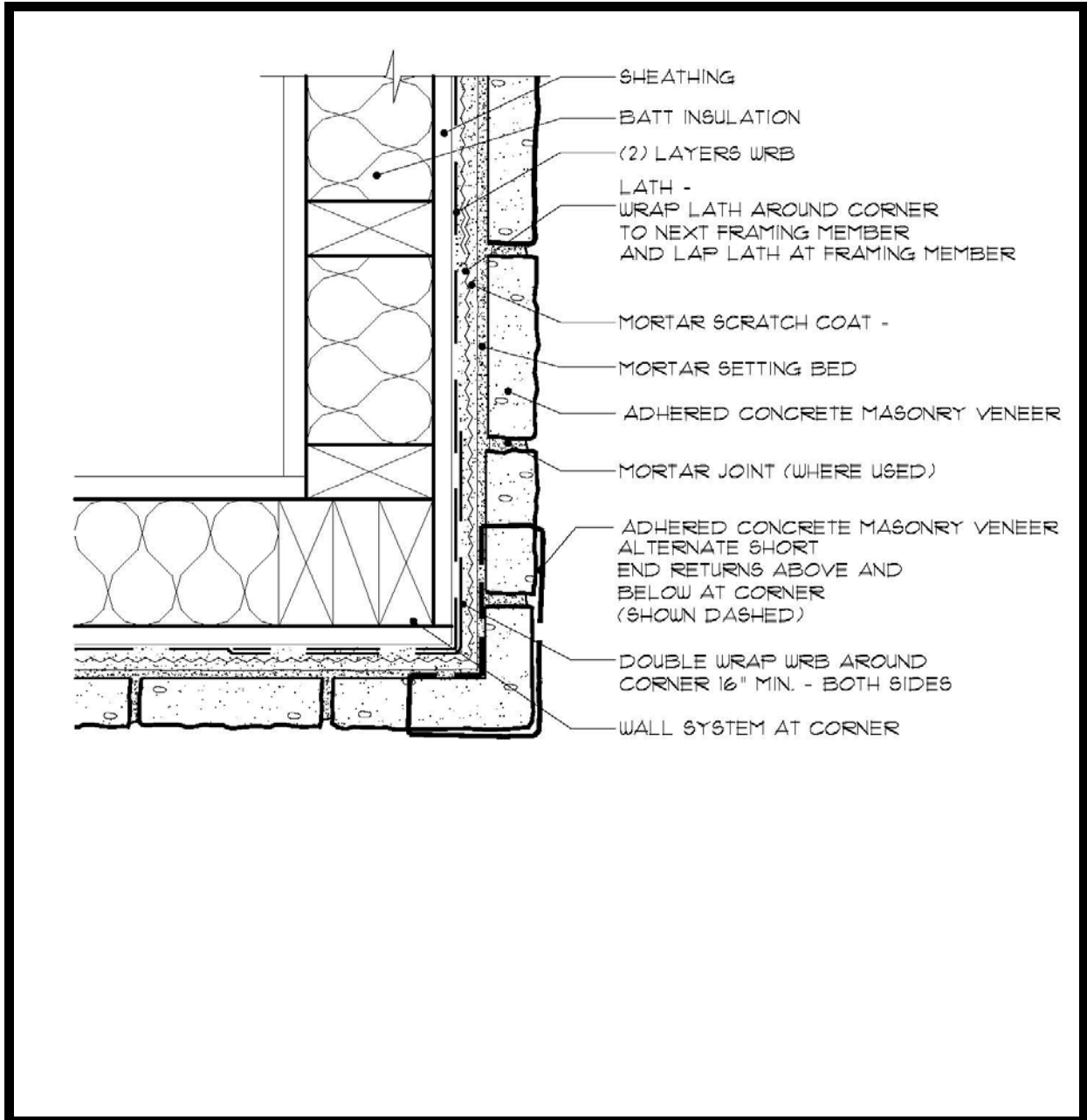
Note layering of sheathing, water resistive barrier, lath, scratch coat, and adhered concrete masonry veneer.

Cladding Transition



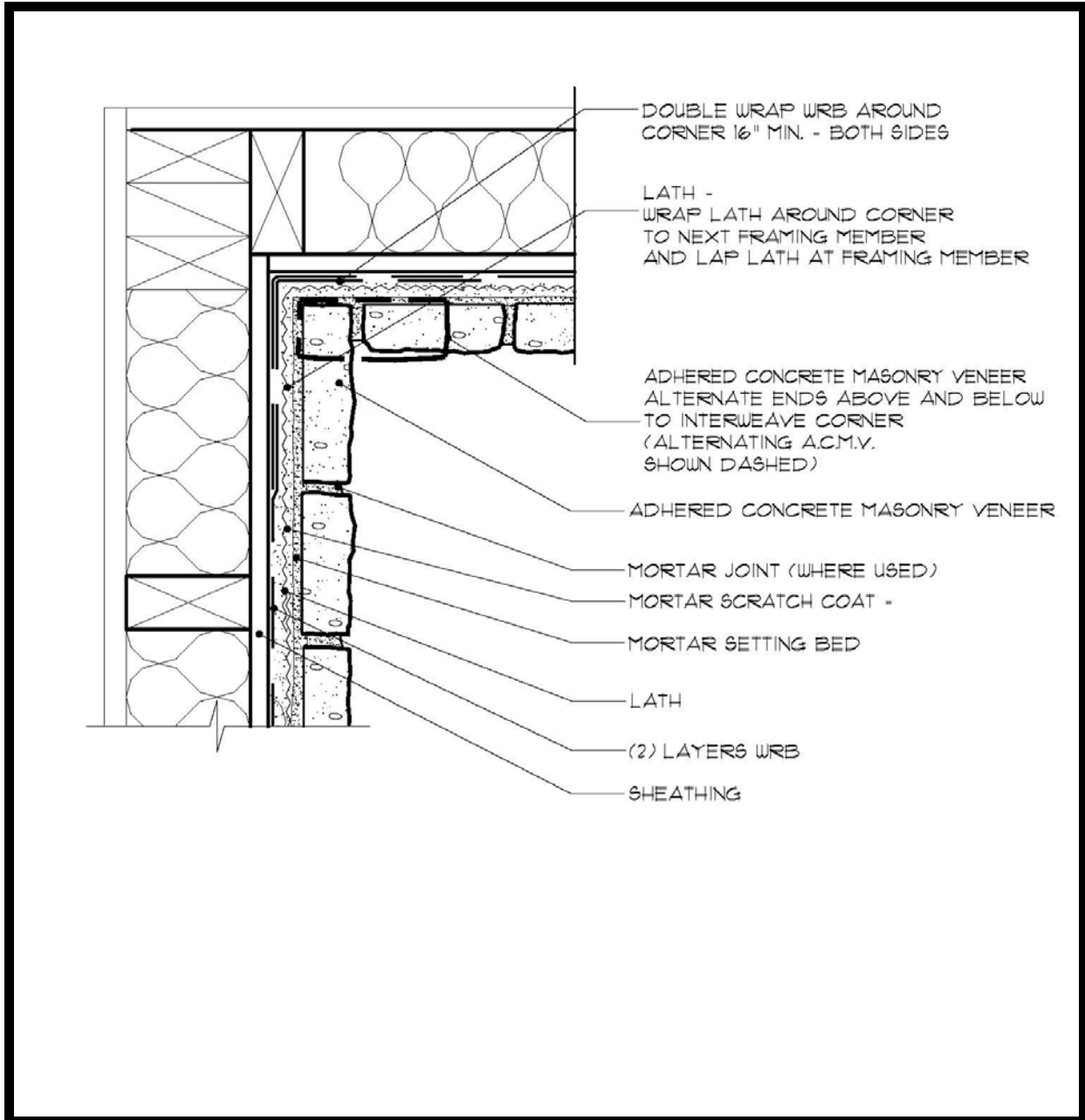
The flashing should be installed prior to the adhered concrete masonry veneer. Water resistive barrier laps over the back leg of flashing for positive drainage. Optional support anchor shown. Verify installation requirements with adhered concrete masonry veneer manufacturer.

Outside Corner



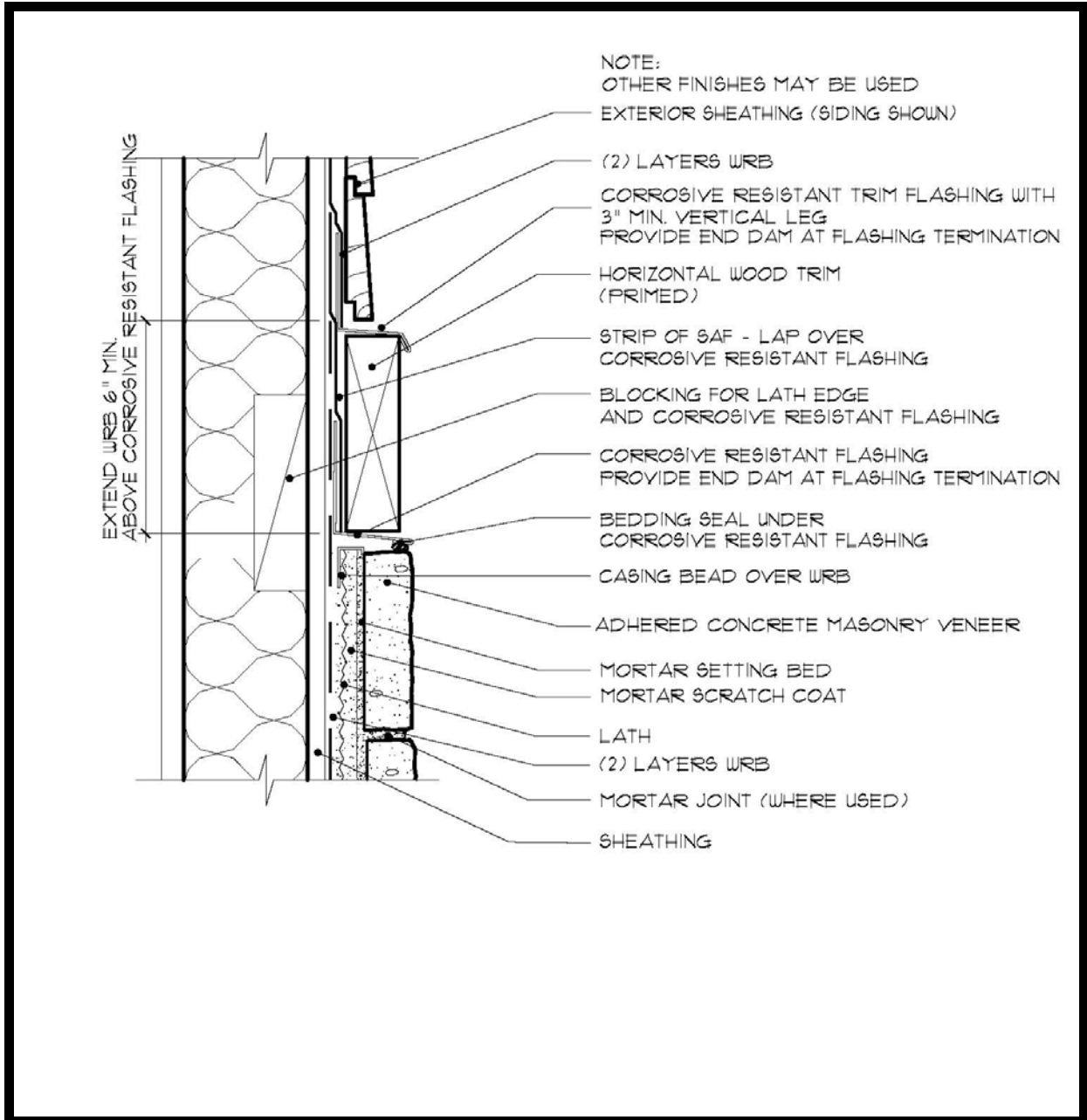
Randomly alternate short end returns above and below at the corner. Lap lath around the corner to the next framing member.

Inside Corner



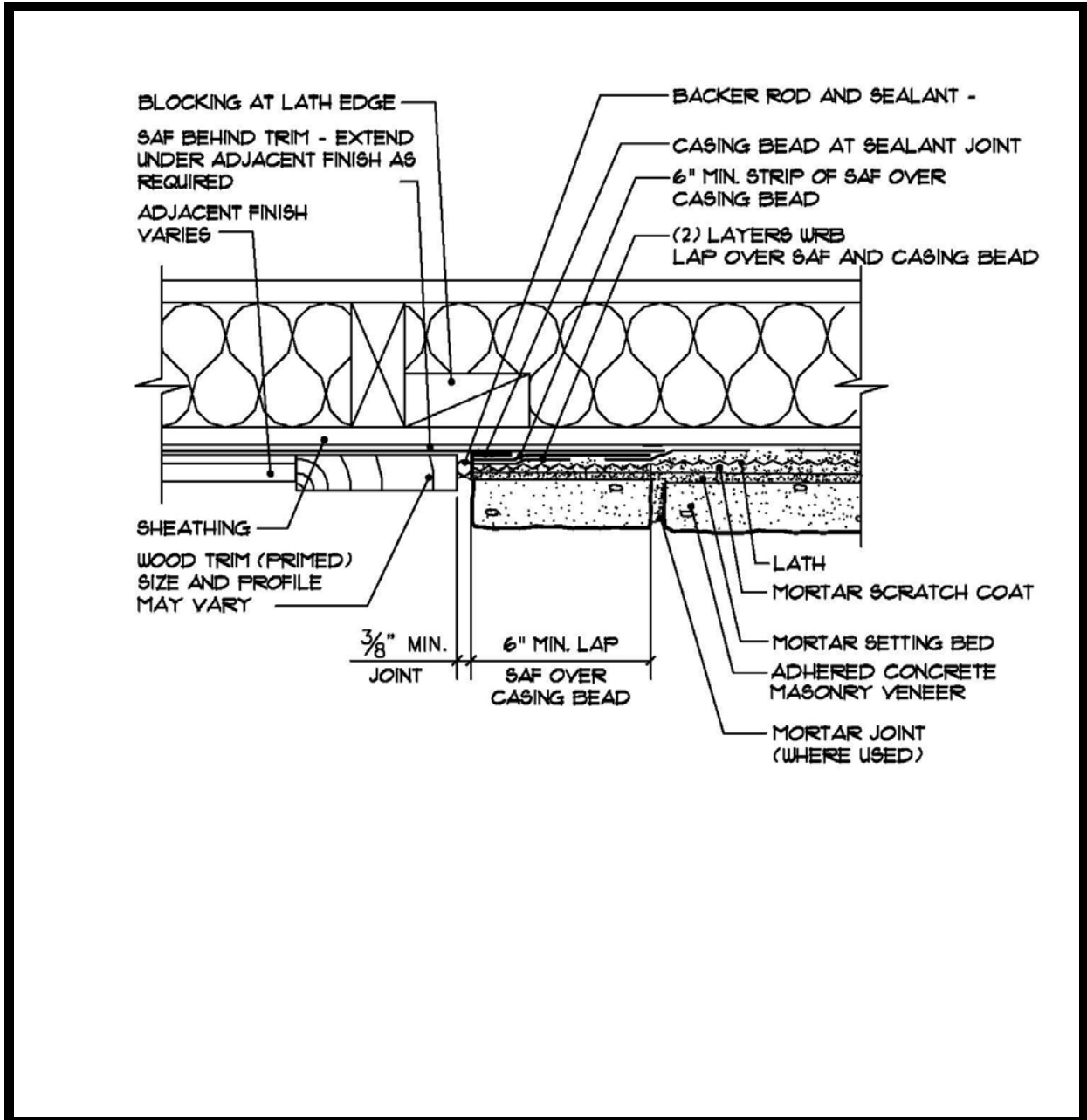
Randomly alternate ends above and below to interweave the corner. Double wrap water resistive barrier around both sides of the corner. Lap lath to the framing at least 16 inches to the next framing member.

Horizontal Transition



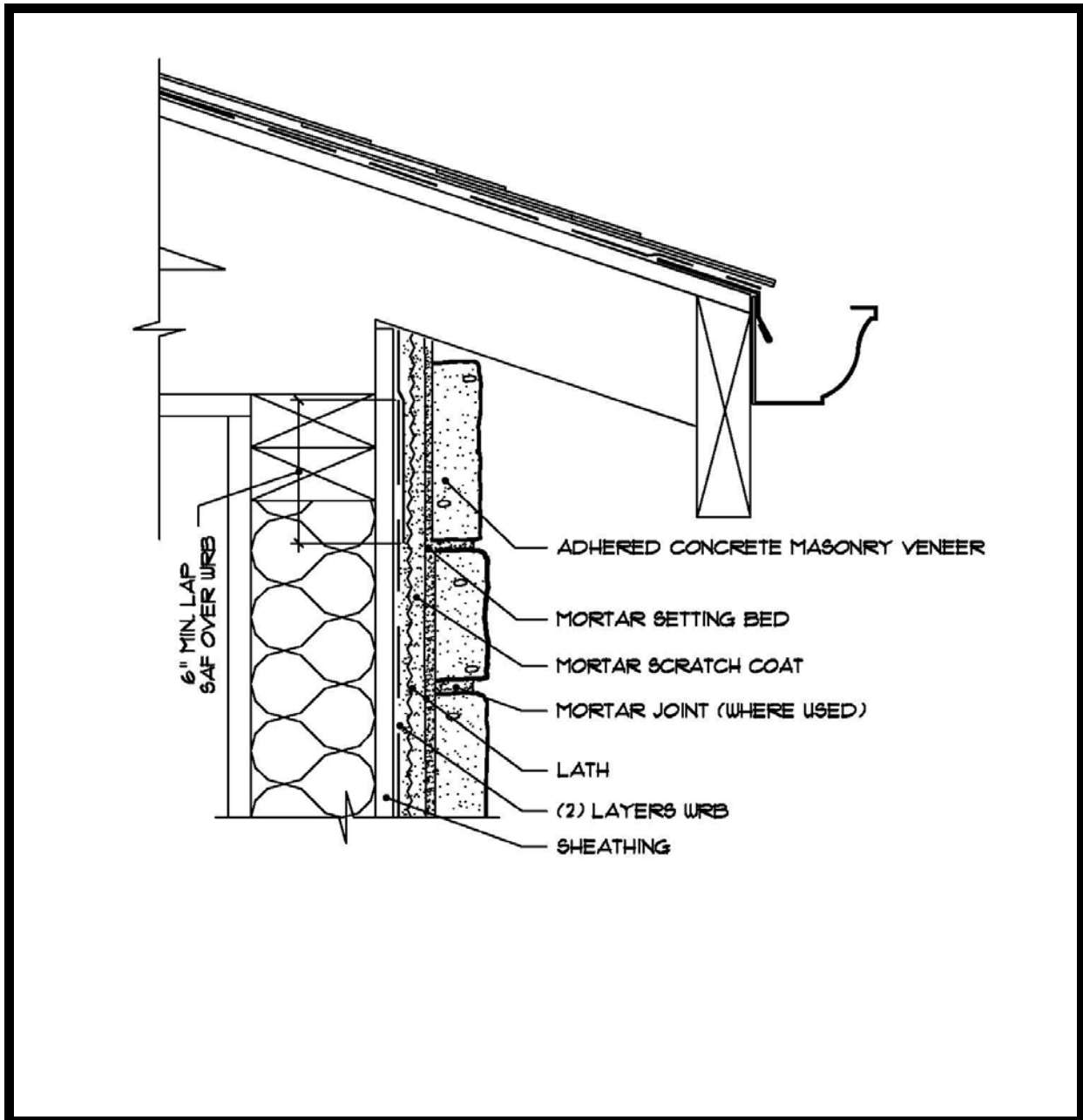
Note that self adhering flashing is lapped shingle-fashion with corrosive resistant sheet metal. A bedding seal is used under the corrosive resistant sheet metal next to the adhered concrete masonry veneer.

Vertical Transition



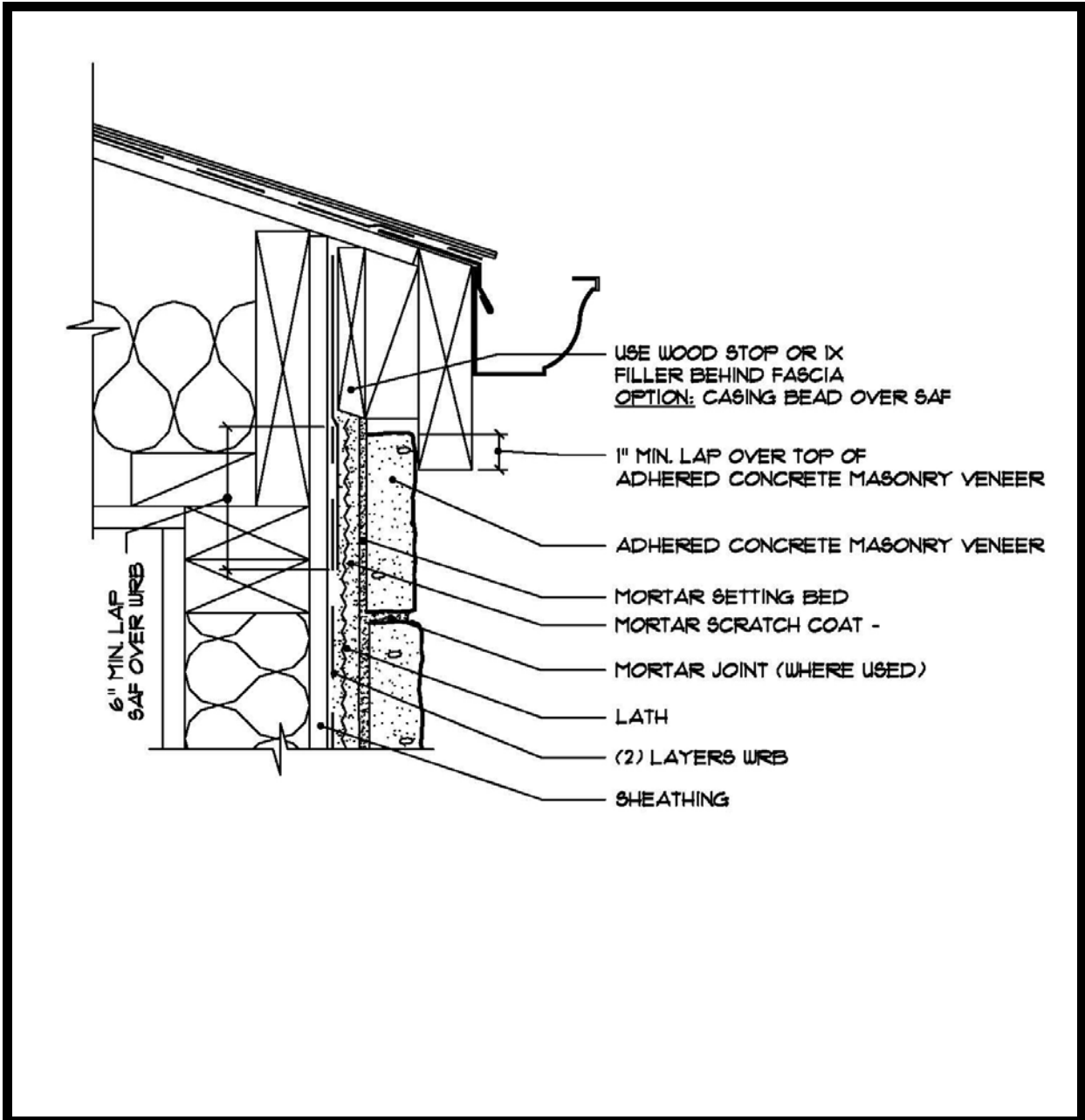
Self adhering flashing extends under the adjacent finishes. A 3/8" minimum gap should be used between finishes.

Open Eave - Overhang



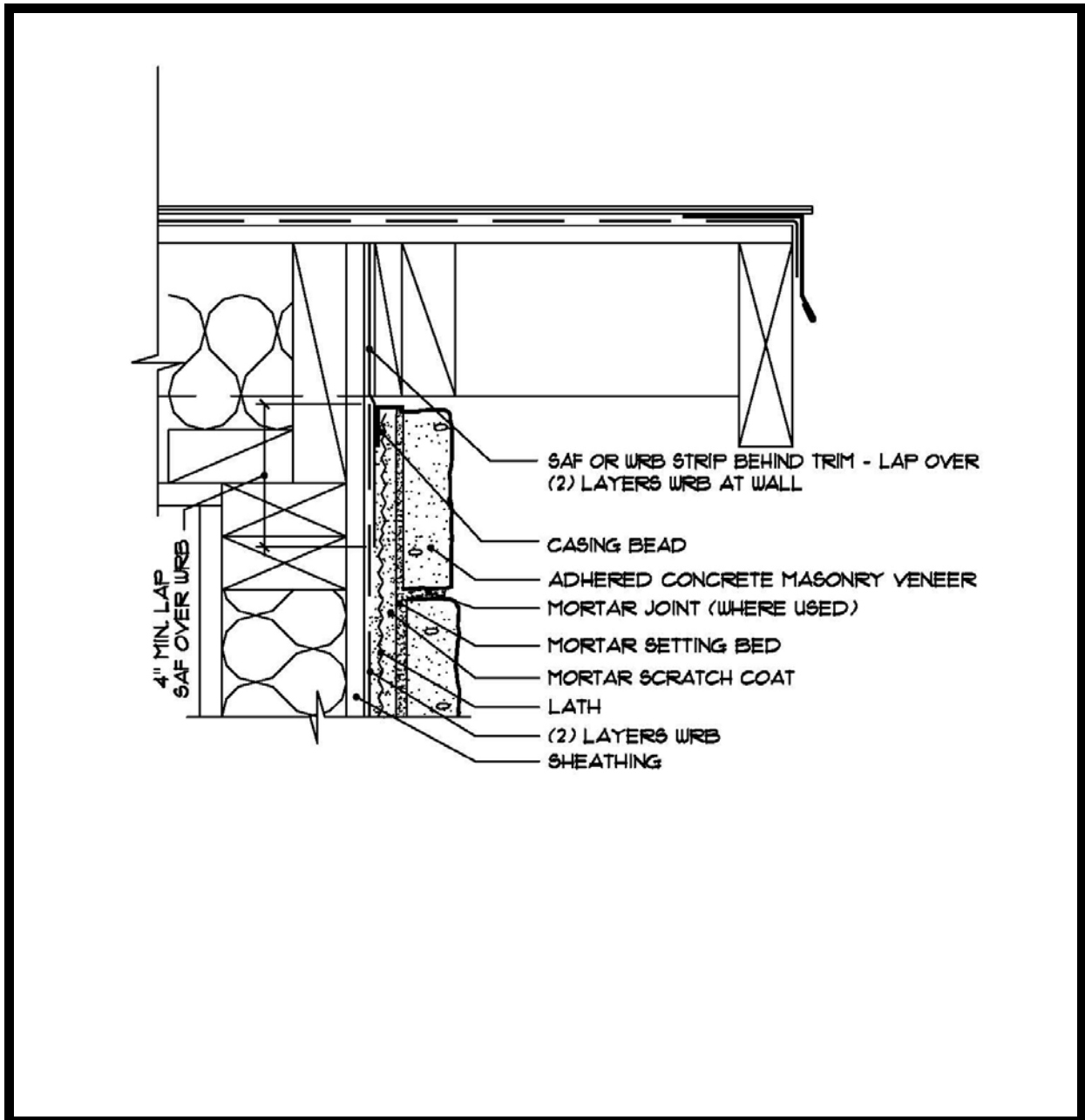
Water resistive barrier should be in place prior to soffit installation followed by adhered concrete masonry veneer.

Open Eave - Flush



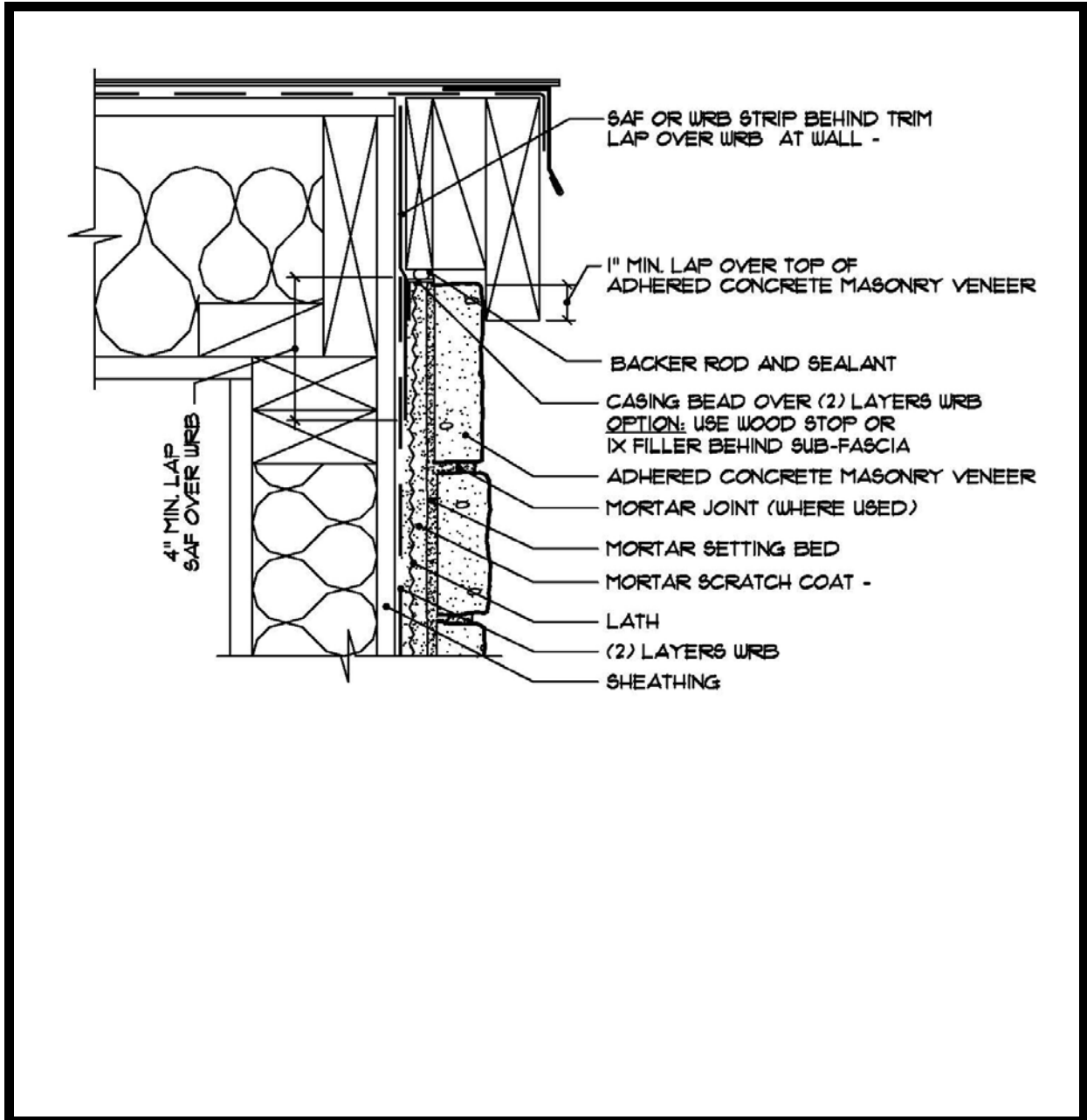
Water resistive barrier should be in place prior to soffit installation followed by adhered concrete masonry veneer.

Rake - Overhang



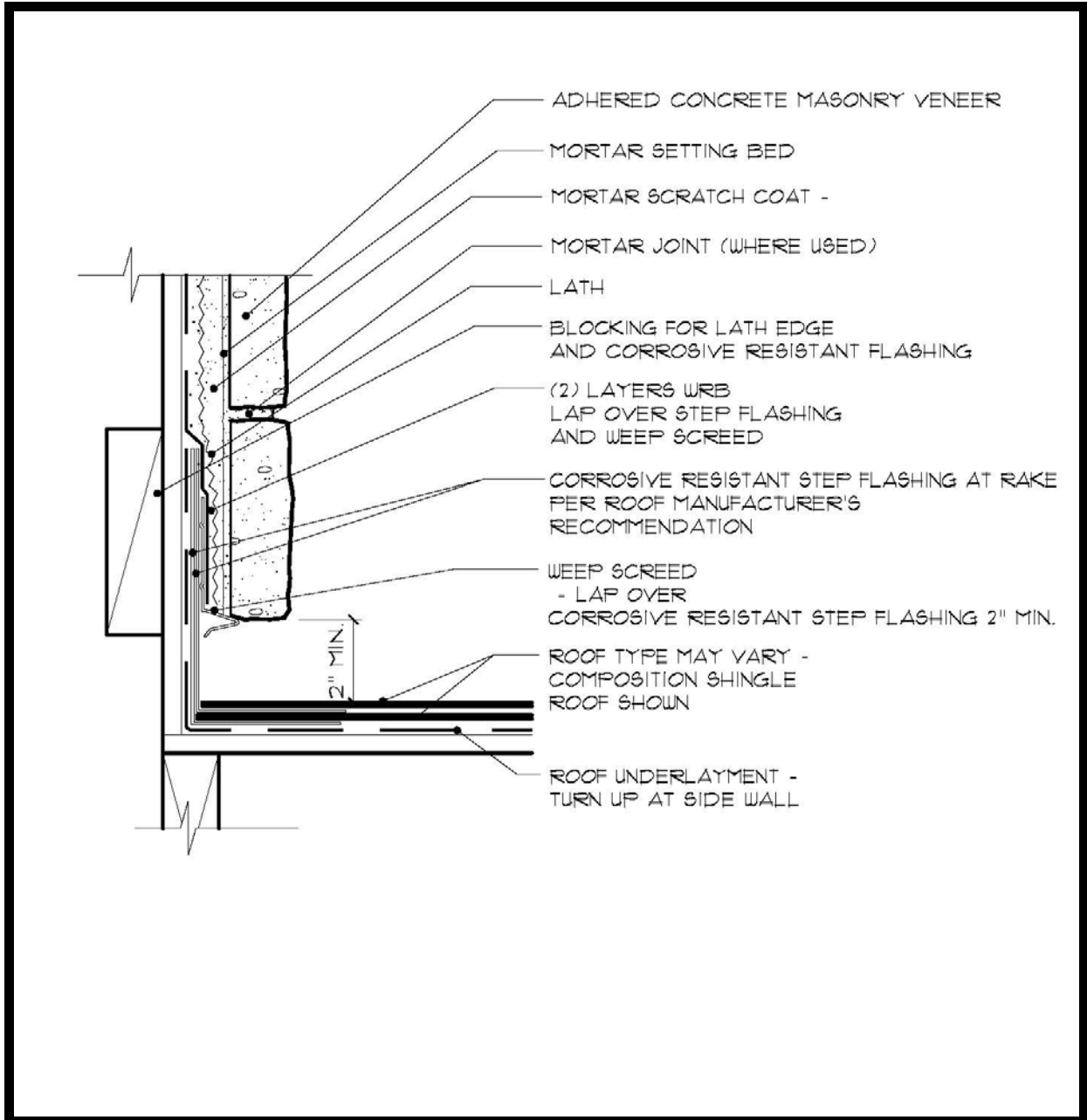
The intent of these details is to limit exposure to wind driven rain.

Rake - Flush



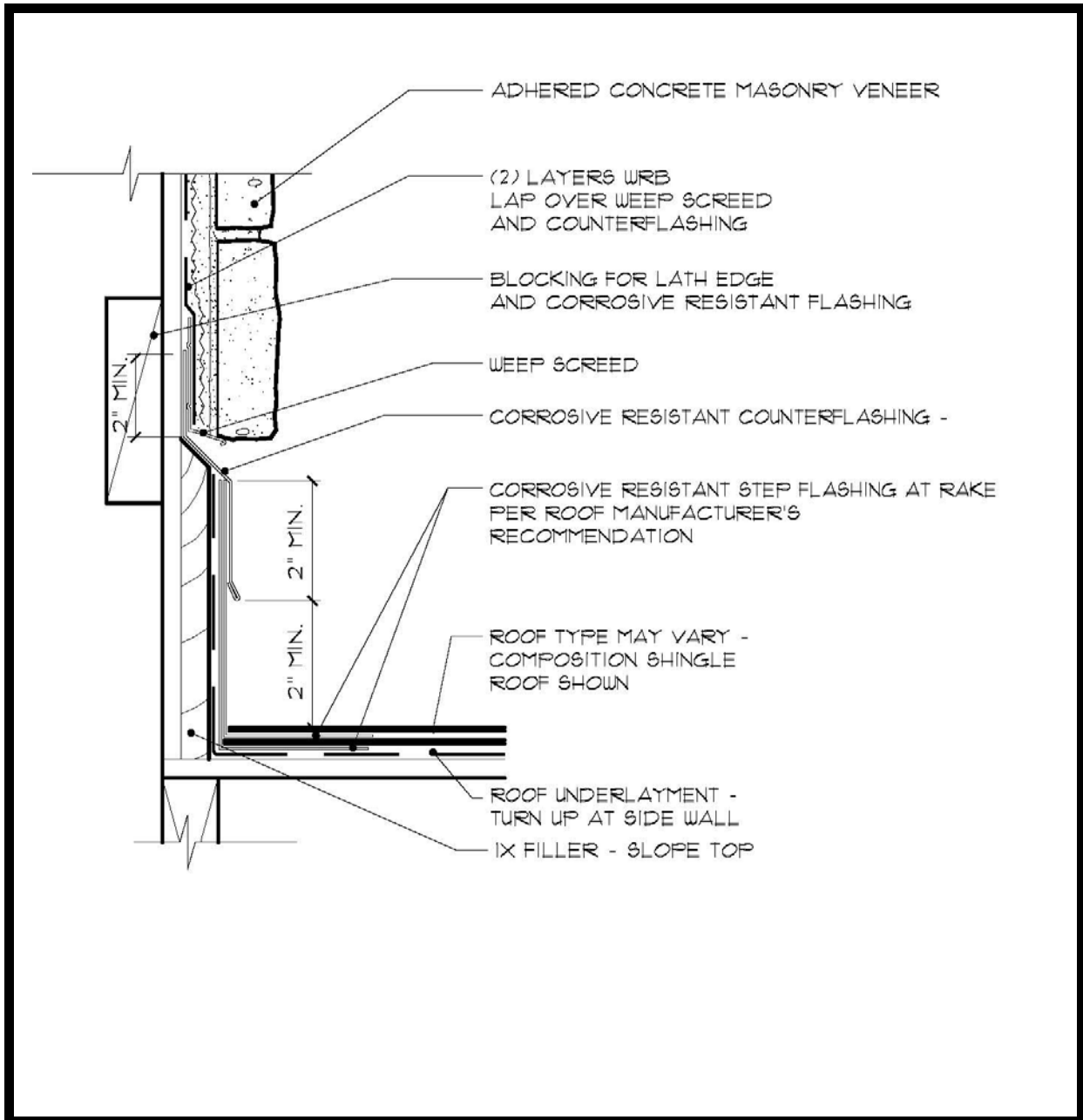
Note the use of backer rod and sealant.

Side Wall - Composition Shingles



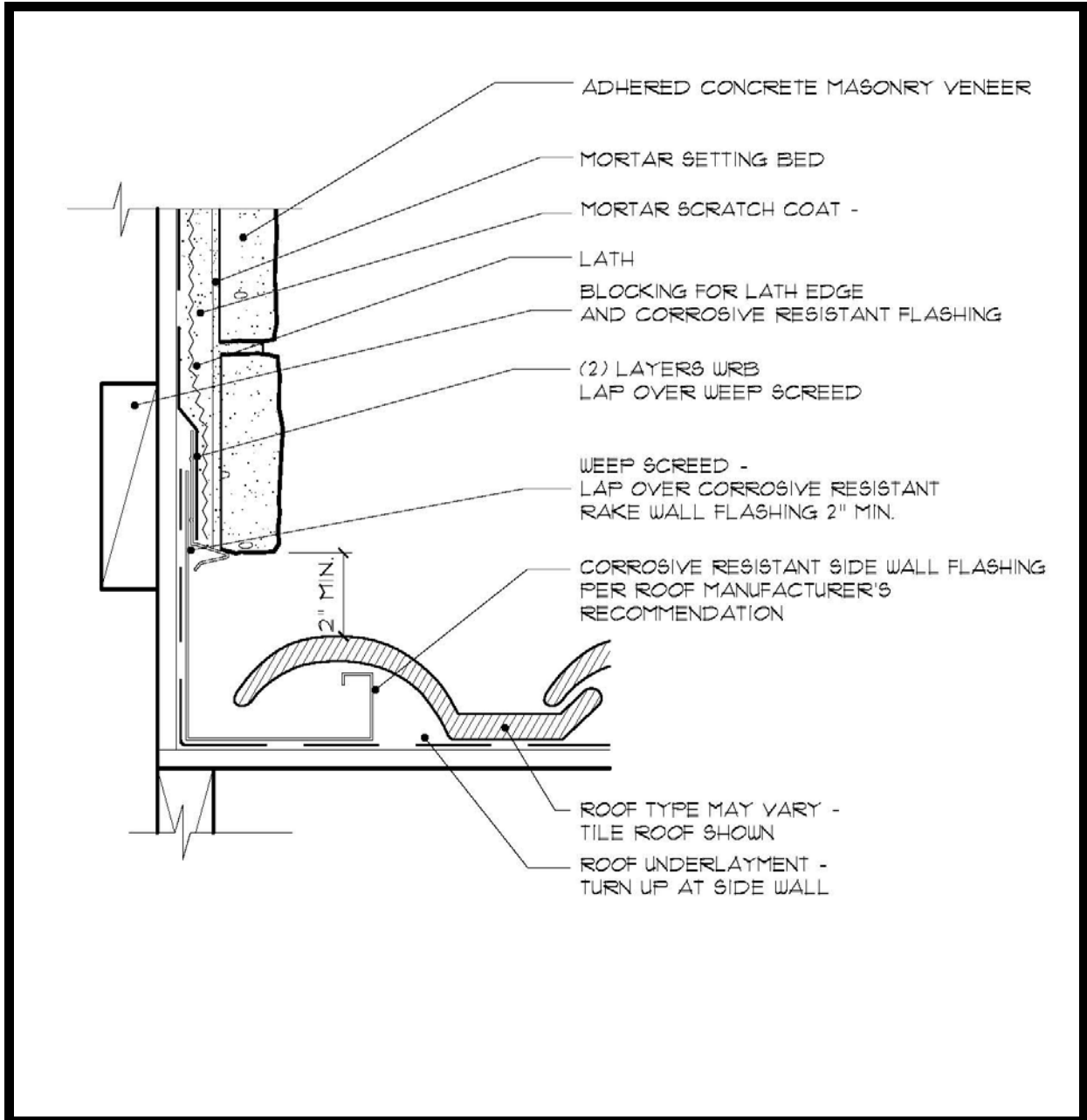
Water resistive barrier laps over step flashing and weep screed.

Side Wall - Composition Shingles Curbing



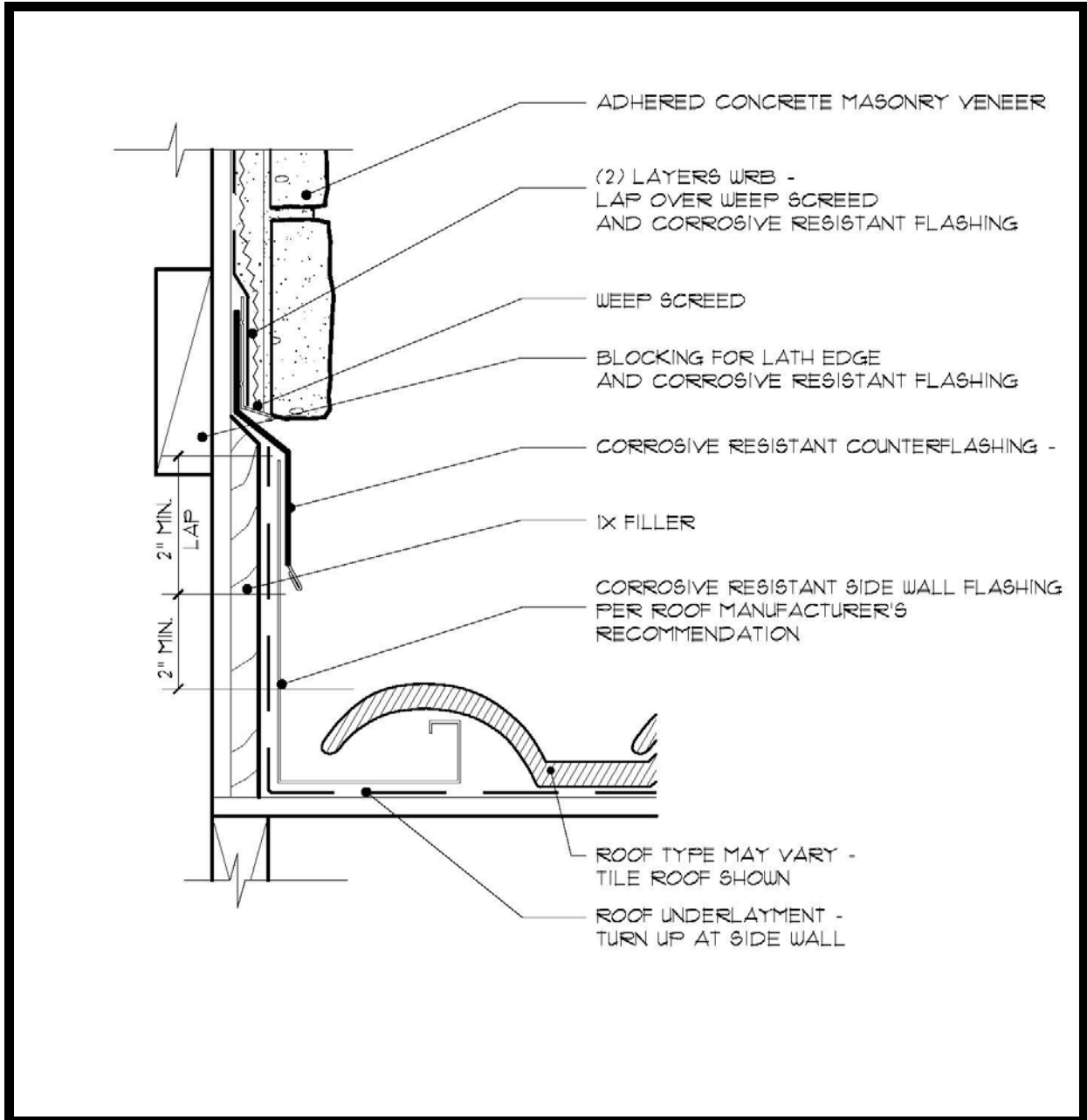
This detail includes base trim. Note the counterflashing between trim and adhered concrete masonry veneer.

Side Wall - Tile Shingles



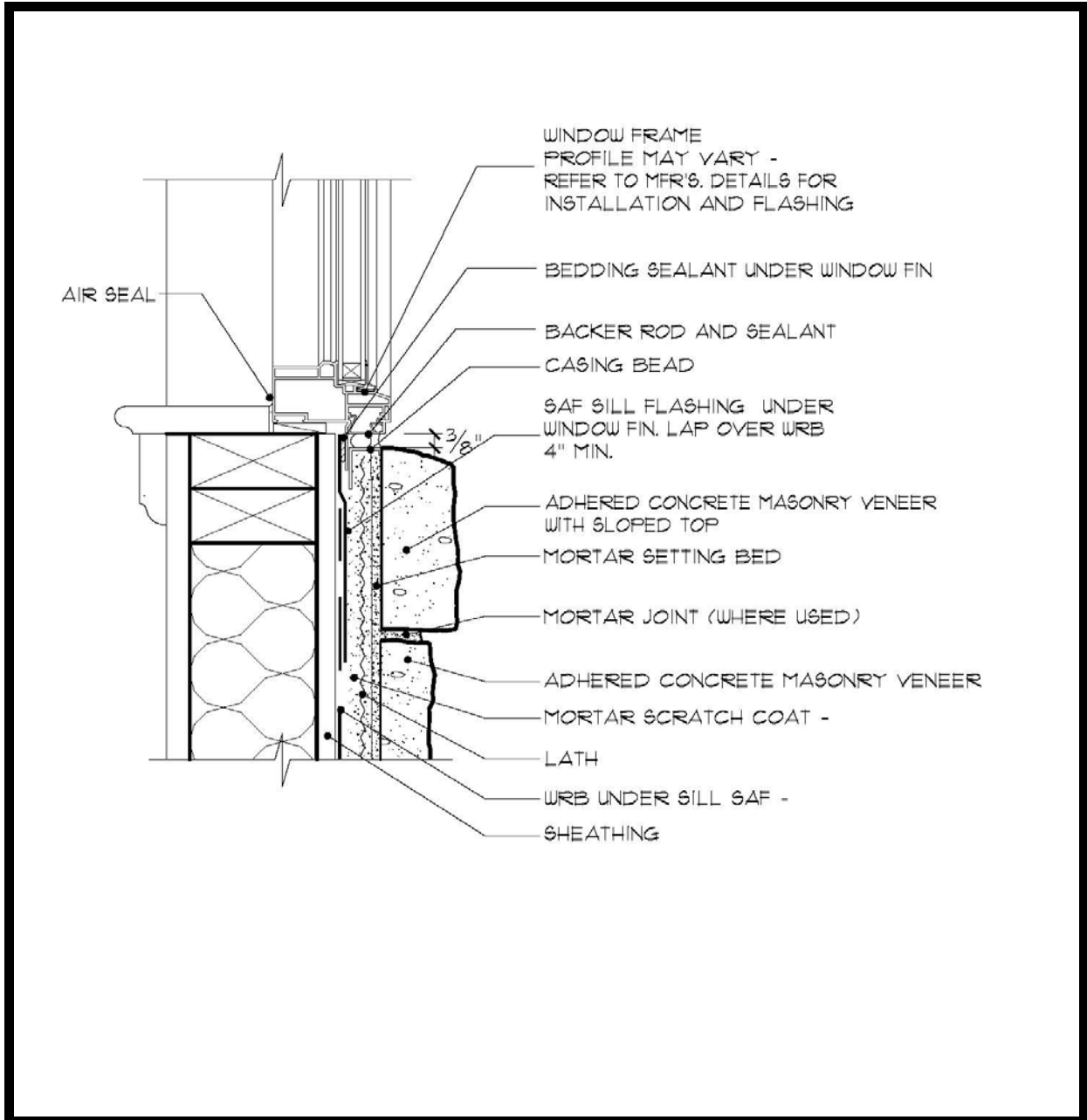
Water resistive barrier laps over step flashing and weep screed.

Side Wall - Tile Shingles Curbing



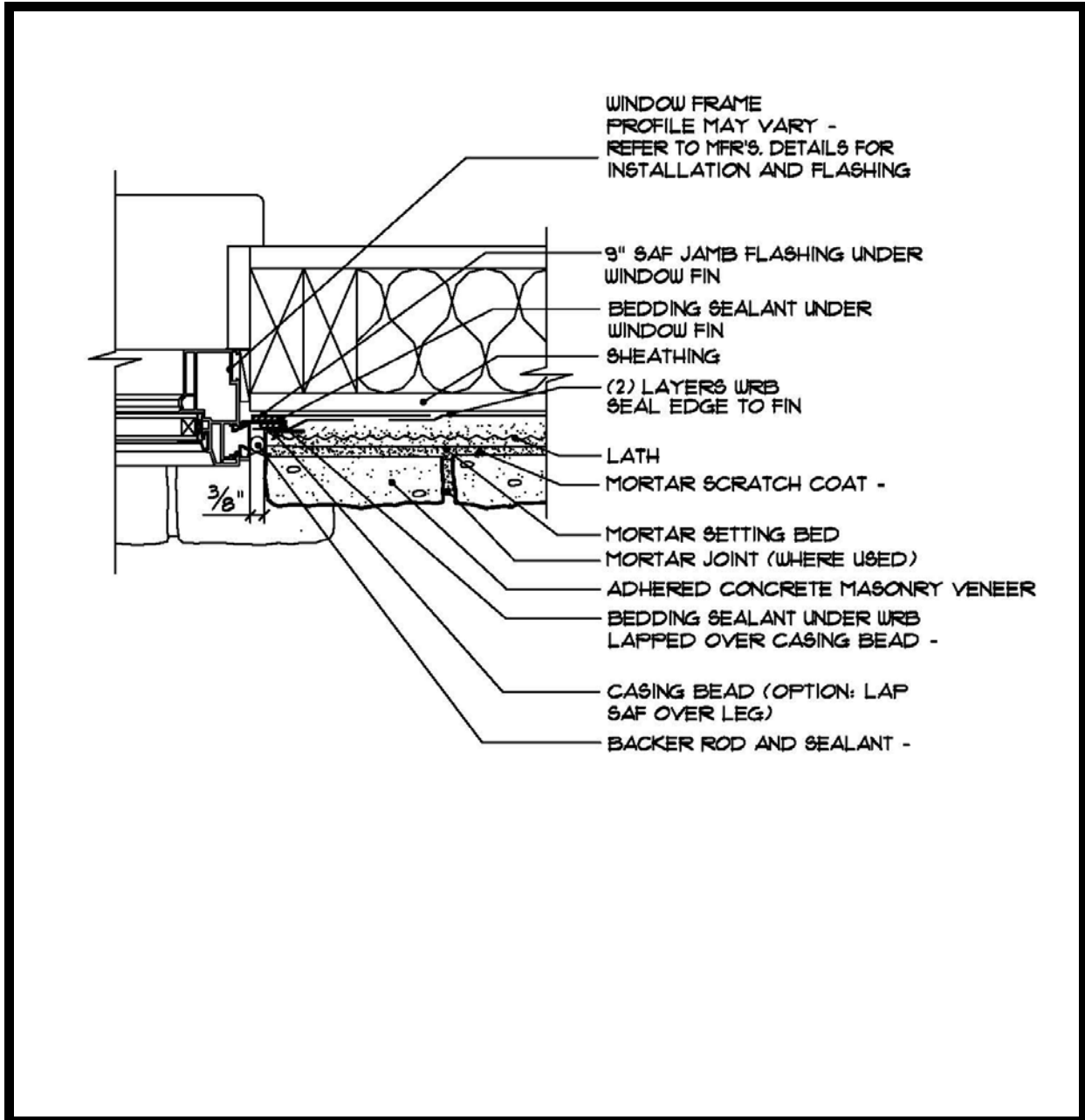
This detail includes curbing. Note the counterflashing between trim and adhered concrete masonry veneer.

Window Sill



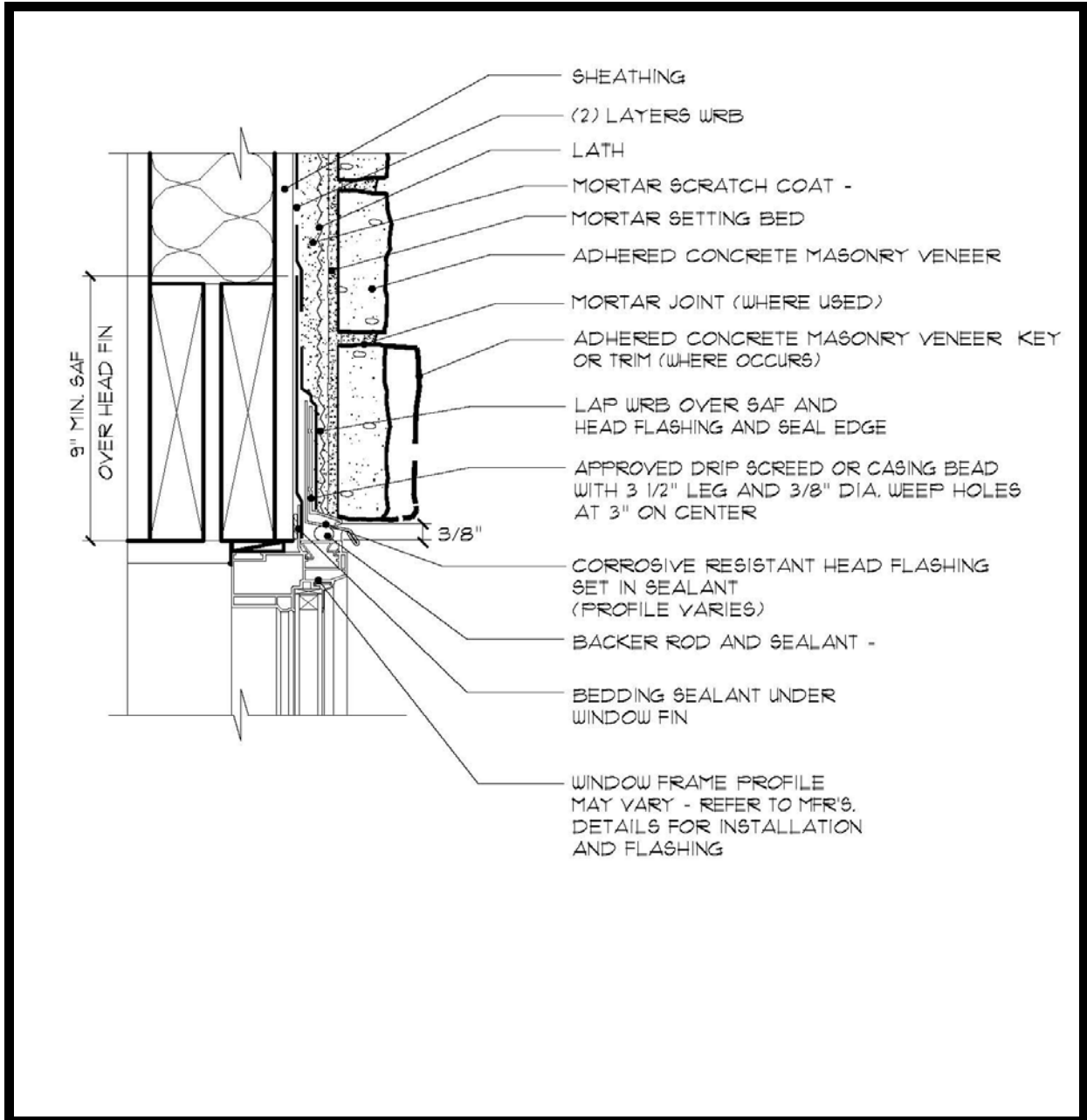
Rough openings must be properly flashed prior to window installation. Tuck water resistive barrier under pan flashing at sill. Sill flashing should drain between layers of WRB or to exterior of adhered concrete masonry veneer.

Window Jamb



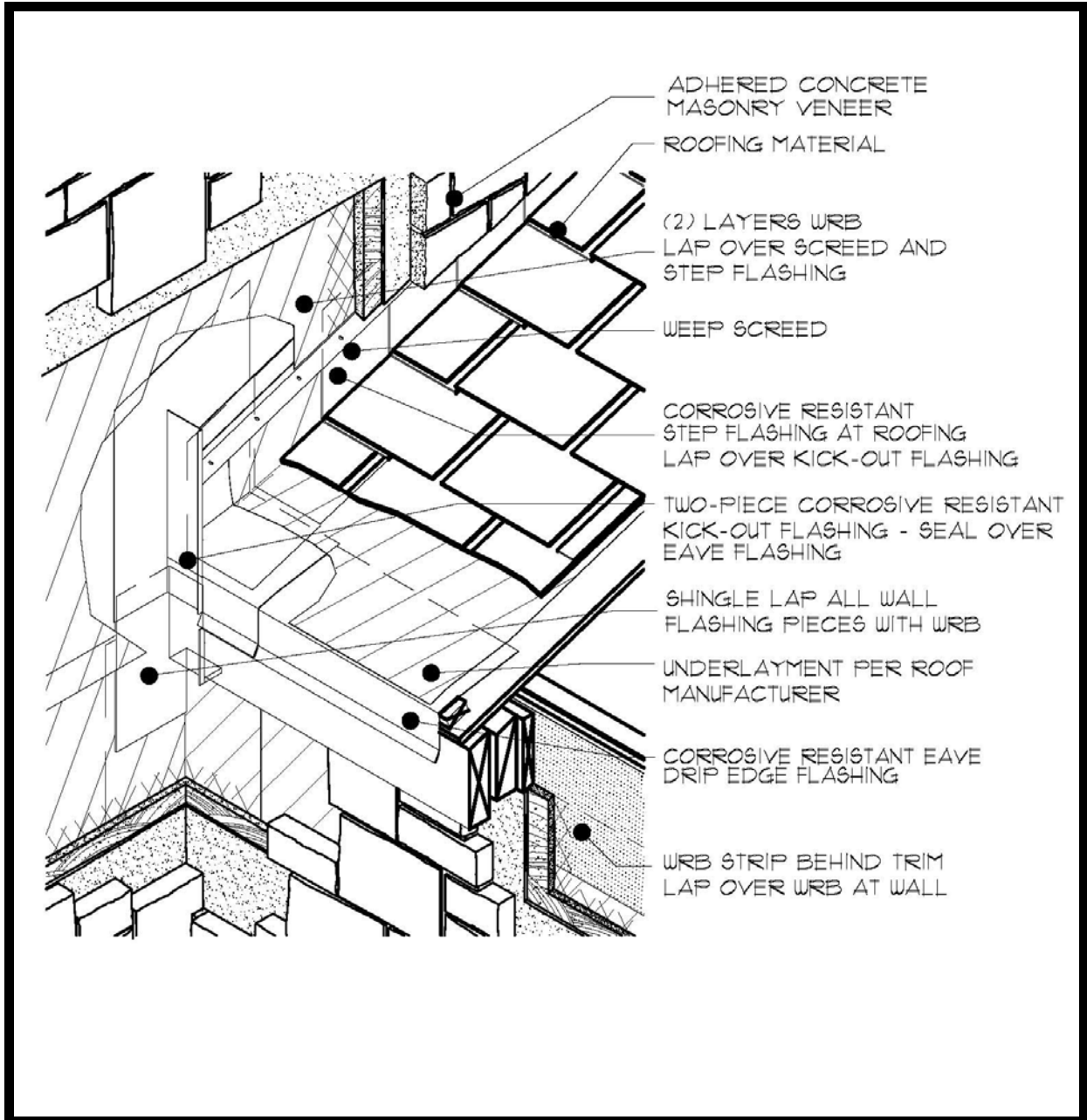
Rough openings must be properly flashed prior to window installation. Tuck water resistive barrier under paper at sill. Flashing should drain layers between of WRB. Extend layers of flashing to extreme of adhered concrete masonry veneer.

Window Head



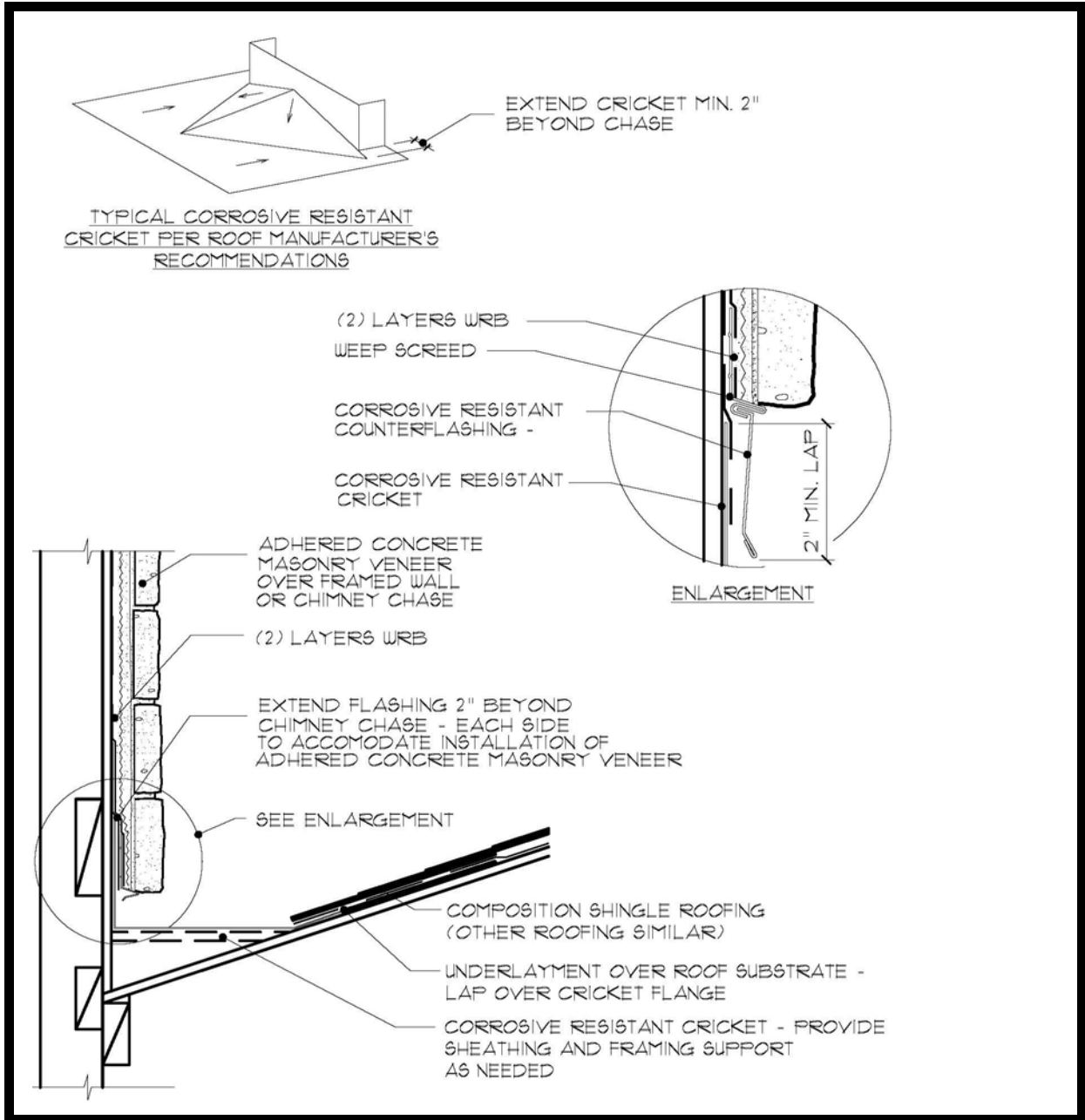
Apply adhesive membrane at window head to cover drip cap and membrane at jambs.

Kickout Flashing

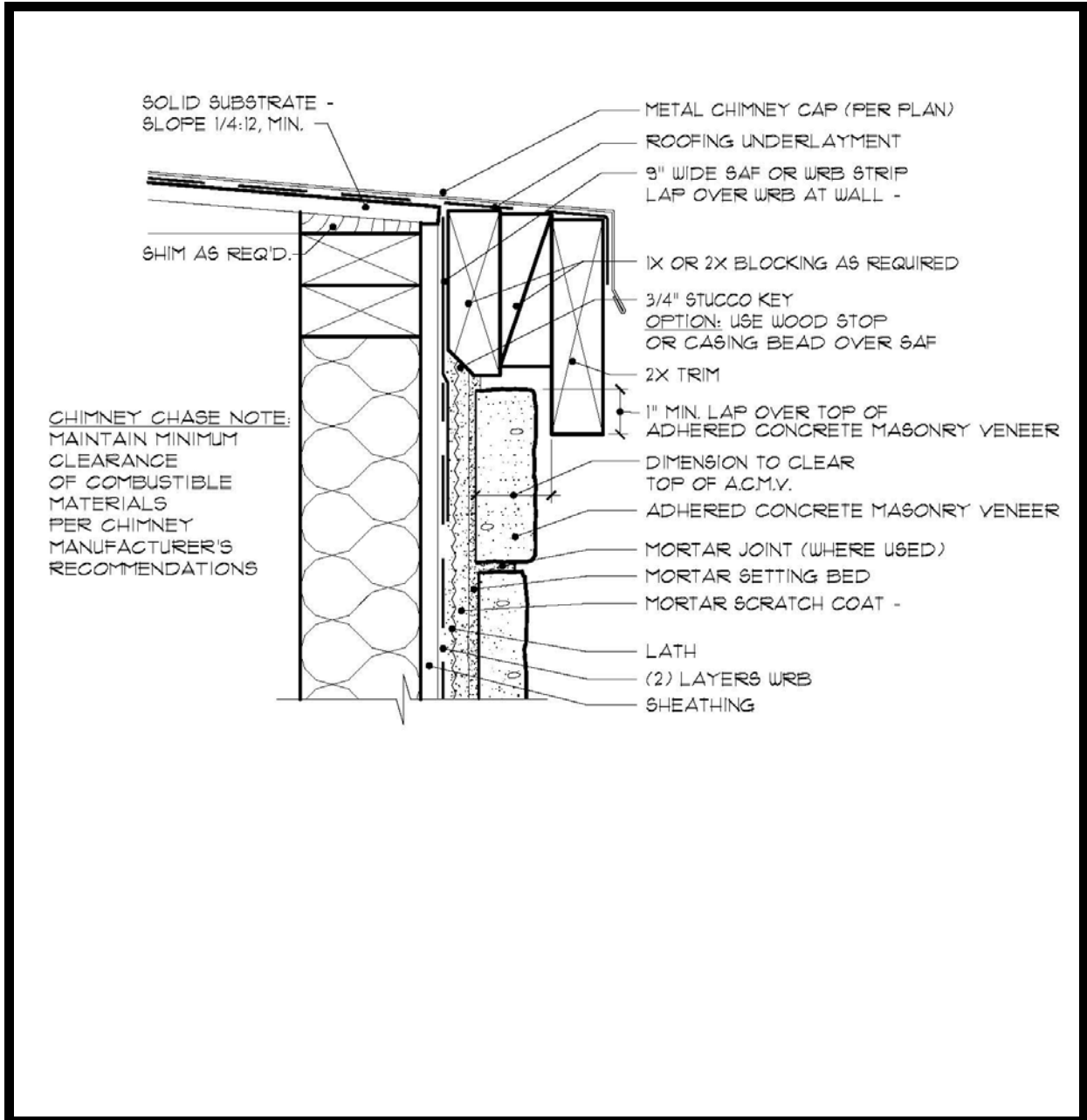


Kickout flashing should be sized properly to accommodate thickness of ACMV.

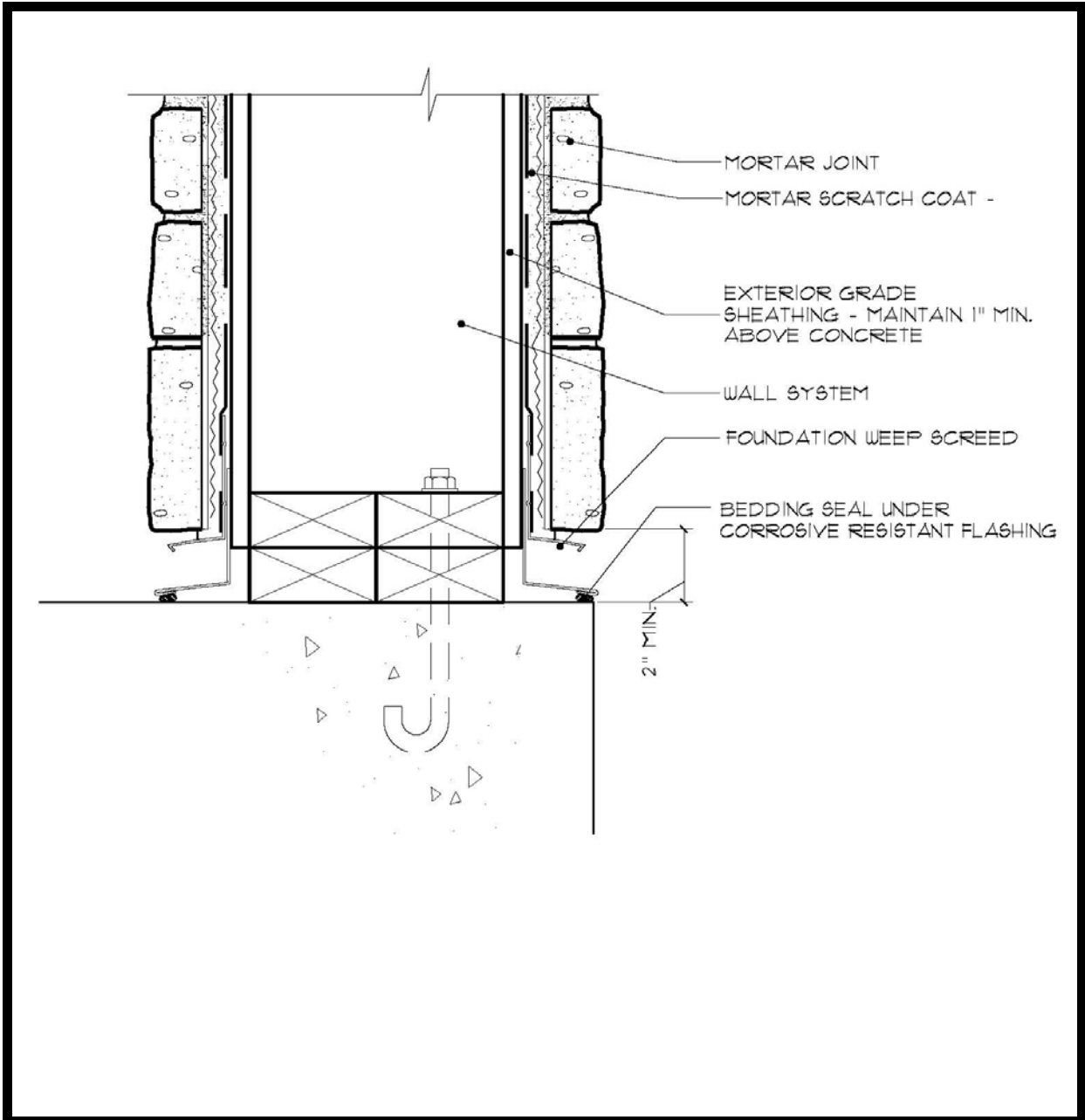
Cricket



Chimney Chase

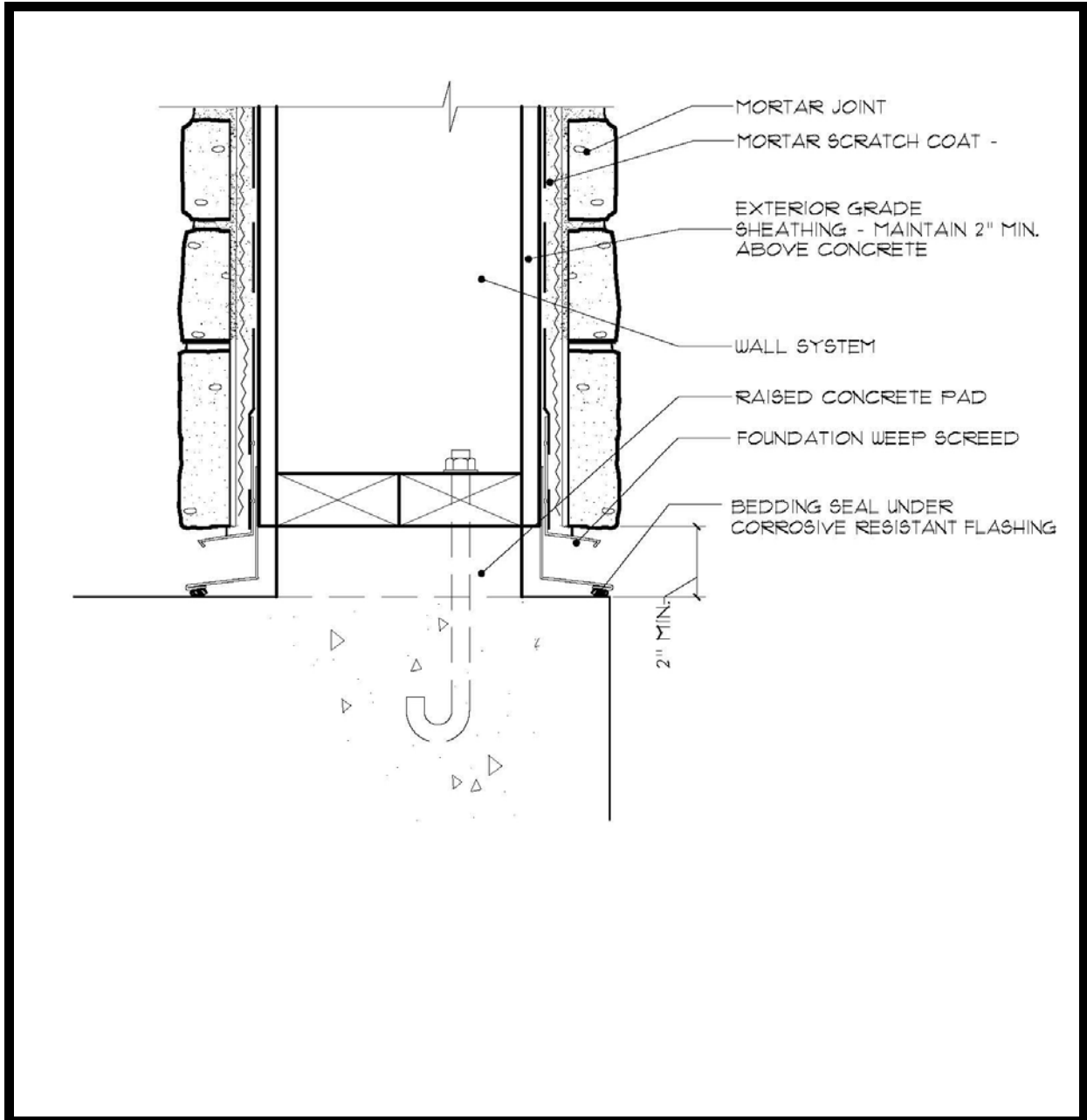


Column Base



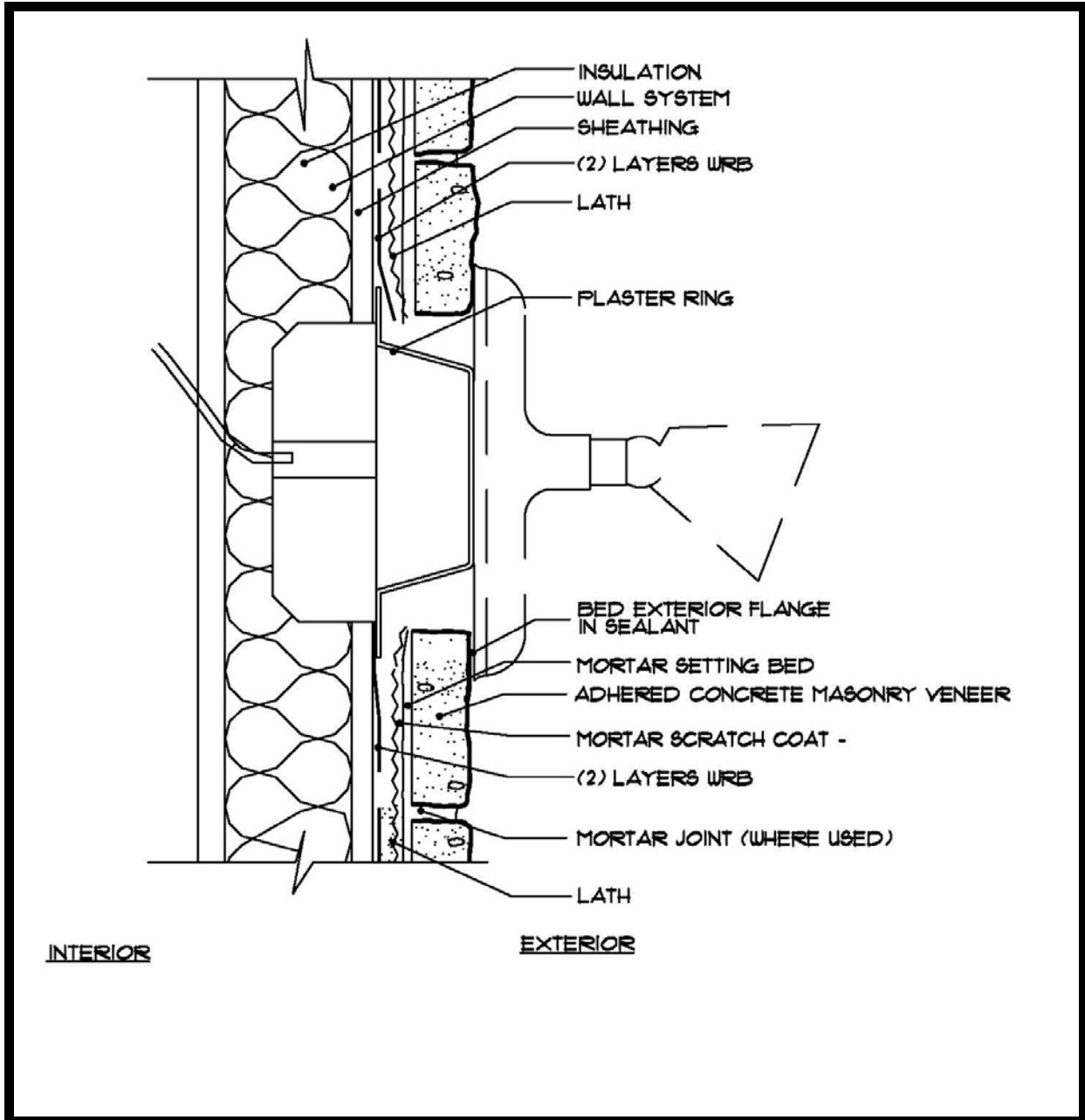
A minimum two inch clearance should be maintained at all sides of the base. All column materials to be exterior grade. Do not extend flashing past edge of ACMV for safety reasons.

Raised Column Base



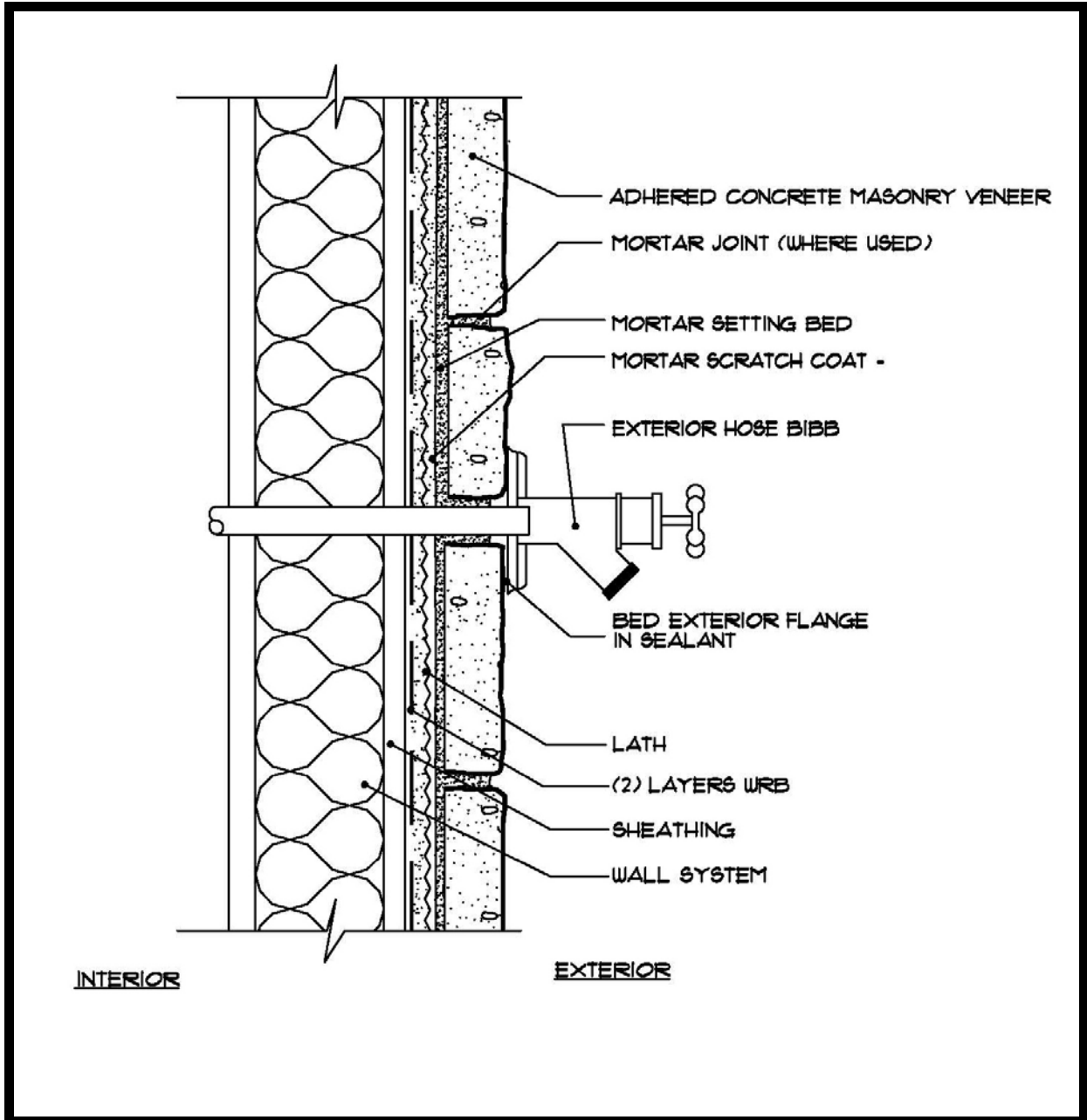
Adhered concrete masonry veneer may overlap the raised concrete pad, but a clearance of two inches should be maintained at all sides of the base. Do not extend flashing past edge of ACMV.

Fixture Penetration



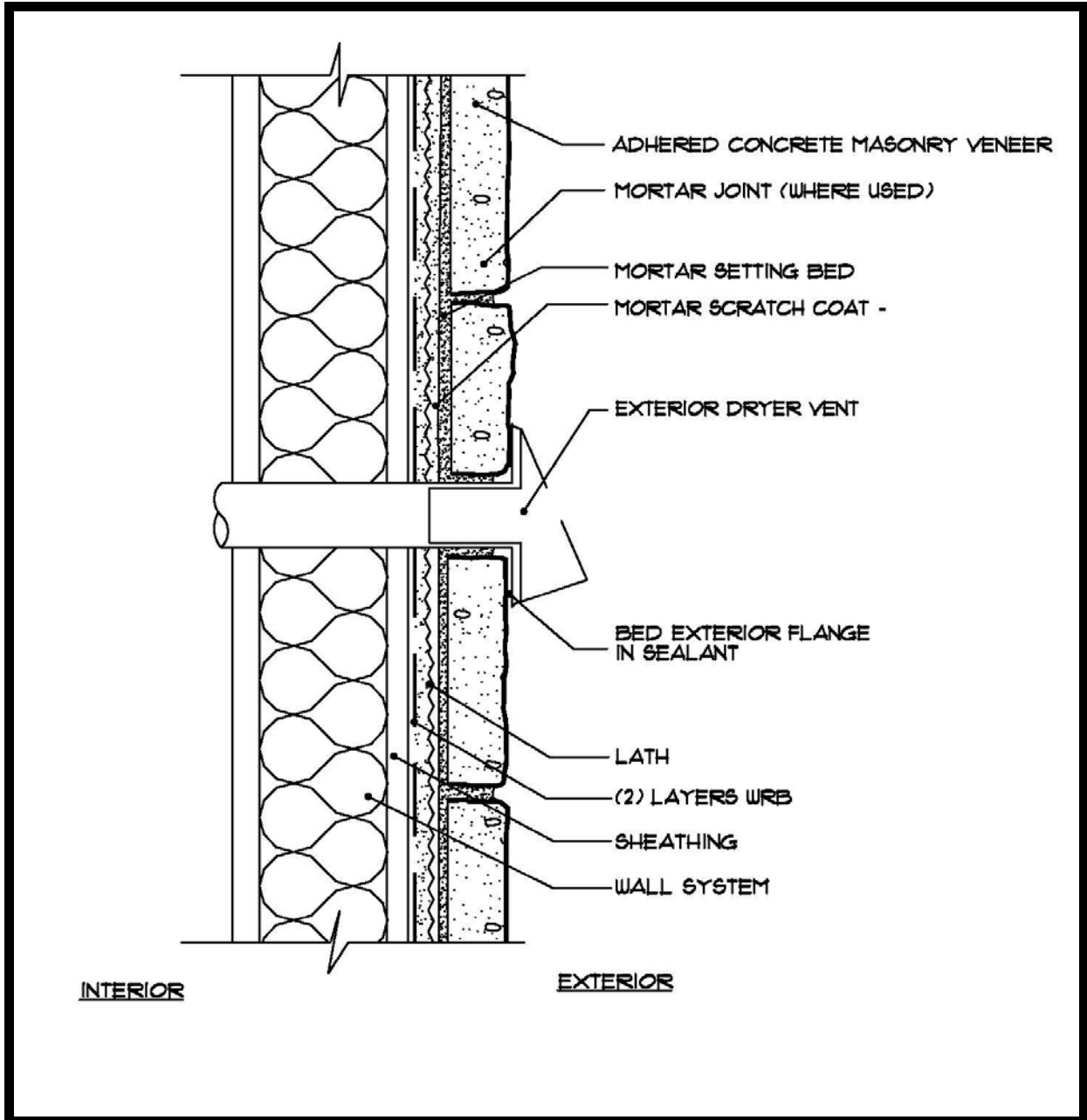
Plaster rings should be affixed over the service box to bring the face of the box flush with the adhered concrete masonry veneer. Be sure to bed the exterior flange in sealant. Water resistive barrier should be installed snugly around the plaster ring flange.

Pipe Penetration



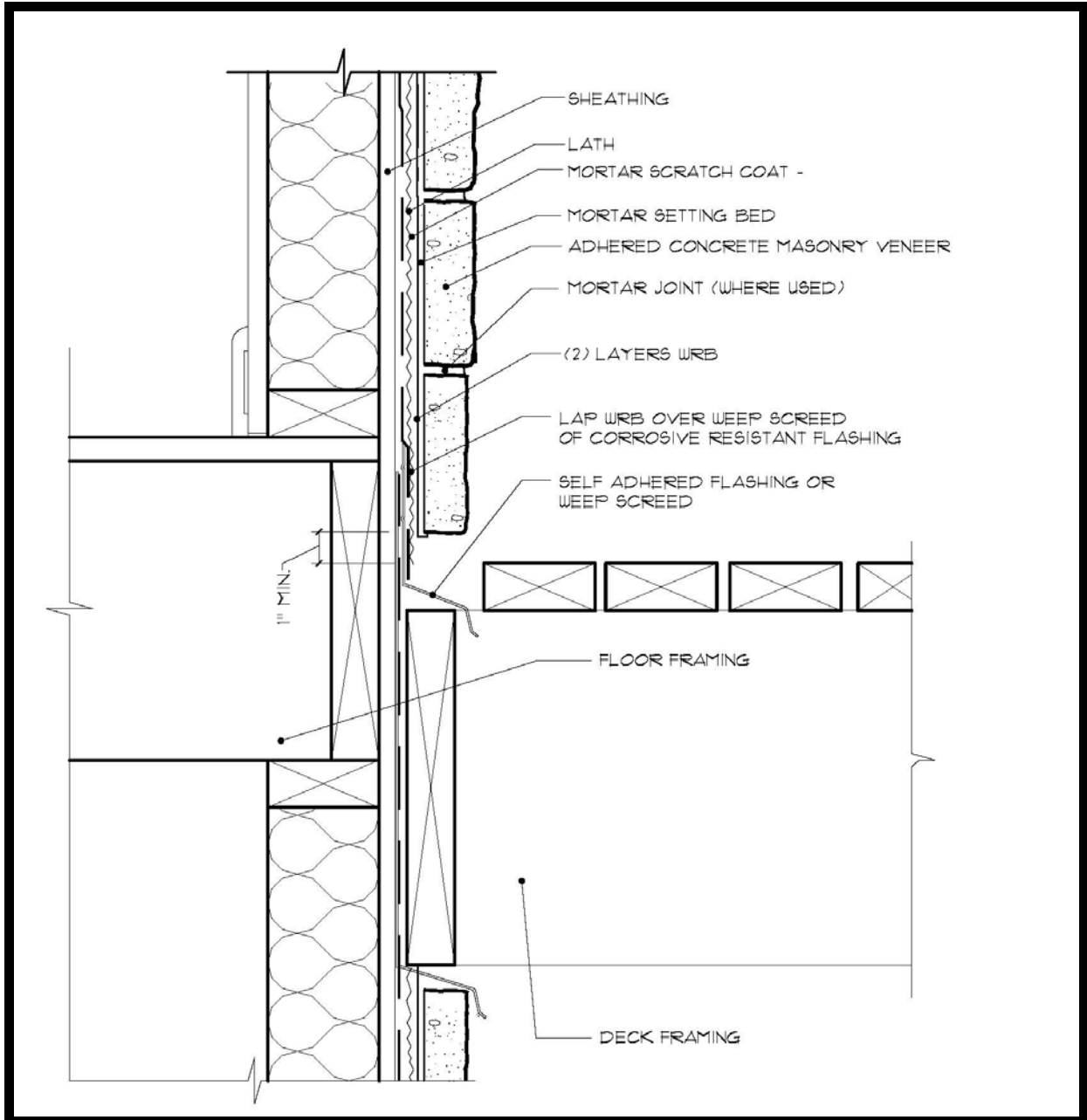
Be sure to bed all covers, flanges, and escutcheons in sealant before fastening them to the wall.

Dryer Vent Penetration



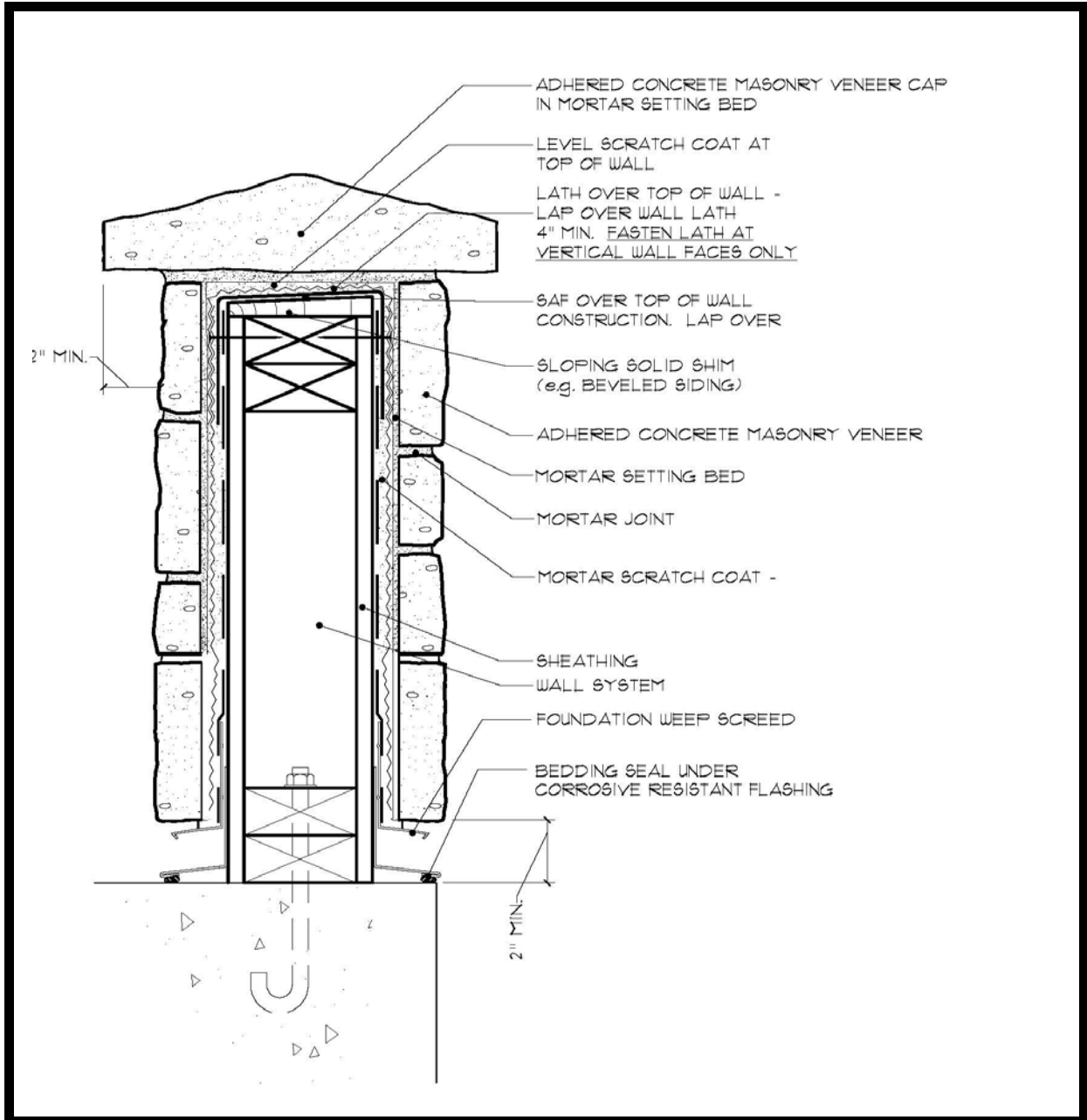
Be sure to bed all covers, flanges, and escutcheons in sealant before fastening them to the wall.

Deck Termination



Be sure to lap water resistive barrier over weep screed and floor framing to manage water intrusion. Provide gap between adhered concrete masonry veneer and decking for drainage.

Wall Cap



Lath should lap over the top of the wall but be fastened only to vertical wall faces. Self adhering flashing should lap top of the wall. A sloping solid shim should top the wall under the SAF and lath.