

Three-Coat Stucco Application Information Sheet

These guidelines apply to single-family homes and/or accessory structures of wood framed construction. Buildings of any other type shall have specifications submitted by an architect or engineer. The construction foreman, roofing foreman and the stucco foreman must meet **prior** to installation of any windows, doors, soffits or roofing. Each trade should understand the sequence of the materials installed to provide the most watertight covering feasible for the structure.

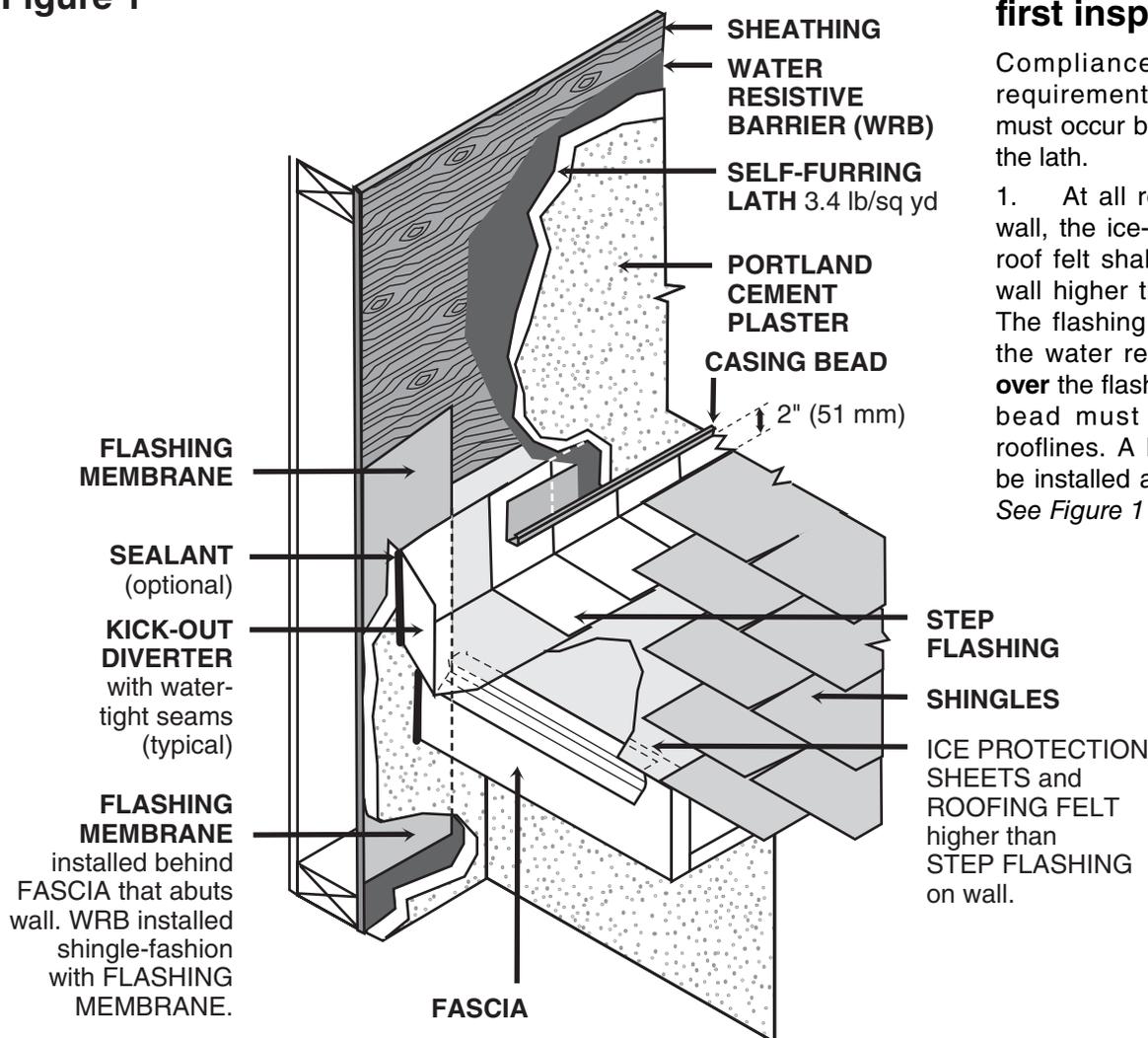
The materials in your packet will be used by the Building Inspectors to ensure that the "system" has been applied correctly, meets both the state building code and accepted practices published by stucco manufacturers and respective trade groups. Any time there is a conflict between specifications, the most restrictive shall apply.

Water resistive barrier

The water resistive sheathing barrier is the key element to a properly installed system. The barrier provides the drainage plane for any moisture intrusion behind the Portland cement plaster. When properly installed, moisture problems from the sheathing inward should be eliminated.

Another important element is the application of sheathing products. The manufacturers of plywood, oriented strand board and fiberboard **all** recommend that a gap of 1/8" be maintained at the edges and ends of their products to accommodate any product expansion. This detail is critical in stucco applications to help alleviate potential cracking. The sheathing product installed shall not have any vertical or horizontal joints at the corners of windows, doors and similar openings. Joints should occur toward the middle of the opening.

Figure 1



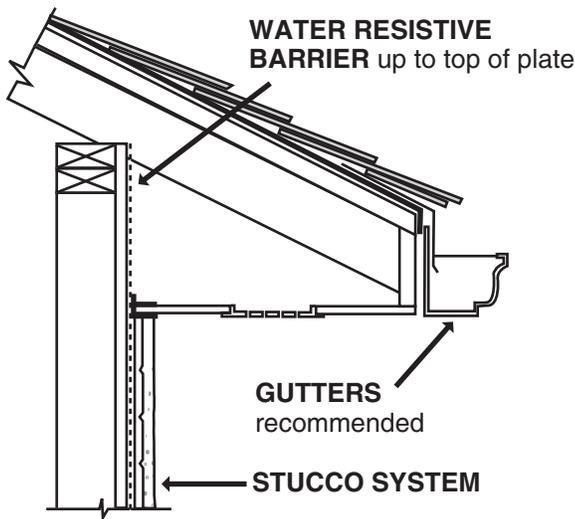
Requirements for the first inspection

Compliance with the following requirements is **mandatory** and must occur before the inspection of the lath.

1. At all roof areas that abut a wall, the ice-protection sheets and roof felt shall be extended up the wall higher than the wall flashing. The flashing is then installed with the water resistive barrier placed **over** the flashing. Stop bead/casing bead must be installed at the rooflines. A kick-out diverter shall be installed at the lower roof edge. See Figure 1 at left.

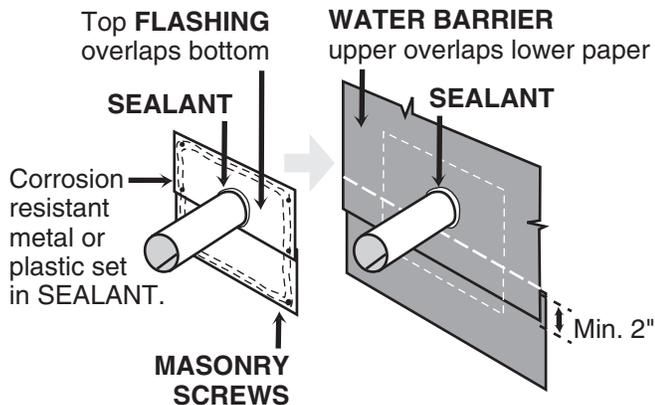
- All flashing products shall be corrosion resistant.
- The water resistive barrier **must** extend to the top plate of the structure. See *Figure 2 below*. Soffits may not be installed until the barrier has been secured in this area. If the barrier has not been started from the bottom up; make sure you have left enough material unfastened so that the layer that comes from below is placed behind the seam and has the proper amount of overlap available.

Figure 2



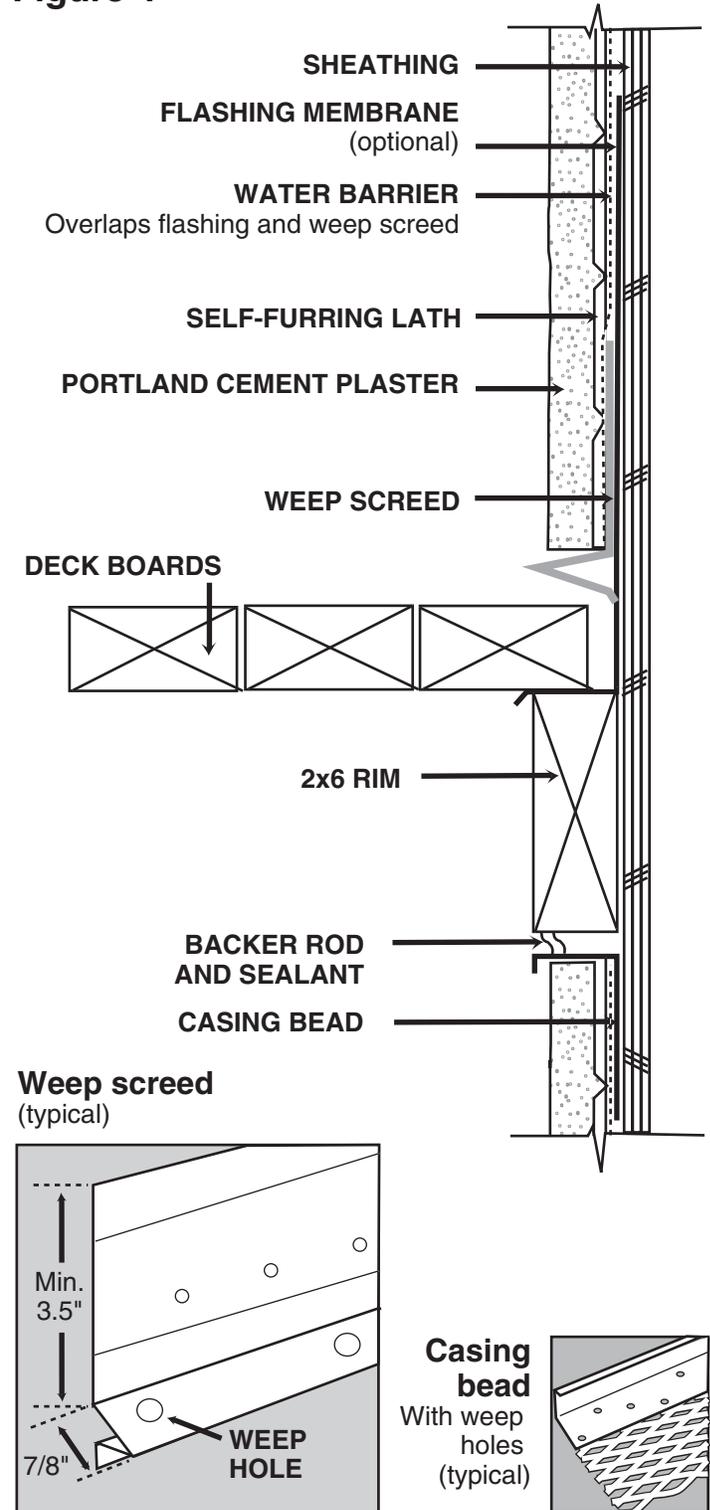
- All laundry, bathroom, furnace and fireplace vents, pipes, lights, hose bibs, etc. that extend through the walls or are placed on the exterior wall must be in place and flashed **prior** to the installation of the water resistive barrier. The general contractor must coordinate the sub-contractors so these items are not installed after the fact, leaving openings for potential moisture intrusion. See *Figure 3 below*.

Figure 3



- Where decks attach to the house, the flashing shall extend a minimum of 4 inches above the termination edge of the stucco. The drip edge shall have a 45 degree angle on the ends to direct water away from the stucco. The water resistive barrier is to be placed **over** the nailing flange of the flashing(s). Fasteners securing the deck rim to the structure shall be sealed. The stucco shall terminate at the top of the deck in a weep screed. The bottom of the deck rim shall have a casing bead. See *Figure 4 below*.

Figure 4



- Any control joints shall be installed per ASTM C-1063-03, a copy of this is in your packet. Architectural trims shall not be placed over control joints.
- A corrosion resistant flashing **with end dams to direct water away from the ends of the openings** shall be installed above all windows, doors, etc. See "Figure 5, 5A and 5B" below. This must be accomplished whether or not the cladding is vinyl, metal or wood. Casing or stop beads that are installed over the mesh must be

placed around all openings where the stucco abuts dissimilar materials. Install stop beads 3/8 inch away from windows or doors to allow for expansion and contraction. The general contractor must obtain installation instructions from the window manufacturer as to how the bottom of their windows are to be flashed for a stucco application.

NOTE: Provide detail on site for inspection.

Figure 5

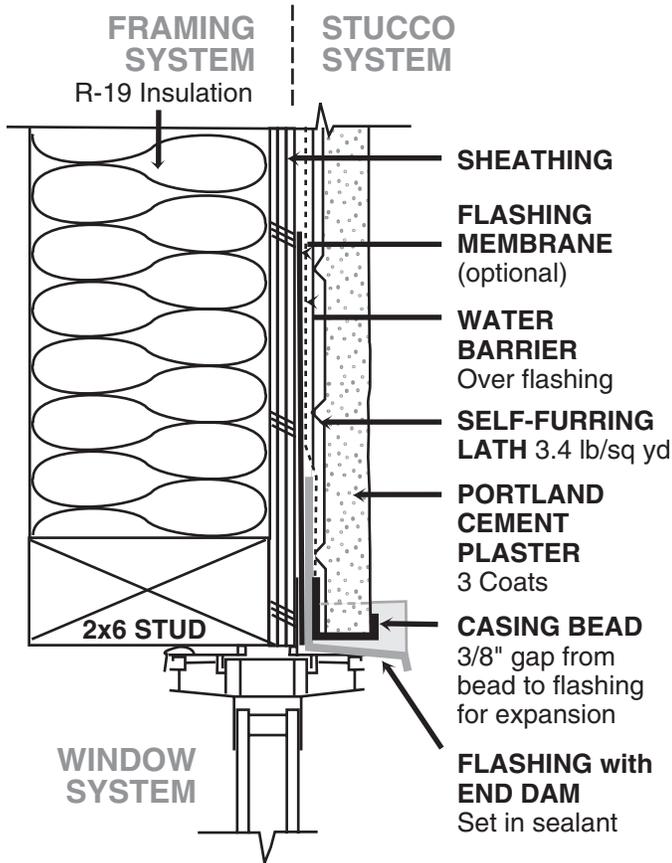


Figure 5B

Example of window membrane flashing

Use membrane flashing when applying grade D paper or follow the manufacturer's instructions for code approved water barrier product.

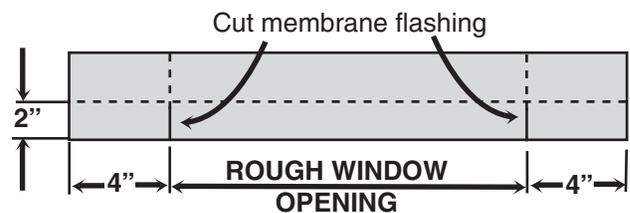
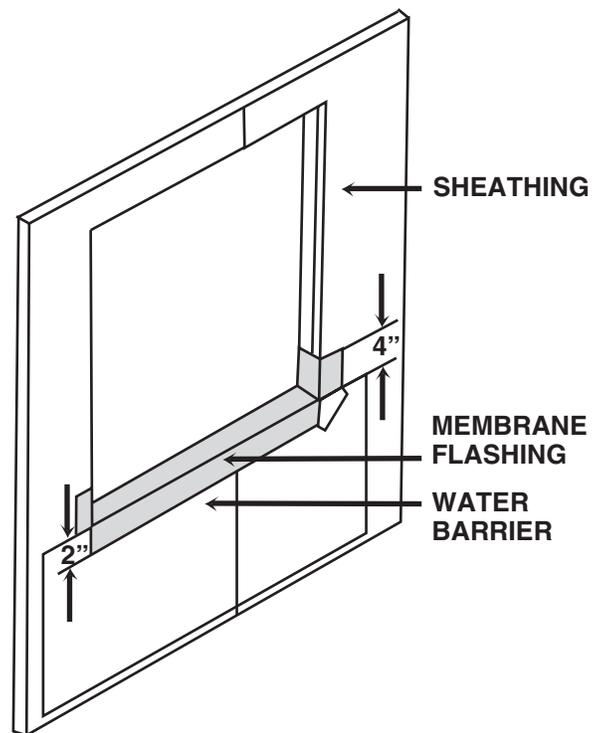
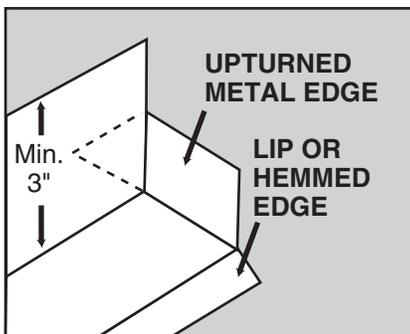


Figure 5A

Window/door cap flashing with required end dam



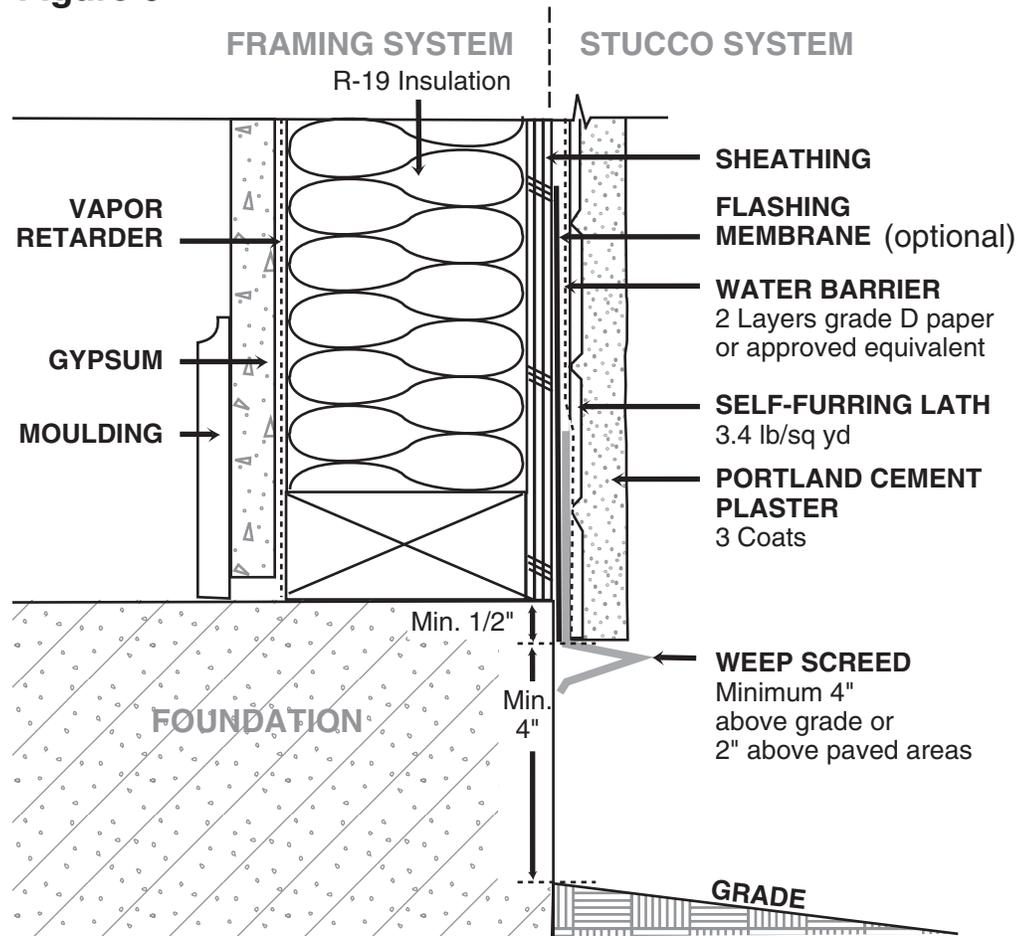
- A pan flashing must be provided under all exterior doors and windows. It must be sloped to drain water to the exterior surface of a water barrier or flat with sealed back dam and side dams to prevent re-entry of water into the wall cavity or interior finishes. Metal pan flashing must be thermally isolated from interior surfaces. For exceptions, see MN State Building Code.

8. Weep screeds shall be installed a **minimum of 4 inches above all surrounding grades**. The water resistive barrier shall be placed **over** the nailing flange of the screed. The bottom of the screed must be a minimum of a 1/2 inch below the sill plate on the foundation walls. See Figure 6 at right.

9. Two layers of Grade D paper, or an approved house-wrap meeting the ASTM standard for two layers of Grade D paper, shall be used as the water resistive barrier. If Grade D paper is installed, a minimum 2 inch overlap is required for the horizontal seams and 6 inches for the vertical seams. Care must be taken so the fasteners do not break the face of the paper. The water resistive barrier must be free of holes or defects. When a patch must be made, the replacement piece shall be installed so it extends under the overlapping piece above, "shingle-style." If using house-wrap, follow the manufacturer's instructions for repairing breaches. Snap lines on the water resistive barrier at stud locations so lath may be fastened accurately into framing members.

10. Metal lath shall be galvanized, 3.4 pounds per square yard diamond, self-furring. It must be applied with long dimensions of the sheets perpendicular to the studs. Edges shall lap no less than 1/2 inch on the sides (horizontal) and 1 inch on the ends (vertical) Lath shall be attached with galvanized 11 gage nails, 1-1/2 inches long with a minimum 7/16 inch head. Staples shall be 16-gauge with 7/8 inch crowns. Staples shall engage at least three stands of lath and penetrate 3/4 inch into vertical **framing members**. A 1-3/4 inch penetration is required for horizontal wood **framing members**. (i.e. rims, plates, headers, etc.) Fasteners shall be a maximum of 6 inches on center. Fasteners that miss the studs **or** penetrate the inside face of the sheathing shall be removed and replaced. If any "extra" fastening is done in the field, the fasteners used **may not** break the inside face of the sheathing material. Ends of adjoining lath shall be staggered. If control joints must be installed, the lath shall not be continuous through the joint, but shall stop and be tied on each side. Once the lath is in place, casing beads, corner reinforcement and interior corners may be installed.

Figure 6



11. You are now ready to call for a lath inspection.

Application of cement

The next step is the installation of the Portland cement plaster. It shall be applied in three coats: the scratch coat, brown coat and finish coat. Follow the technical specifications of ASTM C 926-98a furnished in your packet.

Sealants and backer rod

A 3/8 inch clearance has been specified between the casing /stop beads and any dissimilar materials. The depth of the joint should not be less than 1/4 inch. Horizontal control joints or expansion joints shall be 1/2 inch with a depth of 1/4 inch. Prime all areas to receive sealant as required by the sealant manufacturer. Install the appropriate size closed cell foam backer rod after the areas are primed. The stucco should be cured for at least 14 days or as specified by the sealant manufacturer prior to installing the sealant materials.

Call for final inspection.