THROUGH-WALL FLASHING - INSTALLATION-AT COPING

FIGURE 4-3

Figure 4–3 illustrates the method for flashing the top of a parapet wall to receive a masonry coping. In Figure 4–3A, dowels are placed by the mason as the wall is built. Specially deformed metal flashing is installed by the sheet metal contractor and each dowel is capped as shown in Section A-A. The metal may be drawn around the dowel as shown in Alternate Section A-A. Where desired, a through-wall flashing may be extended down the roof side of a parapet wall to serve as a moisture relief.

Figures 4–3B, C, D, and E illustrate some of the deformed metal patterns available.



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COUNTER FLASHING SYSTEMS (GENERAL)

Careful consideration must be given to flashing systems where a roof joins a wall. The base flashing system must keep water from entering the building and must be designed to provide for building movement. Counter flashing serves to turn water from a wall onto the roof or base flashing.

Metal counter flashing should be used in conjunction with composition base flashings. Composition base flashing should be applied according to the roofing manufacturer's specification.

It is recommended that base flashings be applied over a cant and extended up the wall a minimum of 10 in. (254 mm) above the roof line. Metal counter flashing is installed so that a minimum of 4 in. (100 mm) of the base flashing is covered. Metal base flashings are used with shingle or metal roofs. Metal base flashing is not recommended for use with membrane roofing systems. A metal base flashing may be used over a composition

COUNTER FLASHING SYSTEMS — INSTALLATION

Figure 4–4A illustrates the installation of a complete metal counter flashing system using a metal flashing receiver.

The counter flashing is notched and lapped at inside corners and joints, and seamed at outside corners. The flashing receiver is notched and lapped 3 in. (76 mm) at corners and joints.

After the counter flashing is installed, bend the receiver at a 45 degree angle to provide a drip edge.

This type of counter flashing may be removed with comparative ease when roofing is replaced.

Figure 4–4B shows an alternative receiver that is set as the wall is built. The counter flashing is easily inserted into a spring lock condition as shown in Detail 1.

Figures 4–4C and D illustrate other alternatives for using two-piece counter flashings on new or existing flashing as a protective cover in locations where the base flashing may be damaged by traffic.

Joints in flashing should be lapped 4 in. (100 mm).

Removable counter flashing is cost effective for work installation sequencing and for roofing systems repairs. All membrane roofing should have removable counter flashing.

All counter flashing receivers should be elevated 10 in. (254 mm) above the finished roof. The lower edge of metal counter flashing should be 1 in. (25 mm) minimum above a cant.

All reglets must be capable of supporting flashing.

In high wind areas, clips can be specified for the lower edge of the counter flashing. These would be visible on the edge.

FIGURE 4-4

construction. Figure 4–4C shows a snaplock receiver. Figure 4–4D shows a pocket receiver through which fasteners are installed at 24 in. (610 mm) maximum spacing after the counter flashing is inserted.

Figure 4–4E shows a method of installing a counter flashing in an existing masonry wall. Cut a reglet in the masonry joint to a depth of at least $1\frac{1}{2}$ in. (38 mm). Insert the counter flashing into the reglet and hold it in place by spring action. *See* Detail 1. Then fill the reglet with a sealant. Notch and lap the counter flashing at corners and joints.

The recommended minimum gage for counter flashing shown in Figure 4–4 is 16 oz. (0.55 mm) copper, 26 ga (0.5512 mm) galvanized steel, or 26 ga (0.477 mm) stainless steel. Flashing receivers should be of 16 oz. (0.55 mm) copper, 26 ga (0.477 mm) galvanized steel, or 28 ga (0.396 mm) stainless steel.





FIGURE 4-4 COUNTER FLASHING SYSTEMS - INSTALLATION



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COUNTER FLASHING SYSTEMS — INSTALLATION

FIGURE 4-5

Figure 4–5A shows counter flashing installed using a metal reglet which is furnished by the sheet metal contractor for installation by others. The reglet is attached to the forms before the concrete is poured. Reglet corners should be mitered.

The counter flashing is held in place by wedges and the reglet filled with a sealant.

The counter flashing is notched and lapped at inside corners and joints. Outside corners are notched and seamed.

The Alternate Detail shows another method of installing counter flashing. The counter flashing is snapped in place and the reglet filled with a compatible sealant.

Reglets installed in concrete forms usually need to be fastened 12 in. (305 mm) OC to avoid being dislodged

by vibration of concrete mix. Figure 4–5B shows a complete counter flashing system for use with poured concrete walls. The flashing receiver is furnished by the sheet metal contractor for installation by others. This receiver is attached to the forms before the concrete is poured. The down leg of the receiver is butted at corners. After the roofing and composition flashing are in place, the counter flashing is riveted to the receiver. The counter flashing is lapped at all joints and is lapped and sealed at corners.

Figure 4–5C shows a counter flashing method that can be used for exterior wall coverings of several types, both metallic and non-metallic.

The recommended minimum gage for counter flashing shown in this figure is 16 oz. (0.55 mm) copper, 26 ga (0.477 mm) stainless steel, or 26 ga (0.5512 mm) galvanized steel.



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FIGURE 4-5 COUNTER FLASHING SYSTEMS - INSTALLATION



COUNTER FLASHING SYSTEMS — INSTALLATION

FIGURE 4-6

Figure 4–6 illustrates the installation of counter flashing at concrete walls where reglets are not used.

In Figure 4–6 the counter flashing is held in place by use of masonry anchors on 18 in. (460 mm) centers.

The joint between the flashing and the wall is filled with a sealant as indicated on the drawing. Counter flashings should be lapped at inside corners and joints, and seamed at outside corners.

Counter flashings should be lapped at joints and mitered and soldered or sealed at corners. The recommended minimum gage for counter flashing is 16 oz. (0.55 mm) copper, 26 ga (0.477 mm) stainless steel, 24 ga (0.7010 mm) galvanized steel, or 0.032 in. (.812 mm) aluminum. Flashing material should be at least 24 oz. (0.82 mm) copper, 24 ga (0.635 mm) stainless steel, 22 ga (0.759 mm) for steel or 0.050 in. (1.27 mm) thickness for aluminum. These counter flashing methods may be applied to sloped roof situations as well. One application is shown in Figure 4–8C.

Flashing must not be a continuous piece across moving wall joints. Lap seal or cap seal at every moving joint.

Powder-actuated fasteners are not used where spalling occurs; spalling causes loss of seal.





FIGURE 4-6 COUNTER FLASHING SYSTEMS - INSTALLATION



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COUNTER FLASHING SYSTEMS — INSTALLATION

Figure 4–7 illustrates various installations of counter flashings used in connection with structural steel members.

Figure 4–7A shows a method of flashing a steel beam at the roof edge. Miter the corners and solder or seal them.

In Figure 4–7B the metal flashing for the steel is held in position at the face by a continuous cleat and at the back by the counter flashing. The cleat is fastened to the steel. Seal the flashings and provide them with a cover plate at the joints. Miter the corners and solder or seal them.

The cleat is held in place by mechanical fastening to the steel at 24 in. (610 mm) intervals. Lap the flashings at joints and miter and solder or seal them. Sloped wood

cants can be used, especially with Figure 4–7B, to ensure adequate drainage.

Figure 4–7C illustrates a base and counter flashing system where an "I" beam serves as a fascia. The counter flashing is formed as shown. It is hooked over the "I" beam and fastened through the roofing using fasteners and watertight washers. Seal the joints and provide them with a cover plate. The corners should be mitered and soldered or sealed. Use 4 in. (100 mm) laps at joints for all figures.

Refer to Appendix C Galvanic Corrosion when using dissimilar metals.

The recommended minimum gage for counter flashing shown in this figure is 16 oz. (0.55 mm) copper, 26 ga (0.477 mm) stainless steel, or 24 ga (0.607 mm) galvanized steel or .032 in. (0.812 mm) aluminum.



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FIGURE 4-7 COUNTER FLASHING SYSTEMS - INSTALLATION



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BASE AND COUNTER FLASHING SYSTEMS — INSTALLATION

FIGURE 4-8

The sections of roofs shown in Figure 4-8 illustrate methods for flashing the junction of a sloping roof and a masonry wall.

Figure 4-8A shows a metal flashing system for a shingle roof sloping along a masonry wall. Separate pieces of base flashing are installed as each course of shingles is applied. The upper edge of each piece of flashing should extend 2 in. (50 mm) above each course of shingles. The lower edge should be ½ in. (13 mm) above the butts of the shingles forming the next course.

The flashing must extend up the wall and onto the roof a minimum of 4 in. (100 mm). Nail the flashing pieces to the roof sheathing above the top of each shingle course.

Install the counter flashing in a reglet left by the mason as shown. Use wedges or tension-forming shapes to hold the counter flashing in place and fill the reglet with a compatible sealant. The length of each piece of counter flashing will vary with the slope of the roof but no step should be more than 3 bricks high. The width will vary but should always be wide enough to cover 4 in. (100 mm) of the base flashing Pre-installed through wall receiver flashing should include end dams to the up slope.

A preferred installation is to have the mason install a flashing receiver as shown in Figure 4-8B. (Also, see Figure 4–4A.)

Figure 4-8B shows a type of base flashing that must be attached to the roof before the shingles are installed. The roof portion of this runner flashing is formed with a hook edge and is cleated on 24 in. (610 mm) centers. Extend flashing up the wall. Lap the joints in the flashing 6 in. (152 mm) in the direction of water flow.

Install the counter flashing as described in Figure 4–8A. However, use flashing receiver as described in Figure 4-8B. (Also see Figure 4-4A.)

The flashing in Figures 4–8A and B are for shingle, slate, and tile roofing.

Figure 4-8C illustrates a sloping built-up roof intersecting a wall. Composition base flashings are installed over a cant and brought up the wall. See Figure 4-6.

Figure 4–8D illustrates a base flashing for a half-round tile roof. It is step flashed as shown in Figure 4-8 A or B.

Figure 4-8E shows a tile roof abutting a stucco wall. The counter flashing cap is nailed to the wall, and it extends a minimum of 2 in. (50 mm) above the base flashing pan.

The recommended minimum gage for flashings shown on this plate is 16 oz. (0.55 mm) copper, 26 ga (0.477 mm)mm) stainless steel, or 26 ga (0.454 mm) galvanized steel, or coated metal.

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