

# Applying Roll Roofing

Asphalt roll roofing is manufactured in 36-inch-wide sheets in a variety of weights, surfacings and colors. It is used both as a primary roof covering and a flashing material.

When maximum service life is an important consideration, use the concealed nail method of application. As a primary roof covering, roll roofing is used on slopes down to one inch per foot. If the exposed nail method of application is used the minimum required slope is two inches per foot. The roofing is applied either parallel to the eaves or parallel to the rakes. The type of nail shall fit the application and have a length sufficient to penetrate  $\frac{3}{4}$  inch into the deck or through the deck panel.

Store the material in a warm place until ready for use, especially during the colder seasons of the year. It is not good practice to apply roll roofing when the temperature is below  $45^{\circ}$  F. If rolls do have to be handled below this temperature and have not been

stored as suggested, warm them before unrolling to avoid cracking the coating. Then cut the rolls into 12- to 18-foot lengths and spread them in a pile on a smooth surface until they flatten out.

Before applying roll roofing, prepare the deck and install the necessary flashing in the same manner as described in Chapter 6 for strip shingles. Valleys will be the open type, so follow the appropriate valley flashing procedures.

Because all roll roofing is applied with a certain amount of top and side lapping, proper sealing of the laps is critical. Use only the lap cement or asphalt plastic cement recommended by the roofing manufacturer. Store the cement in a warm place until ready to use. The plastic cement is asphalt based and contains solvents, therefore, take proper safety precautions. Never heat asphalt cement directly over a flame. Do not attempt to thin the cement by diluting it with solvent.

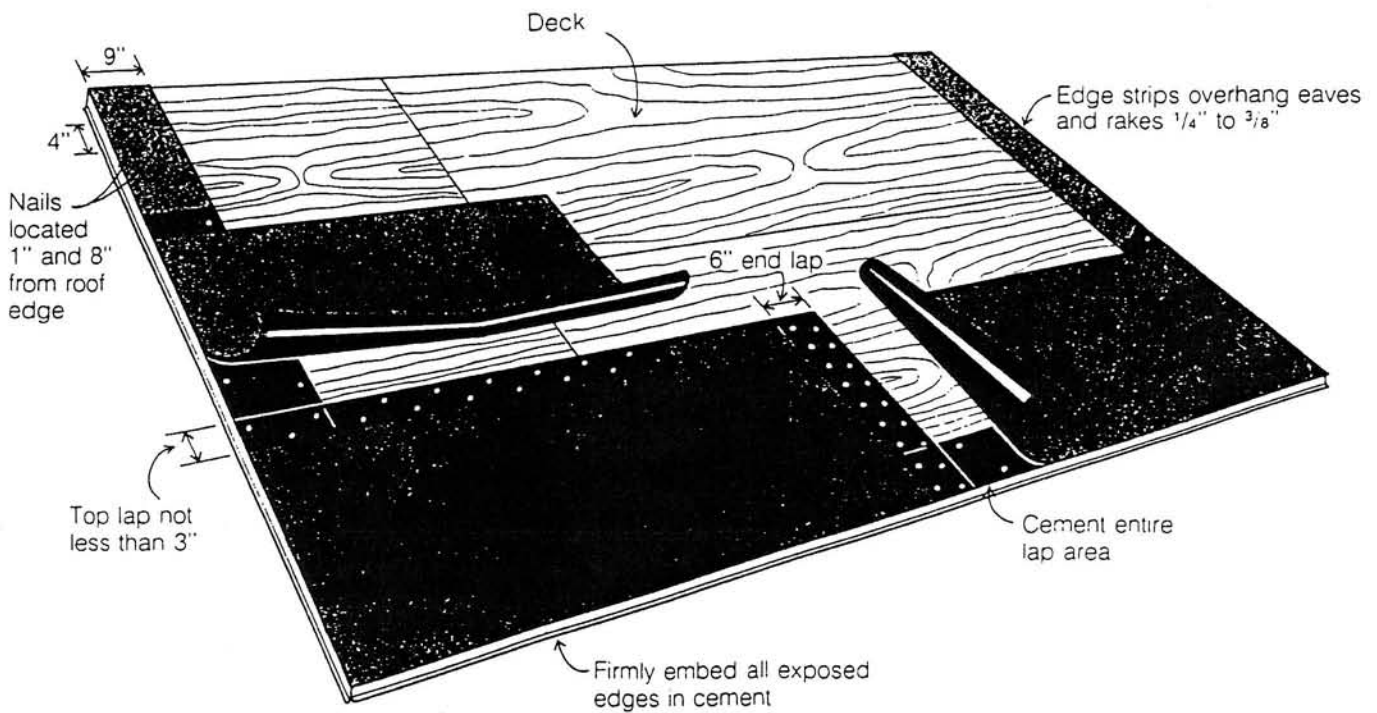


Figure 58: Concealed nail method of applying roll roofing parallel to the eaves

On all cementing, apply the cement in a continuous but not excessive layer over the full width of the lap. EXCESSIVE AMOUNTS OF CEMENT MAY CAUSE BLISTERING OF ROLL ROOFING. ALLOW SUFFICIENT TIME FOR VOLATILES TO FLASH OFF. Press the lower edge of the upper course firmly into the cement until a small bead appears along the edge of the sheet. Using a roller, apply pressure uniformly over the entire cement area. It is recommended that asphalt plastic cement conforming to specification ASTM D2822, Type II be used.

## APPLICATION PARALLEL TO THE EAVES

**CONCEALED NAIL METHOD.** When using this method, narrow edging strips are placed along the eaves and rakes before applying the roofing. Figure 58 illustrates the general installation procedure, including lapping, cementing and nailing.

**EDGE STRIPS** — Place 9-inch-wide strips of roll roofing along the eaves and rakes, positioning them to overhang the deck 1/4 to 3/8 inch. Fasten the strips with rows of nails located 1 inch and 8 inches from the roof edge and spaced 4 inches on center in each row.

**FIRST COURSE** — Position a full-width strip of roll roofing so that its lower edge and ends are flush with the edge strips at the eaves and rakes. Fasten the upper edge with nails 4 inches on center and slightly staggered. Locate the nails so that the next course will overlap them a minimum of 1 inch. Lift the lower edge of the first course and cover the edge strips with cement according to the manufacturer's specifications. In cold weather, turn the course back carefully to avoid damaging the roofing material. Press the lower edge and rake ends of the first course firmly into the cement-covered edge strips. Work from one side of the sheet to the other to avoid wrinkling or bubbling.

End laps should be 6 inches wide and cemented over the full lap area with the recommended cement. Nail the underlying sheet in rows 1 inch and 5 inches from the end of the sheet with the nails spaced 4 inches on center and slightly staggered. End laps in succeeding courses must not line up with one another.

**SECOND AND SUCCEEDING COURSES** — Position the second course so that it overlaps the first course at least 3 inches or as specified by the roofing

manufacturer. Fasten the upper edge to the deck, cement the laps and finish installing the sheet in the same manner as the first course. Follow the same procedure for each successive course. Do not apply nails within 18 inches of the rake until cement has been applied to the edge strip and the overlying strip has been pressed down.

**HIPS AND RIDGES** — Trim, butt and nail the sheets as they meet at a hip or ridge. Next, cut 12- x 36-inch strips from the roll roofing and bend them lengthwise to lay 6 inches on each side of the joint. Do not bend the strips in cold weather without first warming them. These will be used as "shingles" to cover the joint, each one overlapping the other by 6 inches as shown in Figure 59.

Start hips at the bottom and ridges at the end opposite the direction of the prevailing winds. To guide the installation, snap a chalk line 5 1/2 inches from and parallel to the joint on both sides. Apply asphalt plastic cement evenly over the entire area between the chalk lines from one side of the joint to the other. Fit the first folded strip over the joint and press it firmly into the cement, driving two nails 5-1/2 inches from the edge of the end that will be lapped. Cover the 6-inch lap on this strip with lap cement. Then place the next strip over it. Nail and cement in the same manner as the first strip. Continue the same procedure until the hip or ridge is finished.

**EXPOSED NAIL METHOD.** Figure 60 illustrates the general installation procedure, including lapping, cementing and nailing.

**FIRST COURSE** — Position a full-width sheet so that its lower edge and ends overhang the eaves and rakes between 1/4 and 3/8 inch. Nail along a line 1/2 to 3/4 inch parallel to the top edge of the sheet, spacing the nails 18 inches to 20 inches apart. This top nailing holds the sheet in place until the second course is placed over it and fastened. Nail the eaves and rakes on a line 1 inch parallel to the edges of the roofing with the nails spaced 3 inches on center and staggered a bit along the eaves to avoid splitting the deck.

If two or more sheets must be used to continue the course, lap them 6 inches. Apply lap cement to the underlying edge over the full lap width. Embed the overlapping sheet into it and fasten the overlap with two rows of nails 4 inches apart and 4 inches on center within each row. Stagger the rows so that the spacing is 2 inches between successive nails from row to row.

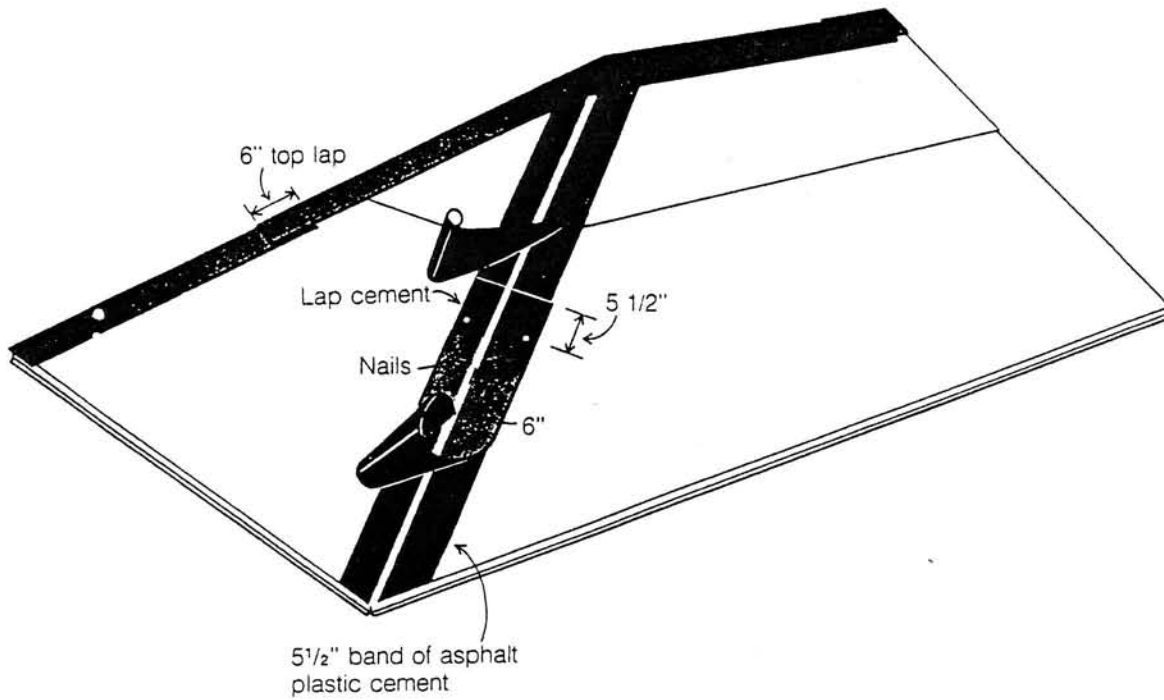


Figure 59: Concealed nail method of applying roll roofing to hips and ridges

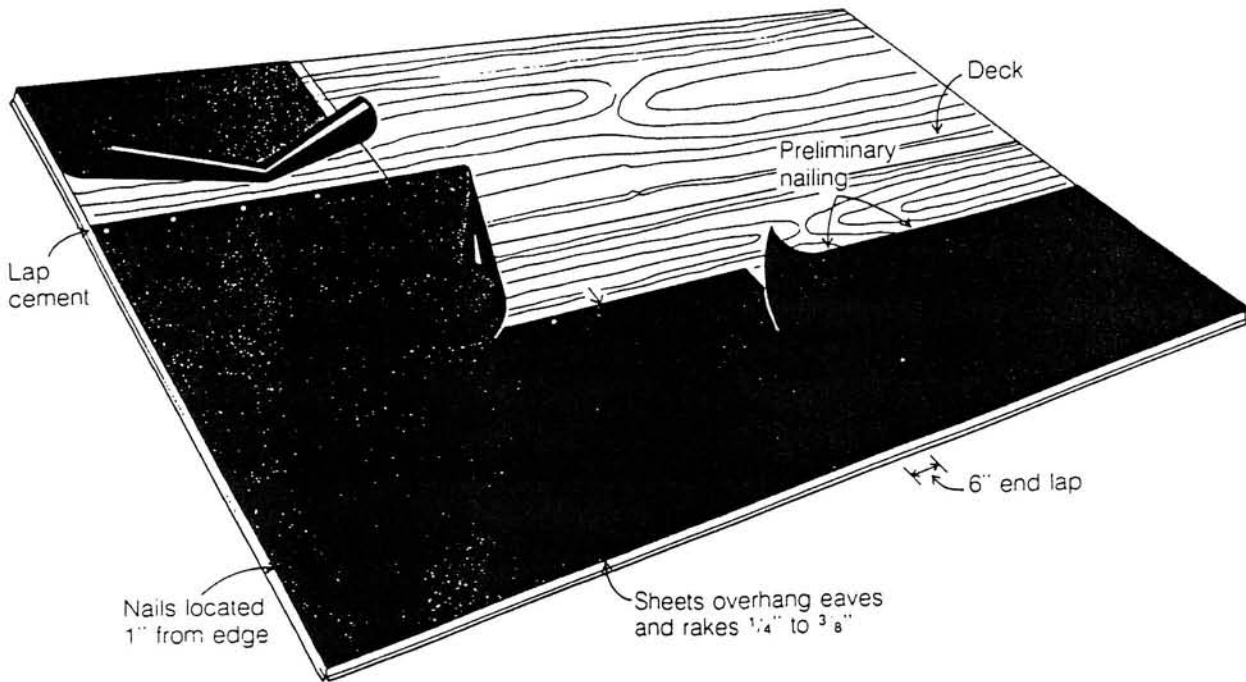


Figure 60: Exposed nail method of applying roll roofing parallel to the eaves

### SECOND AND SUCCEEDING COURSES —

Position the second course so that it overlaps the first course by 2 inches. Fasten the second course along the top edge following the same nailing directions as the first course. Lift the lower edge of the overlapping sheet and apply lap cement evenly over the upper 2 inches of the first course. Then embed the overlapping sheet into it. Fasten the lap with nails spaced 3 inches on center and staggered slightly. Place the nails not less than 3/4 inch from the edge of the sheet. Nail the rake edges in the same manner as the first course. Follow the same procedure for each successive course. End laps should be 6 inches wide and cemented and nailed in the same manner as the first course. Stagger end laps so that an end lap in one course is never positioned over the end lap in the preceding course.

**HIPS AND RIDGES** — Trim, butt and nail the roofing as it meets at a hip or ridge. Snap a chalk line on each side of the hip or ridge, located 5-1/2 inches from the joint and parallel to it. Starting at the chalk lines and working toward the joint, spread a 2-inch-wide band of asphalt lap cement on each side of the hip or ridge. See Figure 61.

Cut strips of roll roofing 12 inches wide and bend them lengthwise along the centerline so that they will lay 6 inches on each side of the hip or ridge. In cold

weather, warm the roofing before bending it. Lay the bent strip over the joint and embed it in the cement. Fasten the strip to the deck with two rows of nails, one on each side of the hip or ridge. The rows should be located 3/4 inch from the edges of the strip and the nails spaced 3 inches on center. Be sure the nails penetrate the cemented zone underneath which will seal the nail hole with asphalt. End laps should be 6 inches and cemented the full lap distance. *Avoid excessive use of cement as it may cause blistering.*

## APPLICATION PARALLEL TO THE RAKE

**CONCEALED NAIL METHOD.** With this method, illustrated in figure 62, the sheets are applied vertically from the eaves up. Lay the sheets out and let them warm in the sun until they lie smoothly on a flat surface. If you nail the sheets before they have time to relax, wrinkling may occur.

**EDGE STRIPS** — Place 9-inch-wide strips of roll roofing along the eaves and rakes. Placement and nailing of these strips is identical to the description found in the concealed nail method for application parallel to the eaves.

**FIRST COURSE** — Position the first sheet so it is flush with the edge strips at the rake and eaves. Fas-

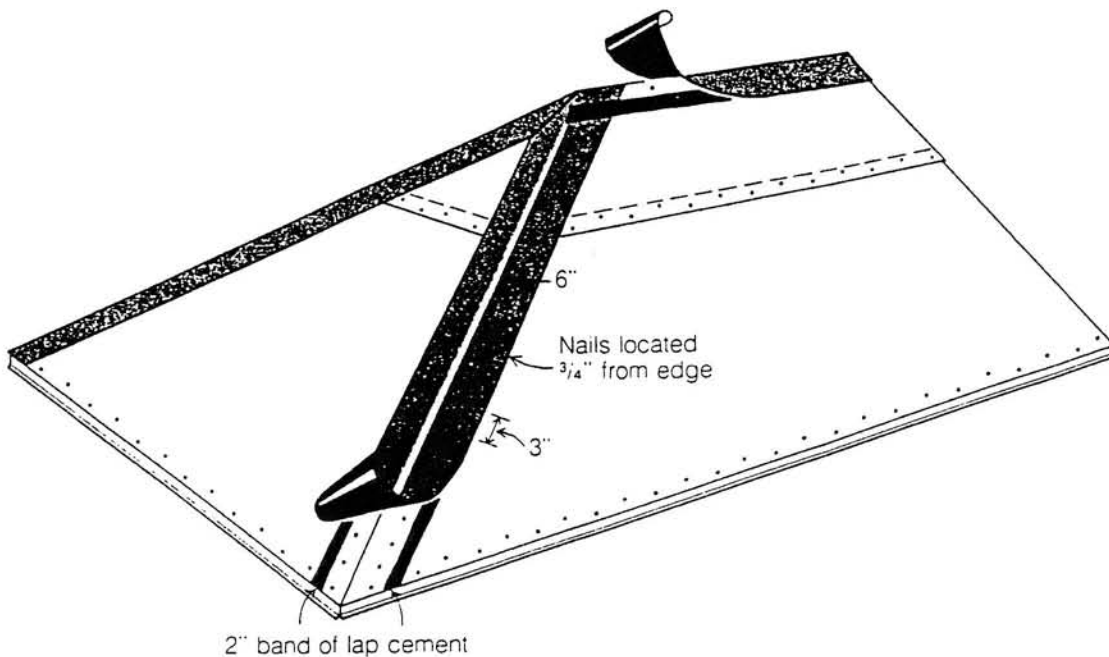


Figure 61: Exposed nail method of applying roll roofing to hips and ridges

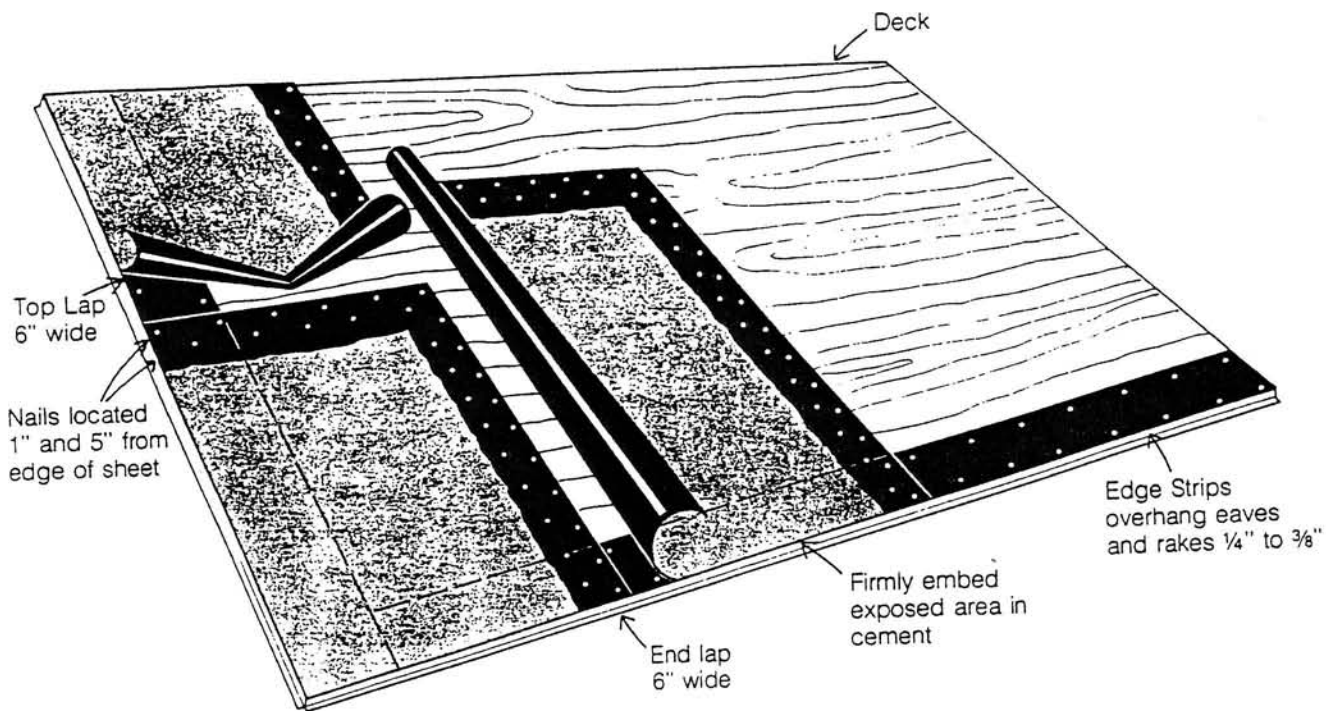


Figure 62: Concealed nail method of applying roll roofing parallel to the rake

ten the upper edge with nails located 1 inch and 5 inches from the top edge of the sheet with the nails spaced 4 inches on center. Carefully lift the first sheet back and cover both edge strips with an even layer of plastic cement. Remember excessive amounts of plastic cement may cause blistering. Press the sheet firmly into the cement. Work from the top of the sheet down to avoid wrinkling or bubbling.

End laps should be a minimum of 6 inches wide. Fasten the length of the end lap with nails 4 inches on center and slightly staggered. Locate the nails so that the next sheet will overlap them a minimum of 1 inch. End laps should be cemented over the full lap area with recommended lap cement.

Top laps should be a minimum of 6 inches wide. Stagger the top laps of adjoining sheets to prevent a build up where the sheets intersect. End laps should

be cemented over the full lap area with the recommended lap cement.

**SECOND AND SUCCEEDING COURSES** — Position the second course so that it overlaps the first course at least 6 inches. Fasten the upper edge to the deck, cement the laps and finish installing the sheet in the same manner as the first course. Do not apply nails within 18 inches of the rake until cement has been applied to the edge strip and overlying strip has been pressed down. Remember to apply all cement in a continuous, but not excessive, layer over the full width of the lap. Press the edge of the sheet into the cement until a small bead appears at the lap. Use a roller to apply uniform pressure over the entire cemented area.

**HIPS AND RIDGES** — Finish the roof at these joints in the same manner as the concealed nail method of application parallel to the eaves.