

Patriot™

YOUR OBJECTIVE:
To learn the correct procedure for
installing Patriot™ shingles.

PATRIOT™

Patriot shingles have the installer-friendly NailTrak® feature, which provides 1-1/2" wide nailing area and specially formulated QuadraBond laminating adhesive (See Figure PAT-3).

Closed-cut valleys are preferred by CertainTeed when applying any Patriot™ shingles; however, open and woven valleys are also acceptable.

STANDARD OR STEEP SLOPES: CertainTeed recommends DiamondDeck® or RoofRunner™ Synthetic Underlayment or shingle underlayment meeting ASTM D226, D4869 or D6757. Take care to ensure sufficient deck ventilation when DiamondDeck, RoofRunner or other synthetic underlayment is installed. Follow manufacturer's application instructions.

LOW SLOPES: All roof shingles applied to a low slope deck (2" to below 4" per foot) require the use of CertainTeed WinterGuard® or GRACE VYCOR™ Waterproofing Shingle Underlayment, or its equivalent,* applied over the entire deck surface. Consult the WinterGuard or GRACE VYCOR™ and individual shingle application instructions for details.

*For low slopes, underlayment equivalents to WinterGuard or GRACE VYCOR™ Ice & Water Shield include:

- 1) waterproofing shingle underlayments meeting ASTM D1970;
- 2) in areas not prone to snow or ice, two layers of 36"(915 mm) wide felt shingle underlayment lapped 19"(485 mm).
- 3) in areas not prone to snow or ice, two layers of CertainTeed's DiamondDeck or RoofRunner in shingle fashion (half lap) per the low-slope application instructions.

IMPORTANT: Because water drains slowly from these slopes and the Pacific Northwest region (British Columbia, Washington, Oregon, Idaho, and Northern California) is known for its above average annual precipitation, there is a greater chance of water back-up. Therefore, after careful consideration of local weather and the application of Patriot™ shingles on a low slope, CertainTeed is requiring a layer of either GRACE VYCOR™ Ice & Water Shield®, GRACE VYCOR™ Ice & Water Shield® HT, or GRACE VYCOR™ ULTRA™ over the entire roof deck. A double layer of asphalt felt underlayment or synthetic underlayment is not an acceptable alternative when applying these products in the Pacific Northwest region on low slopes. For added protection, CertainTeed recommends doubling the end and side laps.

Shingle underlayment should meet ASTM D6757, ASTM D4869 Type I or ASTM D226 Type I Ensure sufficient deck ventilation when DiamondDeck, RoofRunner or other synthetic underlayment is installed. (One layer of shingle underlayment meeting ASTM D4869 applied over the required WinterGuard is also recommended.)

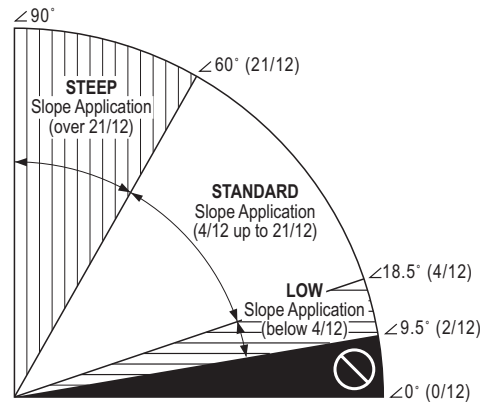


Figure PAT-1: Slope definitions.

The roof deck* must be at least: 3/8" (9.5 mm) thick plywood, or 7/16" (11 mm) thick non-veneer, or nominal 1" (25 mm) thick wood deck.

COLD WEATHER CLIMATES (ALL SLOPES): Application of WinterGuard or GRACE VYCOR™ Ice & Water Shield or a waterproofing shingle underlayment meeting ASTM D1970 is strongly recommended whenever there is a possibility of ice build-up. Follow manufacturer's application instructions.

FLASHING: Corrosion-resistant flashing must be used to help prevent leaks where a roof meets a wall, another roof, a chimney or other objects that penetrate a roof.

SEALING: Shingle sealing may be delayed if shingles are applied in cool weather and may be further delayed by airborne dust accumulation. If any shingles have not sealed after a reasonable time period, hand sealing may be necessary.

CAUTION: To prevent cracking, shingles must be sufficiently warm to allow proper forming for hips, ridges and valleys.

WARRANTY: These shingles are warranted against manufacturing defects and are covered by SureStart™ protection. See the warranty itself for specific details and limitations.

* For technical questions, information on acceptable alternative application methods and materials, or a copy of the product warranty, contact the sources listed below:

	Warranty	Alternate Instructions	Technical Questions
Your supplier or roofing applicator	✓		
CertainTeed-RPG Technical Services 800-345-1145	✓	✓	✓

FASTENING

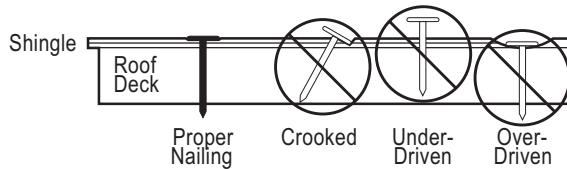


Figure PAT-2: Proper and improper nailing.

IMPORTANT: For decks 3/4" (19 mm) thick or thicker, nails must go at least 3/4" (19 mm) into the deck. On thinner decks, nails must go at least 1/8" (3.2 mm) through the deck.

Nails must be 11- or 12-gauge roofing nails, corrosion-resistant, with at least 3/8" (9.5 mm) heads, and at least 1" (25 mm) long.

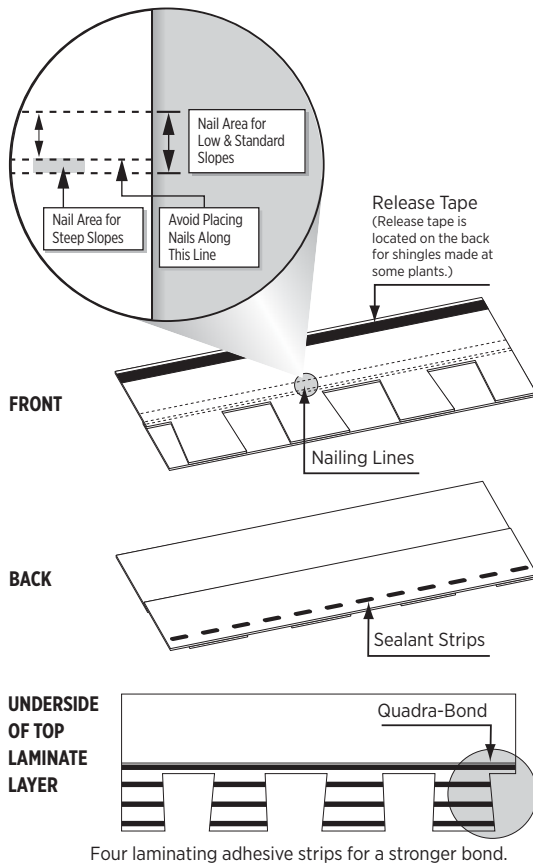


Figure PAT-3: NailTrak® features a wider nail area and extra-strong QuadraBond construction.

LOW AND STANDARD SLOPE

Use four nails for every full shingle as shown below.

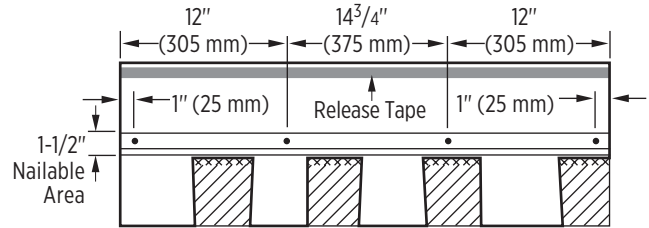


Figure PAT-4: Use four nails for every full shingle.

IMPORTANT: When "six nailing" a full shingle, follow the nail pattern shown in figure 11-5, nails are placed in the 1-1/2" nailable area.

STEEP SLOPE

Use six nails and four spots of asphalt roofing cement for every full shingle as shown below. Asphalt roofing cement should meet ASTM D 4586 Type II. Apply 1" spots of asphalt roofing cement under each corner and at about 12" to 13" in from each edge.

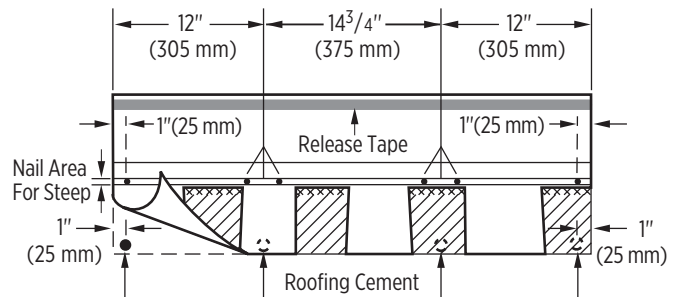


Figure PAT-5: Use six nails and four spots of asphalt roofing cement on steep slopes.

IMPORTANT: Failure to follow these steep slope instructions can void the warranty in the event of a shingle delamination.

CAUTION: Excessive use of roofing cement can cause shingles to blister.

TWO CLEAN-DECK APPLICATION METHODS

FIVE-COURSE DIAGONAL METHOD (6" AND 11") FIVE-COURSE DIAGONAL METHOD (5 5/8" AND 11 1/4")

NOTE: The 6" and 11" method is shown below. The 5-5/8" and 11-1/4" method follows the same application instructions as the 6" and 11" method except the dimensions of the shingle cut-offs in the second and third courses are 5-5/8" and 11-1/4" respectively.

CAUTION: Use of other installation methods may result in an objectionable pattern.

PREPARING THE DECK:

- ◆ Apply underlayment as required. CertainTeed suggests that a layer of shingle underlayment be applied. For UL fire rating, underlayment is generally required. Apply flat and unwrinkled.
- ◆ Snap chalklines to assure shingles will be correctly aligned. Expose all shingles 5-5/8" (143 mm).

STARTER COURSE:

1. Use CertainTeed Swiftstart® Starter, or three-tab self-sealing shingles with the lower tab portions removed. Be sure that the starter shingles are at least 7-5/8" in height. (Figure PAT-6).

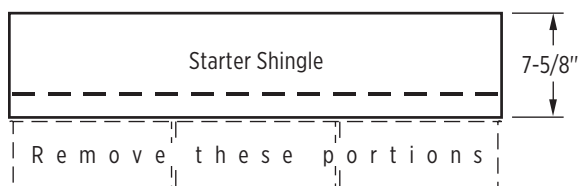


Figure PAT-6: Make starter shingles that are 7-5/8" in height.

2. For the first starter, cut 6" from one side of the starter shingle.
3. Apply the remaining piece to the lower left corner of the roof. Make sure there is 1/2" overhanging the rakes and eaves if drip edge is being used. If you are not using drip edge, make the overhang 3/4".
4. Use full length starter shingles for the rest of the course.

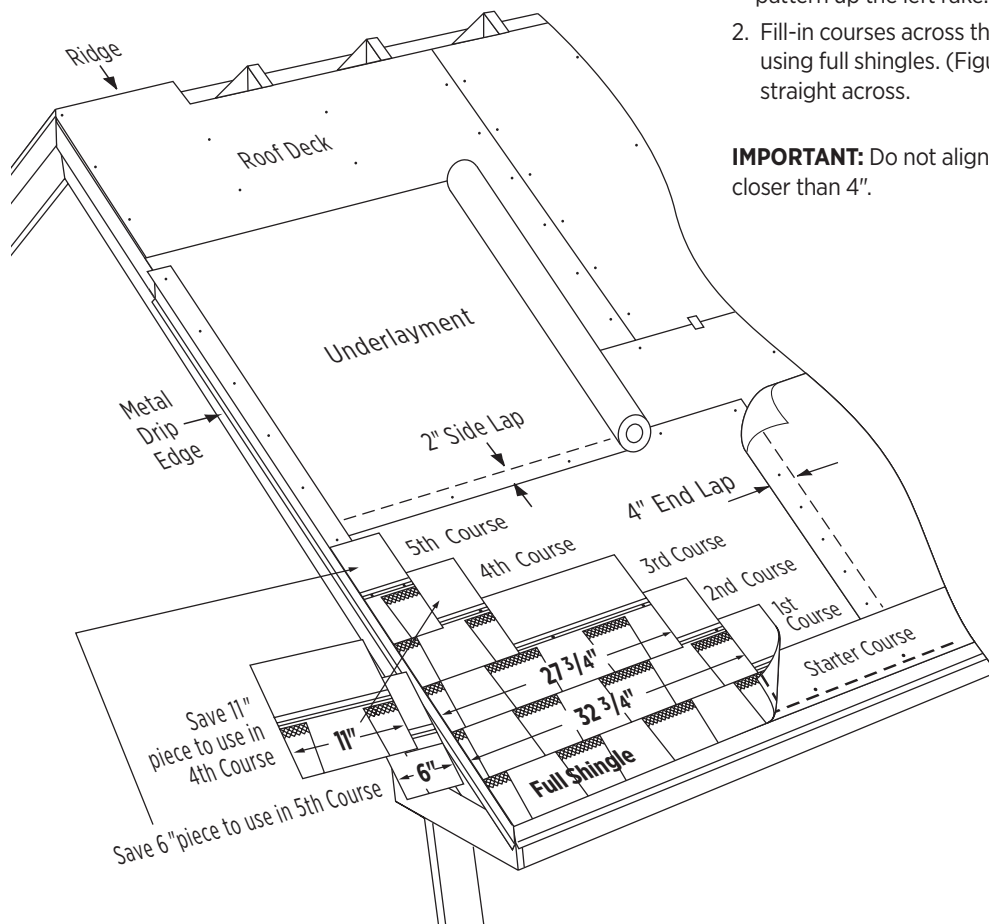


Figure PAT-7: Applying the first 5 courses of Patriot™.

1ST COURSE: Apply a full shingle at the lower left corner of the roof. Make the lower edge and left edge lie flush with the edges of the starter course (Figure PAT-7).

2ND THROUGH 5TH COURSES:

CAUTION! Failure to follow instruction steps 1-5 below will bring joints too close together and may cause unattractive patterns!

1. Cut 6" off the left end of the first shingle and save this piece for later use. Apply the 32-3/4" long piece over and above the first-course shingle. Leave the bottom 5-5/8" tab portion of the first-course shingle exposed.
2. Cut 11" off the first shingle of the third course and save this for later. Install the 27-3/4" long piece over and above the second-course shingle.
3. Apply the previously removed 11" long piece over and above the third-course shingle.
4. Apply the previously removed 6" long piece from the second course over and above the fourth-course shingle.
5. Install a full shingle against the right edge of each shingle in courses one through five.

CONTINUING UP THE ROOF:

1. Beginning again with a full shingle, repeat the five-course pattern up the left rake.(Figure PAT-8, B).
2. Fill-in courses across the roof in a stepped diagonal fashion using full shingles. (Figure PAT-8, A). Do not run courses straight across.

IMPORTANT: Do not align joints of Patriot™ shingles closer than 4".

Figure PAT-8: "Five-Course Diagonal Method" installation schematic.

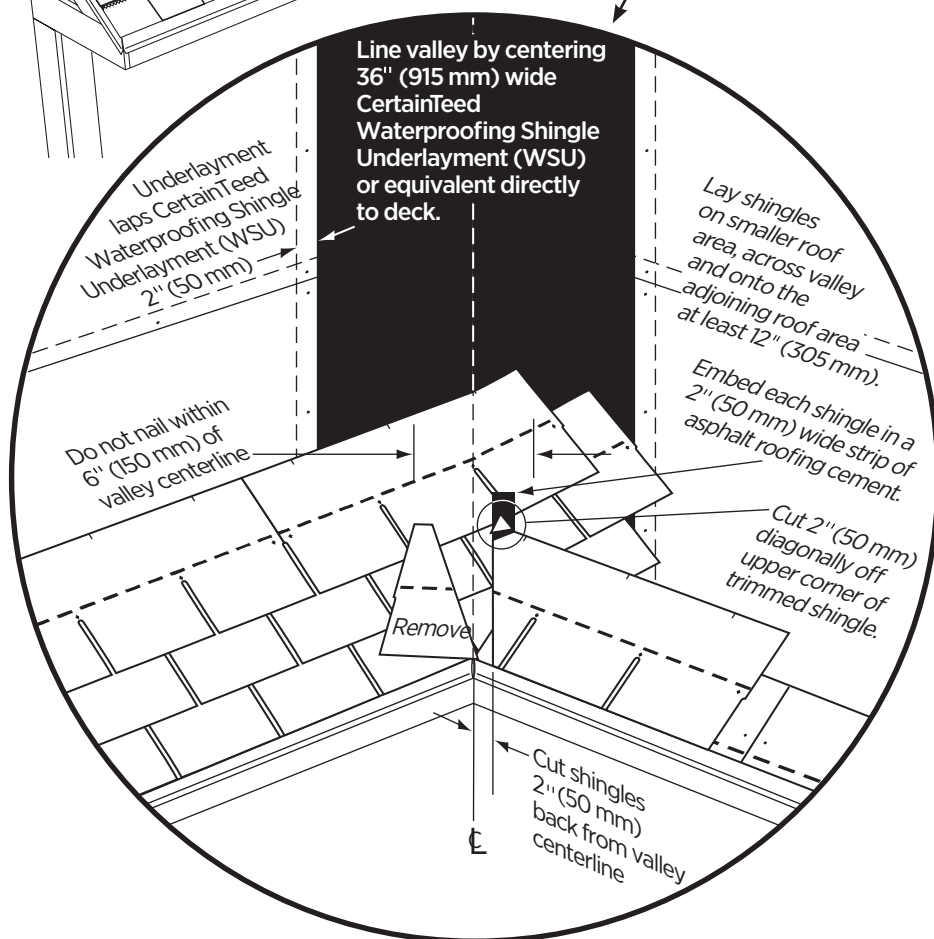
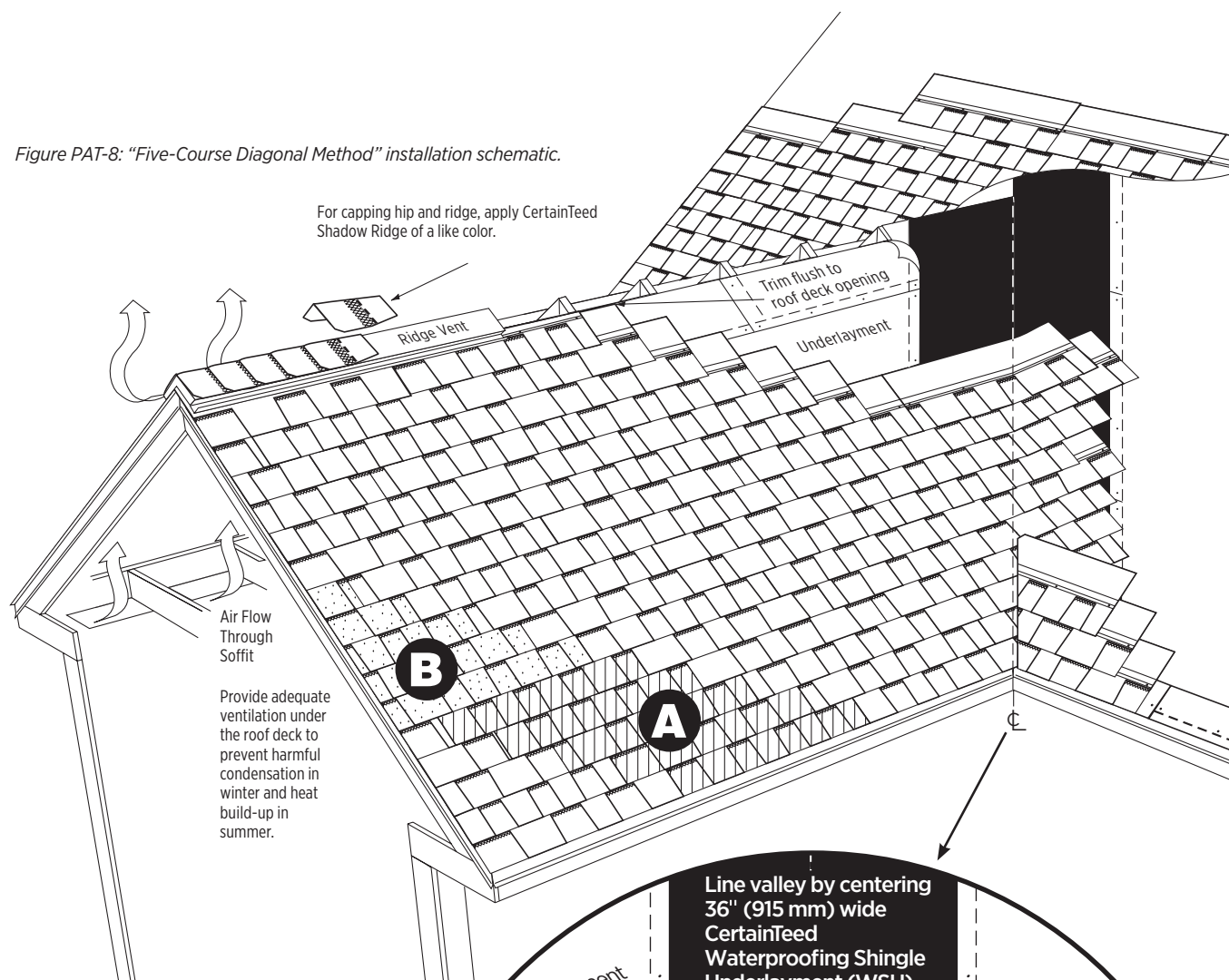


Figure PAT-9: Highlight of closed-cut valley details.

CHIMNEY FLASHING

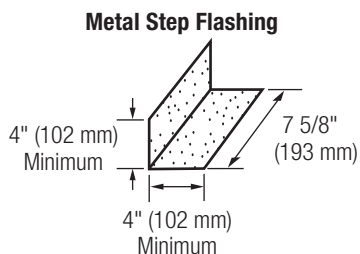


Figure PAT-10: Step flashing minimum dimensions.

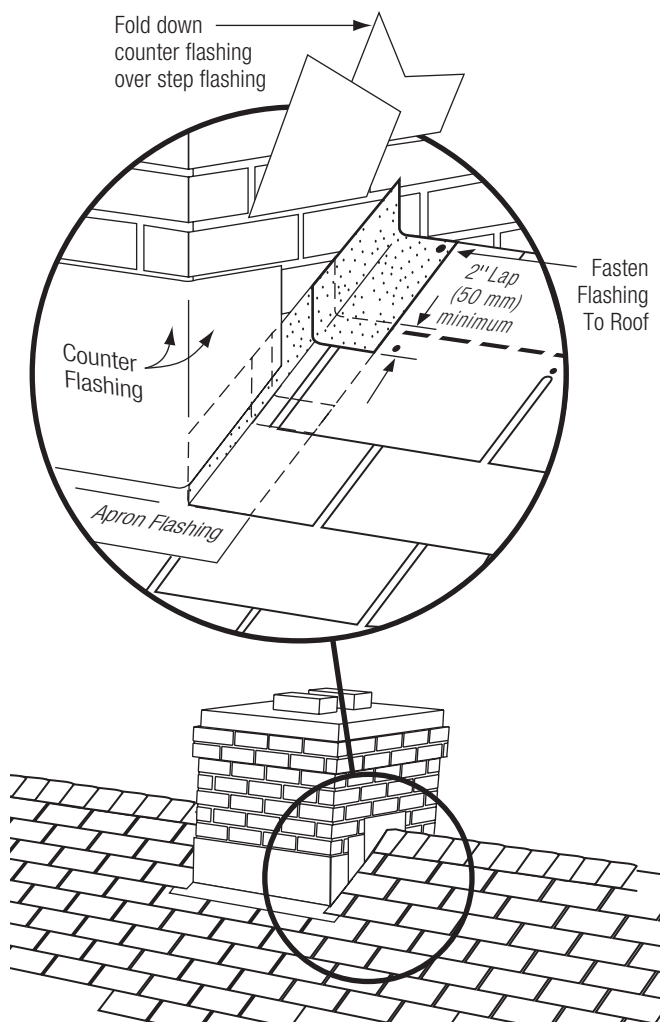


Figure 11-11: Flashing around a chimney.

TWO ROOF-OVER METHODS

The same methods used for clean-deck application of these shingles are used for roof-overs. Application of these shingles over English dimension shingles is not recommended — due to the high cost of workmanship and greater risk of worker error.

HIPS AND RIDGES

SHADOW RIDGE® ACCESSORY SHINGLES

Shadow Ridge shingles have an accented shadow line that is designed to complement these shingles. Simply fold along the pre-cut lines and detach individual cap pieces. Save valuable installation time compared to cutting 3-tab shingles.

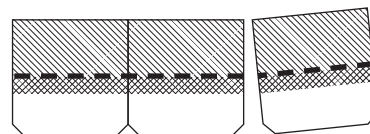


Figure PAT-12: Shadow Ridge accessory shingles detach easily from three-piece units to make 72 individual cap pieces.

There are 24 three-piece units in each Shadow Ridge bundle, providing 72 individual caps that will cover 30 linear feet of a hip or ridge. Each English dimension cap piece is 12" by 12".

The Metric version detaches in to four-piece units to make 96 individual pieces and covers 45 linear feet. Each Metric dimension cap piece is 13-1/4" by 9-7/8". Both English and Metric versions feature clipped corners on the bottom edge of the exposed portion.

Application is as follows:

1. Apply shingles up to the hip or ridge on both sides, then trim flush.

NOTE: The last course of shingles should have an exposure of 5" (5-5/8" for metric) or less when the shingle cap or ridge vent is fastened in place. Otherwise, a potential water leak could occur at exposed shingle end joints. The figures used in this section illustrate the application of accessory shingles over a ridge vent; application directly to the roof deck is very similar.

IMPORTANT: Use two nails to fasten each shingle. Nails must be minimum 1-3/4" (45 mm) long.

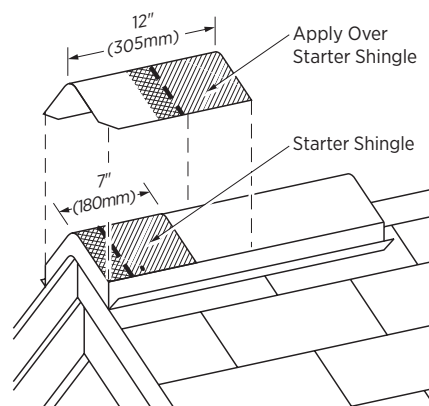


Figure PAT-13: Apply a full cap shingle over the starter piece, flush with the bottom and side edges of the starter.

2. Install caps beginning at the bottom of a hip or at either end of a ridge. Apply a starter piece that has the bottom 5" (5-5/8" for metric) removed. Fasten the starter with two nails located about 3" from the rake edge, and 1" in from each side edge.

Make sure fasteners used to apply caps penetrate at least $\frac{3}{4}$ " into or through the decking.

NOTE: To assist in proper alignment when ridge vent is not used, snap a chalk line parallel to the hip or ridge along the line where the side edges of the cap shingles should be.

3. Apply a full cap shingle over the starter (Figure PAT-13), and place fasteners at 5-5/8" (6-1/4" for metric) up from the exposed bottom edge and 1" in from each side. Nails must not be exposed on the finished roof. All nail heads must be driven straight and must not cut into the shingle surface.

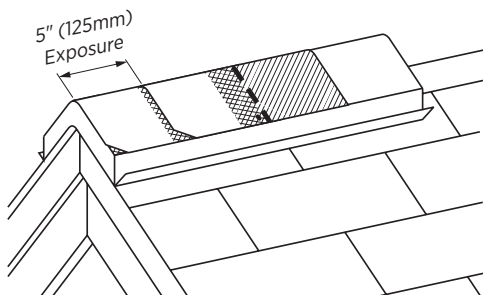
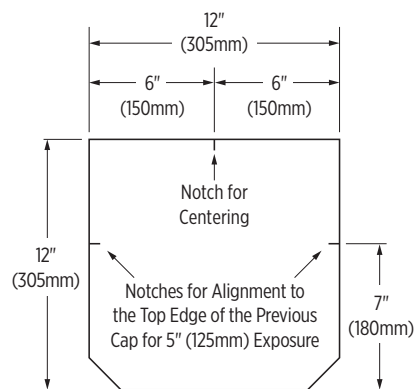
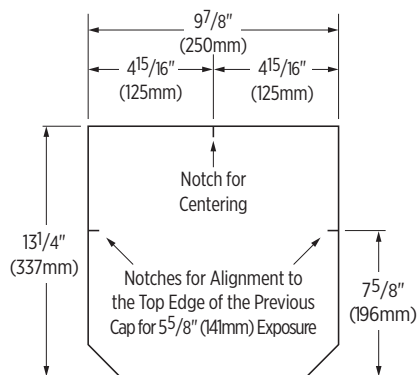


Figure PAT-14: Install cap shingles at their correct exposure and cover all fasteners.

NOTE: Each cap has a laying/alignment notch at the top edge to center the piece on the ridge line, and two notches on each side to indicate the correct exposure and shadow-line placement (Figure PAT-15). The side notches of the cap being applied should be aligned with the top edge of the previously applied cap.



English Dimension



Metric Dimension

Figure PAT-15 : Each Shadow Ridge® shingle has a centering notch and two side-alignment notches to help ensure proper placement

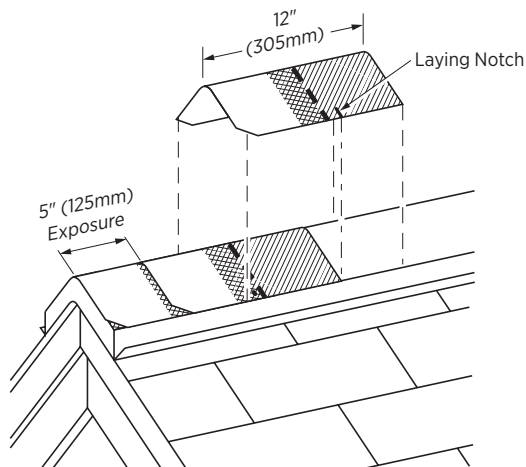


Figure PAT-16: Use laying notches to center shingles on hips and ridges, and to locate the correct exposure.

Here's a Tip...

*In the winter put hip and ridge cap shingles in your truck with the heater blasting for 20 minutes so the caps don't crack when formed.
(Thanks to Mark Dulz, Richmond, MI.)*



CertainTeed

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