

LAMINATED SHINGLES



YOUR OBJECTIVE:

To learn the correct procedure for installing Laminated shingles.

ENGLISH DIMENSIONS

**LANDMARK™ SERIES
WOODSCAPE® SERIES**

METRIC DIMENSIONS

**FIREHALT™, FIREHALT 2000™,
ARCHITECT™ 80, HIGH SIERRA®,
DIMENSIONAL® SHAKE SERIES AND LANDMARK™ SERIES**

All of these shingles are in the “better” or “best” category of roofing products when offering a choice of “good,” “better” and “best” products.

All CertainTeed laminated shingles are built on a fiber glass base to provide a Class A fire resistance rating. All of these products have tear resistance that exceeds ASTM D3462 requirements, except

- ★ Firehalt and Dimensional 25. Wind warranties are graduated according to the product’s warranty duration: A 25-year laminated shingle provides a 60 mph wind warranty, a 30-year duration provides 70 mph and a 40-year duration is warranted up to 80 mph.

- ★ NOTE: The wind warranty for 30-year laminated shingles increases from 70 mph to 80 mph when fastened with six nails instead of four. Use the Steep Slope fastening instructions (roofing cement is not required.)

Deck and valley preparation, ventilation, underlayment, and ice-dam protection are all routine. See the appropriate chapters.

Fastening instructions are stringent and must be followed with care.

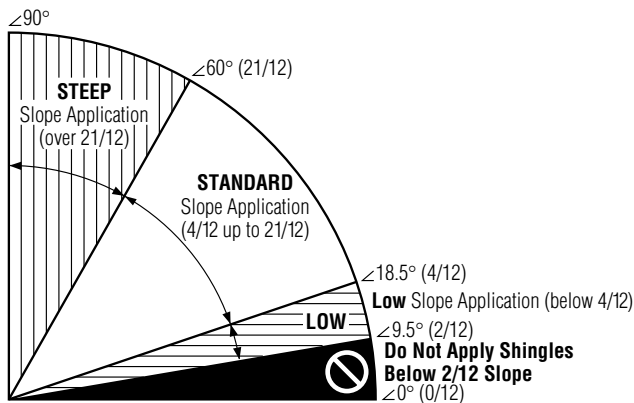


Figure 15-1: Slope definitions.

STANDARD OR STEEP SLOPE UNDERLAYMENT: Roofers Select™ Shingle underlayment* is suggested (ASTM D4869 Type I). (Refer to the chapter on “Shingle Underlayment,” for additional information.)

LOW SLOPE UNDERLAYMENT: One layer of WinterGuard™ Waterproofing Shingle Underlayment or its equivalent*, or two layers of 36" (915 mm) wide felt shingle underlayment lapped 19" (485 mm) must be applied over the entire roof.

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, not more than 6" (150 mm) wide.

COLD WEATHER CLIMATES (ALL SLOPES): WinterGuard or its equivalent* must be used wherever there is a possibility of ice build-up.

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 covered by SureStart™ protection. See the warranty itself for specific details and limitations.

NOTE: Some roofers choose to apply shingles at 4" exposure (vs. standard 5") at slopes less than 4/12 in order to increase the wind-driven rain resistance. In some cases, this can be an acceptable practice, but there are risks for which CertainTeed will not take responsibility. A shortened exposure can harm the appearance of the applied roofing, especially those with shadow lines, and it can reduce shingle ability to resist wind blow-offs by shifting the adhesive seal line away from the bottom edge of the shingles.

* 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 Home Institute 800-782-8777	✓	✓	
CertainTeed Fax-on-Demand 800-947-0057	✓	✓	
CertainTeed-RPG Technical Services 800-345-1145	✓	✓	✓

FASTENING

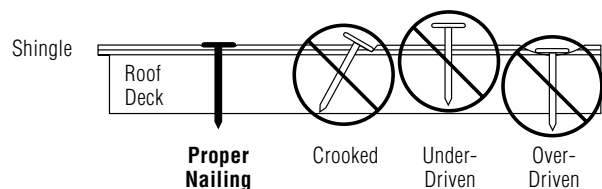
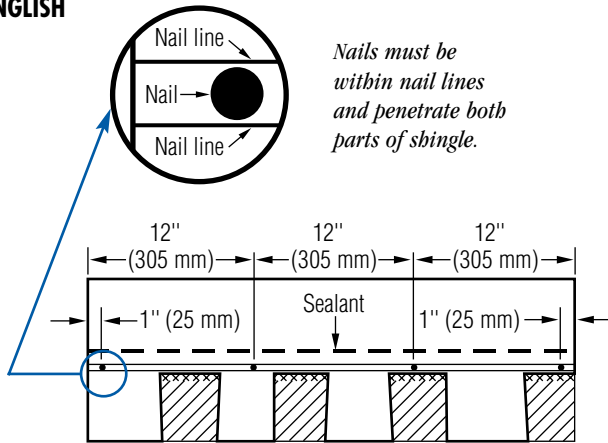


Figure 15-2: Proper and improper nailing.

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

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

ENGLISH



Nails must be within nail lines and penetrate both parts of shingle.

METRIC

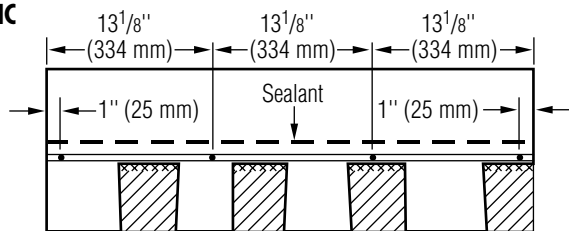


Figure 15-3: Use **four** nails for every full shingle.

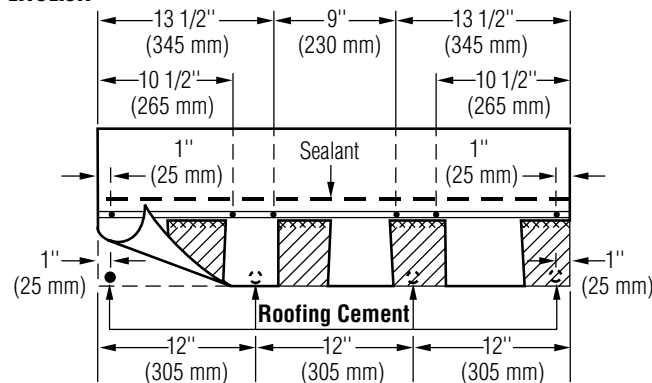
LOW AND STANDARD SLOPE

Use **four** nails for every full shingle (Figure 15-3). (Asphalt roofing cement should meet ASTM D4586 Type II.)

STEEP SLOPE

Use **six** nails and four spots of asphalt roofing cement for every full laminated shingle. See below. (Asphalt roofing cement should meet ASTM D4586 Type II.)

ENGLISH



Apply 1" (25 mm) spots of asphalt roofing cement under each corner and at about 12" (305 mm) in from each edge.

Figure 15-4: Use **six** nails and four spots of asphalt roofing cement on steep slopes.

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

ONE CLEAN-DECK APPLICATION METHOD FOR ENGLISH DIMENSION SHINGLES

FIVE-COURSE DIAGONAL METHOD ("SEVENS AND FOURTEENS")

PREPARING THE DECK:

- ◆ Roof deck must be at least $\frac{3}{8}$ " (9.5 mm) thick APA-approved plywood, **or** at least $\frac{7}{16}$ " (11 mm) thick APA-approved non-veneer, **or** at least nominal 1" (25 mm) thick wood deck, not more than 6" (150 mm) wide.
- ◆ 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 horizontal and vertical chalklines to assure shingles will be correctly aligned. Expose all shingles 5" (125 mm).

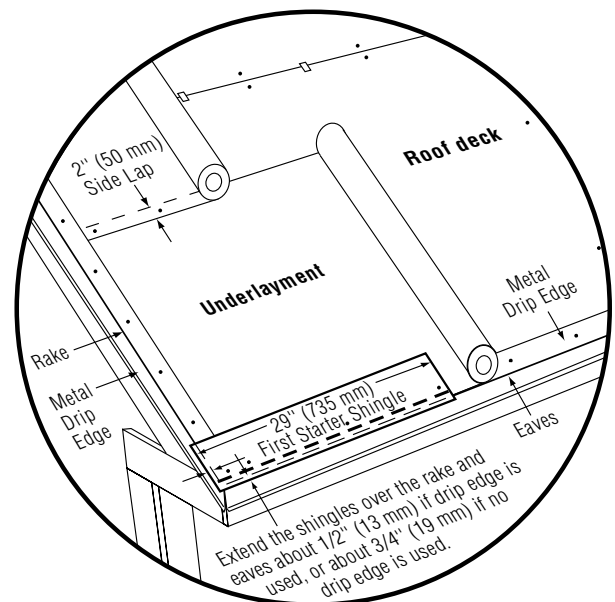


Figure 15-5: Standard slope underlayment and starter drip edge details.

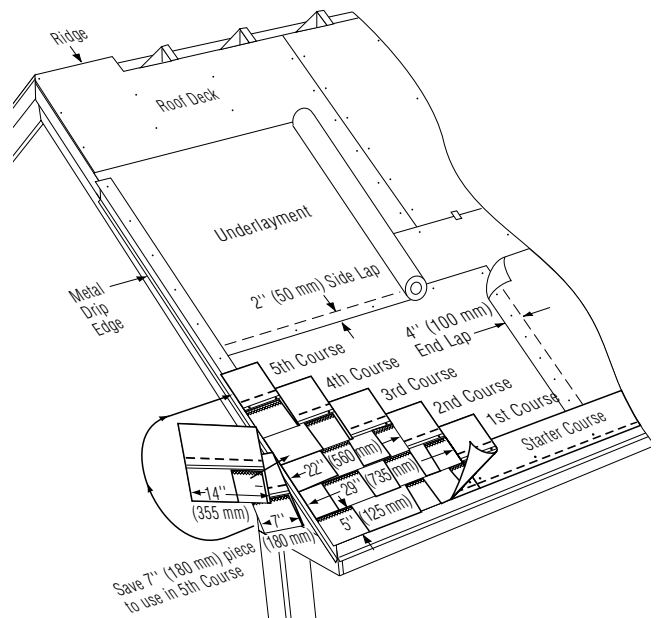


Figure 15-6: Applying the first 5 courses on a standard slope.

Figure 15-8: "Five-Course Diagonal Method" installation schematic.

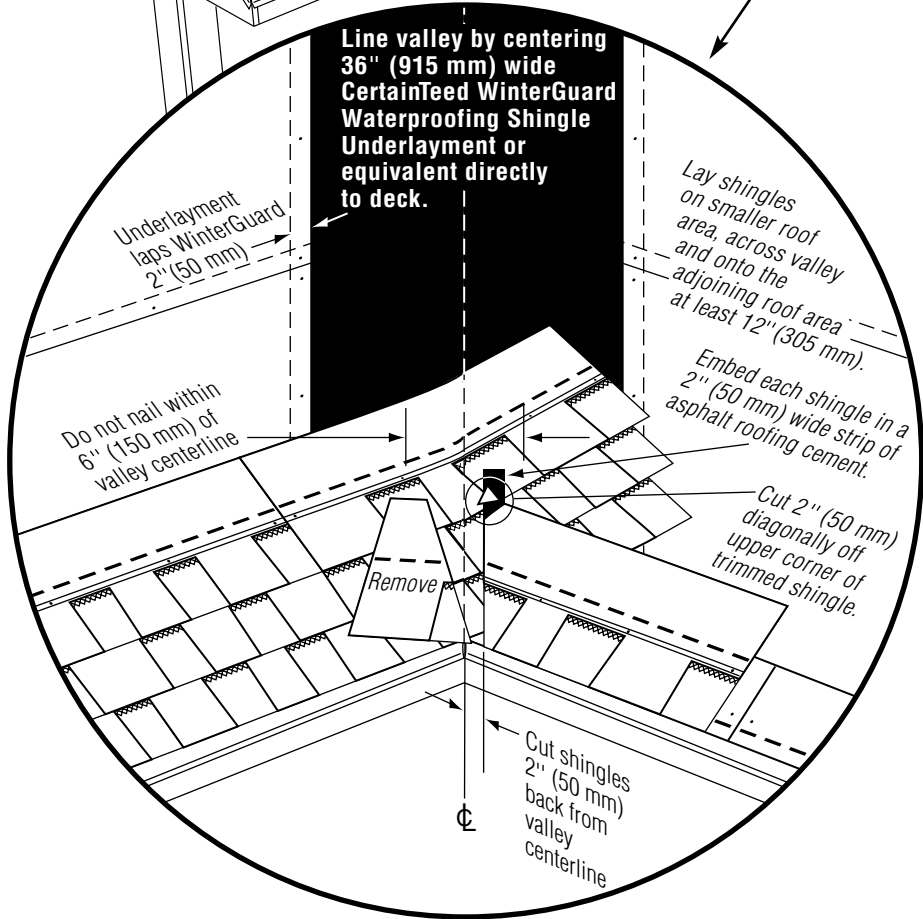
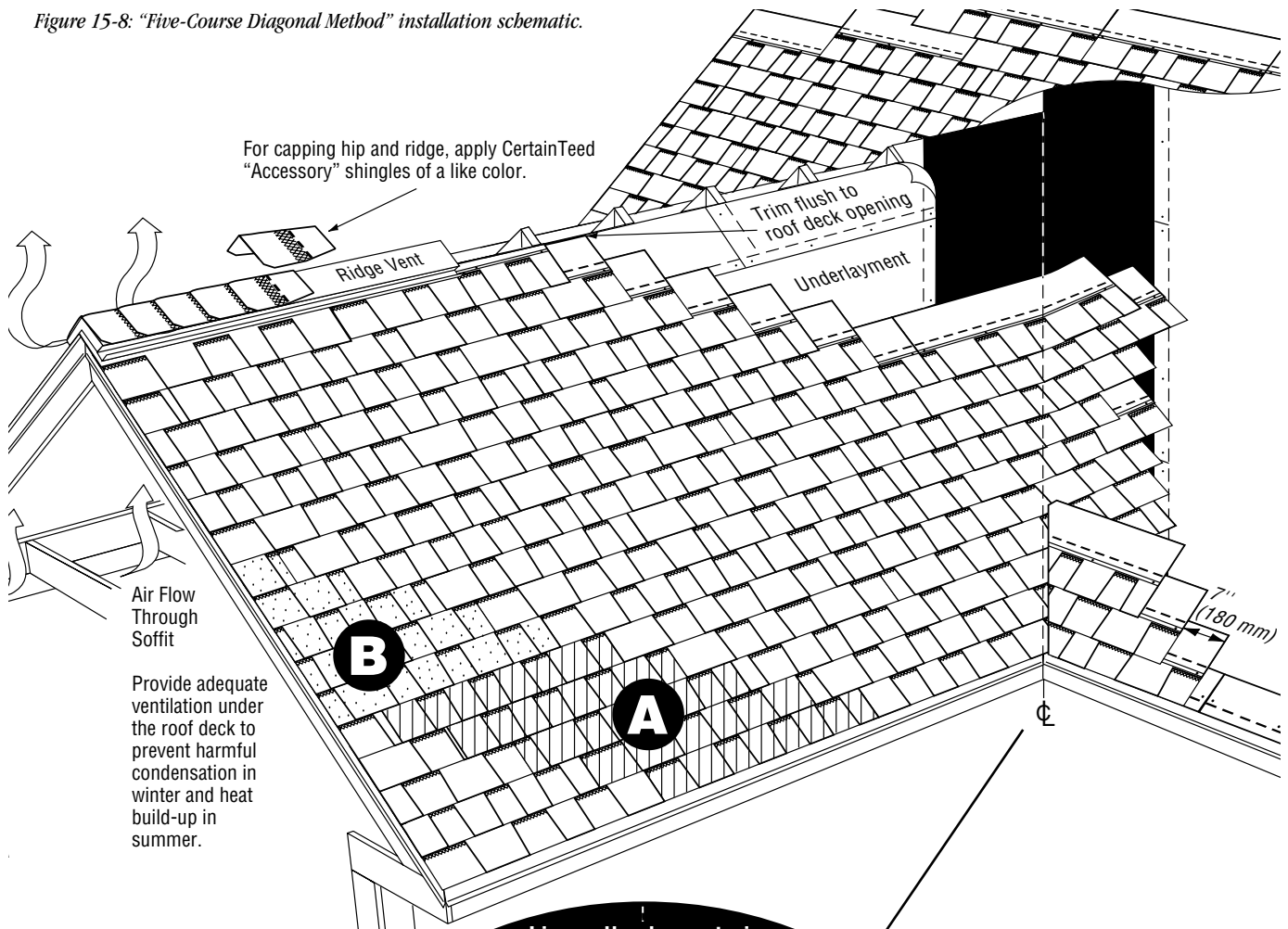


Figure 15-9: Highlight of closed-cut valley details.

Here's a Tip... **ROOFING FOREMEN AND SUPERVISORS:** On slow days or half days, schedule training for installers. Read aloud and study or practice one or more chapters in the Master Shingle Applicator's Manual each session. Time spent with workers off the roof pays off. (Thanks for this tip go to David Ruggiero of Pittsburgh, Pennsylvania.)

STARTER COURSE:

1. Use standard three-tab self-sealing shingles as the starter shingles, after removing the lower 5" tab portions (Figure 15-7).

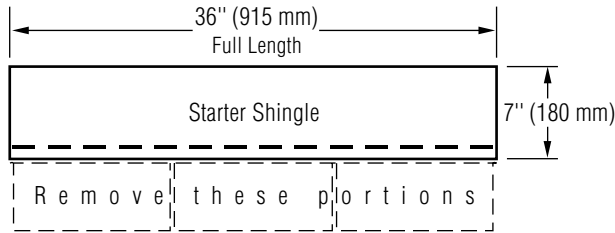


Figure 15-7: Make starter shingles by removing the lower 5" tabs.

2. For the first starter, cut 7" from one of the starter shingles.
3. Apply the 29" 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 36" long, 7" wide starter shingles for the rest of the course.

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 15-6).

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 7" off the left end of the first shingle and save this piece for later use. Apply the 29" long piece over and above the first-course shingle. Leave the bottom 5" tab portion of the first-course shingle exposed (Figure 15-6).
2. Cut 14" off the first shingle of the third course and save this for later. Install the 22" long piece over and above the second-course shingle.
3. Apply the previously removed 14" long piece over and above the third-course shingle.
4. Apply the previously removed 7" 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 15-8 – see B).
2. Fill-in courses across the roof in a stepped diagonal fashion using full shingles (Figure 15-8 – see A and B). Do not run courses straight across.

IMPORTANT: Do not align joints of shingles closer than 3 1/2" from one another.

TWO CLEAN-DECK APPLICATION METHODS FOR METRIC DIMENSION SHINGLES

- ◆ The “Five-Course, Diagonal Method” (5 5/8" and 11 1/4"); **REQUIRED FOR METRIC LANDMARK SHINGLES!**
- ◆ The “Seven-Course, Random 5 5/8" Method.”

IMPORTANT: To install Dimensional Shake Series shingles manufactured in the Fremont, CA. and Birmingham, AL. Plants, use the “Six-Inch Stepped-Off Diagonal Method” as described in Chapter 18. Other application methods can cause objectionable patterning. ★

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

PREPARING THE DECK:

- ◆ Roof deck must be at least 3/8" (9.5 mm) thick APA-approved plywood, **or** at least 7/16" (11 mm) thick APA-approved non-veneer, **or** at least nominal 1" (25 mm) thick wood deck, not more than 6" (150 mm) wide.
- ◆ 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).

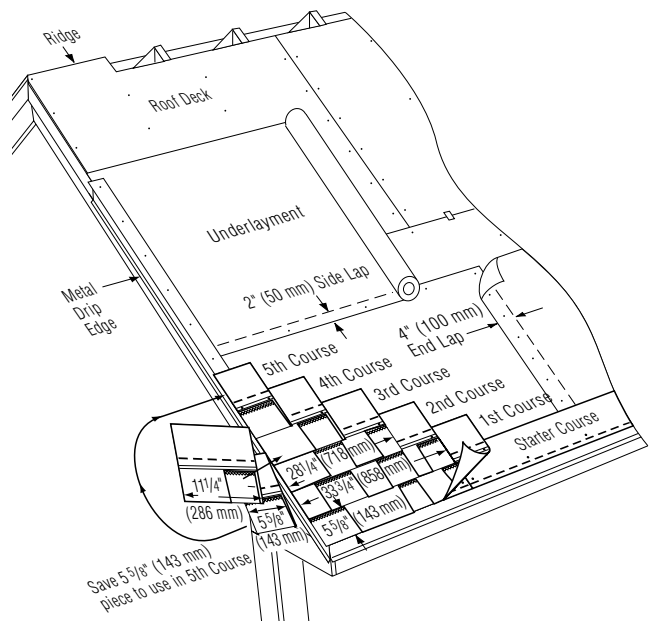


Figure 15-10: Applying the first 5 courses on a standard slope.

STARTER COURSE:

1. Use standard three-tab self-sealing shingles as the starter shingles, after removing the lower tab portions.
2. For the first starter, cut 5 5/8" from one of the starter shingles.
3. Apply the 33 3/4" 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 39 3/8" long starter shingles for the rest of the course.

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 15-10).

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 $5\frac{5}{8}$ " off the left end of the first shingle and save this piece for later use. Apply the $33\frac{3}{4}$ " long piece over and above the first-course shingle. Leave the bottom $5\frac{5}{8}$ " tab portion of the first-course shingle exposed (Figure 15-10).
2. Cut $11\frac{1}{4}$ " off the first shingle of the third course and save this for later. Install the $28\frac{1}{4}$ " long piece over and above the second-course shingle.
3. Apply the previously removed $11\frac{1}{4}$ " long piece over and above the third-course shingle.
4. Apply the previously removed $5\frac{5}{8}$ " 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.
2. Fill-in courses across the roof in a stepped diagonal fashion using full shingles. Do **not** run courses straight across.

IMPORTANT: Do not align joints of shingles closer than $3\frac{1}{2}$ " from one another.

SEVEN-COURSE RANDOM $5\frac{5}{8}$ " METHOD

PREPARING THE DECK:

- ◆ Roof deck must be at least $\frac{3}{8}$ " (9.5 mm) thick APA-approved plywood, **or** at least $\frac{7}{16}$ " (11 mm) thick APA-approved non-veneer, **or** at least nominal 1" (25 mm) thick wood deck, not more than 6" (150 mm) wide.
- ◆ 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 $5\frac{5}{8}$ " (143 mm).

STARTER COURSE:

1. Use standard three-tab self-sealing shingles as the starter shingles, after removing the lower tab portions.

2ND THROUGH 7TH COURSES:

1. Cut $5\frac{5}{8}$ " off the left side of a shingle and install this $33\frac{3}{4}$ " piece over and above the first-course shingle, in line with the left edge of the starter course (Figure 15-11).
2. Cut $11\frac{1}{4}$ " off the first shingle of the third course, $16\frac{7}{8}$ " off the first shingle of the fourth course, $22\frac{1}{2}$ " off the first shingle on the fifth course, $28\frac{1}{8}$ " off the first shingle of the sixth course, and $33\frac{3}{4}$ " off the first shingle of the seventh course. Apply each with its left edge in line with the previous course (Figure 15-11).
3. Install full shingles flush against the seven applied courses.

SUCCEEDING COURSES: As you go up the rake, repeat the same pattern used to start the first seven courses. Finish the courses with full shingles, working from the eaves up the roof.

IMPORTANT: Do not align end joints of a given course closer than $5\frac{5}{8}$ " from one another, and they **MUST** be at least 3" from the nails on the underlying course.

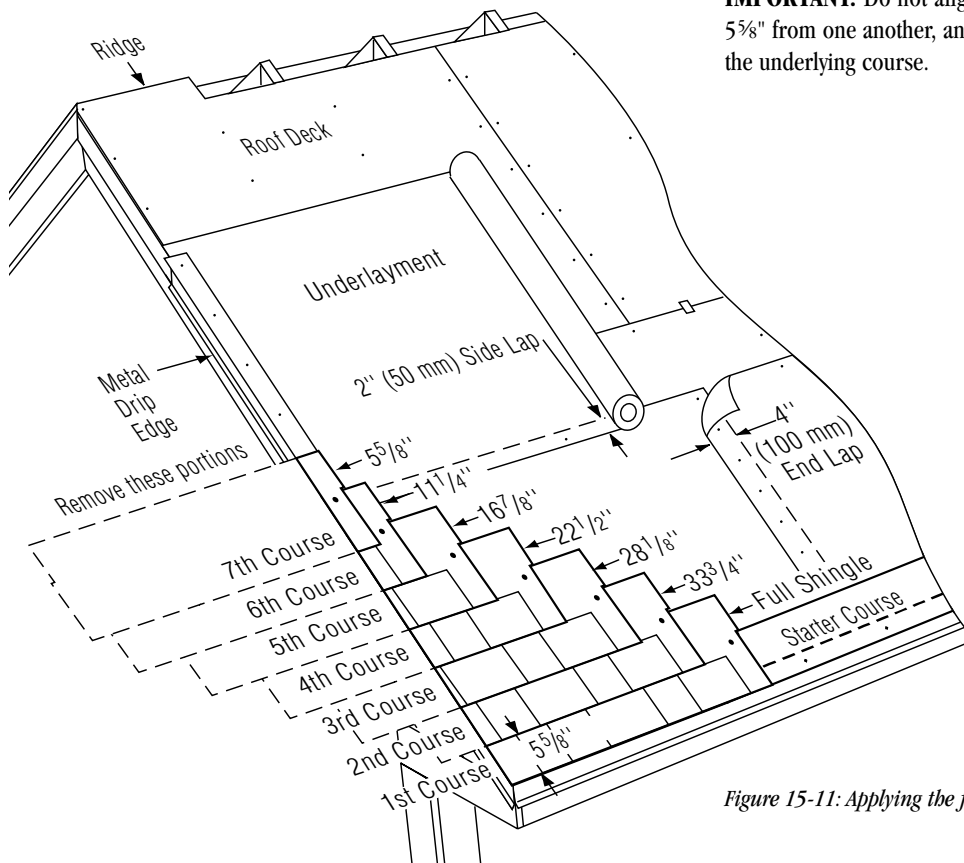


Figure 15-11: Applying the first 7 courses on a standard slope.

CHIMNEY FLASHING

Metal Step Flashing

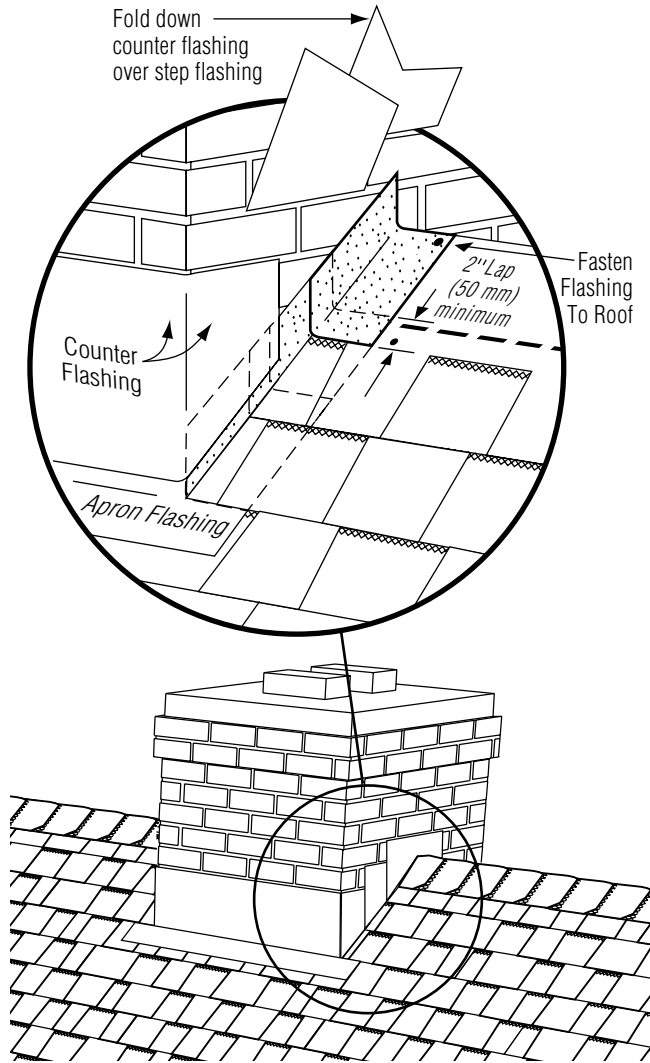
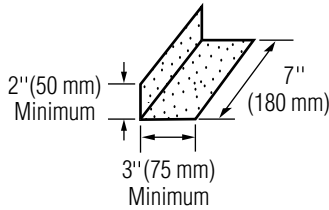


Figure 15-12: Flashing around a chimney.

ONE ROOF-OVER METHOD FOR ENGLISH DIMENSION SHINGLES

PREPARING THE ROOF SURFACE FOR REROOFING

- ◆ Make the surface of the old roof as smooth as possible by replacing missing shingles. Split and nail flat all buckled, raised tabs and curling shingles.
- ◆ It's a good idea to cut old shingles back flush to the rakes and eaves.

- ◆ We suggest that you apply corrosion-resistant drip edge along the rakes and eaves, covering the edges of the old shingles. This will provide a uniform and straight edge that will help prevent water from seeping under the shingle edges.

"NESTING" COMBINED WITH THE FIVE-COURSE DIAGONAL METHOD ("SEVENS AND FOURTEENS")

NOTE: Nesting is preferred over "bridging" methods when reroofing because nesting sheds water best and looks better. Nesting, as described below, is an easy application over square-tab asphalt strip shingles with a 5" exposure. If you are covering a different type or size shingle, you may need to cut back the tabs so that nesting is possible. To do this, simply cut off the leading edge of all old shingles when they are lapped less than 2½" by the new shingles. This permits a flat nested application that avoids lifted edges and slumps.

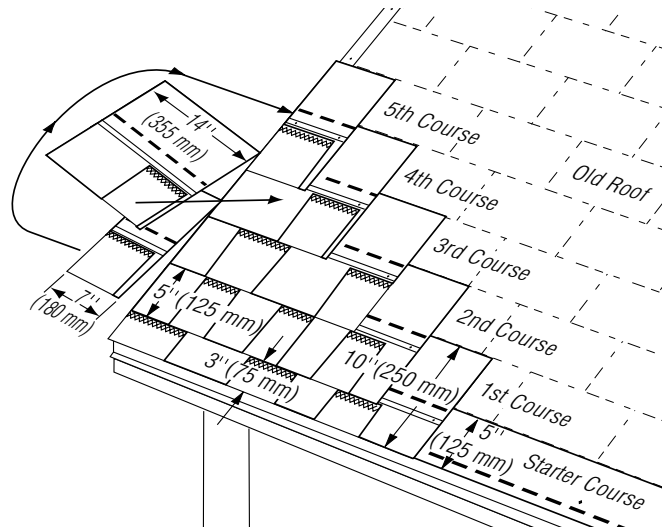


Figure 15-13: Five-Course Diagonal, Nested.

STARTER COURSE:

1. Remove the tabs and the top 2" from standard self-sealing shingles, leaving 5" by 36" strips.
2. Cut 7" off the length of the first strip, apply the 29" remaining piece over the old first course at the lower left corner, overhanging the rakes and eaves ½" if drip edge is used, or ¾" if no drip edge is used (Figure 15-13).
3. Continue with full-length starter shingles along the eaves (Figure 15-13).

1ST COURSE:

1. The first-course shingles are made of full Landmark shingles with 2" cut off the bottom of the tabs (Figure 15-13).
2. Align the first-course strips with the left and lower edges flush with the starter course.

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 7" off the left end of the first shingle and save this piece for later use. Apply the 29" long piece over and above the first-course shingle. For this and all succeeding courses, align the top edge of the shingle to be applied with the bottom edge of old shingles in the next course. Exposure of first course only is reduced to 3" (Figure 15-13).

2. Cut 14" off the first shingle of the third course and save this for later. Install the 22" long piece over and above the second-course shingle.
3. Apply the previously removed 14" long piece over and above the third-course shingle.
4. Apply the previously removed 7" 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. Remember that course one shingles are only 10" wide.

CONTINUING UP THE ROOF:

1. Beginning again with a full shingle, repeat the five-course pattern up the left rake.
2. Fill-in courses across the roof in a stepped diagonal fashion using full shingles (Figure 15-13). Do **not** run courses straight across.

IMPORTANT: Do not align joints of shingles closer than 3 1/2" from one another.

ROOF-OVER METHODS FOR METRIC DIMENSION SHINGLES

The same methods used for clean-deck application of metric dimension shingles are used for roof-overs. Application of metric dimension 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 FOR HIPS AND RIDGES

Shadow Ridge accessory shingles are designed to be used with laminated shingles to cap hips and ridges. Easier to apply than ever before, accessory shingles can save valuable installation time. Instead of cutting full-length shingles at the tab cutouts and trimming the ends of a cap (a total of eight knife cuts), simply fold along the pre-cut lines and detach individual cap pieces.

Shadow Ridge accessory shingles have accented shadow lines that offer a pleasing appearance of depth and dimension. A wide array of colors are available to complement main roof colors.

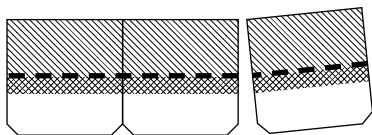


Figure 15-14: Shadow Ridge accessory shingles detach easily from three-piece units to make 72 individual cap pieces.

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 cap piece is 12" by 12" and features 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"* 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 roofing is very similar.

*5 5/8" for Metric.

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" removed (Figure 15-15). 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 are at least 1 3/4" long and able to penetrate at least 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.

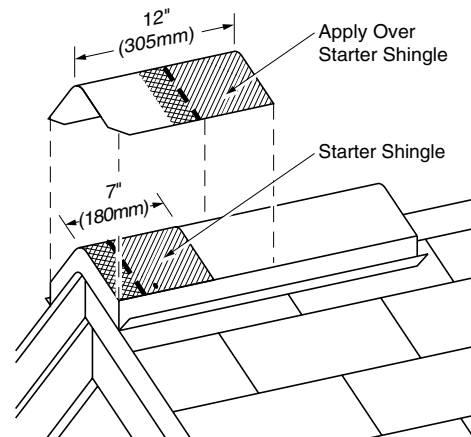


Figure 15-15: Apply a full cap shingle over the starter piece, flush with the bottom and side edges of the starter.

3. Apply a full cap shingle over the starter (Figure 15-15), and place fasteners at 5 5/8" 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.

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 5" exposure and correct shadow-line placement (Figure 15-17). The side notches of the cap being applied should be aligned with the top edge of the previously applied cap.

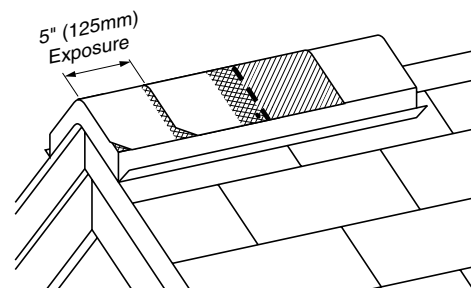


Figure 15-16: Expose cap shingles 5" and cover all fasteners.

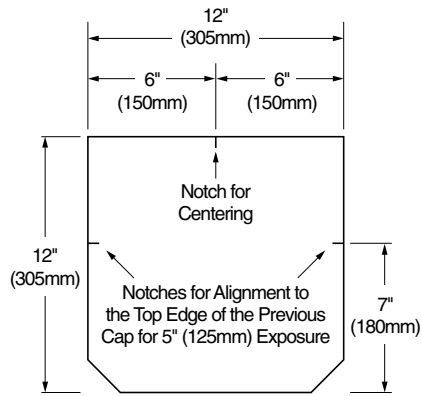


Figure 15-17: Each Shadow Ridge shingle has a centering notch and two side-alignment notches to help ensure proper placement.

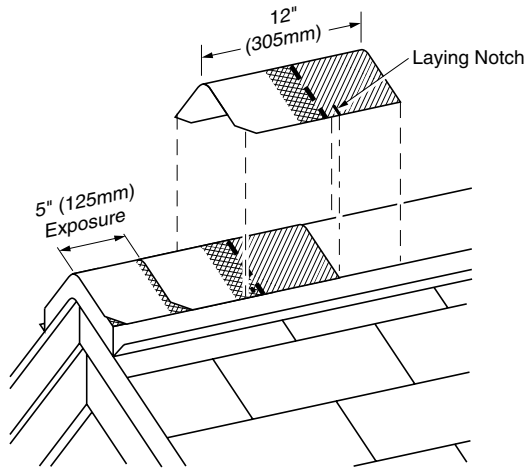


Figure 15-18: Use laying notches to center shingles on hips and ridges, and to locate the 5" exposure.

CAP-IT-AL™

CAP-IT-AL premium hip and ridge shingles are also available for use with laminated shingles. These cap shingles do not have a shadow line or clipped corners. CAP-IT-AL shingles have pre-scored lines for easy separation, are installed with a 5" exposure and cover 30 lineal feet per bundle.

SIERRA® RIDGE

Sierra® Ridge hip and ridge shingles are designed to create a high-profile look. Sierra Ridge is pre-folded to reduce labor time, has nail placement indicators to assure proper alignment, and an 8" exposure (Figures 15-19 and 15-20). A box of Sierra Ridge contains 50 pieces and covers 33.3 lineal feet.

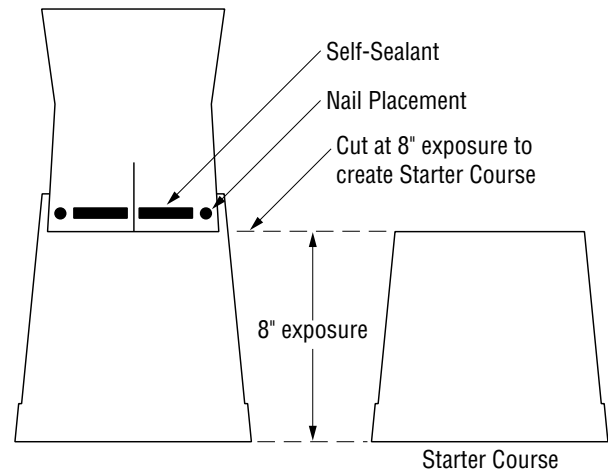


Figure 15-19: Sierra Ridge shingles.

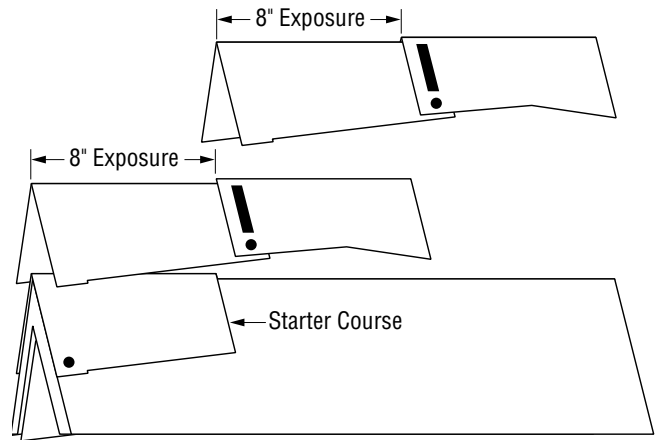


Figure 15-20: Sierra Ridge shingles.

SECTION 15 SELF-TEST

- 15-1. When applying Laminated shingles on steep slopes, use four spots of asphalt roofing cement and six nails for every full shingle.
- A. True.
 - B. False.
- 15-2. Do not align joint between shingles closer than 3¹/₂" between courses.
- A. True.
 - B. False.
- 15-3. Sierra® Ridge is a hip and ridge shingle with an 8" exposure.
- A. True.
 - B. False.
- 15-4. Roofing professionals can call CertainTeed at 800-345-1145 for information on:
- A. Warranties.
 - B. Alternate instructions.
 - C. Technical questions.
 - D. All of the above.
- 15-5. Use five nails in every laminated shingle.
- A. True.
 - B. False.
- 15-6. English dimension Landmark shingles should be applied using the "Sevens and Fourteens" installation method for both clean decks and roof-overs.
- A. True.
 - B. False.
- 15-7. Accessory shingles come 24 to a bundle, for 72 individual caps and 25 linear feet of coverage.
- A. True.
 - B. False.
- 15-8. "Sevens and Fourteens" refers to the removal of a 7" piece from the first shingle on the 2nd course and using it to start the 5th course. Similarly, remove a 14" piece on the 3rd course and install it to start the 4th course.
- A. True.
 - B. False.
- 15-9. Metric laminated shingles can be applied using the "5⁵/₈" and 11¹/₄" Method" or the "Random 5⁵/₈" Method."
- A. True.
 - B. False.

*For an MSA Test Card call 800-404-9880.
Please allow at least two weeks for test results.
Or test on-line @ www.certainteed.com/msatest.*