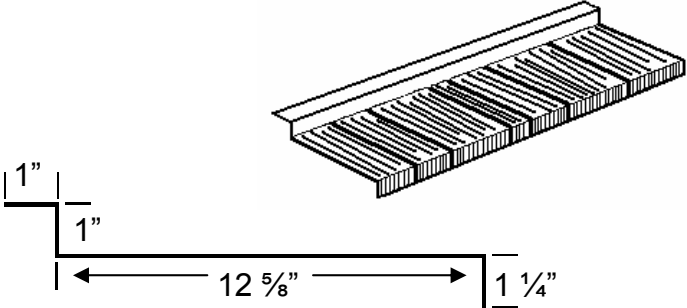
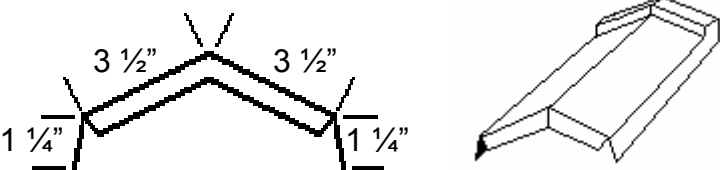
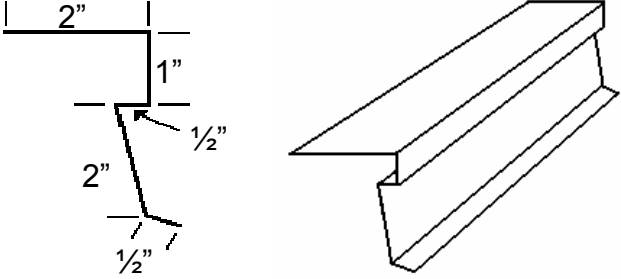
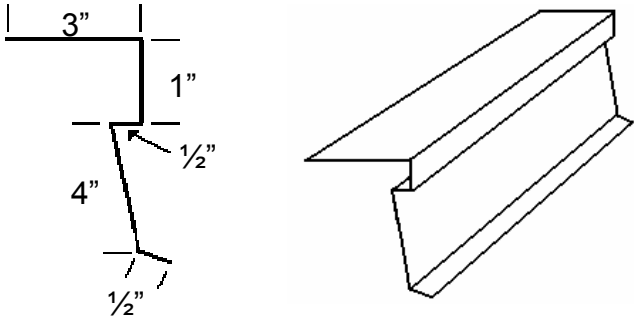


HEAVY SHAKE & FLASHING DETAILS

	<p style="text-align: center;">SHAKE</p> <table border="0"> <tr><td>Overall Length</td><td style="text-align: right;">51"</td></tr> <tr><td>Length of Coverage</td><td style="text-align: right;">48"</td></tr> <tr><td>Width of Coverage</td><td style="text-align: right;">12.5"</td></tr> <tr><td>Total Shake Coverage</td><td style="text-align: right;">4.16 sq. ft.</td></tr> <tr><td>Weight per Shake</td><td style="text-align: right;">5.54 lbs</td></tr> <tr><td>Shakes per square</td><td style="text-align: right;">24</td></tr> <tr><td>Shake per pallet</td><td style="text-align: right;">480 (20 sq.)</td></tr> <tr><td>Approx. weight of full pallet</td><td style="text-align: right;">2659 lbs</td></tr> </table>	Overall Length	51"	Length of Coverage	48"	Width of Coverage	12.5"	Total Shake Coverage	4.16 sq. ft.	Weight per Shake	5.54 lbs	Shakes per square	24	Shake per pallet	480 (20 sq.)	Approx. weight of full pallet	2659 lbs
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	<p style="text-align: center;">SHAKE CAP</p> <table border="0"> <tr><td>Overall Length</td><td style="text-align: right;">14"</td></tr> <tr><td>Length of Coverage</td><td style="text-align: right;">13"</td></tr> <tr><td>Weight per Cap</td><td style="text-align: right;">0.84 lbs</td></tr> <tr><td>Shake Caps per box</td><td style="text-align: right;">50</td></tr> <tr><td>Shake Caps per pallet</td><td style="text-align: right;">600</td></tr> </table>	Overall Length	14"	Length of Coverage	13"	Weight per Cap	0.84 lbs	Shake Caps per box	50	Shake Caps per pallet	600						
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	<p style="text-align: center;">SHAKE STARTER 5"</p> <table border="0"> <tr><td>Overall Length</td><td style="text-align: right;">96"</td></tr> <tr><td>Length of Coverage</td><td style="text-align: right;">93"</td></tr> <tr><td>Weight</td><td style="text-align: right;">5.44 lbs</td></tr> </table>	Overall Length	96"	Length of Coverage	93"	Weight	5.44 lbs										
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FLASHING SPECIFICATIONS
EUROPEAN TILE AND HEAVY SHAKE PROFILES

	<p style="text-align: center;">BARGE COVER</p> <table border="0"> <tr> <td>Overall Length</td> <td style="text-align: right;">96"</td> </tr> <tr> <td>Length of Coverage</td> <td style="text-align: right;">93"</td> </tr> <tr> <td>Weight</td> <td style="text-align: right;">4.83 lbs</td> </tr> </table>	Overall Length	96"	Length of Coverage	93"	Weight	4.83 lbs
Overall Length	96"						
Length of Coverage	93"						
Weight	4.83 lbs						
	<p style="text-align: center;">HIP/RIDGE CAP</p> <table border="0"> <tr> <td>Overall Length</td> <td style="text-align: right;">96"</td> </tr> <tr> <td>Length of Coverage</td> <td style="text-align: right;">93"</td> </tr> <tr> <td>Weight</td> <td style="text-align: right;">3.62 lbs</td> </tr> </table>	Overall Length	96"	Length of Coverage	93"	Weight	3.62 lbs
Overall Length	96"						
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	<p style="text-align: center;">VALLEY FLASHING</p> <table border="0"> <tr> <td>Overall Length</td> <td style="text-align: right;">96"</td> </tr> <tr> <td>Length of Coverage</td> <td style="text-align: right;">93"</td> </tr> <tr> <td>Weight</td> <td style="text-align: right;">4.83 lbs</td> </tr> </table>	Overall Length	96"	Length of Coverage	93"	Weight	4.83 lbs
Overall Length	96"						
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	<p style="text-align: center;">WALL FLASHING</p> <table border="0"> <tr> <td>Overall Length</td> <td style="text-align: right;">96"</td> </tr> <tr> <td>Length of Coverage</td> <td style="text-align: right;">93"</td> </tr> <tr> <td>Weight</td> <td style="text-align: right;">3.62 lbs</td> </tr> </table>	Overall Length	96"	Length of Coverage	93"	Weight	3.62 lbs
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	<p style="text-align: center;">WALL VALLEY FLASHING</p> <table border="0"> <tr> <td>Overall Length</td> <td style="text-align: right;">96"</td> </tr> <tr> <td>Length of Coverage</td> <td style="text-align: right;">93"</td> </tr> <tr> <td>Weight</td> <td style="text-align: right;">3.62 lbs</td> </tr> </table>	Overall Length	96"	Length of Coverage	93"	Weight	3.62 lbs
Overall Length	96"						
Length of Coverage	93"						
Weight	3.62 lbs						



ROOF FRAMING

RESPONSIBILITY

Ensure that roof framing meets local and national building codes. It is the responsibility of the specifying authority, architects, engineers and builders to ensure that these requirements are followed.

RAFTERS

Savings can be realized if rafter lengths are specified to allow for an exact number of shake courses, otherwise cutting the final top course will be required.

RIDGE VENTING

For wood decks ensure that the wood sheathing, if used, does not block or reduce the required vent openings.

ROOF INTRUSIONS

Ensure that fastening locations for, electrical cables, vents, plumbing stacks, skylights etc., correspond with the Rare roofing system layout.

PITCH

Rare's shake design will adapt to any slope from 3 in 12 minimum to a vertical face.

BATTENS

Use construction grade wood 1½" x 1½" or metal 1½" x 1½" batten 22 gauge galvanized steel (minimum). Ensure that size, grade and gauge comply with specifications, codes and standards.

ATTIC SPACE VENTILATIONS

The attic or ceiling space should be adequately ventilated according to appropriate building code standards. This is a design and building code requirement and is not the responsibility of the roofing contractor.

SHEATHING MEMBRANE

A sheathing membrane is required for all metal panel systems, usually composed of a nailed #15 asphalt felt or heavier. Open truss designs require a stronger barrier such as spun bonded olefin breather type sheathing membrane.

NOTE: *Roof interruptions such as vents, skylights, plumbing stacks, chimneys, walls, etc. are to be fully waterproofed with self-adhering membrane underlayment to a minimum of 1 ft. onto the roof surface (or per the local building code when specified).*

APPLICATION

SHEATHING MEMBRANE

Over wood sheathing:

- A Install specified membrane perpendicular to slopes with minimum 4" horizontal lap and 6" side lap.
- B Membrane should cover the whole roof surface under shake panels and accessories. Ensure that it runs up vertical surfaces (curb, vertical wall, vents, stack, etc.) and is properly fastened and/or taped to penetration.
- C Ensure that such roof penetration is properly identified and located as per Rare roofing system layout, minimizing cutting and waste.
- D Ensure that proper blocking is provided all around such items for stability and for support, fixing and fastening of flexible membrane.



HEAVY SHAKE INSTALLATION

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All of the four above recommendations applied (A, B, C & D).

Plus ensure proper blocking is provided. Especially for all lap joints not occurring over structural members.

BATTEN APPLICATION

Install battens at 12.5" measures from front of batten to front of succeeding one, perpendicular to joists or rafters, offset butt joints of battens a minimum of one rafter of joist space and nail securely in place. Use 3" galvanized flat head nails. **Illustration #1 & #2.**

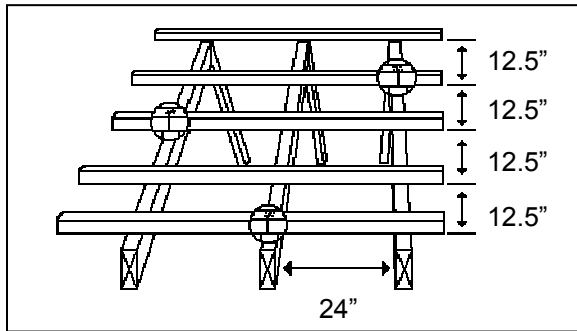


Illustration #1

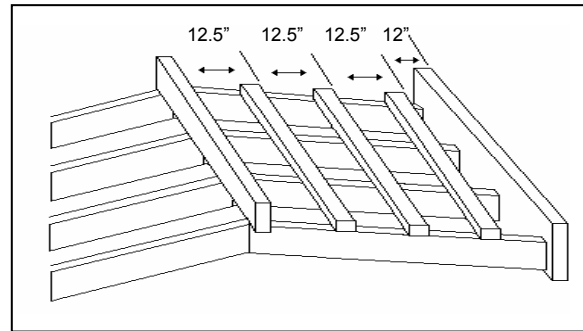


Illustration #2

IMPORTANT: Inaccurate measurements will result in failure to fit shakes properly. For this reason we recommend that batten, barge and hip boards etc. be supplied and installed by approved metal shake applicators. The structural support for such items as joist, trusses and backing is the responsibility of the design authority.

BATTEN FOR RIDGE (STRAIGHT CAPPING)

Toe nail to the ridge a 1" x 4" rough board, then nail a 1" x 4" on each side of the ridge. Make sure the distance from bottom of the 1½" x 1½" batten is no greater than 12.5". **Illustration #3.**

BATTEN FOR RIDGE (SHAKE CAPPING)

Nail a 1" x 4" on each side of the ridge and nail a 1½" x 1½" batten to the surface. Make sure the distance from bottom of the batten is no greater than 12.5". **Illustration #4.**

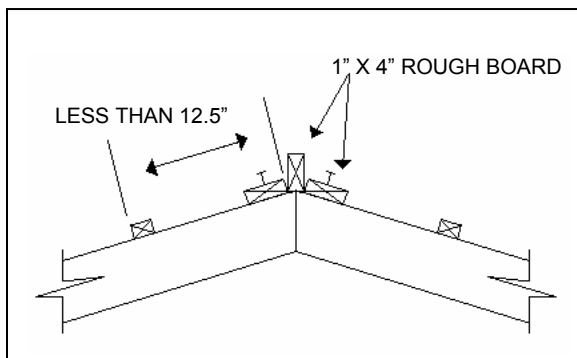


Illustration #3

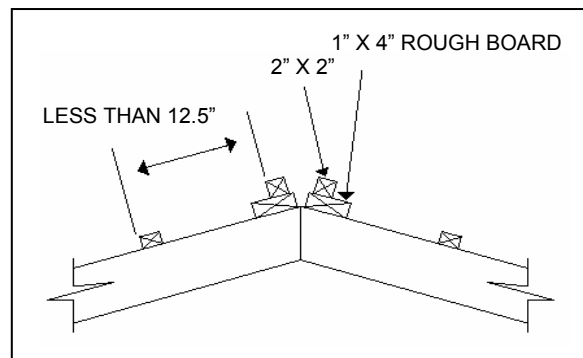


Illustration #4

BATTEN FOR HIP (STRAIGHT CAPPING)

A chalk line is run down the hip and a 1" x 4" rough board is toe nailed. The battens are then mitered and toe nailed to the 1" x 4" rough board. **Illustration #5.**

BATTEN FOR HIP (SHAKE CAPPING)

Run two chalk lines 4½" from the centre of the hip. Battens are installed down the chalk lines, the distance from outside of batten to outside of batten should be 4½". **Illustration #6.**



HEAVY SHAKE INSTALLATION

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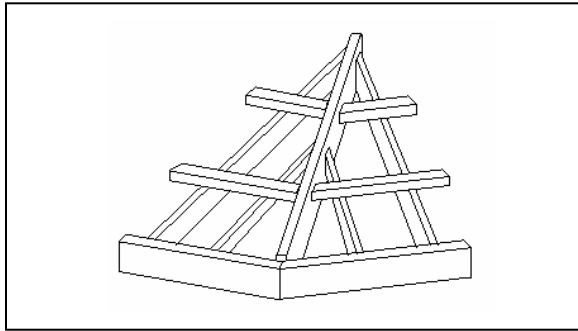


Illustration #5

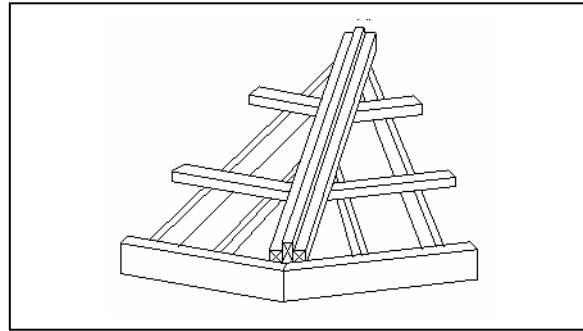


Illustration #6

BATTEN FOR VALLEYS

Run two chalk lines 2" measured from the centre of the valley. Battens are installed running up the slope on both sides of the valley. Distance between valley supports should measure 4". Battens should be mitered and nailed to valley supports. **Illustration #7.**

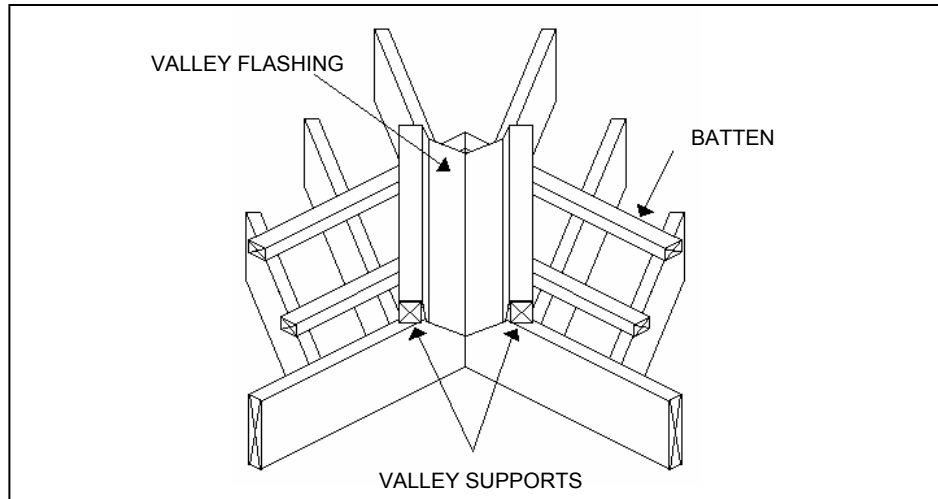


Illustration #7

BATTEN FOR GABLE (STRAIGHT CAPPING)

Install 1 1/2" x 1 1/2" batten for barge cover. Run a chalk line parallel and flush to the fascia and install over existing battens. **Illustration #8.**

BATTEN FOR GABLE (SHAKE CAPPING)

Install 1 1/2" x 1 1/2" batten 3/4" out from the edge of the fascia. **Illustration #9.**

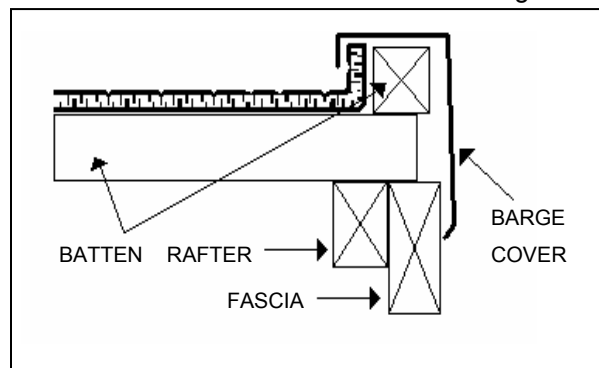


Illustration #8

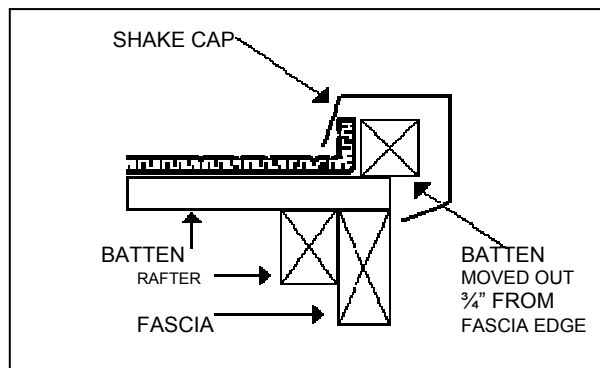


Illustration #9



HEAVY SHAKE INSTALLATION

Revised Mar 09

SHAKE APPLICATION

Shakes are laid starting with the first two full courses down from the peak of the roof. Shakes are laid left to right with the right shake overlapping the left. Lapping should be staggered for visual effect.

Illustration #10.

Lay shakes by lifting both shakes of the course above and slipping the next course under the nose of the shakes already in place. **Illustration #11.**

Fasten shakes to the batten at bottom and top at every seam using #8 – 1½” galvanized painted head screws. **Illustration #11.**

Stack shakes across the rafters or wood deck such that there is sufficient amount of support at hand. **Illustration #12.**

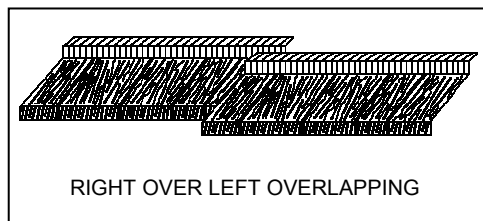


Illustration #10

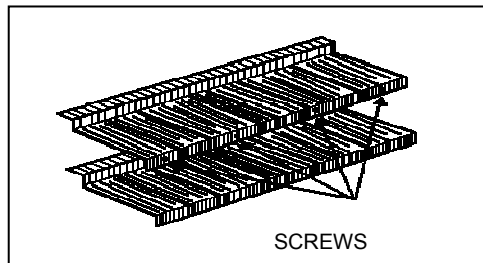


Illustration #11

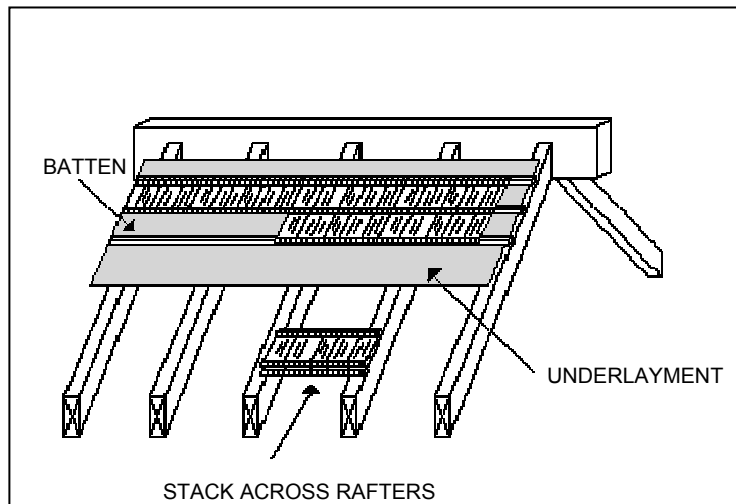


Illustration #12

INSTALLATION OF SHAKES AT HIPS

Lay shakes toward the other hip. Continue in this manner until the field of the roof is covered.

Illustration #13. Eaves fascia fastening is done at the front flat section of the shake. **Illustration #14.**

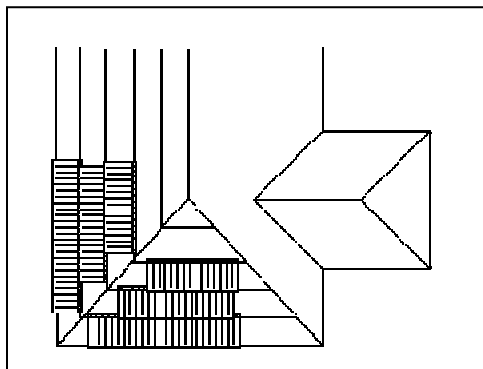


Illustration #13

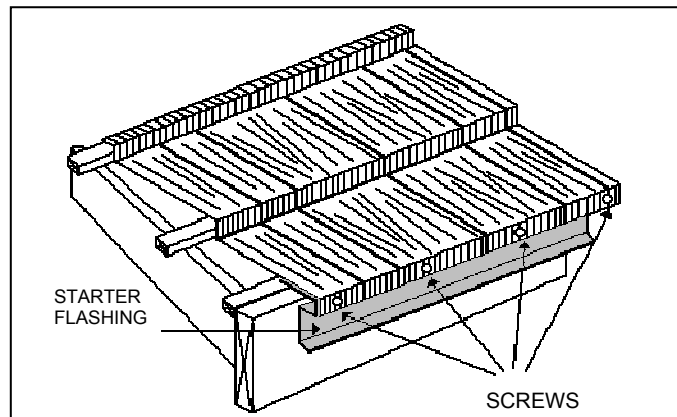
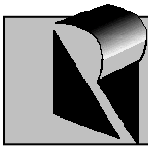


Illustration #14



HEAVY SHAKE INSTALLATION

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CUTTING SHAKES

If top row width is less than 12.5" shakes must be cut and bent to fit then screw to ridgeboard. Use portable shear and top row bender for capping. **Illustration #15 & #16.**

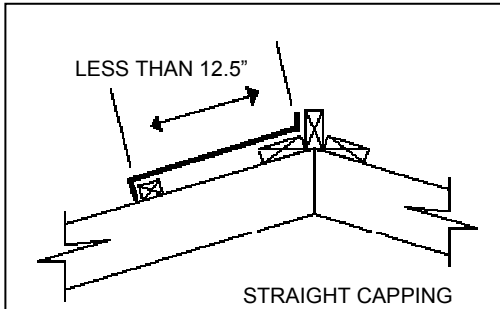


Illustration #15

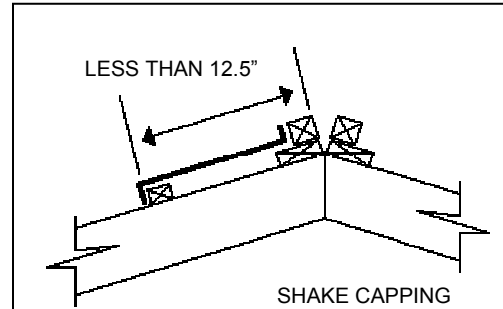


Illustration #16

CUTTING SHAKE FOR HIPS

Measure bottom and top of each shake to be cut and record on a piece of paper. Continue down the slope until all measurements are recorded. **Illustration #16A & #16B.**

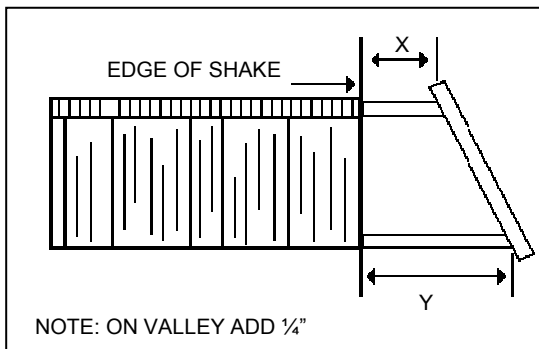


Illustration #16A

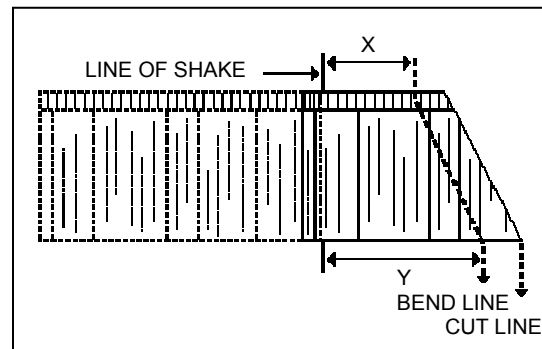


Illustration #16B

Mark, cut and bend shakes using portable bender and cutter. Stack shakes in order of application. Install shakes and screw to batten or ridgeboard using minimum two screws per shake.

VALLEY MEASURING AND CUTTING

Measure and cut shake as per hip **Illustration #16A & #16B**, except shakes must be bent down at the valley gutter 1 1/2" and screwed. **Illustration #17.**

GABLE MEASURING AND CUTTING

Bend and cut then screw to batten. **Illustration #18.**

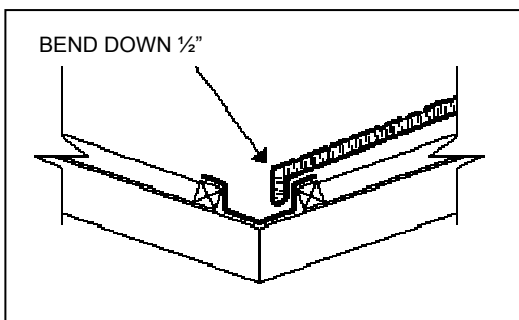


Illustration #17

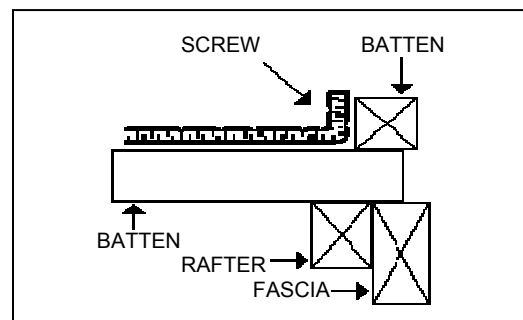


Illustration #18



HEAVY SHAKE INSTALLATION

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INSTALLATION OF CAPPING (STRAIGHT)

Install using painted head screws. Overlap trims 3". For hip application ensure that laps are facing down the slope. **Illustration #19.**

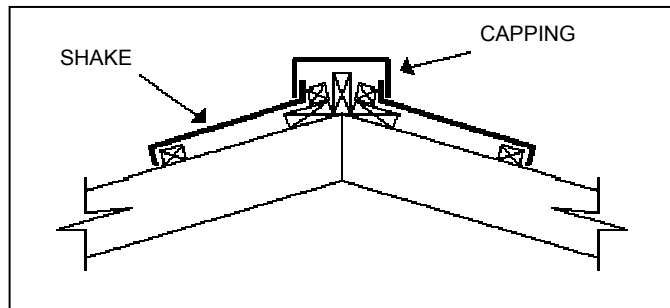


Illustration #19

INSTALLATION OF CAPPING (SHAKE CAP)

See **Illustration #20 & #21.**

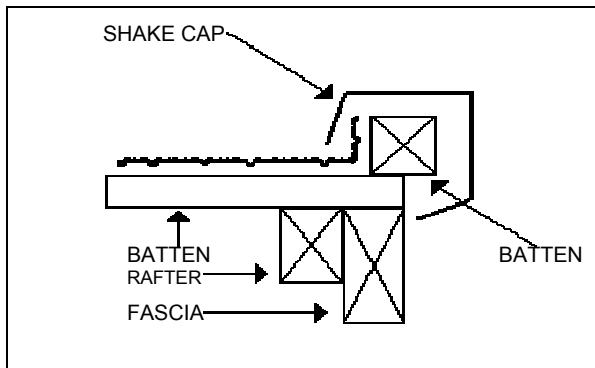


Illustration #20

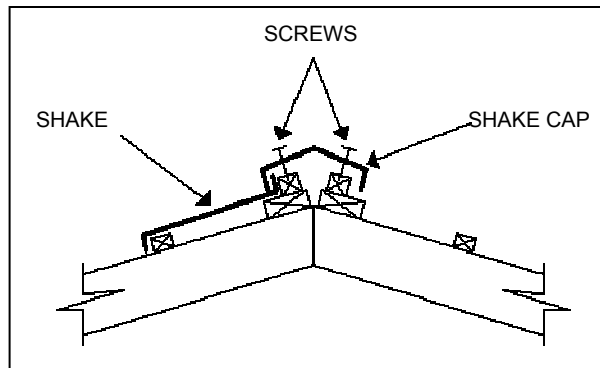


Illustration #21

BARGE COVER INSTALLATION

Barge cover should be installed over the batten and bent up portion of the shake. Ensure that seams are facing down the slope. **Illustration #22.**

END COVERS FOR HIP & RIDGE

See **Illustration #23.**

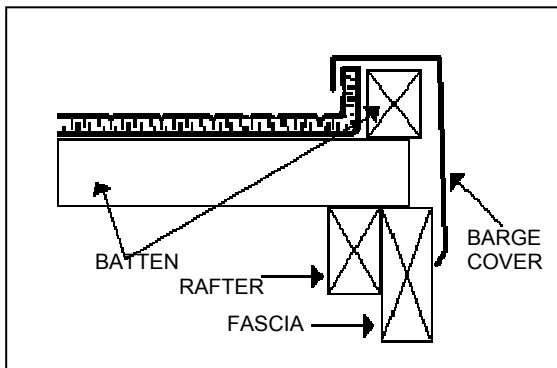


Illustration #22

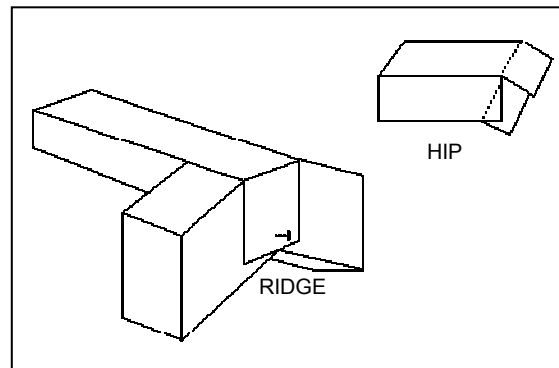


Illustration #23



MANSARD AND GAMBREL ROOFS

In this situation a backer batten is placed at the top of the bottom roof slope or mansard as shown. If full coursing cannot be accommodated, shakes at the top of the vertical wall may be cut off and flashed over.

Illustration #24.

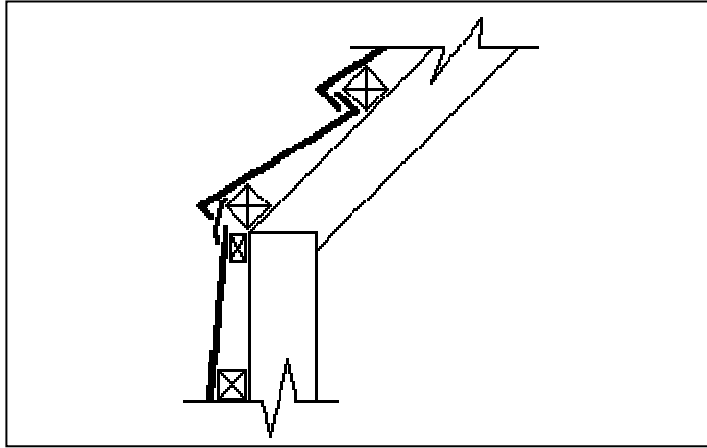


Illustration #24

VERTICAL WALL JUNCTIONS

On new work, co-ordinate the installation of the roof flashing with wall cladding supplier. To make sure the roof flashing is well tucked-in and sealed under the through wall flashing. **Illustration #25 or #26.**

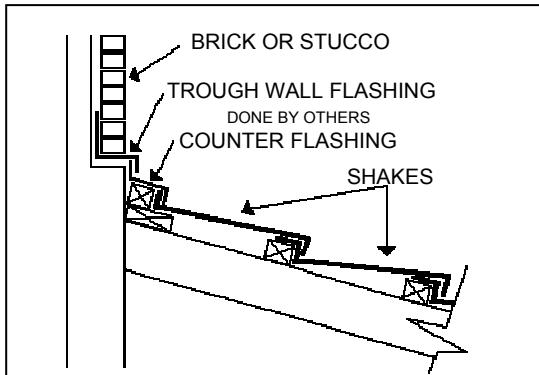


Illustration #25

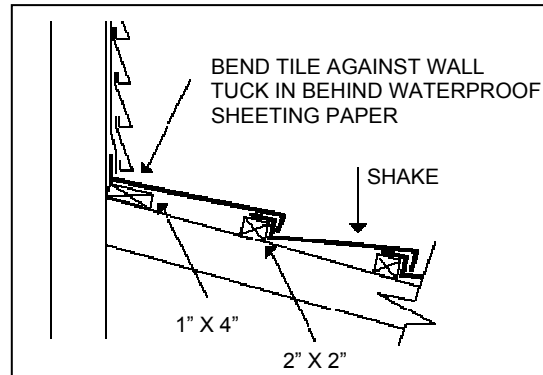


Illustration #26

SPLIT LEVELS OR DORMERS

Install as per **Illustration #27 or #28.**

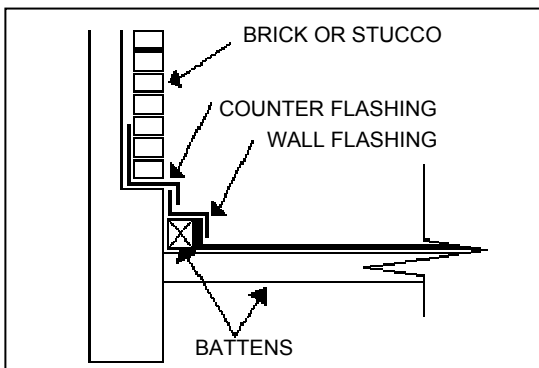


Illustration #27

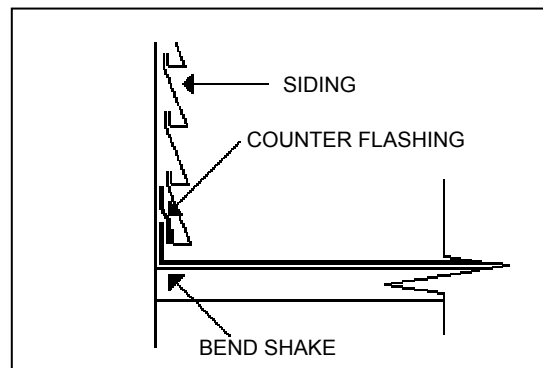


Illustration #28



HEAVY SHAKE INSTALLATION

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SKYLIGHT AND CHIMNEY FLASHING

Bend the shake up the side 3" and install counter flashing. Tuck in and seal under through wall flashing. Co-ordinate installation with other trades. **Illustration #29 or #30.**

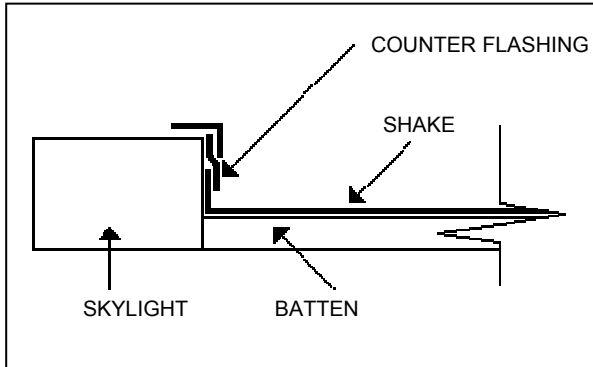


Illustration #29

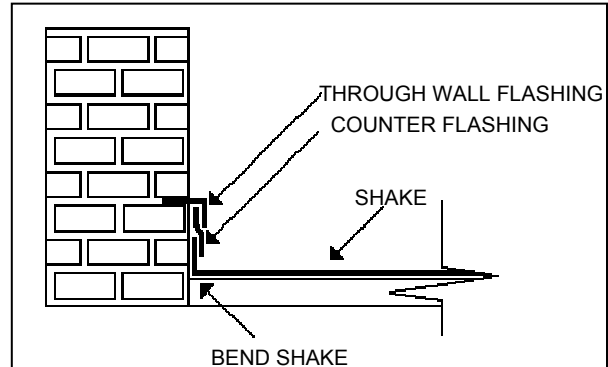


Illustration #30

PLUMBING STACKS

First cut a hole in shake and install over plumbing stack, then install a lead flashing over the pipe and onto the shake. A second shake is put over the lead flashing and fastened to the batten. **Illust. #31.**

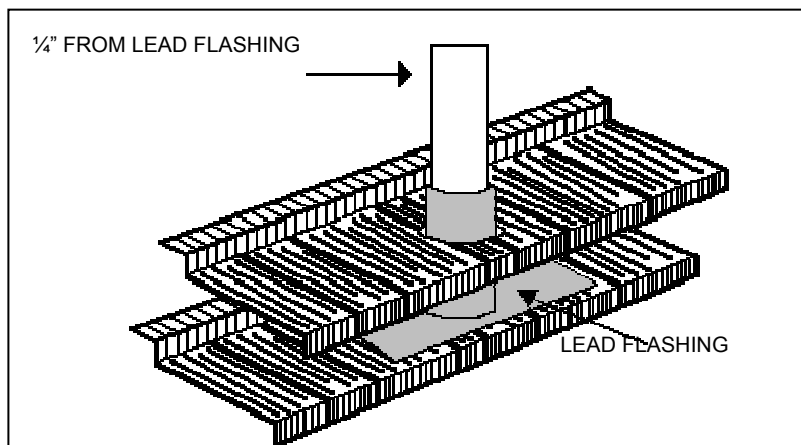


Illustration #31

NOTE: Lead flashing must run high enough up slope to counter act capillaries and wind pressure and allowed gravity flow.



HEAVY SHAKE INSTALLATION

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GENERAL INFORMATION

1. The most efficient way to install our system is in teams of two people.
2. Rubber soled shoes must be worn during application of shakes.
3. Installers should stand at the bottom edge of shake during installation.
4. Although Rare's Heavy Shake system is designed to be installed over open-truss roofs, an application of self-supporting underlayment (1/2" aspenite) will speed up the shake installation.

EQUIPMENT REQUIRED TO INSTALL RARE SHAKES

1. Portable cutter
2. Portable bender
3. Portable top row bender
4. Metal snips
5. Nailing gun
6. Screw gun

INSULATED ROOF DECKS

Same as European Tile Installation (*see last page of European Tile Installation guide*).