

Design and Application Details

The instructions given here are not meant to supercede local code requirements. Check with your local building official for their preference in your area.

Preparation - Be sure that the walls are smooth, without protuberances. Nail ends or points should be removed or pounded flush.

Underlayment - The CSSB recommends Type 30 felt underlayment (also known as #30 bituminous impregnated building paper). Check with your local building official for any questions about alternative underlayment materials. Apply it horizontally, with a staple gun, starting at the base of the wall, with a 2" horizontal overlap with each succeeding course, and a 6" overlap vertically when starting a new roll. Wrap the Type 30 felt underlayment 4" each way around both inside and outside corners.

Corner Boards - Install corner boards (Figure 8) at this time.

Flashing - Flashings associated with doors, windows, and penetration details should be in accordance with good building practice.

Laying Out - Determine the number of Certi-label courses by measuring the height of the wall at the lowest part of the foundation, from a point 1" below the top of the foundation, to the top of the wall. Divide the height into equal parts, corresponding closely to the weather exposure, but not exceeding the maximum weather exposure recommended. Transfer this measurement and the number of Certi-label courses to a storypole (Figure 1), to lay out courses on all other walls. Whenever possible butt lines should align with tops or bottoms of windows or other openings, and for appearance the exposure of the final course at the top should match those below.

Certi-label Western Cedar shingle and shake size, exposure, width of joints, width of product, kiln versus air-drying process, moisture content and the local environment will all affect the expansion/contraction of Certi-label Western Cedar sidewall products. These factors should always be taken into consideration when determining the installation details and adequate spacing needed for your specific project. Consult with your Approved Installer and refer to Figure 2: Spacing Detail.

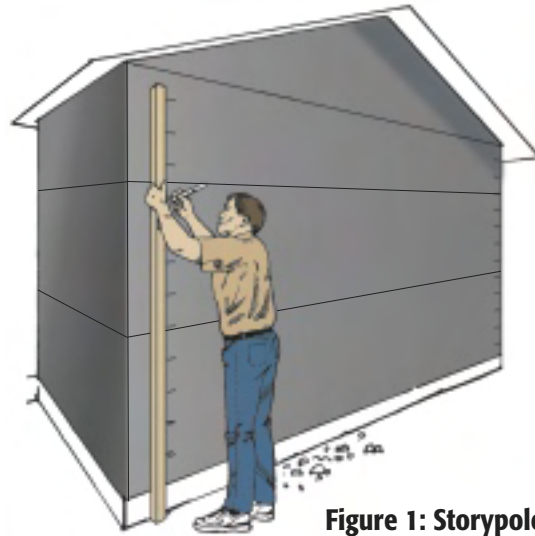


Figure 1: Storypole

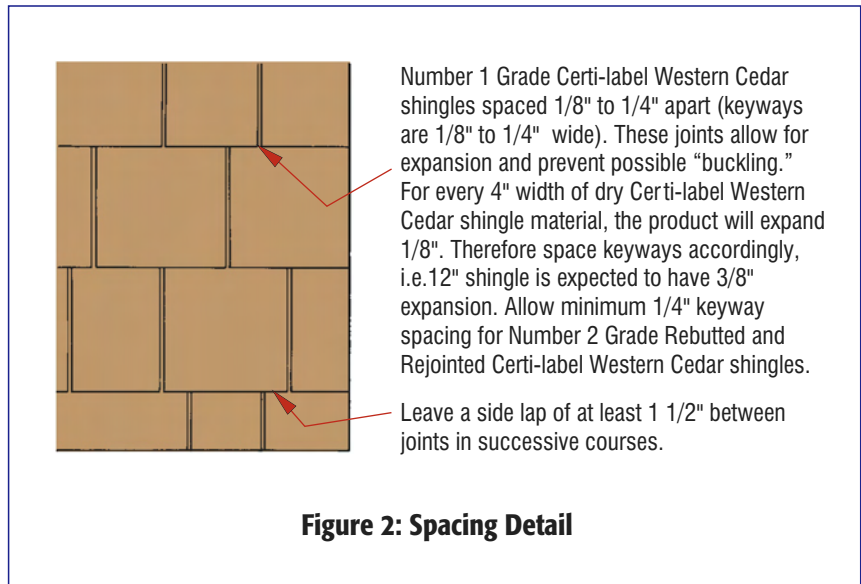


Figure 2: Spacing Detail

Figures 3a and 3b: To prevent the wicking of water, which may cause staining, keep a 1/2" clearance between the first course of Certi-label products from all surfaces below.

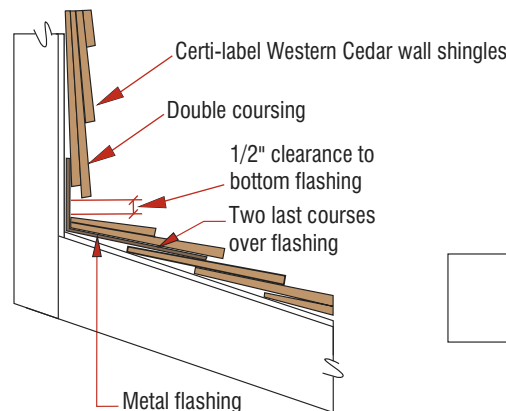


Figure 3a: Flashing

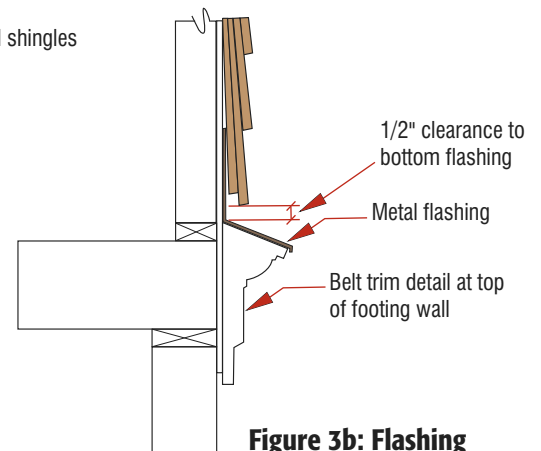


Figure 3b: Flashing

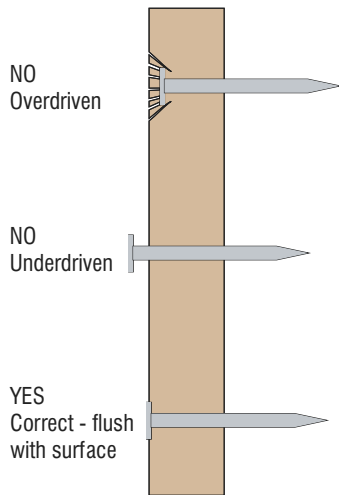


Figure 4: Nail Driving Detail

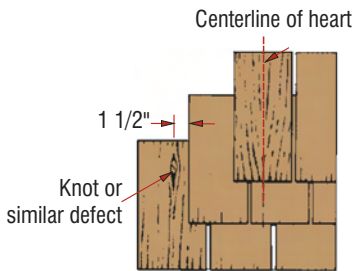


Figure 5: Course Alignment

Nails

Each Certi-label Western Cedar shingle or shake should be applied with two corrosion-resistant fasteners, such as stainless steel (type 304 or 316), hot-dipped zinc coated, or aluminum nails or other fastener as accepted by your local building official. Minimum nail lengths are shown in the fastener chart below. In double course applications, the exposed Certi-label Western Cedar shingle or shake shall be face-nailed with two hot-dipped galvanized or stainless steel casing nails, driven 2" above the butt line, and 3/4" from each edge. Certi-label Western Cedar shingles wider than 10" require 2 additional nails and these two nails are driven approximately 1" apart near the center of the shingle.

Staples

Staples should be aluminum or stainless steel (type 304 or 316) 16 gauge or other fastener as accepted by your local building official. Two staples should be driven per Certi-label Western Cedar shingle or shake with the staple crowns 7/16" minimum horizontal, maximum 3/4" horizontal, to the Certi-label Western Cedar shingle or shake butt. Staples are driven in the same location as nails relative to the sides and overlapping butt line. Certi-label Western Cedar shingles wider than 10" require 2 additional staples and these two staples are driven approximately 1" apart near the center of the shingle.

Fasteners should be long enough to penetrate into the sheathing at least 3/4" or all the way through and driven flush with the surface of the Certi-label Western Cedar shingle or shake. In all applications, staples shall be concealed by the course above. Fasteners cannot be electro-galvanized as they will cause staining. **Nails are preferred, for aesthetic reasons, in sidewall applications using exposed fasteners.**

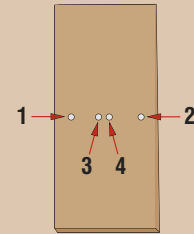
Important Notes:

Underdriving or overdriving any fastener will affect the integrity of the Certi-label Western Cedar sidewall system.

Certi-Guard (fire-retardant-treated) or Certi-Last (preservative-treated) Western Cedar shingles and shakes:

ALWAYS ask the treatment company which fasteners are recommended for use with their pressure-treated Certi-label Western Cedar shingles and shakes. Some fasteners are not compatible with treated material.

The information on this page is not meant for use with sidewall panel applications. Please contact the manufacturer for specific panel fastener details.



Wide Shingle Fastener Detail

Single Course Sidewall Fasteners	
Product Type	Nail Type & Minimum Length
Certigrade, R&R and Sanded Shingles	Type (in)
16" and 18" Shingles	3d Box 1 1/4
24" Shingles	4d Box 1 1/2
Certigroove Shingles	Type (in)
16" and 18" Shingles	3d Box 1 1/4
24" Shingles	4d Box 1 1/2
Certi-Split & Certi-Sawn Shakes	Type (in)
18" Straight-Split Shakes	5d Box 1 3/4
18" and 24" Handsplit Shakes	6d Box 2
24" Tapersplit Shakes	5d Box 1 3/4
18" and 24" Tapersawn Shakes	6d Box 2

Double Course Sidewall Fasteners	
Product Type	Nail Type & Minimum Length
Certigrade, R&R and Sanded Shingles	Type (in)
16", 18" and 24" Shingles	5d Box 1 3/4 or same size casing nails
Certigroove Shingles	Type (in)
16", 18" and 24" Shingles	5d Box 1 3/4
Certi-Split & Certi-Sawn Shakes	Type (in)
18" Straight-Split Shakes	7d Box 2 1/4 or 8d 2 1/2
18" and 24" Handsplit Shakes	7d Box 2 1/4 or 8d 2 1/2
24" Tapersplit Shakes	7d Box 2 1/4 or 8d 2 1/2
18" and 24" Tapersawn Shakes	7d Box 2 1/4 or 8d 2 1/2

Single Coursing

Double the starting course at the base of the wall (Figure 6). Apply with 1/8" to 1/4" keyway space between Certi-label Western Cedar shingles, giving a pronounced individual effect to each course.

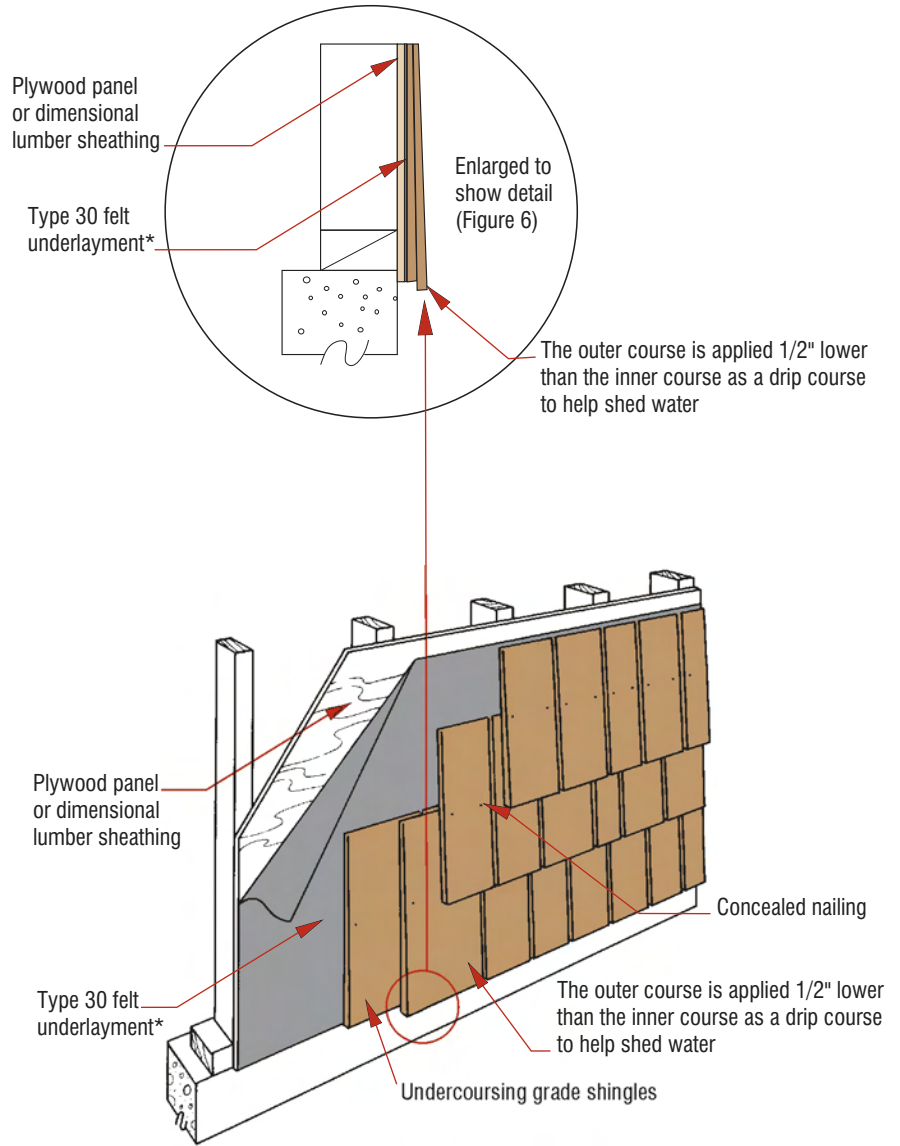
Offset the side joints in any one course at least 1 1/2" over joints in adjacent courses (Figure 2).

Use a straight edge, nailing it lightly to the wall with the edge at the butt line (to keep courses straight and level). Check for level every 3 or 4 courses.

This wall application features concealed nailing (Figure 6), with nails driven approximately 1" above the butt line of the succeeding course. For Certi-label Western Cedar shingles up to 10" wide, place two nails in each shingle 3/4" from each edge. With Certi-label Western Cedar shingles wider than 10", drive two additional nails approximately 1" apart near the center.

Because Certi-label Western Cedar shingles vary in width there should be little waste. At corners, or at door or window frames, you may have to trim a selected Certi-label Western Cedar shingle slightly.

The CSSB recommends installing over plywood panel or dimensional lumber sheathing. If other sheathing materials are approved for use by your local building official, the holding power of the fasteners should also be considered carefully.



*The Cedar Bureau recommends Type 30 felt underlayment and will refer to required underlayment with this description throughout this manual. Check with your local building official for any questions about alternative underlayment materials.

Figure 6: Single Coursing



Architect: Shope Reno Wharton, Photo: Robert Benson

Double Coursing

To obtain an attractive wall characterized by wide weather exposures and deep shadow lines, Certi-label Western Cedar shingles and shakes can be applied double coursed. This method offers economy because of the wide exposures of the outer course and the use of less expensive undercoursing Certi-label Western Cedar shingles for the under layer (Figure 7). For double coursing exposure details refer to the chart on page 12.

In double coursing, the bottom or starter course is laid triple with two undercourse Certi-label Western Cedar shingles or one undercourse Certi-label Western Cedar shingle over a wood lath and then the outer course. This gives the bottom course the same slant as succeeding courses. All outer courses are applied 1/2" lower than the undercourse (Figure 7). A straight edge can be used to facilitate placement and nailing of both the undercourse and exposed course.

Undercourse Certi-label Western Cedar shingles are fastened at the top with one nail or staple in the center. The exposed Certi-label Western Cedar shingle or shake is face-nailed with two casing-type nails, driven approximately 2" above the butt line, 3/4" from each edge. With Certi-label Western Cedar shingles wider than 10" drive two additional nails approximately 1" apart near the center.

The CSSB recommends installing over plywood panel or dimensional lumber sheathing. If other sheathing materials are approved for use by your local building official, the holding power of the fasteners should also be considered carefully.

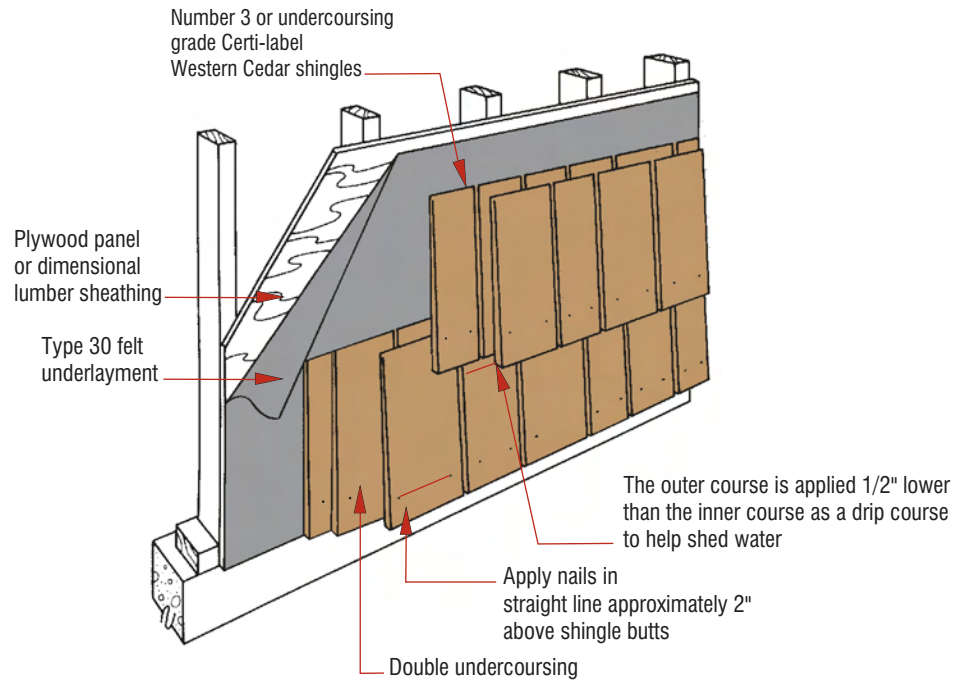


Figure 7: Double Coursing



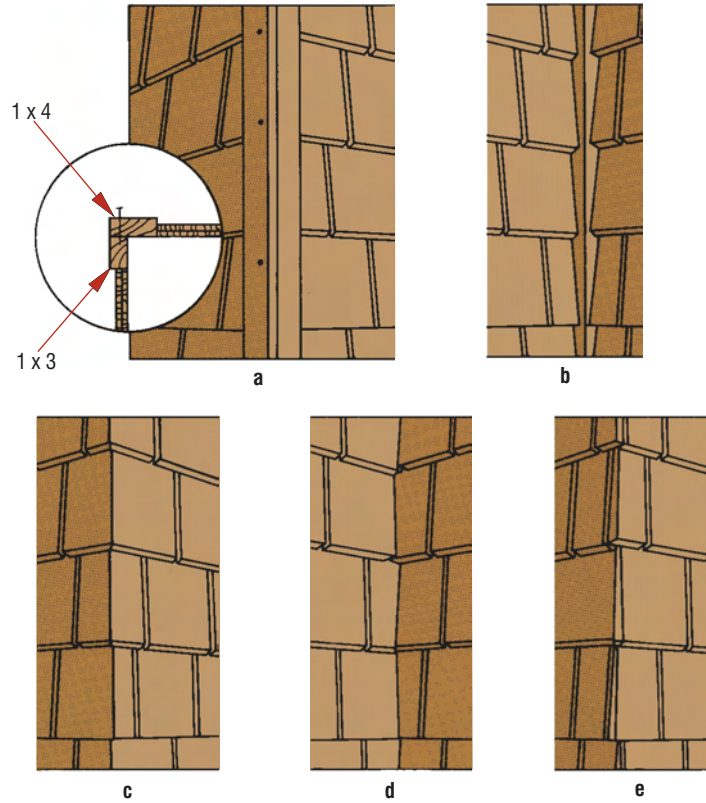
Architect: Tanner and VanDine Architects, Photo: Mark Citret

Corners

Neatly fitting inside or outside corners are easily made. It is standard practice to lace outside corners (Figure 8e). On wide exposures this method requires small nails near the Certi-label Western Cedar shingle butts to tighten and hold the lapped corners. For these corners use only nails that are corrosion resistant. In double course applications, the exposed Certi-label Western Cedar shingle or shake shall be face-nailed with two hot-dipped galvanized or stainless steel casing nails, driven 2" above the butt line, and 3/4" from each edge. Certi-label Western Cedar shingles wider than 10" require 2 additional nails and these two nails are driven approximately 1 inch apart near the center of the shingle. Corner boards also can be used to advantage by nailing a 1 x 4 cedar board to a 1 x 3 cedar board, then attaching the preassembled corner to the building (Figure 8a).

It is good practice to use flashing behind Certi-label Western Cedar shingles or shakes at the inside corners. They may be butted against a square wood strip (Figure 8b), or they may be fitted one course to the other (Figure 8d). When the latter method is used, courses must be completed on each wall progressively, and can be best applied by working from the corners while alternately fitting one course to the other. (Figure 9)

It is preferred practice to install inside/outside corner flashing to safeguard against the cracking or tearing of Type 30 felt underlayment at these corners.



- a) Certi-label Western Cedar shingles butted against corner boards
- b) Certi-label Western Cedar shingles butted against square wood strip, flashing behind
- c) Mitered corner
- d) Laced inside corner with flashing behind inside strip on corner
- e) Alternated laced outside corner

Figure 8: Corner Option Details

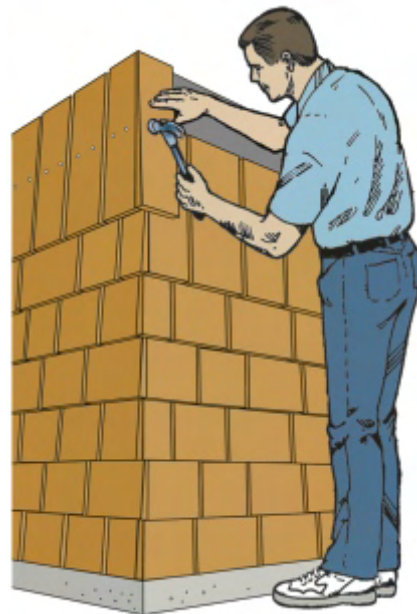


Figure 9: Fitting Laced Corner Courses

Design and Application Instructions

Staggered Butt Coursing

For single course application, an attractive effect can be made by staggering the butt of the Certi-label Western Cedar shingle from the horizontal line. Apply the Certi-label Western Cedar shingle irregularly at variable distances below (but not above) the horizontal line.

Staggered butt applications are made by shortening the exposure less than the greater maximum exposure. No Certi-label Western Cedar shingles or shakes shall be applied greater than the maximum exposure allowed. Check with local building codes for approval of the staggered butt coursing installation method.

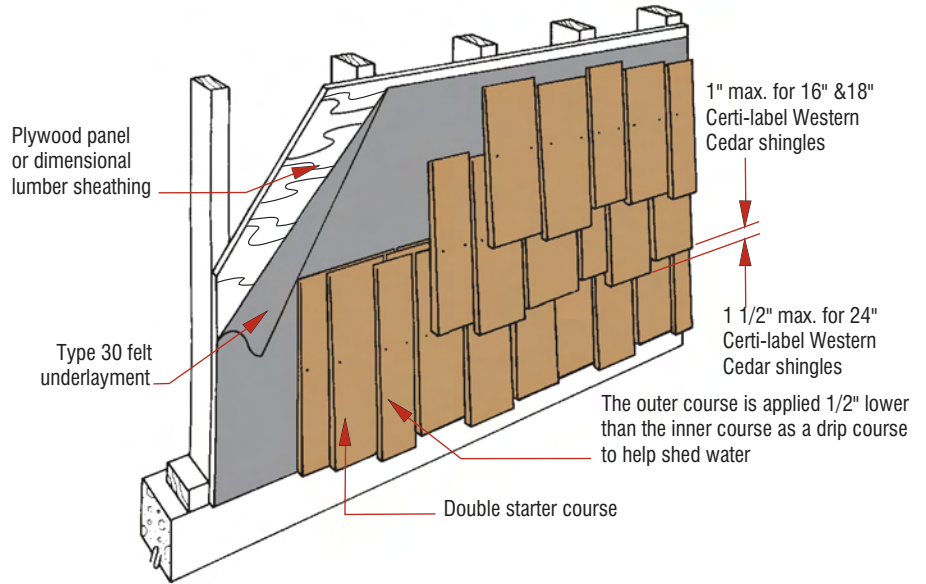


Figure 10: Staggered Coursing



Architect: Alfredo De Vido Associates, Photo: Paul Warchol

Butt nail all double coursed Certi-label Western Cedar shingles that are exposed more than their maximum single course exposure.

Ribbon Coursing

A double shadow line effect can be obtained by raising the outer course Certi-label Western Cedar shingles approximately 1" above the undercoursing. Use Number 1 Grade Certi-label Western Cedar shingles for undercoursing when applying ribbon coursing (Figure 11).

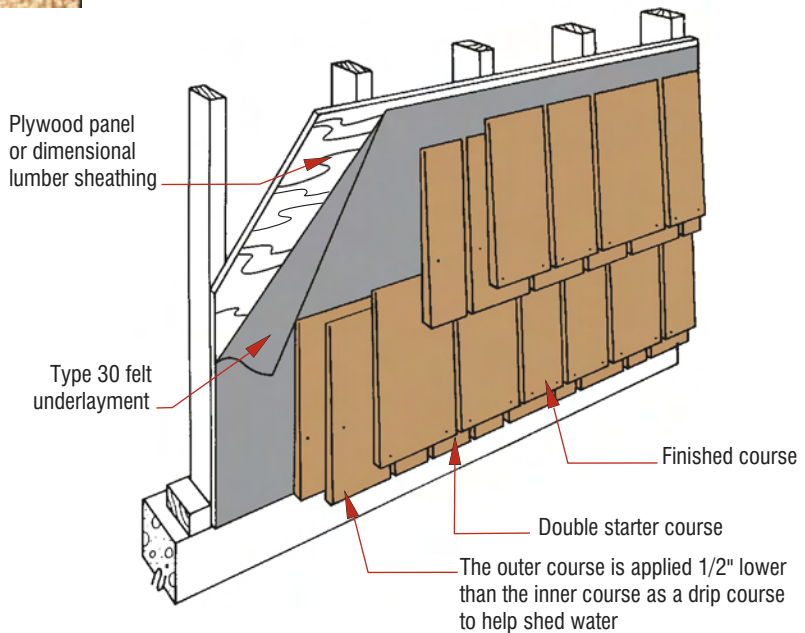


Figure 11: Ribbon Coursing

Design and Application Instructions

Re-walling

Once the old exterior wall material has been removed and the old nails or other protrusions cleaned away, the new wall can be applied. Type 30 felt underlayment should be applied since it is new construction.

Over-walling

Applying Certi-label Western Cedar shingles or shakes right over an old wall - whether wood, brick, stucco, or synthetic products - is easily done. It saves time involved in both removing the old exterior and in disposing of it. However, avoid nailing over vinyl or aluminum as they are not sufficiently strong to provide a proper support.

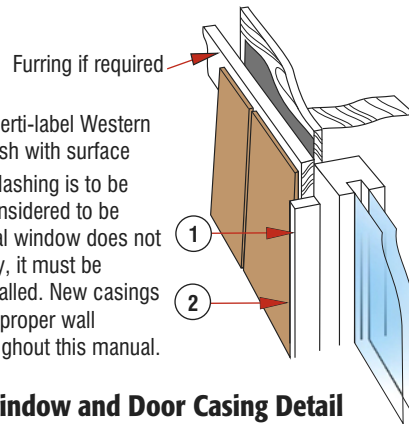
First, nail moulding strips on the face of existing window and door casings, flush with the outer edges. The Certi-label Western Cedar shingles or shakes are then joined to the mouldings (Figure 12).

Over Beveled Siding - Applying a new Certi-label Western Cedar shingle or shake wall over old beveled siding can be accomplished in either of two ways: 1) By filling in the low points of the wall with low grade lumber or plywood strips (called horse feathers) of appropriate thickness and thereby increasing the potential nailing surface, or 2) by nailing the Certi-label Western Cedar shingles or shakes to the high points of the bevels of each course of the old wall, or of alternate courses (provided it does not result in weather exposure greater than is recommended (Figure 13).

Ensure that the first course is properly attached. All Certi-label Western Cedar shingle and shake product installation must meet nailing and exposure guidelines as detailed in this manual. It may be necessary to add occasional nailing strips.

Over Masonry - Masonry walls are easily covered, by vertically furring the walls and applying nailing strips (1 x 3 or 1 x 4) spaced according to the exposure and single/double course product design. The nailing strips should be fastened with special nails, driven between the bricks or blocks, so that the outer shingled wall will be firmly attached (Figure 14).

Over Stucco - Nailing strips should be attached with nails long enough to penetrate the stucco and the underlying sheathing. Do not apply directly to the stucco, which is too weak to provide a proper support. If the old stucco is removed, new Type 30 felt underlayment is then applied to the walls, and the shingling can proceed as in new construction (Figure 15).



1. Apply new casing to bring Certi-label Western Cedar shingles or shakes flush with surface
2. The integrity of the original flashing is to be utilized. Additional trim is considered to be decorative only. If the original window does not have good structural integrity, it must be removed and a new one installed. New casings are to be installed as part of proper wall construction as shown throughout this manual.

Figure 12: Typical Window and Door Casing Detail

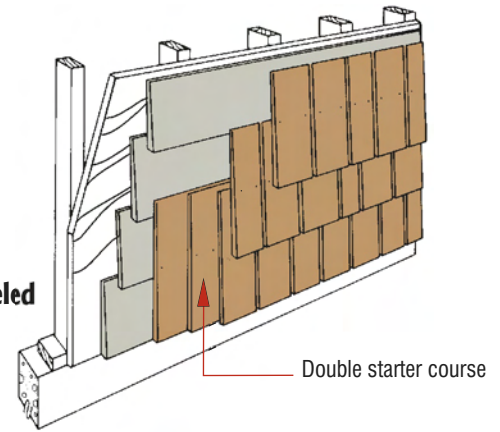


Figure 13: Over Beveled Siding Detail

1 x 3 or 1 x 4 nailing strips spaced according to exposure of Certi-label Western Cedar shingles or shakes, regardless of single or double course. (See pages 6-7)

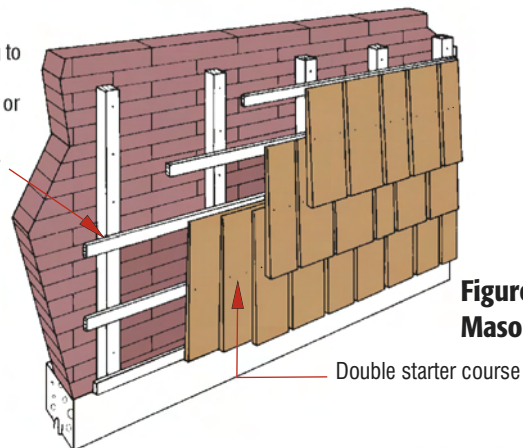


Figure 14: Over Masonry Detail

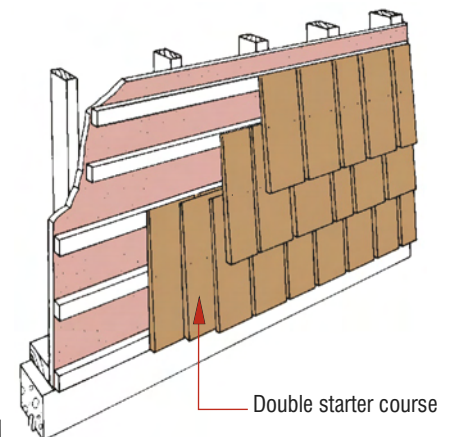


Figure 15: Over Stucco Detail

Design and Application Details

Certi-label Western Cedar shingles or shakes are building materials that adapt easily to many different structural forms. Their use in interiors is practically unlimited, and a wide variety of imaginative effects can be achieved.

Certi-label Western Cedar shingles or shakes can be readily applied over almost any interior wall surface, including wood, brick, plaster, or concrete. Nails, staples, or glue may be used as fasteners on interior wall projects. Certi-label Western Cedar shingles or shakes may be attached directly to the interior wall providing it has sufficient holding qualities to support the fasteners. If this is not the case, they may be applied over spaced furring strips, which are fastened to the wall by nails or glue. As a general rule, the furring strips should be placed a distance apart equal to the desired exposure.

Calculate the number of courses by dividing the wall height (minus the height of the base board, if any) by the desired exposure. Mark the positions of the nailing strips on a furring strip, then transfer these measurements to the wall. Fasten 1" x 2" or 1" x 3" furring strips to the wall (e.g. by nailing them through the wall into the studs) at the positions marked. If the Certi-label Western Cedar shingles or shakes are to be carried around the corner, make sure the furring strips line up (Figure 16).

Start with a double course at the bottom of the wall. Use two nails or staples in each Certi-label Western Cedar shingle or shake placed so that the nail heads will be covered by the next course. The outer layer should overlap and conceal the side joints of the first course (Figure 17).

Continue with single courses to the top of the wall. A straight edge tacked to the wall will keep the courses true and the exposure consistent.

Alternately overlap the Certi-label Western Cedar shingles or shakes on the outside corner to give a "laced" effect, then trim them flush with a block plane (Figure 18).

Cut the Certi-label Western Cedar shingles or shakes for the last course and discard the thin end. Glue or nail the last course in place to make a neat top edge. A moulding strip may be applied to cover nail heads and hide any irregularities in the ceiling (Figure 19).

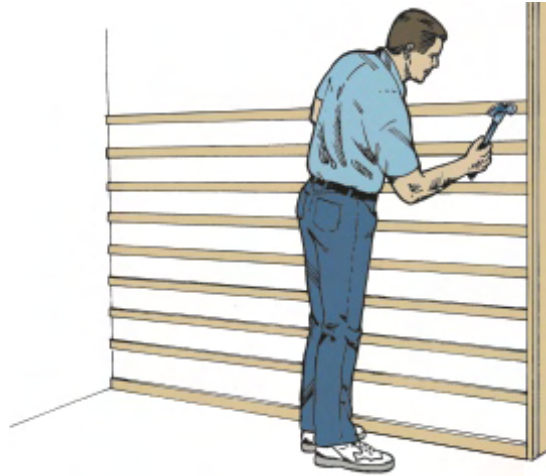


Figure 16: Furring Strip Detail



Figure 17: Starter Course

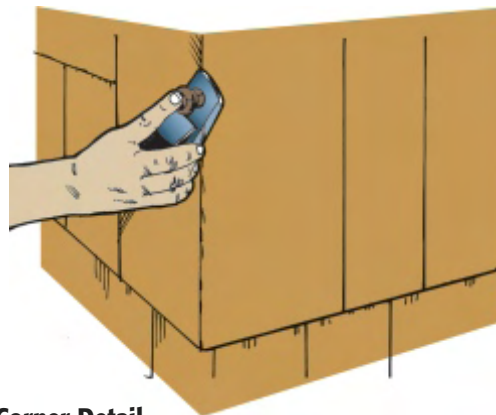


Figure 18: Corner Detail



Figure 19: Top Course

The interior Certi-label Western Cedar shingles or shakes can now be finished to suit almost any taste. Contact a reputable finish manufacturer for more details.