

LAP SIDING

Approved Methods

August 22,2020



This section was compiled by volunteers of Habitat for Humanity to comply with current construction practices, we have used the Internet for the content of some of the contents in this section.

Note to the Reader: Due to differing conditions, tools, and individual skills, the authors of this manual and Charlotte Region Habitat for Humanity assume no responsibility for any damages, losses incurred, deaths, or injuries suffered as a result of following the information published in this manual. Although this manual was created with safety as the foremost concern, every construction site and construction project is different. Accordingly, not all risks and hazards associated with Home building could be anticipated by the authors of this manual and Charlotte Region Habitat for Humanity. Always read and observe all safety precautions provided by any tool or equipment manufacturer, and always follow all accepted safety procedures. Because codes and regulations are subject to change, you should always check with authorities to ensure that your project complies with all local codes and regulations.

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Installing lap siding

Quality Point: Do it right the first time and it won't have to be torn down and redone.

Material:

Lap siding (typically 3/8" thick with 8" width – typically these are 7.84" and 12' or 16' length)

Lap siding trim (typically 1.25" thick by 4" and 16' length; 1.25" thick by 6" and 16' length)

Caulk

2.5" or 3" galvanized roofing nails

Aluminum for flashing

High-quality exterior acrylic latex paint

Tools:

Hammer

Levels (4', 2')

Miter saw

Chalk line

Circular saw

Table saw

Smart Square

Caulk and caulk gun



Siding preparation and installation:

Apply siding over properly prepared walls with maximum stud spacing of 16 inches on center.

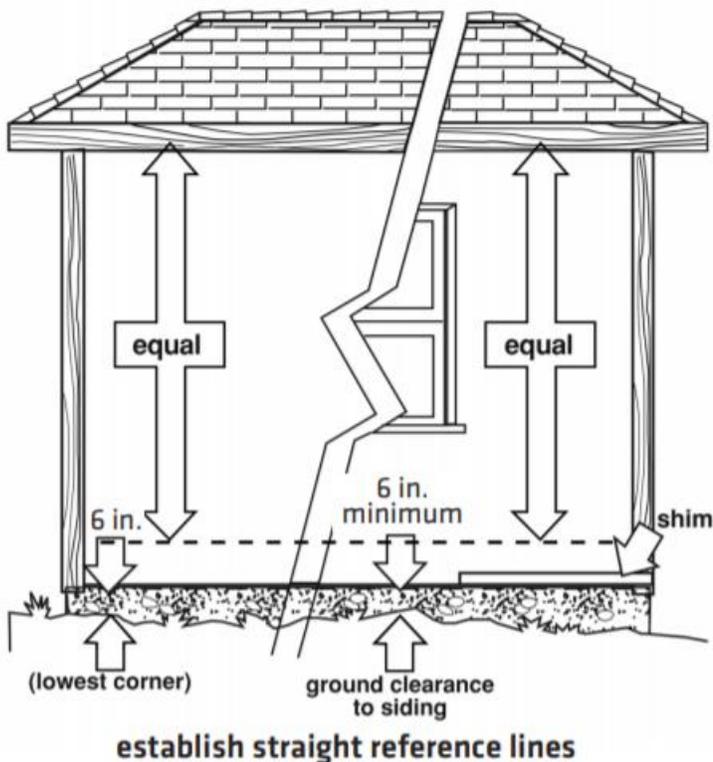
Exterior walls are covered with OSB panels and a rigid .5" blue foam board. Foam board is tape sealed at all seams.

If possible be sure to mark the center point locations of the interior studs on the blue foam board.

The key element in a successful siding installation is:

- Establishing a straight reference line upon which to start the first course of siding. Use a water level to establish a straight line around the perimeter off the house. Another procedure is to measure equal distances downward from the eaves and/or windows. This ensures that the siding appears parallel with the eaves, soffit, and windows, regardless of any actual setting of the house from true level.

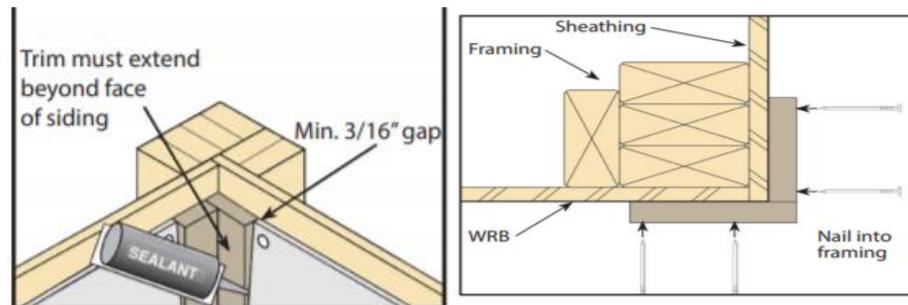
- Install all the trim (outside and inside corners, window and door casing, dryer vent, outlet, faucet water lines, F-channel and trim under F-channel, box-returns). See below for illustrations and photo of what proper trim installation looks like.
- A quality factor is that gaps between siding pieces have the correct gap, neither too small or too large. Check with thickness of speed square. Also, usually one outside wall will be ahead of the adjacent side. Take care to match up courses visually around corners. This should happen automatically if lines are snapped correctly but it's amazing how many times this will get messed up.
- **DO NOT OVERDRIVE NAILS.** Nail heads should seat firmly to the face of the siding, but not overdriven to distort the siding surface. Shim as needed to avoid drawing siding against uneven walls.
- To allow for expansion and contraction between the siding seams and where the siding butt against trim – leave a 3/16 “ gap – this will be caulked at post install time. Use the thin part of your metal smart square as the gap gauge (be sure to measure the smart square thickness and that it is 3/16”).
- Penetrate structural framing or wood structural panels and structural framing a minimum of 1-1/2 in.
- Use hot-dipped galvanized nails with a minimum 0.270 in diameter head and 0.113 in shank diameter.



Trim for inside and outside corners, windows, doors, fixtures:

Before installing the lap siding, prepare and install all the trim.

On the wall being sided, cut and nail all outside and inside corner trim, windows and door casing trim, as well as any protruding items such as dryer vent, water line for exterior faucets, exterior outlets. Use the short width trim (usually 4") stock for the window trim; for the outside corners, use the wider trim (usually 6") for the front and rear facing sides and the short trim stock (usually 4") for the adjacent side of the corner. The wider trim overlays the short width trim so when looking at from the street you do not see the seam. Nails should be staggered and no more than 24" apart, To avoid trim splitting, do not nail into the adjacent trim unless you pre-drill the holes. See illustrations below.



✓



**LP® SmartSide® 1-1/4 x 6
x 16' Textured Strand Trim
Board**



**LP® SmartSide® 1-1/4 x 4
x 16' Textured Strand Trim
Board**

The bottom of the outside corners trim should extend 1.5" below the top of the cement blocks.

The top of the outside corner trim should not butt against the F-Channel – leave a gap of about 1/8" which can be caulked. The F-Channel allows for the vented soffit installation.

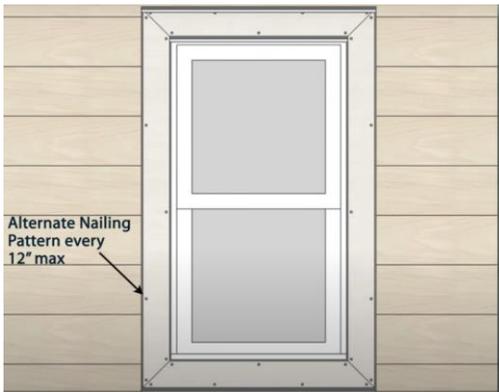
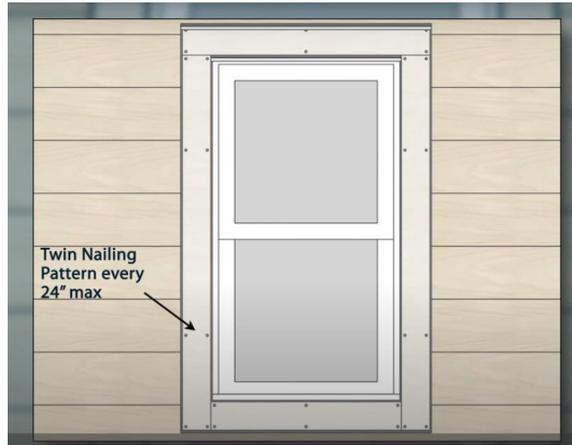
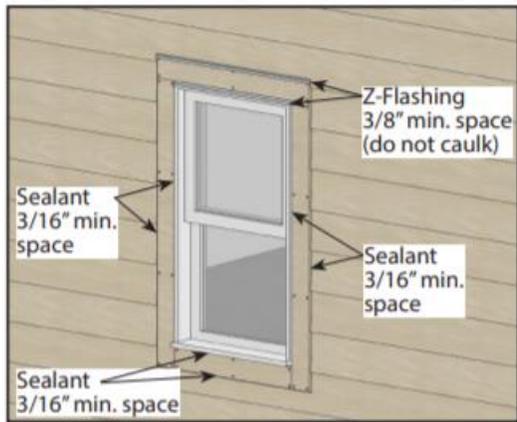
The topmost siding board is "ripped" along its length (its width is shortened) so that it butts up against the trim butting the F-channel supporting the soffit. Leave a gap of about 1/8" which can be caulked.

Siding installed onto gable ends is cut at the angle of the roof pitch where the wall meets the rake or the fascia. For accuracy, measure the dimensions of each board when making angled cuts. Do this by measuring along the bottom edge of the board to the long point, and along the top edge to the short point

Do not install lap siding directly over where it will come in contact with masonry (concrete, bricks). Install 4" wide trim over a 4" water sealer flashing (aluminum). Nail an aluminum z-flashing over the top of this trim and install the lap siding over this flashing (be sure to leave a 3/16" gap and do not caulk this gap).

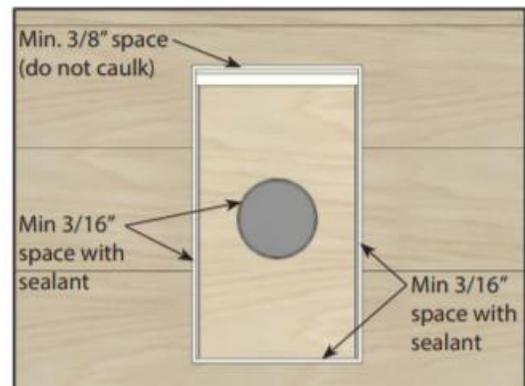
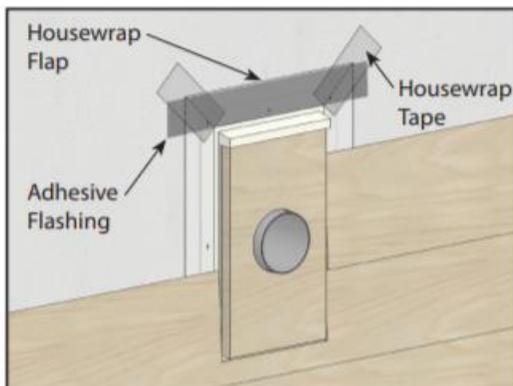
Install the vinyl F-Channel for the soffit on the eave side of the roof and on the gable side of the roof. Then install a 2" wide trim (ripped from a 4" wide trim) under the F-Channel so that the last siding plank butts against this trim (less 1/8" from the F-Channel so that it can be caulked). The nails on the last siding plank will be exposed and will need caulked before painting.

Below are illustrations of how to prepare the windows with trim



Any exterior wall openings for vents, outlets, light fixture need to be prepared with the technique shown below in the illustrations using the 6" trim boards to create the mounting blocks (if none are available):

- a. Be sure to flash the top of the mounting block with z aluminum flashing.



The first row:

Siding is typically 8" in width (typically 7.84"). The top of the first row of siding should be marked on the one end of the wall so that the bottom extends 3/4" below the top of the cement block foundation. Now, at the other corner, mark a point equal to the distance down from the eaves to the starting mark. Use of a water line level is also an option to set the level line for the top of the first row for the other end. Snap chalk lines between these marks.

As a guide, mark each end of the wall (on the trim boards) where the top of the siding will reside. These guide lines will be marked as follows:

- The first row is marked 7 and 1/8" (for an 8" lap siding width) above the top cement block. This will give you the 3/4" for the first row to have an over hang over the blocks.
- The second and succeeding rows are marked at 6.5". This will give you a 1 and 3/8" overlap over the top of each of the lower panels. Snap chalk lines between these points to help you with the installation of multiple rows of siding.

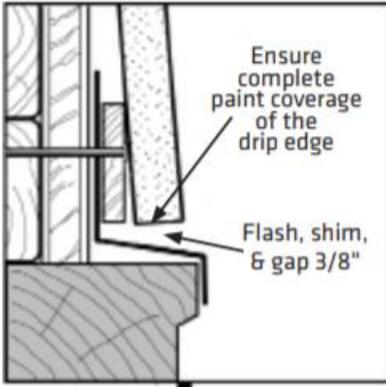
As you get further up the wall it will be more difficult to see these guide lines. At this point measure down from the top of course already installed 1 3/8" on each end and snap a line on that course. (or 6.5" from bottom of that course). This will be the bottom of next course. Continue this process from this point on.

Measure the length of the wall. On a long wall, multiple siding planks will be used, make sure to not leave any end planks smaller than 4' at the end. If necessary, shorten the first full plank so that the end plank is 2-3' or longer.

With a helper place the first lap siding with the bottom of the first row 3/4" below the top of the cement blocks.

- Place nails for the first row 3/4" from the top of the siding. This nailing pattern is repeated on each row. See illustration below. This nail head will be covered by the overlap of the next row. Nails should be placed to catch the studs of the interior wall and every 16".
- Nail from one end to the other end. NEVER nail from the ends of the siding toward the middle.
- As you nail, check with a level to make sure the row is level.
- Be sure to leave a 3/16" gap (thickness of a speed square) where the siding meets the outside or inside corner (this will be caulked sealed when the siding is fully installed) as well as any casing around windows and doors.
- The second row overlaps the top of the first row by 1 and 3/8"
- Use drip cap flashing above all openings (windows, door) to ensure a weathertight installation.

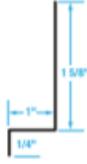
Over Openings



DRIP CAP

Directs water away from the structure above doors and windows.

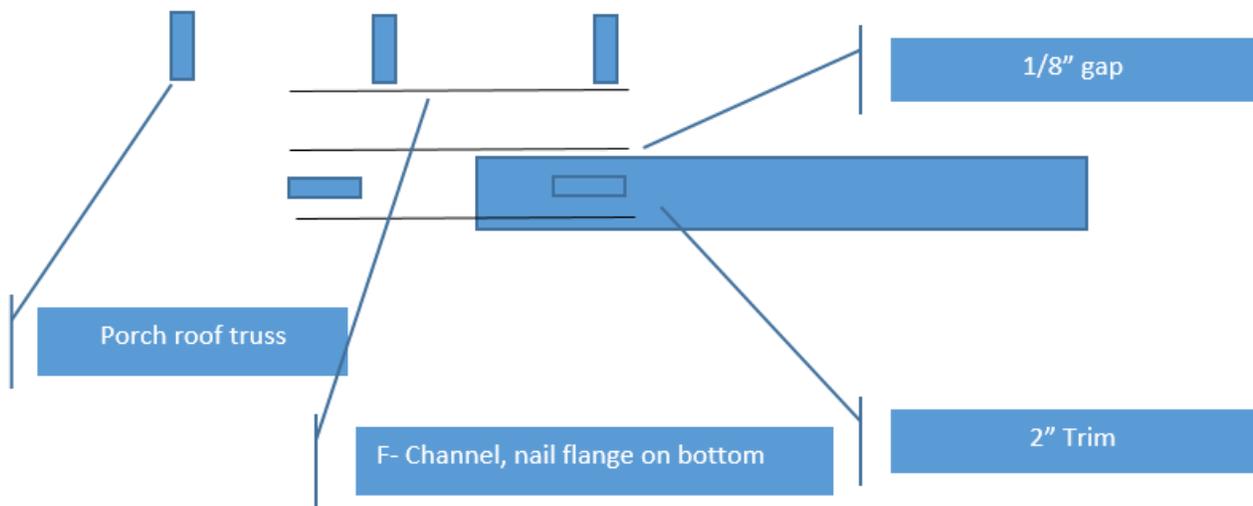
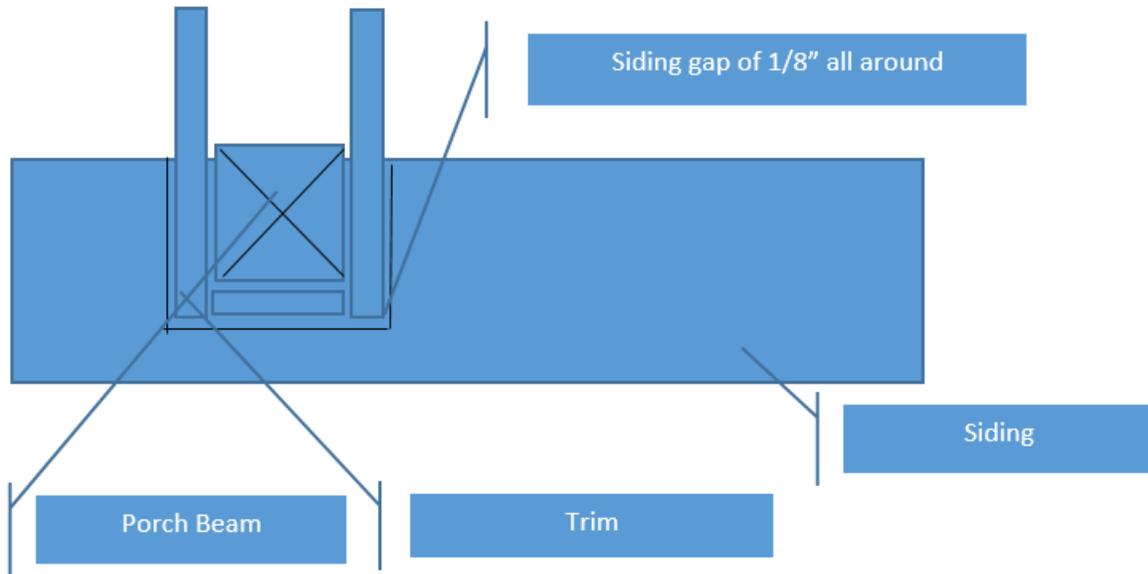
Installs at the top of trim boards to protect against moisture intrusion.



Porch, porch beam and porch roof:

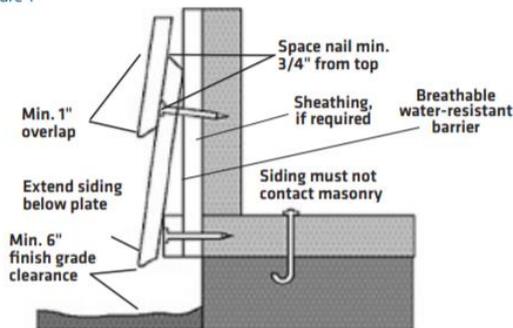
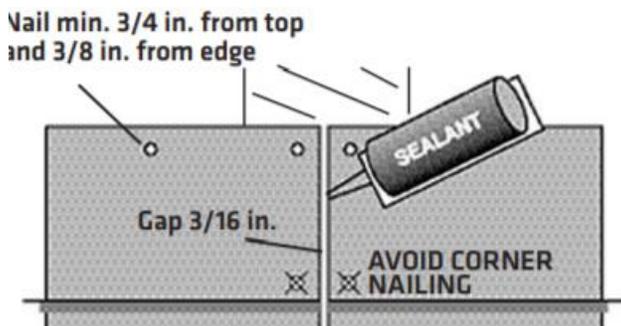
Rip a 4" trim in half down the length of the trim. The cuts needs to be straight so use a fence if cutting with a circular saw.

On gable ends place the ripped trim under F channel. We use same rips to trim corners on porch beam and around beam (under beam and up outside corner with house). Lap siding on porch beam finished edge should be 1/8" below bottom of beam and should line up with courses on house. First and second course may have to be ripped to line up and bump out of second course. See illustrations below.



OVERLAP, CLEARANCE & NAILING SPACE

Figure 1



Where siding butts against window and door trim and at wood inside and outside corners, leave a 3/16 in gap and seal with caulk.

Post installation:

Seal all gaps with a high-quality, non-hardening, paintable sealant. Follow the sealant manufacturer's instructions for application.

Prime and paint all exposed surfaces including all drip edges or where water will hang.

Apply finish coat as soon as possible or within 180 days of application.

High-quality exterior grade acrylic latex paint, specially formulated for use on wood and engineered wood substrates, is highly recommended. Semi-gloss or satin finish.

All openings must be properly sealed or flashed in a manner that prevents moisture intrusion or buildup. This includes windows, doors, exterior dryer vent, exterior electrical outlets, exterior lights fixtures, exterior water spouts.

Below are photos of lap siding on homes that Habitat has completed.





Notice how inside corner is lowered when there is a lower brick wall intersecting a higher brick wall. All siding line up. Notice how porch roof siding on gable end is installed.



Notice how siding is installed around windows, around exterior front door, over cement based front porch.

