

Chapter 20. Exterior Finish Work

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Tools needed by volunteers:

Hammer
Nail apron
Tape measure
Square
Pencil

Materials needed:

Toe kick
3" Drywall screws
16d Galvanized casing nails
1¼" Hard finish nails
Tapcon® screws
OSB scrap
Caulk
Shims
[4x4 Treated lumber](#)
[4x4 Post stake](#)
[Mailbox kit](#)
House numbers
[Mailbox numbers \(if curbside mailbox\)](#)

Tools and equipment needed:

Extension cords
Chop saw
Drill driver
Caulk gun
[Sledge hammer](#)
[2' Level](#)

Personal Protection Equipment:

Safety glasses (required)

Reference Materials:

House Plan

Safety First! Review the Safety Checklist before performing tasks in this chapter.

20.1. INSTALLING STORM DOORS

1. Review the House Plan to determine door swing.
2. Check the picture on each door label. If one has more aesthetic features, install it on the front door.
3. Confirm there are five casing nails through the brickmold into the Jack wall studs on each side of the exterior door.

NOTE: The weight of the storm door assembly can cause the brickmold of the exterior door to pull away.

4. Lay the packaged storm door on saw horses with the inside of the door facing up. Cut around the perimeter of the box and remove the door from the box. Check the door for damage and that all parts are present. (Save the box for later use as a carpet cover.)
5. Measure the opening between brickmold at top, middle, and bottom of the door. Average the three values.
6. Refer to the Larsen Door instruction step 1 to determine if shims will be required to match the door to this separation.
7. If necessary, cut 8 pieces of $\frac{3}{4}$ " x 48" underlayment for use as shims between the storm door frame and the brickmold to close this separation.
8. To begin, install shims on the hinge side with trim nails. Make sure the shims are flush with the outside of the brickmold so they are not visible from inside after the storm door is installed. Hold remaining shim material for possible use on the strike side.
9. Carefully follow steps 2 through 4c in the Larsen Door instructions. Temporarily tack or hold the strike side rail in place on the strike side, close the door carefully, and determine the need for shims on the strike side of the door. If needed, install shims with trim nails.

NOTE: If the $\frac{1}{4}$ " strips are too thick, or not thick enough, rip $\frac{3}{4}$ " wide strips of the desired thickness from the edge of a pine board.

10. Follow the remaining Larsen Door instructions.
11. Install the wind chain by attaching the head jamb chain bracket 19" from the storm door hinge side jamb and the storm door chain bracket 18" from the storm door hinge side jamb (see Figure 20-1; note the orientation of the brackets). Use a small duplex nail located 3" from the hinge side jamb to attach the wind spring (this dimension can be adjusted to ensure the chains are "taut" and stay above the top edge of the upper window thereby concealing the chain from the exterior when the storm door is closed). If a wind chain is not provided by Larsen, check the trailer for one and follow the directions included.



Figure 20-1. Storm Door Wind Chain.

20.2. INSTALLING TOE KICK BOARD

20.2.1. Background

1. The purpose of this installation is to (1) support the door threshold and (2) to trim out the area under the door. The standard exterior door threshold overhang measures 2" ($\pm 1/4$ ", depending on the door install) from foamboard to the outside edge of door threshold. This installation assumes the 1" foamboard is in place over the rim board and behind the concrete porch (if not, install and caulk all seams thoroughly).

20.2.2. Install Filler Piece

1. Ideally, use a $3/4$ " piece of OSB decking material (preferred) or two layers of $1/2$ " OSB.
2. Measure the length from outside to outside of the brickmold and subtract 2". Measure the width (height) from the top of the concrete to the bottom of the brickmold and subtract 1". Cut the OSB to these dimensions.

NOTE: It is very important to keep this OSB a minimum of 1" off the concrete so it doesn't absorb moisture and swell or decay.

3. Install the OSB tight to the underside of the threshold (for proper support) using eight 3” drywall screws evenly spaced across the top and bottom of the OSB.

20.2.3. Install Toe Kick Trim

1. Measure the length from outside to outside of the brickmold. Cut the toe kick board material to that length.
2. Measure the width (height) from the top of the concrete to the bottom of the brickmold (checking both ends for any variation in dimensions). Subtract 1/8” from the measurement at each end and, on the grain-finished face of the board, mark and connect the points. Cut the board to this width, tapering the cut as required. This reduced dimension allows the toe kick to be positioned with a 1/8” gap at the bottom so it is easier to install and not tight to the concrete.
3. Install the toe kick with the GRAIN-FINISHED FACE OUT using six 16d galvanized casing nails. Nail through the area where the OSB is located, remembering that the OSB is 1” up from the concrete and 1” short on each end.
4. Set nails slightly and caulk the bottom edge along the concrete with CLEAR caulk to keep water from getting behind the toe kick. Also, lay a small bead of caulk along each of the ends where they abut the siding J-channel in order to prevent water from getting in from the side.

20.3. INSTALLING PORCH RAILS

1. Separate porch rail components from the stretch wrap and arrange them into groups according to where they will be installed. Verify that the number of spindles equals the number of holes in the bottom set of porch rails, and that the rail lengths are correct for each side.
2. Install the front bottom railing by first placing a short piece of 2x4 spacer next to each post with their 3 1/2” faces positioned vertically. Slide attachment sleeves onto each end of the railing and place the railing on the spacer blocks. The porch concrete may be pitched, so step away from the porch and, by sight, check that the bottom rail is aligned with the siding. Shim on top of the 2x4 spacers as required.
3. With the sleeve centered on the post, drill pilot holes and attach each sleeve to the porch post using four long, white-headed, square drive screws provided in the railing kit.
4. Insert the spindles along the length of the railing.
5. Slide attachment sleeves onto each end of the top railing. Position the top railing so each spindle slides completely into the corresponding slot on the railing. Confirm the top railing is parallel to the siding by sighting from in front of the house. Then, repeat Step 3 to anchor the top railing to the porch post.

6. Install one bottom side railing by first placing one short piece of 2x4 spacer (3½” face positioned vertically) next to the front post. Place two short pieces of 2x4 spacers (1½” faces positioned vertically) next to the siding. Slide attachment sleeves onto each end of the railing and place the railing on the spacer blocks.
7. Using shims, adjust the height of the railing next to the house siding until it is level. If there is siding on the opposite end, sight along the bottom rail to verify it aligns with the siding. Verify that the railing is parallel to the edge of the porch concrete. Then, attach the rear sleeve to the house using four long, white-headed, square drive screws provided in the railing kit. Do not drive screws so tight as to distort the vinyl siding.
8. Drill pilot holes and attach the front sleeve to the porch post using four long, white-headed, square drive screws provided in the railing kit.
9. Insert the spindles along the length of the railing.
10. Slide attachment sleeves onto each end of the top railing. Position the top railing so each spindle slides completely into the corresponding slot on the railing. Confirm the railing is level. Then, attach the railing sleeves to the porch post and the house using four long, white-headed, square drive screws provided in the railing kit.
11. Repeat Steps 6-10 for the railing on the other side of the porch.
12. If the kit contains plugs, install the plugs over each screw. Match the mark on the plug to the mark on the collar.

20.4. INSTALLING HOUSE NUMBERS

1. Verify the house number from the elevation page of the House Plan.
2. Install house numbers on one of the two porch posts forming the entrance to the porch. Arrange the numbers so they are equally staggered vertically and horizontally on the post.
3. Install the first digit so that its top edge is 12” below the soffit of the porch. Install additional numbers below the first about 1” apart.
4. For each nail hole on the number, drill a pilot hole through the vinyl sheath of the post. Attach the number to the post using 1¼” hard finish nails.
5. Repeat for each of the remaining numbers.

20.5. INSTALLING MAILBOX

20.5.1. Installing House Mailbox

1. If the mailbox is being attached to the siding, first determine on which side of the front exterior door the mailbox will be installed. (Typically, on the latch side of the storm door. If insufficient room, there should be blocking on the opposite side.) Position the mailbox so its topmost edge is slightly above the siding buttlock roughly 48" above the concrete porch. Mark the mailbox attachment points on the siding. At each mark, drive a 2½" screw through the vinyl siding into the OSB behind the siding. Hang the mailbox on the screws and tighten them.
2. If the mailbox is being installed on the porch rail, be sure to position it near the front of the porch so it doesn't interfere with the opening of the storm door (and is convenient for the USPS to deliver the mail). Position the mailbox so its topmost edge is flush with the top of the porch rail. Mark the mailbox attachment points on the vertical edge of the porch rail. Drill pilot holes into the railing and attach the mailbox (if available, use the self-threading screws used to assemble the railing).

20.5.2. Installing Curbside Mailbox

1. Proper mailbox placement is important for city crews as well as postal carriers. Snowplows, street sweepers and garbage trucks can damage mailboxes that extend over the road. Postal regulations state the mailbox (presumably the mailbox door) must be no more than 6-8" away from curb/street and the opening 41-45" above the surface of the road.
2. Cut a 36" length from a 48" piece of 4x4 treated lumber.
3. Insert the 12" drop from Step 2 into the sleeve of the 4x4 post stake. Position the post stake centered 24" back from the pavement or curb (street side). While checking for plumb, drive the post stake into the ground until the bottom of the 4x4 area of the post stake hits the ground.

NOTE: Using the scrap piece of 4x material protects the post stake from damage when driving it into the ground.

4. Remove the scrap piece of 4x4 and insert the 36" post cut in Step 2 into the sleeve of the stake. Tighten the clamp mechanism to secure the post to the stake, making sure the post is plumb, using shims if necessary (see Figure 20-2).



Figure 20-2. Installation of Mailbox Post.

5. Install mailbox per manufacturer's instructions.
6. Apply self-adhesive mailbox numbers to both sides of the mailbox. Install numbers with no gaps between them, horizontally positioned to reach the back of the mailbox, and vertically centered on the smooth surface of the mailbox side (see Figure 20-3).



Figure 20-3. Curbside Mailbox.

20.6. AIR SEALING EXTERIOR PENETRATIONS

1. Check all exterior penetrations, including water heater exhaust, furnace intake and exhaust, gas line, and sump pump. Completely seal any gaps with clear silicone caulk.