Best Barns

Assembly Book

revised July 28, 2021

the Elm R 10' x 12'

Manufactured by Reynolds Building Systems, Inc.
205 Arlington Drive - Greenville, PA 16125

IMPORTANT INFORMATION - Read This First

Thank you for your purchase. I want you to be completely satisfied with your building. The 2x4s are imported from Europe because they grade lumber four sides. If you are dissatisfied with lumber you receive we will replace it.

Read the instructions before starting the assembly of the building. If you have any questions about assembling the kit, call 800-245-1577. Business hours (8:00-5:00 ET) Monday thru Friday. After business hours call 724-866-HELP (4357).

The material that is included in our kit is listed on the back page. The optional floor package, if purchased, will be supplied by a local lumber supplier. This will be a separate delivery.

Our kit does not include shingles, the quantity needed is listed on the back page. The siding is primed. You will need to apply a finish coat using latex acrylic paint.

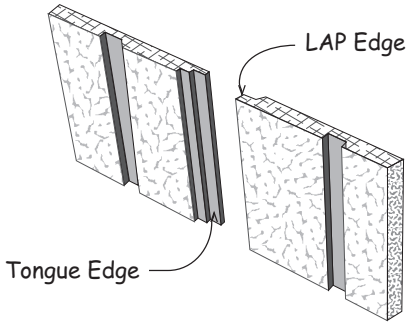
Some of the framing lumber was used in the shipping pallet. Unpack the material from the pallets, then unscrew the top 2x4s. The bit for the screws is packed in the hardware bag. The 2x4s will be used for wall bracing and tie plates.

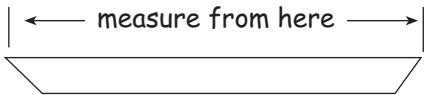
Most buildings are installed on a wood floor and the siding was designed to extend over the wood flooring. If the foundation is a concrete floor cut the siding flush with the bottom of the wall plate to prevent the concrete from contacting the siding.

Before building, obtain a building permit and check all pertinent building code regulations.

The siding is made in 4x8 sheets with grooves cut into the face, the long edge is beveled so that the siding overlays where they butt.

To identify which edge we want you to use, we will refer to the edge as either the 'LAP' Edge or the Tongue Edge. Nail siding with 6d galv. nails, spaced 12" apart.





When measurements are given for a board length, it is from the longest side.

Tool List

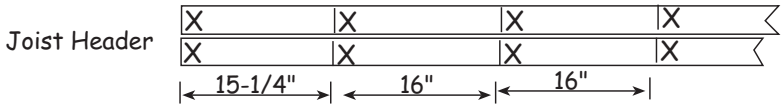
- ❑ Hammer & Phillips Screwdriver
- ❑ Framing Square & Level
- ❑ Hand Saw
- ❑ Power Drill/Screwdriver
- ❑ Measuring Tape
- ❑ 2-6' Step Ladders

Always wear safety glasses when cutting or nailing!

Construction Details for Optional Floor System

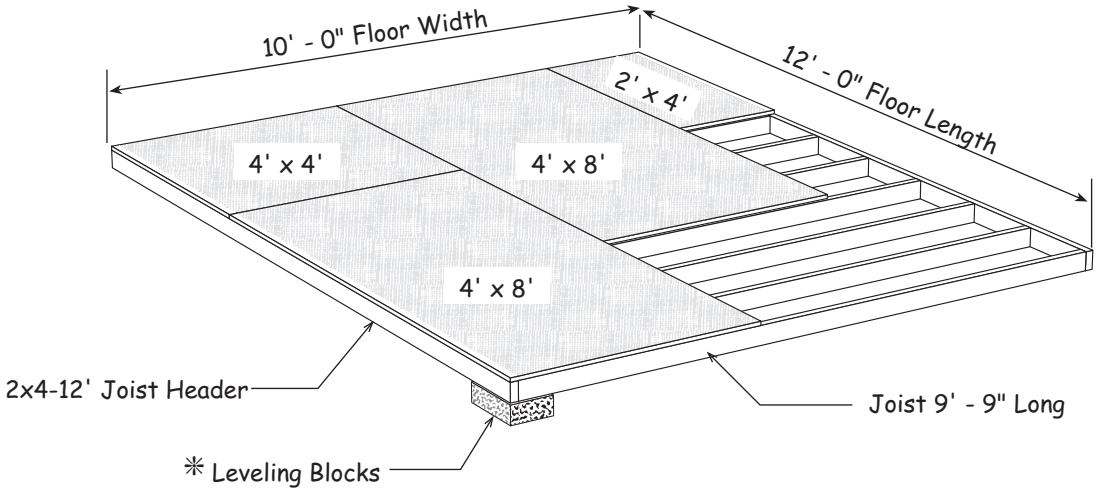
Check local building codes in your area, the construction may have to change. For a concrete slab, install sill sealer as a moisture barrier between the concrete and the wall plates. Foam sill sealer can be purchased at home centers in rolls 3-1/2" or wider.

1. Treated lumber is not cut to exact length. Cut (2) two 2x4-12' boards to 12'-0". Layout for 16" on center joist spacing. 'X' marks where floor joist will be placed.



2. Cut (10) ten 2x4-10' floor joist to 9'-9". *Treated lumber may be thicker than 1-1/2". Take this into account when cutting the length of floor joists. Shorten joist measurements if necessary to obtain 12'-0" building width.*

3. Install the floor joist, *over the 'X' marks*, between the 12' long joist headers. Use 16d galv. deck nails.



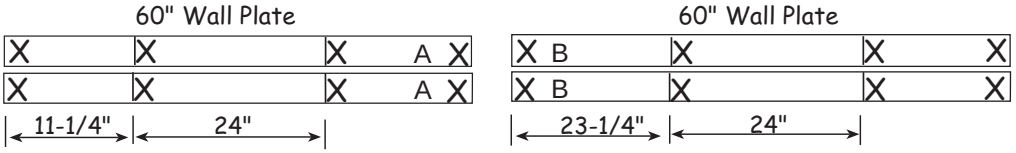
✳ *If necessary use bricks, patio stones or similar material to level or provide additional support to the floor. If your ground has low areas consider adding gravel and or 4x4 treated timbers to rest the floor on. If you use 4x4 timbers you will need (3) three pieces 12' long.*

It is important that the floor be level and square. Before nailing the flooring, measure the floor diagonally (corner to corner). Then measure the opposite corners. These measurements will be the same if the floor is square (187-1/2").

Material Description	**10' x 12' Floor**
2x4 Treated Headers	2 pcs. 12'
2x4 Treated Floor Joist	10 pcs. 10'
Flooring 5/8" 4x8	4 pcs. 4x8
8d Screw Floor Nails	1 lb. 8d
16d Galv. Box Nails	1 lb. 16d

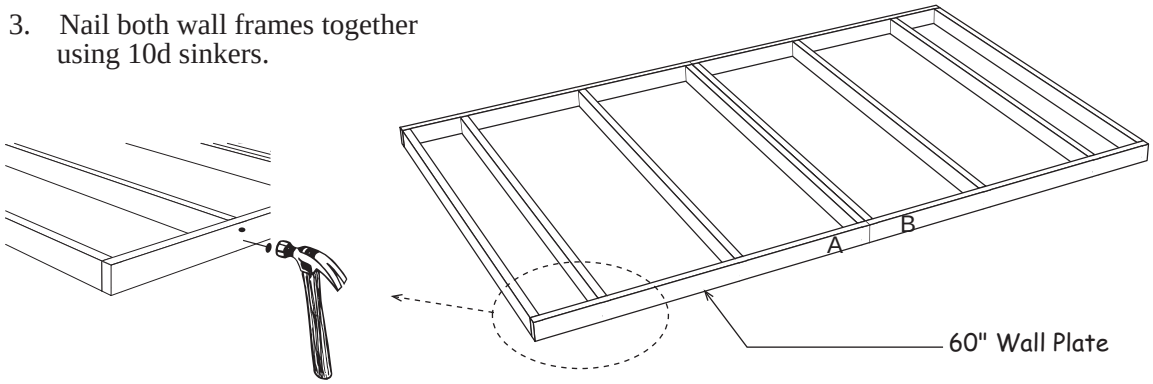
Step 1 Assemble Back Wall

1. Position (4) four 60" boards together and indicate with 'X' marks, where the wall studs will be located. Mark the ends that will butt together with the letters 'A' and 'B'.



2. Install 72" wall studs between the top and bottom plates. Assemble wall frames with 10d sinkers. Use (2) two nails at end of each wall stud.

3. Nail both wall frames together using 10d sinkers.

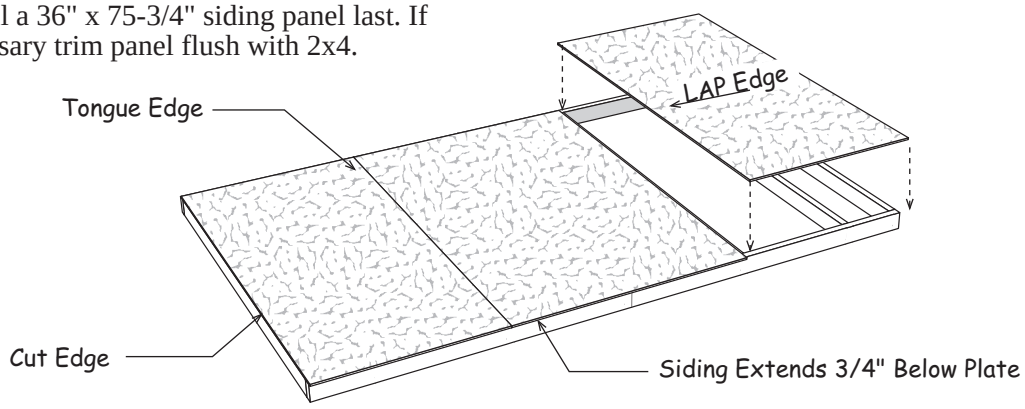


4. Square frame, *measure diagonally (corner to corner).* The measurement should be 141-1/2".

5. Select a 36-3/4" wide siding panel with a 'tongue' edge. Install this panel with the 'Cut' edge flush with the end of the wall frame. Install siding flush with the 2x4 top plate. Use 6d galv. nails spaced 12" on center.

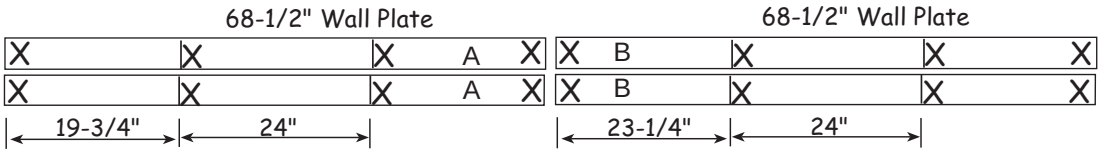
6. Install a full width x 75-3/4" long siding panel next.

7. Install a 36" x 75-3/4" siding panel last. If necessary trim panel flush with 2x4.

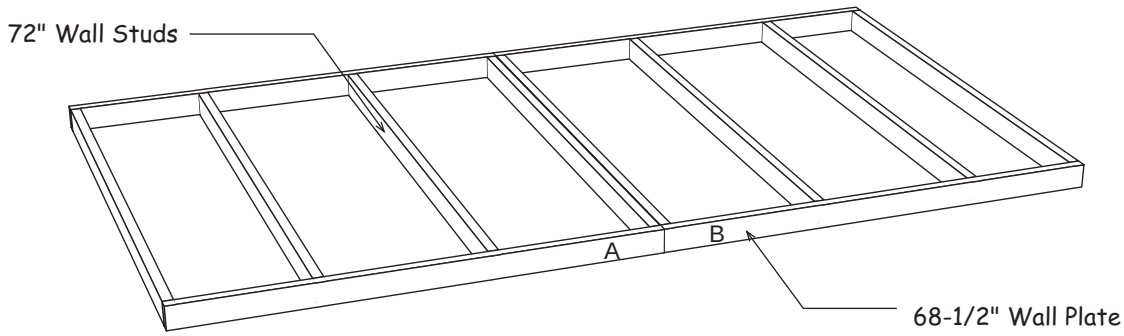


Step 2 Assemble Side Walls

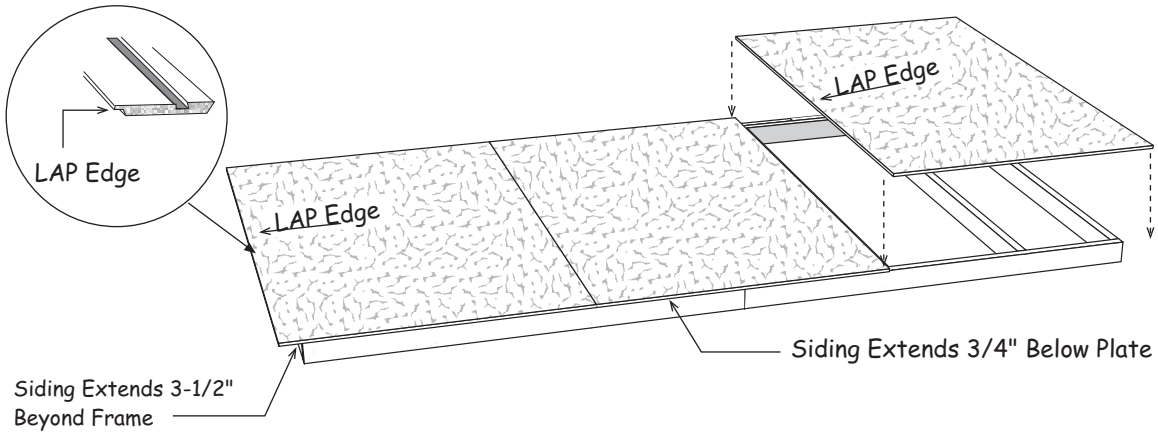
1. Position (4) four 68-1/2" boards together and indicate with 'X' marks, where the wall studs will be located. Mark the ends that will butt together with the letters 'A' and 'B'.



2. Install 72" wall studs between the top and bottom plates. Assemble wall frames with 10d sinkers. Nail both wall frames together.



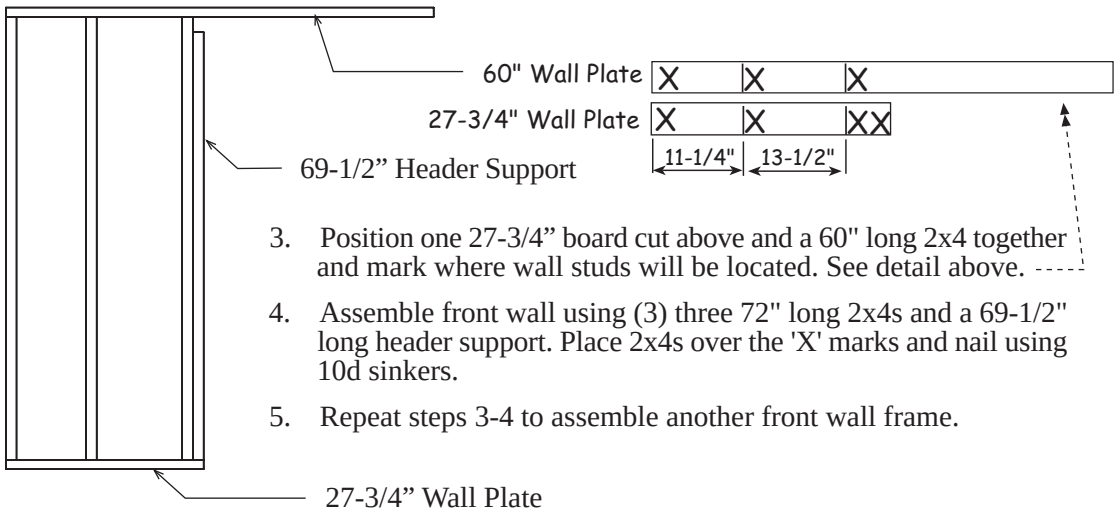
3. Square wall frame. The measurement should be 156-1/4". Install (3) three full width siding panels. Install the first siding panel with the 'LAP' edge extending 3-1/2" past the end of the wall frame. The last panel should extend 3-1/2" past frame. The siding should extend 3/4" below the bottom plate and flush with the top plate.



4. Repeat to assemble another sidewall panel.

Step 3 Assemble Front Wall Frames

1. Cut (2) two 27-3/4" long boards from (1) one 72" long 2x4 board.
2. Cut (2) two 72" 2x4s to a length of 69-1/2" used for header supports.

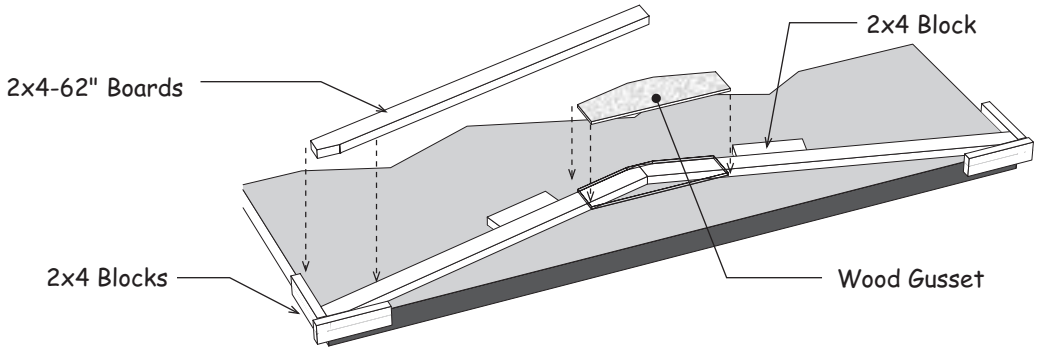


3. Position one 27-3/4” board cut above and a 60" long 2x4 together and mark where wall studs will be located. See detail above.
4. Assemble front wall using (3) three 72" long 2x4s and a 69-1/2" long header support. Place 2x4s over the 'X' marks and nail using 10d sinkers.
5. Repeat steps 3-4 to assemble another front wall frame.

Step 4 Assemble Roof Trusses

Tip: If possible, temporarily screw 2x4 blocks to the floor. Short 2x4s, *that may have an angle on one end*, supplied in the kit for this purpose. This will secure the truss boards in position so all the trusses will be assembled the same. Use the 2-1/2" deck screws packed in the kit.

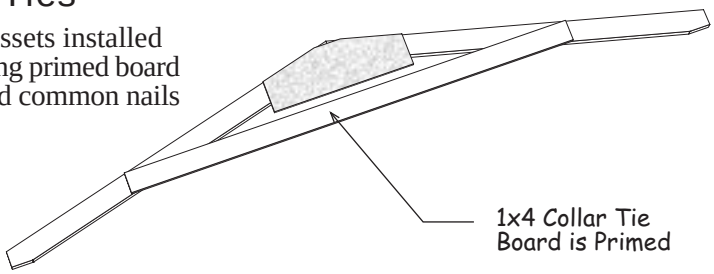
1. Place (2) two 62" long 2x4 boards with angled ends together as shown below. If possible, hold in place with 2x4 blocks as shown. Make sure the trusses measure 10'-0" wide when assembled to fit properly when installed.
2. Secure the tops together with a wood gusset. Nail the gusset to the 2x4s with (14) fourteen 6d common nails. Angle nail slightly so nails do not protrude through the 2x4 boards.
3. Repeat above steps to assemble (6) six more trusses.



4. **Select (5) five trusses** and apply wood gussets to the opposite side.

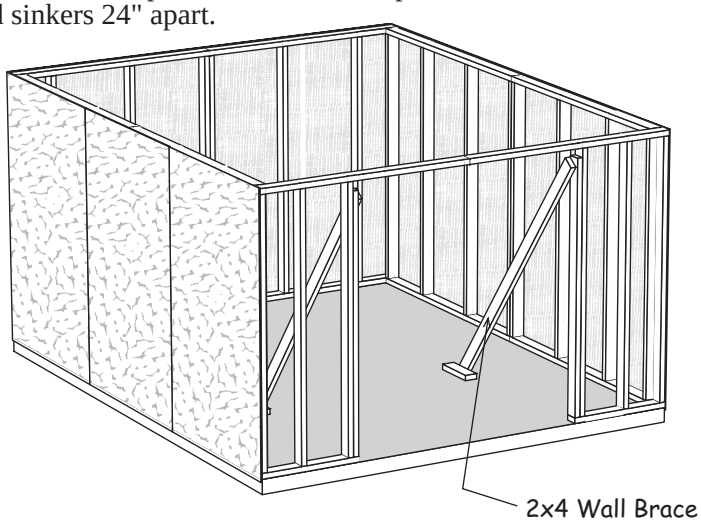
Step 5 Install Collar Ties

1. Select (3) three trusses that have gussets installed on both sides and install a 1x4-72" long primed board on one side as shown. Use (4) four 6d common nails on each end.
2. Remove 2x4 blocks. Save blocks, some will be used when installing gables. The remaining (2) two trusses with one gusset will be used in a later step.

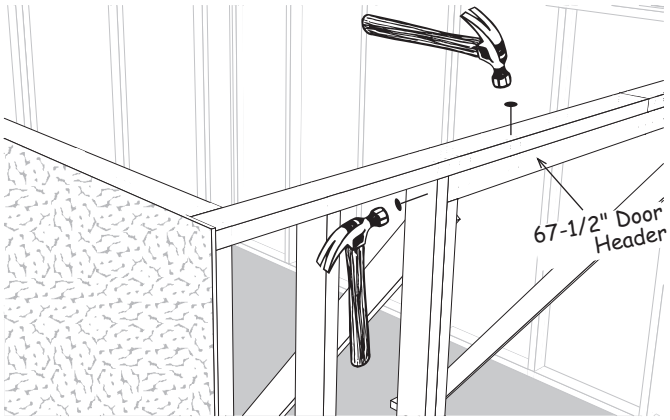


Step 6 Set Walls

1. Erect wall panels. **IMPORTANT: Make sure walls are plum and square.** Secure wall panels together at the corners. Use (4) four 10d sinkers per corner. Nail wall panels to the floor. Nail through the bottom plate. Space 10d sinkers 24" apart.
2. Remove the (2) 2x4s screwed to the pallet. Use thes to brace the walls next to door opening. The bit for the screws is in the hardware bag.
3. Use (2) two of the 2x4s boards to brace the door walls to hold them straight. Save the 2x4s, they will be used in a later step

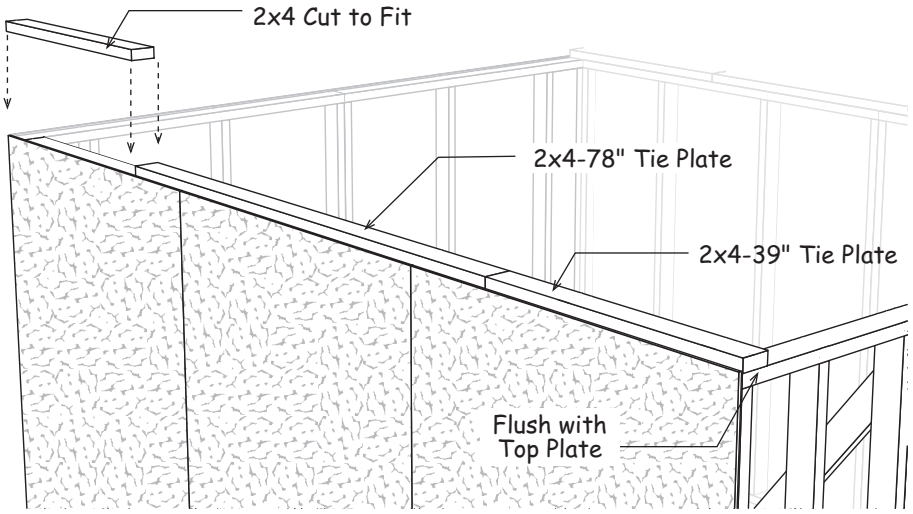


4. Install a 67-1/2" door header between the front wall panels. Secure with 10d sinkers. Nail through the top 2x4 plate and the wall stud.



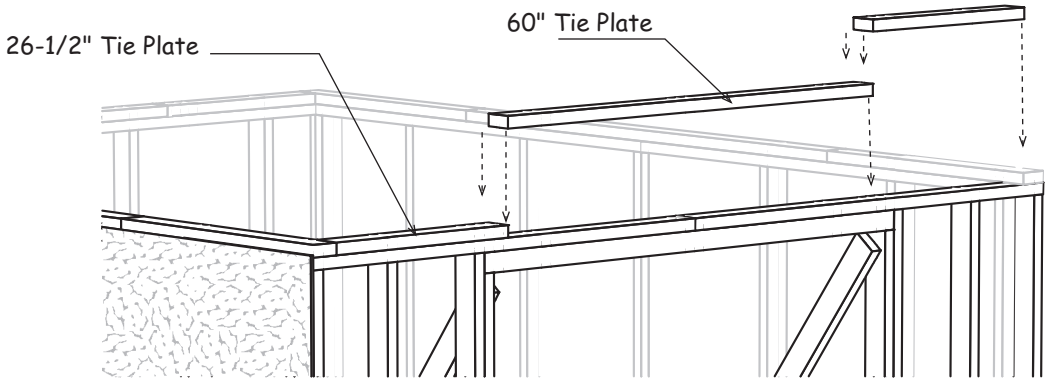
Step 7 Install Tie Plates on Side Walls

1. Cut a 2x4-78” removed from pallet in half and install (1) one 39” board over the sidewall. Install the 2x4 flush with the 2x4 wall plate on the front wall. Use 10d sinkers spaced 12" apart.
2. Install a 78" 2x4 from pallet next. Cut to fit the second 39” board.
3. Repeat to install tie plates on the opposite side wall.



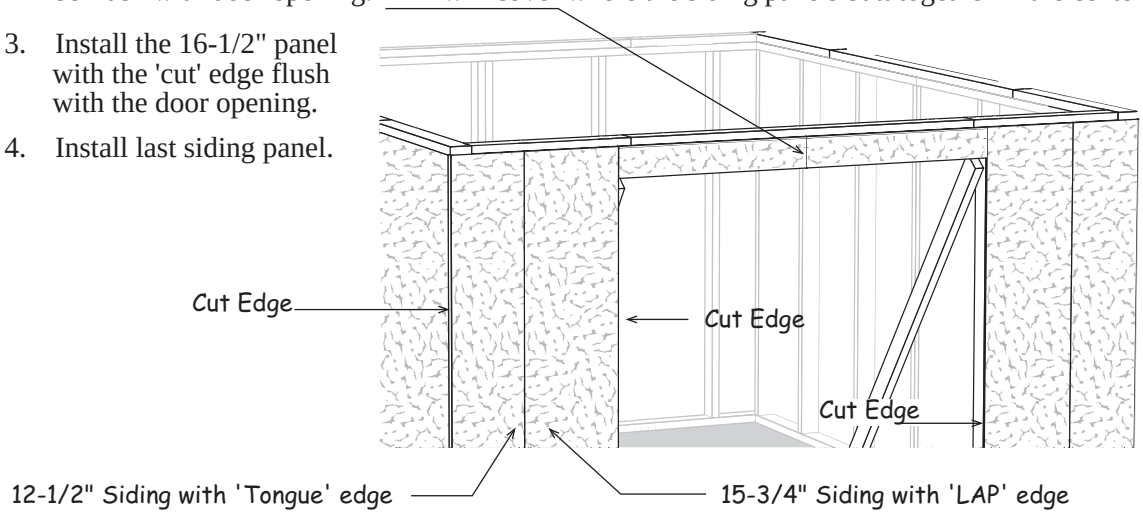
Step 8 Install Tie Plates on Front and Back Walls

1. Cut (2) two 26-1/2" long 2x4s from a 2x4-60" board.
2. Install a 26-1/2" long 2x4 over the front wall.
3. Install a 60" long 2x4 next and finish with another 26-1/4" long 2x4.
4. Repeat to install tie plates on the back wall.



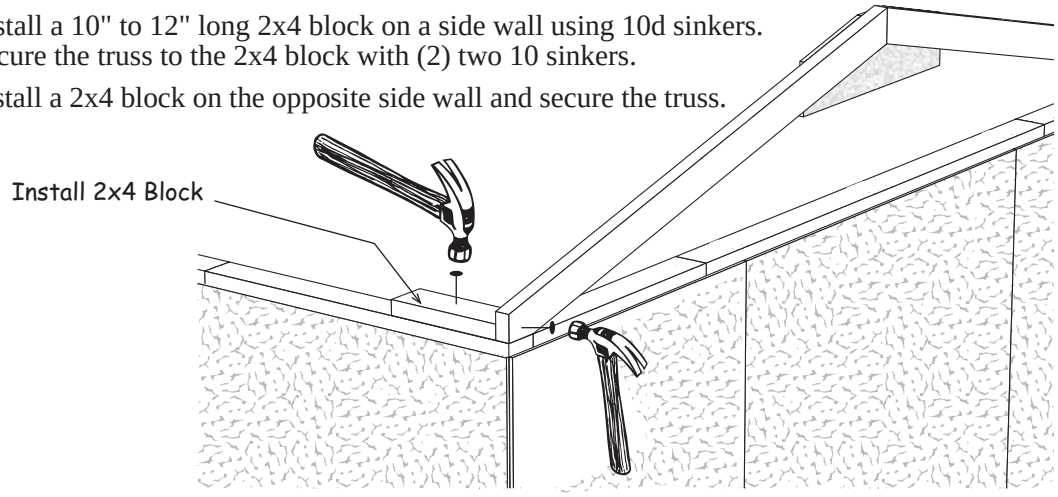
Step 9 Install Siding on Front Wall

1. Select a 12-1/2" siding panel with a 'Tongue' edge and install at the front left corner. Cut edge will be flush with side wall siding. Install a 15-3/4" siding panel with a 'LAP' edge next. Cut edge should be flush with door opening.
2. Install (2) two 4-3/4" x 32-1/4" siding panels over the door opening. Bottom of siding should be flush with door opening. Trim will cover where the siding panels butt together in the center.
3. Install the 16-1/2" panel with the 'cut' edge flush with the door opening.
4. Install last siding panel.



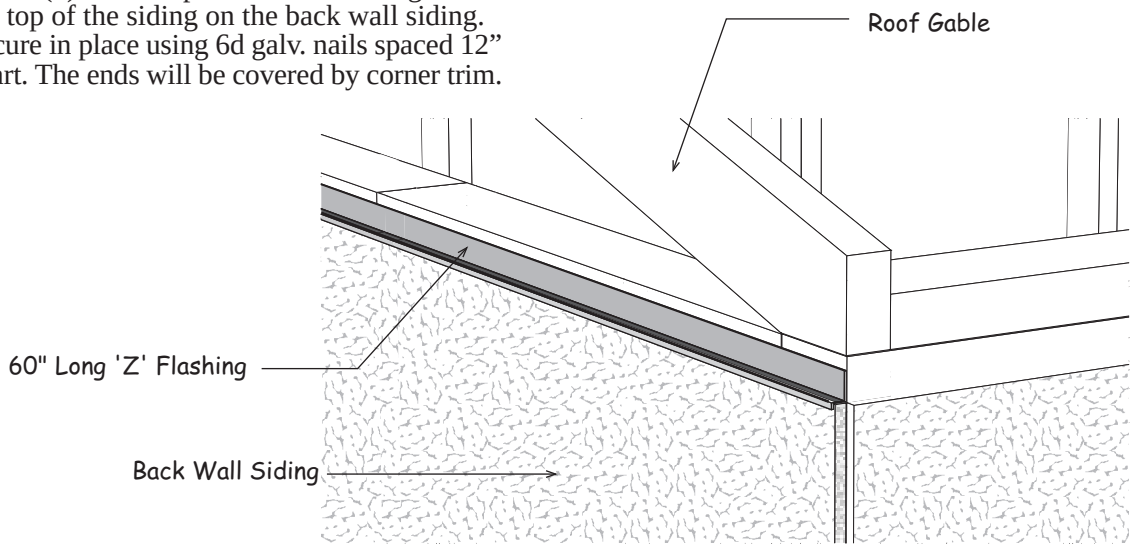
Step 10 Install Roof Gable

1. Select a truss with a gusset installed on one side. Position this truss with the gusset facing towards the inside of the building and flush with 2x4s on back wall.
2. Install a 10" to 12" long 2x4 block on a side wall using 10d sinkers. Secure the truss to the 2x4 block with (2) two 10 sinkers.
3. Install a 2x4 block on the opposite side wall and secure the truss.



Step 11 Install 'Z' Flashing

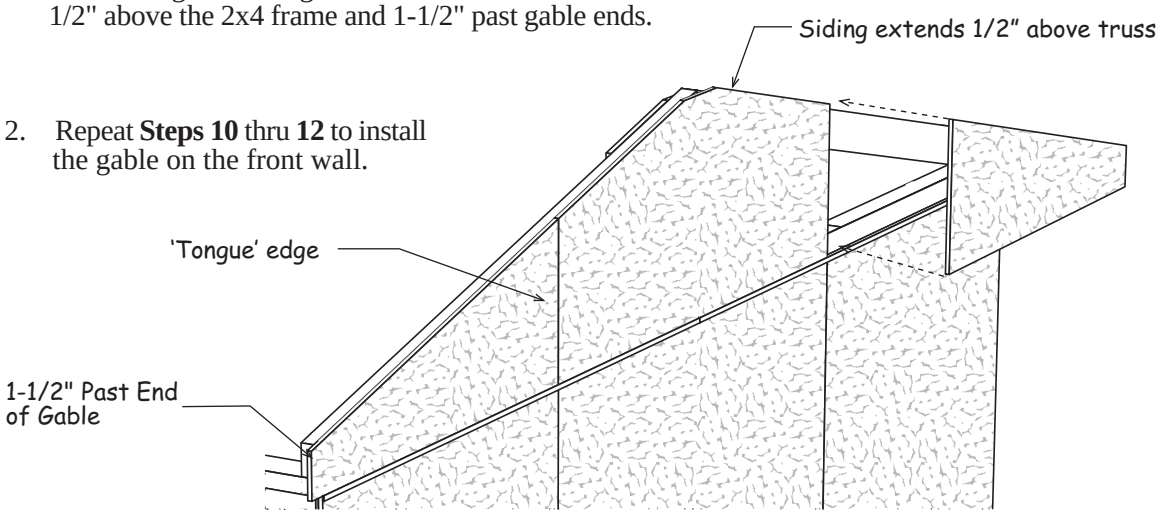
Install (2) two 60” pieces of 'Z' flashing across the top of the siding on the back wall siding. Secure in place using 6d galv. nails spaced 12” apart. The ends will be covered by corner trim.



Step 12 Install Roof Gable Siding

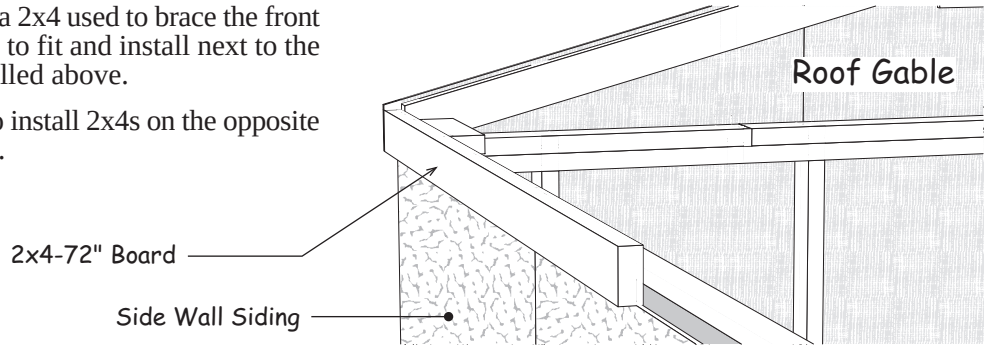
1. Install gable siding on the roof gable using 6d galv. nails. The gable siding should extend no more than 1/2" above the 2x4 frame and 1-1/2" past gable ends.

2. Repeat **Steps 10** thru **12** to install the gable on the front wall.



Step 13 Install 2x4 Truss Headers

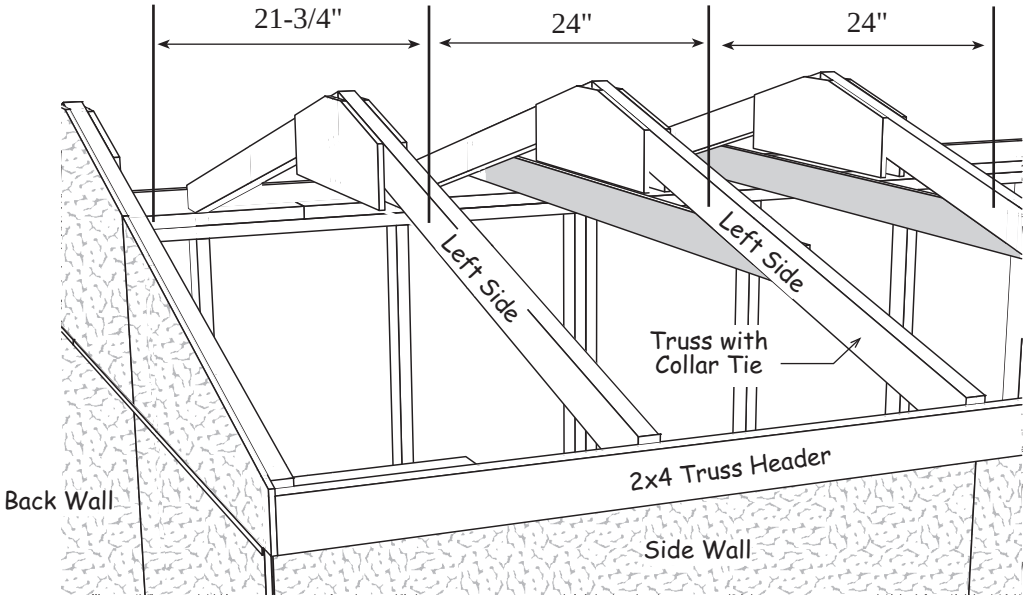
1. Place a 72" long 2x4 on top of the siding on the sidewall. It will butt against the siding on the roof gable. Nails this 2x4 to the 2x4 tie plate with 10d sinkers.
2. Remove a 2x4 used to brace the front wall. Cut to fit and install next to the 2x4 installed above.
3. Repeat to install 2x4s on the opposite side wall.



Step 14A Install Trusses

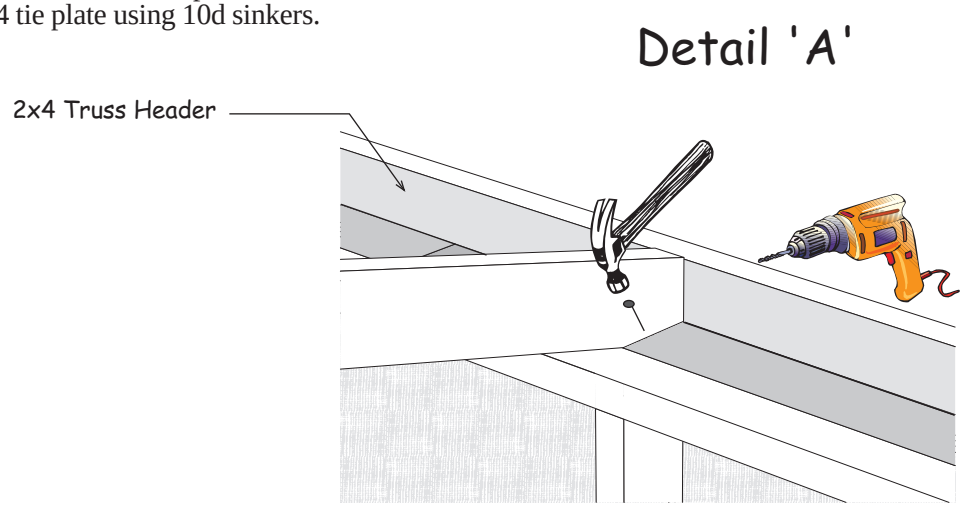
The first and last truss will not have a collar tie attachd.

1. Starting from back wall install the first truss (without a collar tie) measuring 21-3/4" from the face of the 2x4 on back gable and the left side of 2x4 truss. Secure the trusses using 2-1/2" screws and 10d sinkers, See Detail 'A' on next page.
2. Install the remaining trusses measuring 24” from left side to left side of each truss. Last truss will not have a collar tie.



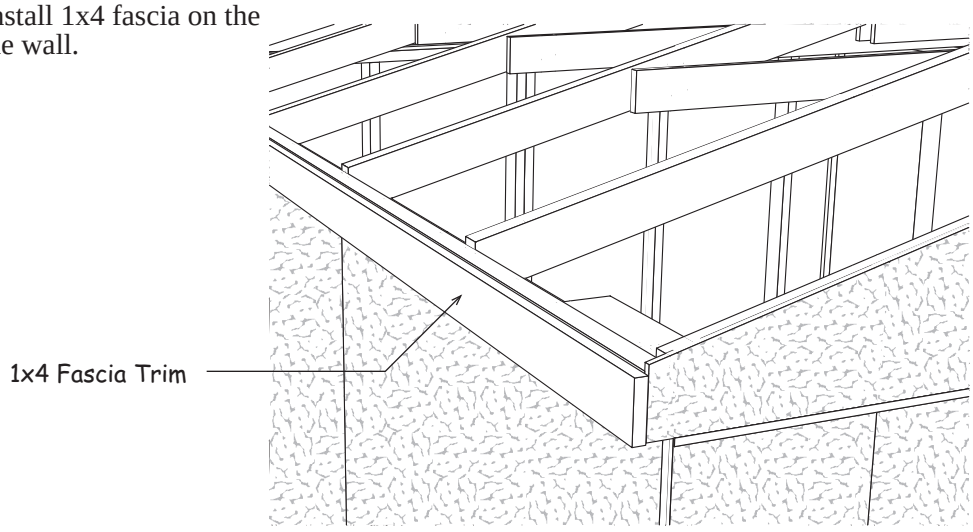
Step 14B Install Trusses Continued

Using a 2-1/2" screw, secure all trusses to 2x4 Truss Header installed in Step 11. Toe nail truss into 2x4 tie plate using 10d sinkers.



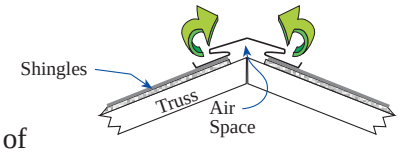
Step 15 Install 1x4 Fascia

1. Install 72" long 1x4 fascia trim over the 2x4 Truss Headers. Install 1x4 trim boards flush with the bottom of the 2x4 and flush with face of siding on the front gable.
2. Cut a 74" long 1x4 to fit and install flush with the face of siding on the back gable.
3. Repeat to install 1x4 fascia on the opposite side wall.



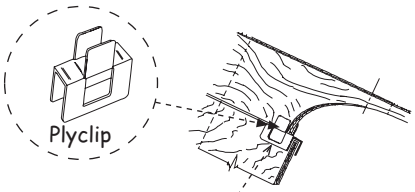
Step 16 Install Roof Sheathing

Install roof sheathing with 7d sinkers, space nails 12" apart. When installing sheathing across the top, insert a plyclip into the roof sheathing between each truss. The top row of sheathing will be about 1" below the ridge to allow for optional ridge venting. See detail below.

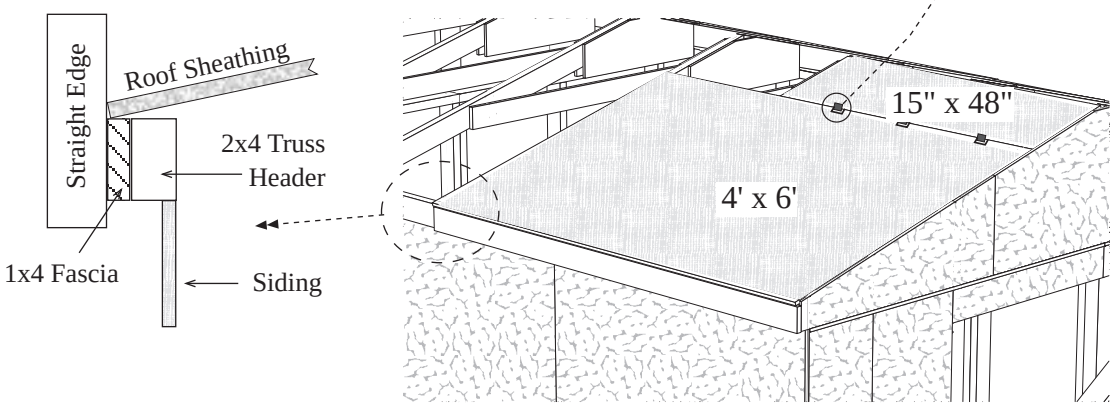


See supplier of shingles to purchase ridge venting.

1. Install the first 4x6 roof sheathing panel against the back of of gable siding. Note: Using a straight edge install the top edge of the roof sheathing flush with the face of the 1x4 fascia. See Detail 'B'.
2. Install a 15" x 48" sheathing panel at the top.
3. Continue to install sheathing per layout below.
4. Repeat on opposite side.



Detail 'B'



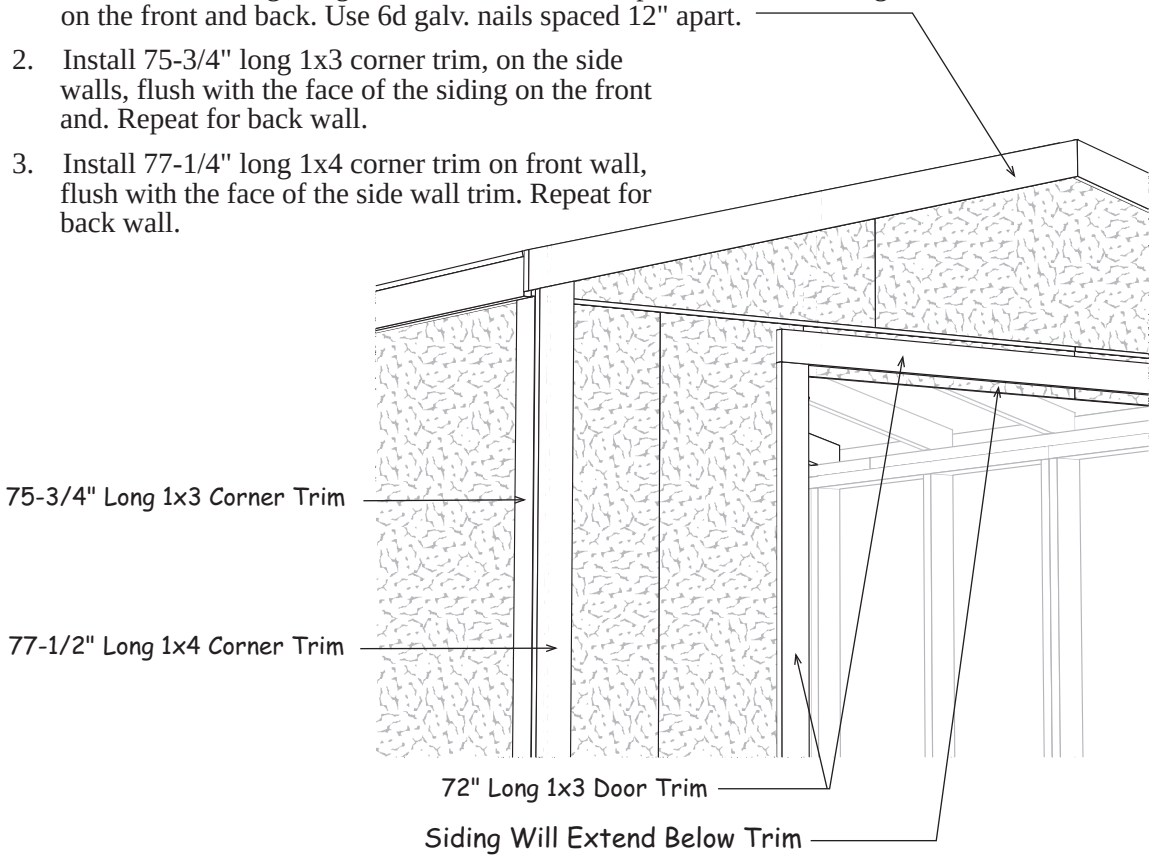
Install roof sheathing on each side of the building as per pattern on right.

Roof Ridge

15"x 48"	15"x 48"	15"x 48"
48"x 72"	48"x 72"	

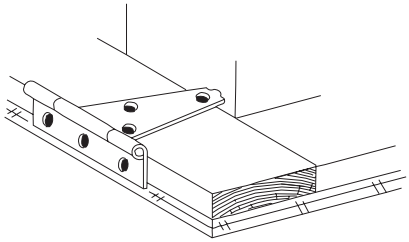
Step 17 Install Trim

1. Install 64-3/8" long 1x4 gable trim flush with the top of the roof sheathing on the front and back. Use 6d galv. nails spaced 12" apart.
2. Install 75-3/4" long 1x3 corner trim, on the side walls, flush with the face of the siding on the front and. Repeat for back wall.
3. Install 77-1/4" long 1x4 corner trim on front wall, flush with the face of the side wall trim. Repeat for back wall.

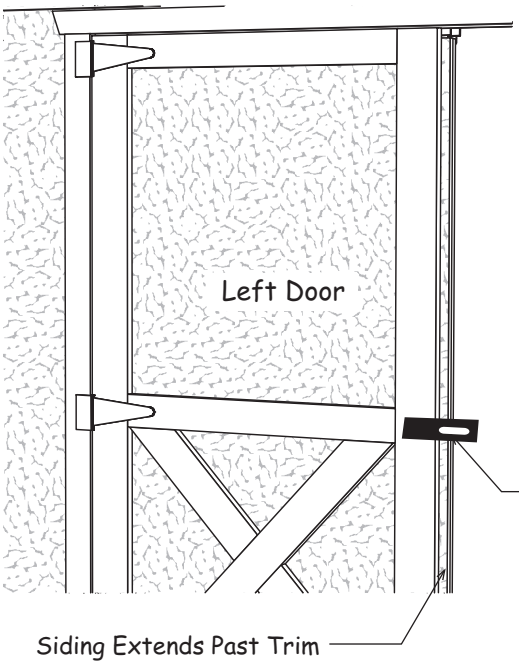


4. Install (2) two 72" long 1x3 trim boards, *with top edge 3/4" above door opening*, along each side of the door opening. Use 6d galv. nails. Tack these boards with a couple nails; you may want to move the trim later when you install the doors.
5. Install a 72" long 1x3 trim board centered across the top of the vertical trim. 3/4" of siding will be revealed at top of door.

Step 18 Install Doors & Hardware

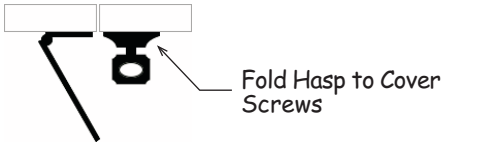


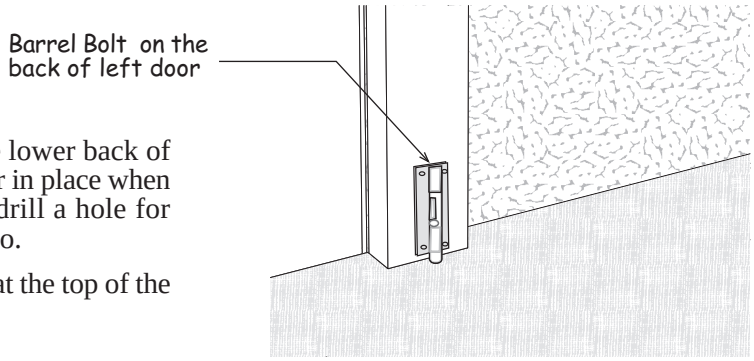
1. Locate the door that has a 2x4 fastened, *on edge*, to the back side of the door. When doors are closed this 2x4 will be in the center where doors meet. Lay the door with the trim facing up and install (3) three 5" hinges to the right side. To position the hinge properly, hold the rectangular plate against the frame. Use 1-1/4" black screws.
2. Install hinges on the left side of the other door.



3. Before fastening the hinges to the side trim, temporarily prop the doors in the opening. Leave a space at the top and bottom of the doors and between the doors and the side trim to allow room for the doors to expand due to humidity.

   If your door opening is out of square, the space around the doors will not be even. You can remove and re-position the side trim to make allowances for this. The side trim does not have to be flush with the frame of the door opening. You can move the trim in or out to make the door spacing equal.
4. Determine position of hinges and install to side trim with 2" screws.
5. Install door hasp on double doors. When properly installed the hasp will fold in half to receive locking latch and the screw heads will be covered.





6. Install a barrel bolt on the lower back of the door to secure this door in place when closed. You will need to drill a hole for the round shaft to drop into.
7. Install another barrel bolt at the top of the door.

Elm R

Packing List for 10' x 12'

Qty.	Description	Size
	2x4 Framing	
2	Tie Plates (attached to pallet)	78 "
14	Truss Rafters	62 "
37	Wall Studs & Plate Material	72 "
8	Plate Material	68 1/2"
10	Plate Material	60 "
6	Blocks for truss jig	10" to 12"
1	Pre-built Door Header	67 1/2"
2	Pre-built Barn Doors	32" x 72"
	LP Exterior Siding	
7	Pcs. 48" x 75-3/4" Sidewall Siding	
2	Pcs. 36" x 75-3/4" Sidewall Siding	
2	Pcs. 16" x 75-3/4" Sidewall Siding	
2	Pcs. 12" x 75-3/4" Sidewall Siding	
2	Pcs. 4-3/4" x 32-1/4"Siding Above Door	
2	Pcs. 48"x 19-3/4" Gable Siding - angle cut	
4	Pcs. 38" x 14-1/2" Gable Siding - angle cut	

Qty.	***Whie Pine Trim***		Size
4	1x4 Gable Trim		64 3/8"
4	1x4 Corner Trim		77 1/4"
4	1x3 Corner Trim		75 3/4"
3	1x3 Door Side Trim		72 "
3	1x4 Collar Ties		72 "
2	1x4 Fascia Trim		72 "
2	1x4 Fascia Trim		74 "
	Hardware		
3	lb. 10d Sinkers	6	4" Hinges
2	lb. 7d Sinkers	1	4" Door Hasp
		2	Barrel Bolts
4	lb. 6d Galv.	14	7/16" Plyclips
1	lb. 6d Common	50	Hinge Screws
4	'Z' Flashing - 60"	50	2-1/2" Screws
	7/16" Roof Sheathing		
4	48" x 72"	6	15" x 48"
12	8" x 24" Wood Gussets		

Material Purchased By Owner					
5	bdl.	Roof Shingles	6	pcs.	Roof 'drip' edge