



Best Barns USA Assembly Book

Revised November 1, 2018



the Easton-R

12'x 16'

Manufactured by Reynolds Building Systems, Inc.

205 Arlington Drive - Greenville, PA 16125

This manual is copyrighted. Under the copyright laws, this manual may not be copied, in whole or in part, without consent from Reynolds Building Systems, Inc. © Copyright 2018

IMPORTANT INFORMATION ABOUT YOUR SHED KIT

Thank you for purchasing our shed kit. 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) or email to help@barnkits.com.

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.

Our kit does not include the 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.

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.

The (2) two center boards on the shipping pallet can be removed and used for wall bracing.

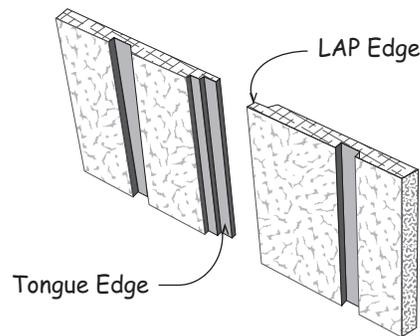
Stacking the boards, according to size, will make them easier to find when needed. Some boards may have colored ends. **Do Not** discard any material until your building is complete.

Before you begin construction, be sure to study this assembly manual. Also, obtain a building permit and check all pertinent building code regulations.

Thank you for your purchase.

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 8d galvanized box nails spaced 8" apart.



Tool List

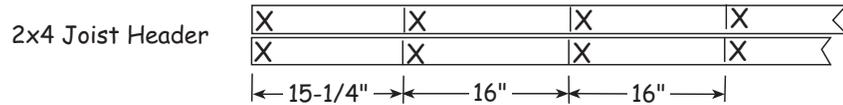
- | | |
|--|--|
| <input type="checkbox"/> Hammer & Phillips Screwdriver | <input type="checkbox"/> Power Drill/Screwdriver |
| <input type="checkbox"/> Framing Square & Level | <input type="checkbox"/> Measuring Tape |
| <input type="checkbox"/> Hand or Circular Saw | <input type="checkbox"/> 2 - 8' Step Ladders |

Always wear safety glasses when cutting or nailing!

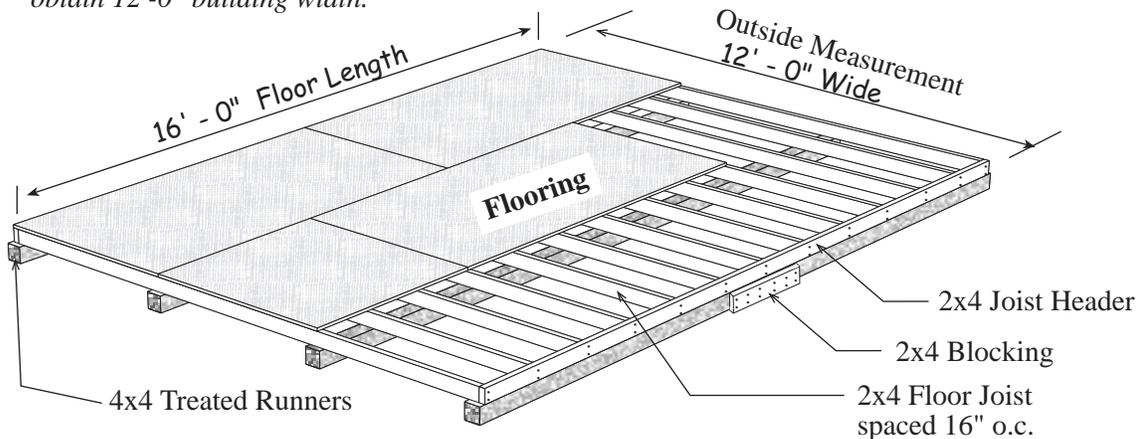
Constructing Details for Deluxe Floor System

Foundation size is 12'-0" x 16'-0". 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. Cut (2) two 2x4-8' boards into 2' long blocks. Butt the 4x4-8' timbers together to make 16' runners. Secure the 4x4s together with the 2' long 2x4 blocks and 16d galvanized nails.
2. Cut (2) two 2x4 joist headers to 16' - 0". Layout for 16" on center joist spacing. 'X' marks where floor joist will be placed.



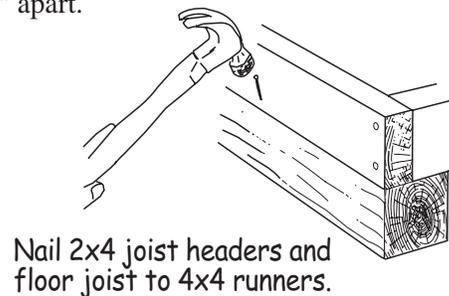
3. Cut 2x4-12' floor joist to 11'-9". *Treated lumber may be thicker than 1-1/2". Take this into account when cutting the length of floor joists. Shorten joist measurements if necessary to obtain 12'-0" building width.*



It is important that the floor be level and square. Square the floor as follows: before nailing the flooring, measure the floor diagonally (corner to corner). Then measure the opposite corners; these measurements will be the same when the floor is square. Toenail frame to the 4x4 runners.

Install the flooring with 8d galvanized nails spaced 8" apart.

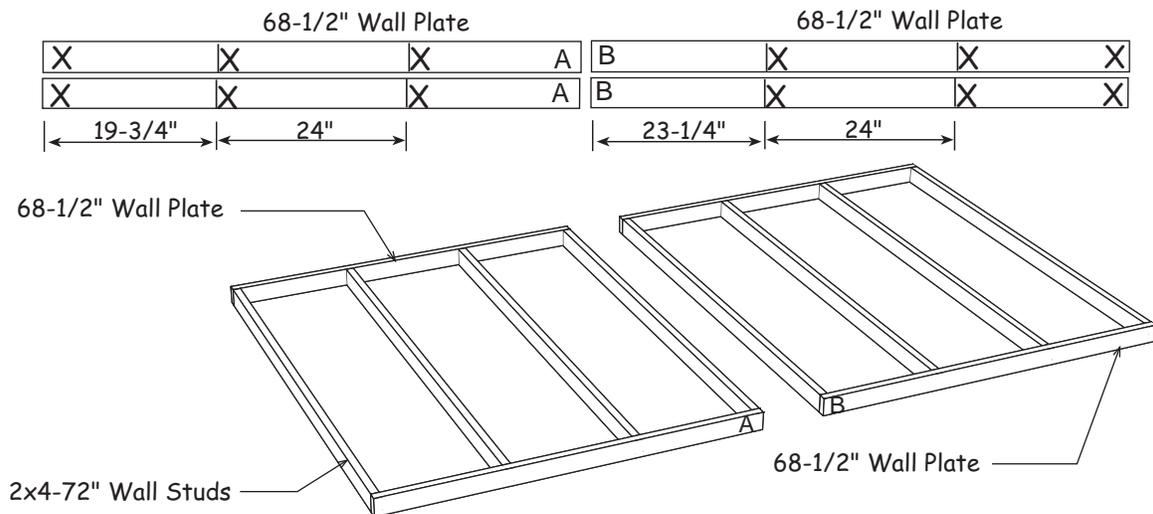
Material Description	Qty. & Size
2x4 Treated Blocking	2 pcs. 8'
2x4 Treated Floor Joists	13 pcs. 12'
2x4 Treated Joist Headers	2 pcs. 16'
4x4 Treated Runners	8 pcs. 8'
Flooring: 5/8" or 3/4"	6 pcs. 4x8
Galv. Spiral Floor Nails	3 lbs. 8d
Galvanized Deck Nails	3 lbs. 16d



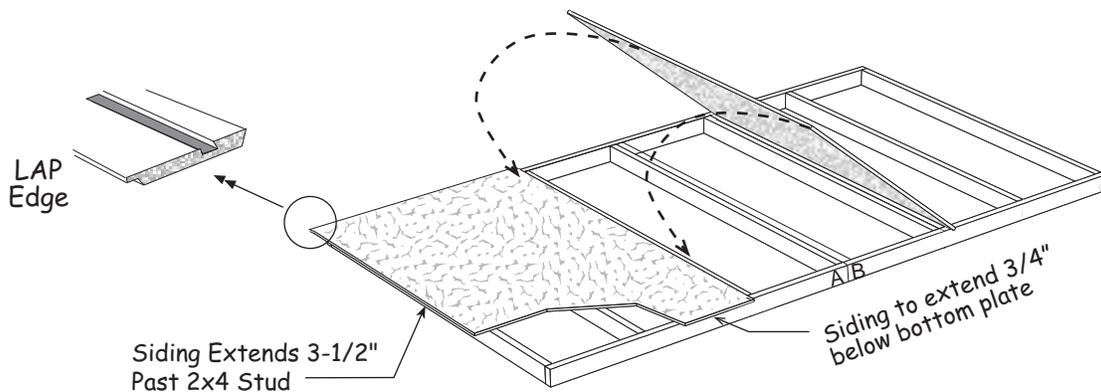
 **Do not discard any material until construction is complete. Including short blocks of 2x4s.**

Step 1 Assemble 12' Side Wall Panel

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 (8) eight 72" long wall studs, between the wall plates. Use 10d sinkers, (2) two nails at each end of stud. Nail both wall frames together with 10d sinkers.

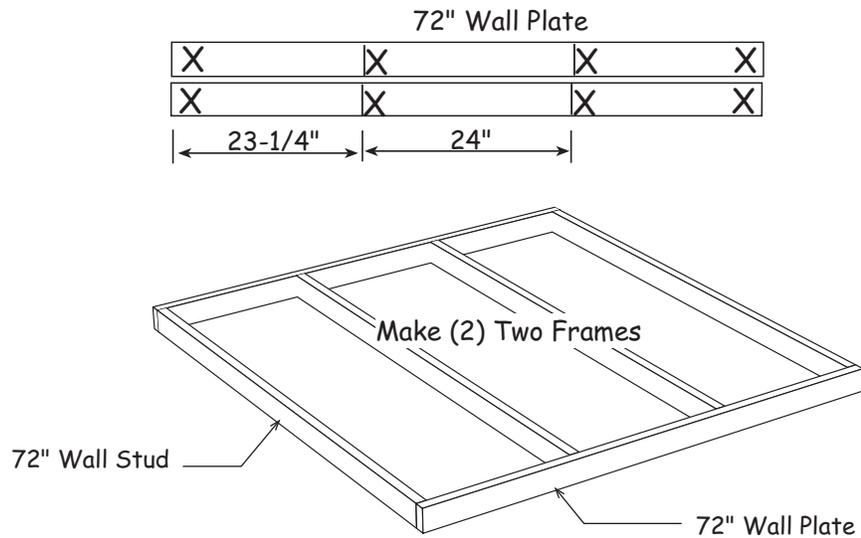


3. Square wall frame. *Measure diagonally (corner to corner). The measurements will be the same when the wall is square.*
4. Install the 1st siding panel with the 'LAP' edge extending 3-1/2" past the wall frame. The bottom will extend 3/4" below the bottom plate. Tip; use a 1x4 trim board as a gauge. Use 8d galv. nails spaced 8" apart.
5. Install (2) two more siding panels. Cut the last panel to extend 3-1/2" beyond the wall frame.

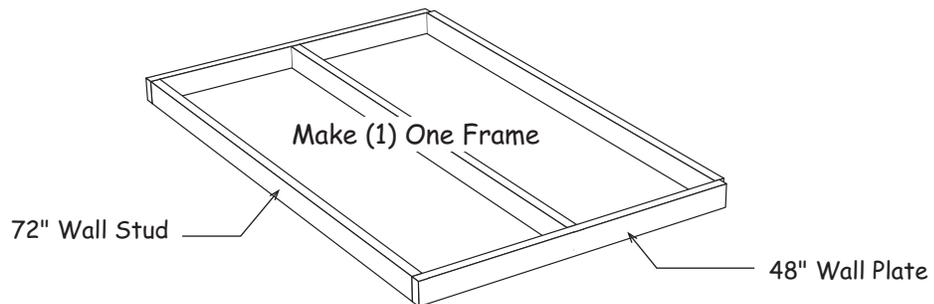


Step 2 Assemble Back Wall Frames

1. Position (2) two 2x4-72" boards together and indicate with 'X' marks, where the wall studs will be located.
2. Install (4) four 72" long wall studs between the wall plates

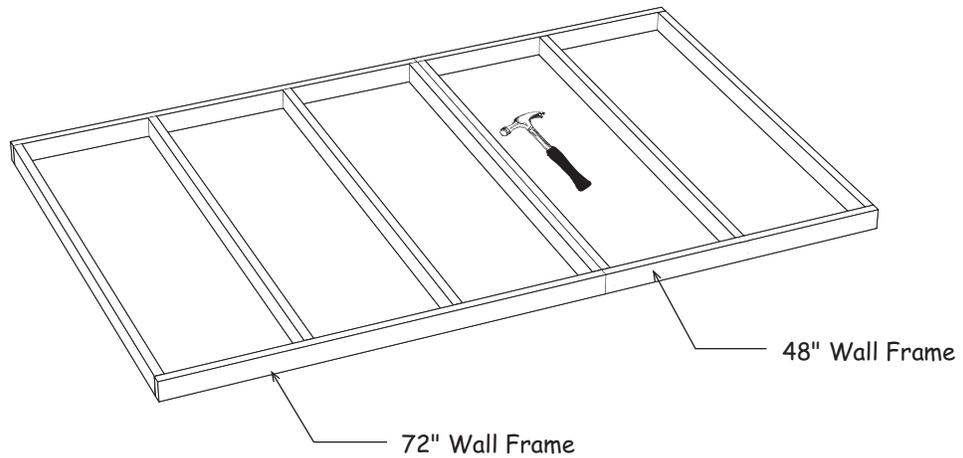


3. Repeat process to assemble another 72" long wall frame.
4. Locate (2) two 48" long 2x4s and (3) three 2x4-72" wall studs.
5. Install (2) two 2x4-72" wall studs between wall plates at each end. Install (1) one stud in the center of the wall frame.

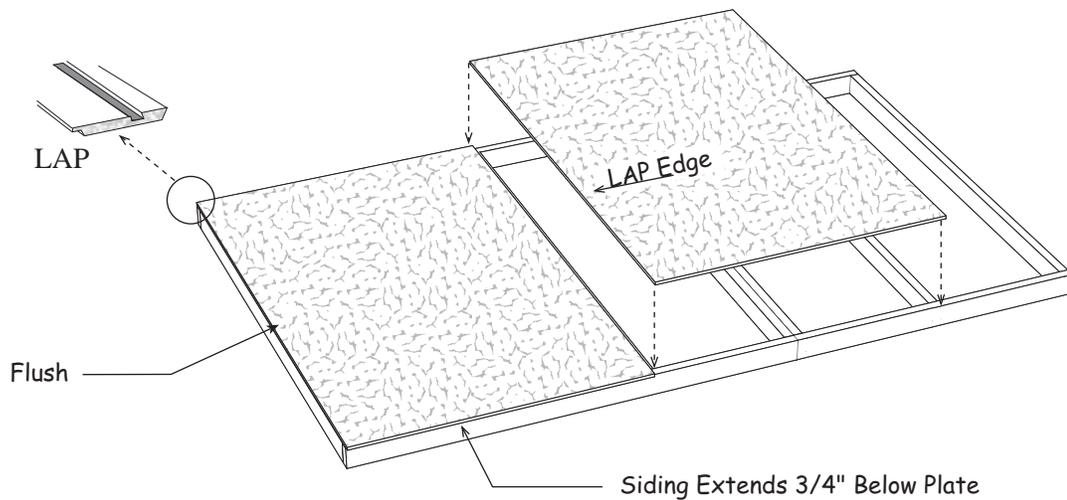


Step 3 Assemble (2) Two Back Wall Frames

1. Position the 48" wide wall frame against one of the 72" wall frames as shown below. Nail frames together with 10d sinkers.
2. Square wall frame. *Measure diagonally (corner to corner). The measurements will be the same when the wall is square.*

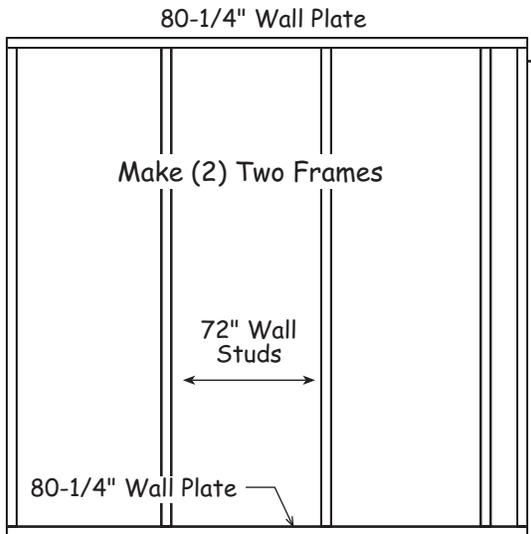
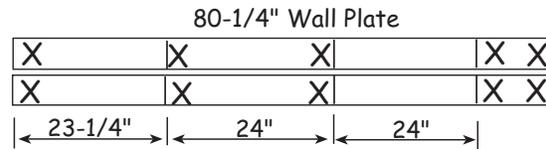


3. Install the first siding panel with the 'LAP edge' flush with the end of the wall and extending 3/4" below the bottom plate.
4. Install (1) one more siding panel. Leave the remainder of frame un-sided. Siding will be applied when walls are erected in a later step.



Step 4 Assemble (2) Two Front Wall Frames

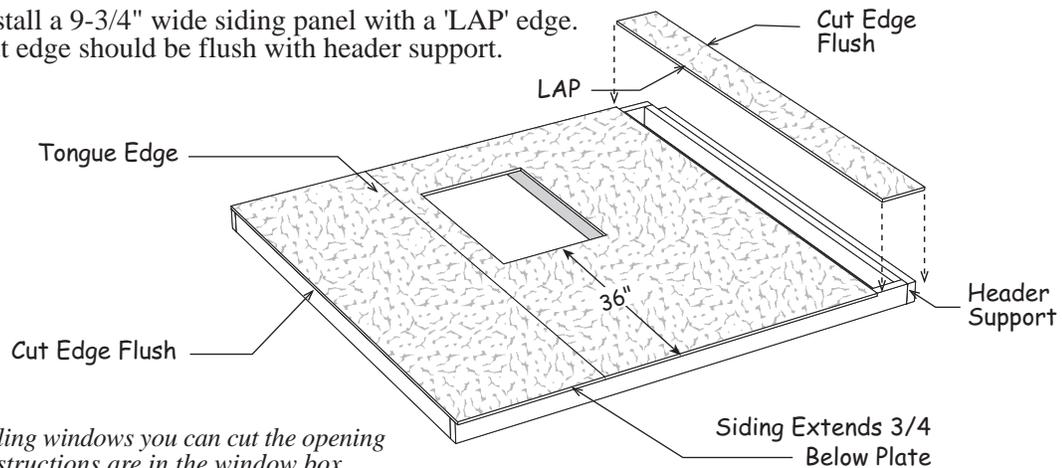
1. Locate (2) two 80-1/4" long boards. Position boards together and indicate with 'X' marks where the wall studs will be located.



2. Install (5) five 72" wall studs between the 80-1/4" wall plates.
3. Locate (1) one 72" long 2x4 and cut to a length of 71-1/2". Install as a header support on the wall frame flush with bottom plate. Use 10d sinkers.
4. Repeat steps to assemble another wall frame.

Step 5 Apply Siding to Left Front Wall Frame

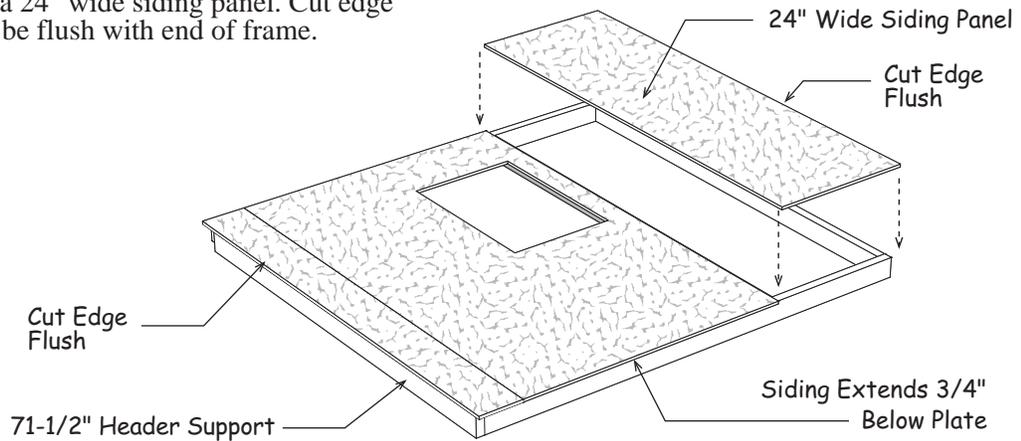
1. Select one of the wall frames from **Step 4**. Position frame with the header support on the right. Select a 24" wide panel, with a 'tongue' edge, and install this panel with the 'cut' edge flush with the end of the wall frame. The siding should extend 3/4" below bottom plate.
2. Install a full width siding panel.
3. Install a 9-3/4" wide siding panel with a 'LAP' edge. Cut edge should be flush with header support.



If installing windows you can cut the opening now. Instructions are in the window box.

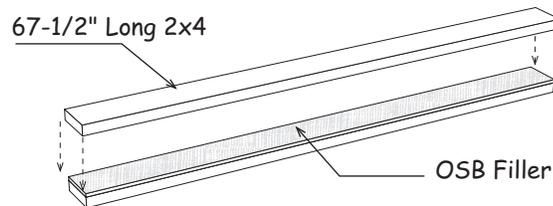
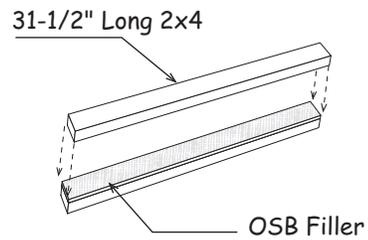
Step 6 Apply Siding to Right Front Wall Frame

1. Select the remaining wall frame. Position wall frame with the header support on the left.
2. Install a 9-3/4" wide panel with a 'Tongue' edge. the 'cut' edge should be flush with the header support. Siding should extend 3/4" below bottom plate.
3. Install a full width siding panel.
4. Install a 24" wide siding panel. Cut edge should be flush with end of frame.

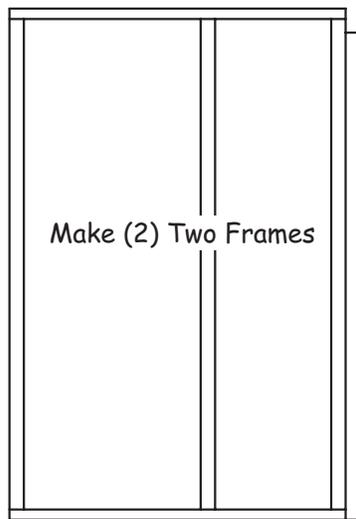


Step 7 Assemble Door Headers

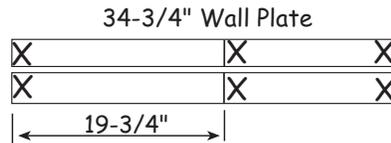
1. Gather (2) two 31-1/2" long 2x4 boards and a 3-1/4" x 31-1/4" OSB filler panel. Glue both sides of OSB. Nail header together from both sides with 10d sinkers staggered 6" apart.
2. Gather (2) two 67-1/2" long 2x4 boards and a 3-1/4" x 67-1/4" OSB filler panel. Glue both sides of OSB. Nail header together from both sides with 10d sinkers staggered 6" apart.



Step 8 Assemble Double Door Wall

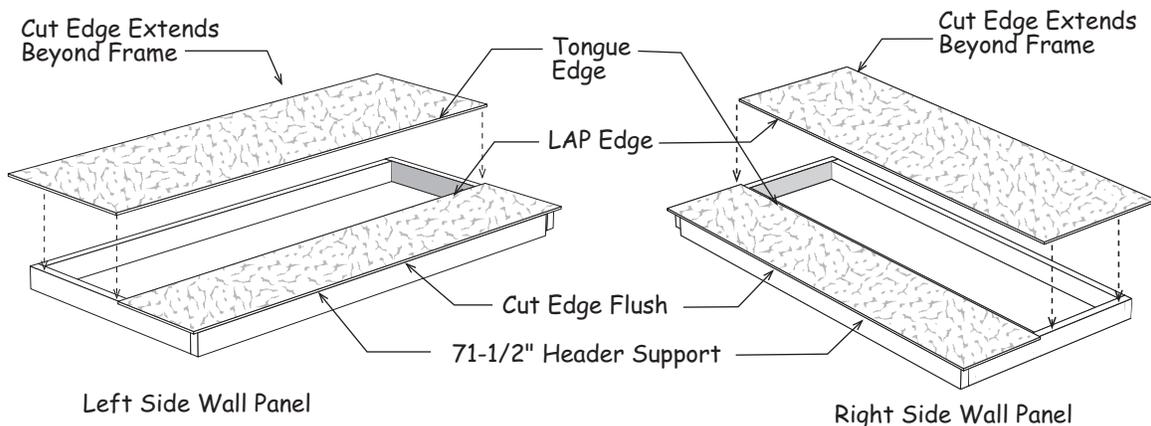


1. Locate (2) two 34-3/4" long 2x4s and position them together. Indicate with 'X' marks where studs will be located..



2. Install (3) three 72" wall studs between 34-3/4" wall plates.
3. Locate (1) one 2x4-72" and cut to 71-1/2". Install as a header support on right side as shown and flush with bottom plate. Use 10d sinkers.
4. Repeat to assemble another wall frame.

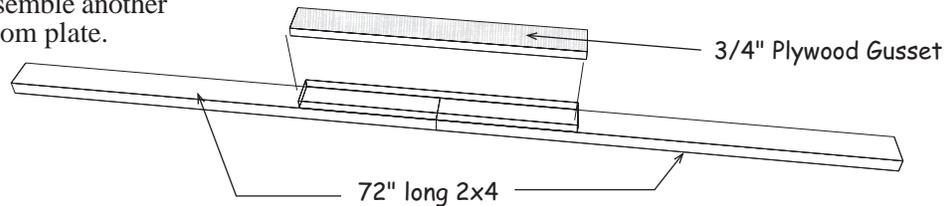
5. Select one frame and position so header support is on right.
6. Locate a 16" wide siding panel with a 'LAP' edge. Install this panel with the cut edge flush with the 2x4 header support. Bottom edge should be 3/4" below bottom plate. Only nail along cut edge until next panel is installed.
4. Select a 24" siding panel with a 'Tongue' edge. Install this panel so cut edge extends 3-1/2" beyond the end of the frame and tongue edge under the 16" panel. The siding should extend 3/4" below the bottom plate. Nail both siding panels to frame.



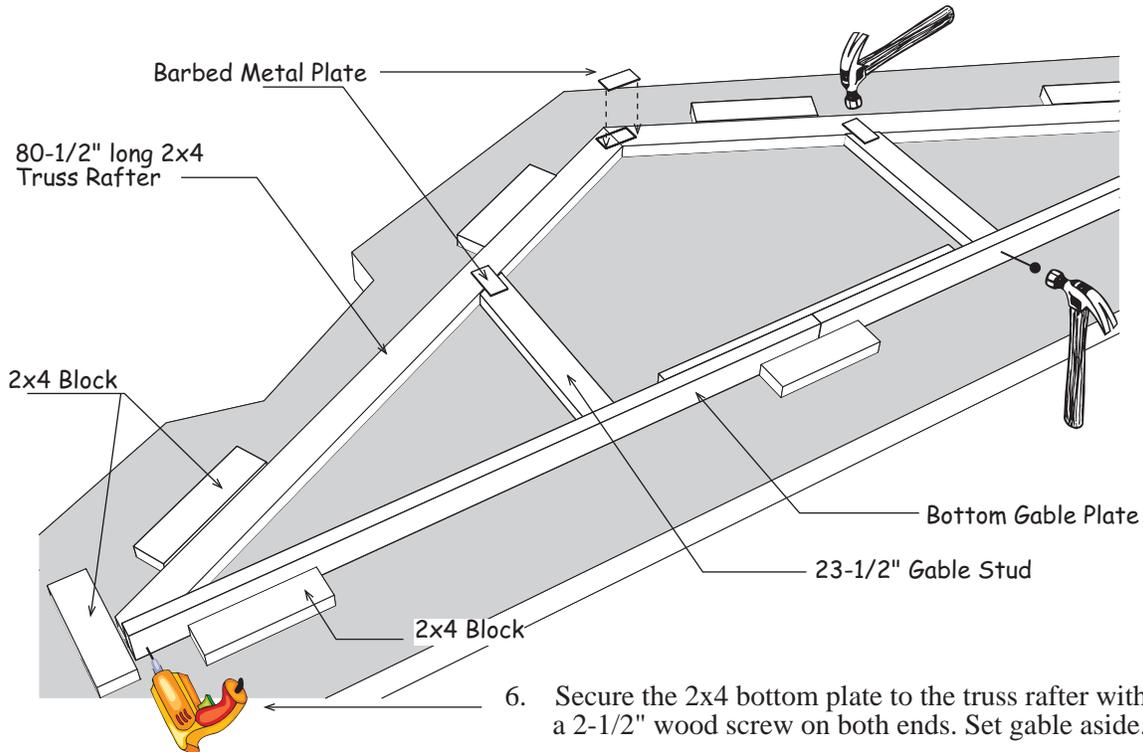
7. Locate a 16" wide siding panel with a 'Tongue' edge and the remaining 24" wide cut panel. Install these on remaining frame. **Make sure header support is oriented to the left.**

Step 9 Assemble Roof Gables

1. Butt (2) two 72" long 2x4s together and secure them with a 3-1/2" x 31-3/4" long plywood gusset across the top where they butt together. Use glue and (12) twelve 6d common nails. This will be used as the bottom plate on the roof gables.
2. Repeat to assemble another 12' long bottom plate.



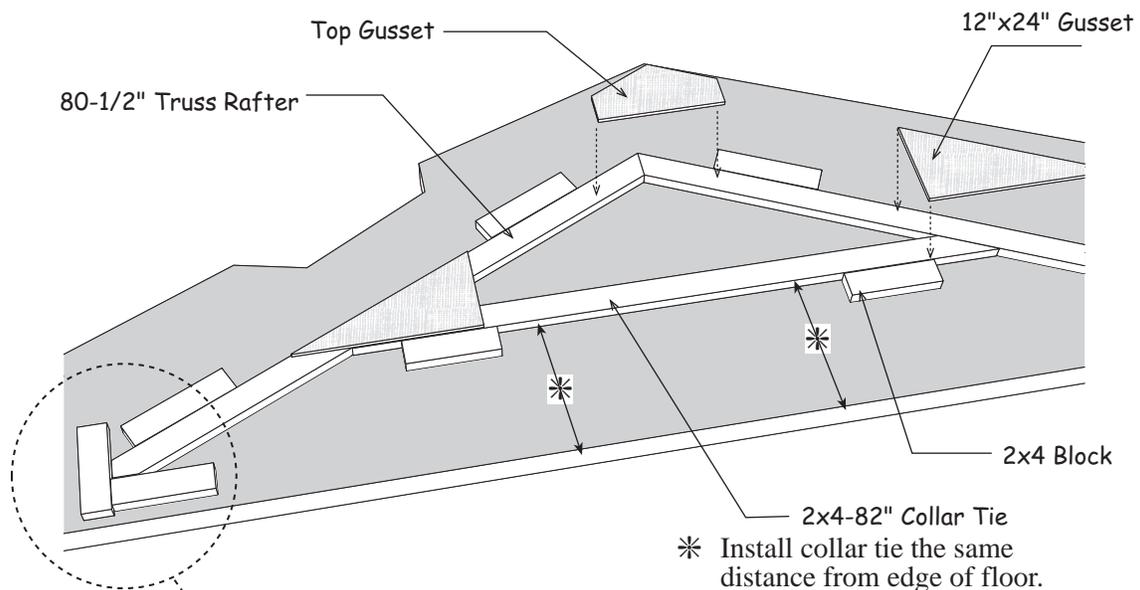
3. Place the bottom gable plate on the floor along with (2) two 80-1/2" long 2x4 truss rafters as shown below. Bottom plate will be on edge. There are short 2x4s, that may have an angle on one end, supplied in the kit. Use these to hold the truss rafter and bottom gable plate together by temporarily screwing the blocks to the floor using 2-1/2" screws. This will ensure that the gable frames and the trusses, assembled next, are identical.
4. Secure the top of the truss rafters together with a 1"x4" barbed metal drive-on plate.
5. Install (2) two 23-1/2" gable studs with angle cut at one end. Nail through the bottom plate with 10d sinkers and secure the top with barbed metal drive-on plates.



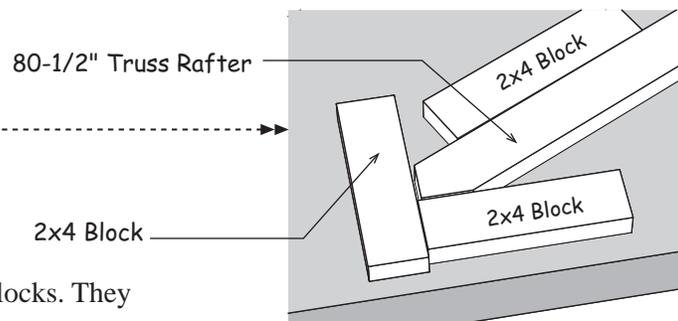
6. Secure the 2x4 bottom plate to the truss rafter with a 2-1/2" wood screw on both ends. Set gable aside.
7. Repeat steps 3-6 to assemble another gable.

Step 10 Assemble Roof Trusses

1. Place (2) two 80-1/2" long 2x4 truss rafters and a 82" long collar tie together as shown below. The collar tie has an angle cut on both ends. Reposition the lower 2x4 blocks to hold the truss rafter and collar tie in place. See **'Detail B'**.
2. Secure the 2x4 truss rafters at the top with a 8" x 20" wood gusset. Apply wood glue between the 2x4s and the gusset. Nail the gusset to the 2x4s with (14) fourteen 6d common nails,
3. Install (2) two 12"x24" gussets at ends of the collar tie. Glue and nail using 14 nails per gusset.
4. Turn this truss over and apply wood gussets to the opposite side.
5. Repeat to assemble (6) six more trusses.



Detail 'B'

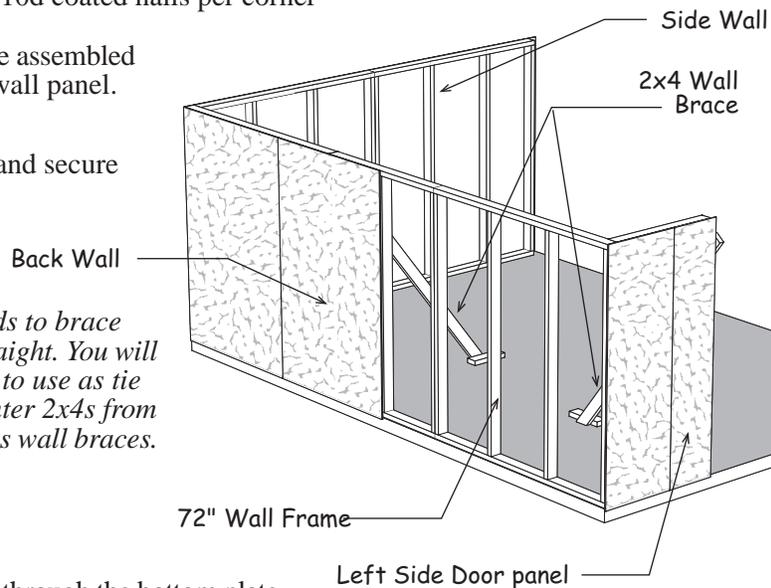


6. Remove and save the short 2x4 blocks. They will be used in a later step.

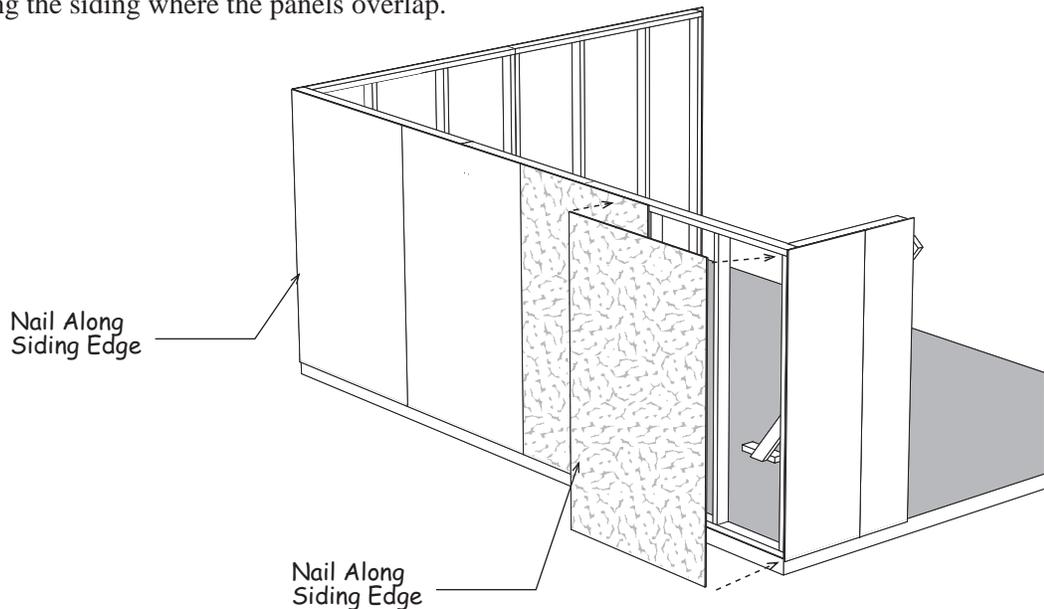
Step 11 Set Wall Panels

1. Erect side wall panel assembled in **Step 1** and the 10' back wall panel with siding applied from **Step 3**. **IMPORTANT make sure walls are plumb and square**. Secure wall panels together at the corners. Use (4) four 10d coated nails per corner
2. Butt the 72" back wall frame assembled in **Step 2** against the back wall panel. Secure with 10d sinkers.
3. Install left side door panel and secure to back wall.

 You can use 2x4-72" boards to brace walls to help hold them straight. You will need to remove them later to use as tie plates. Or unscrew the center 2x4s from the shipping pallet to use as wall braces.

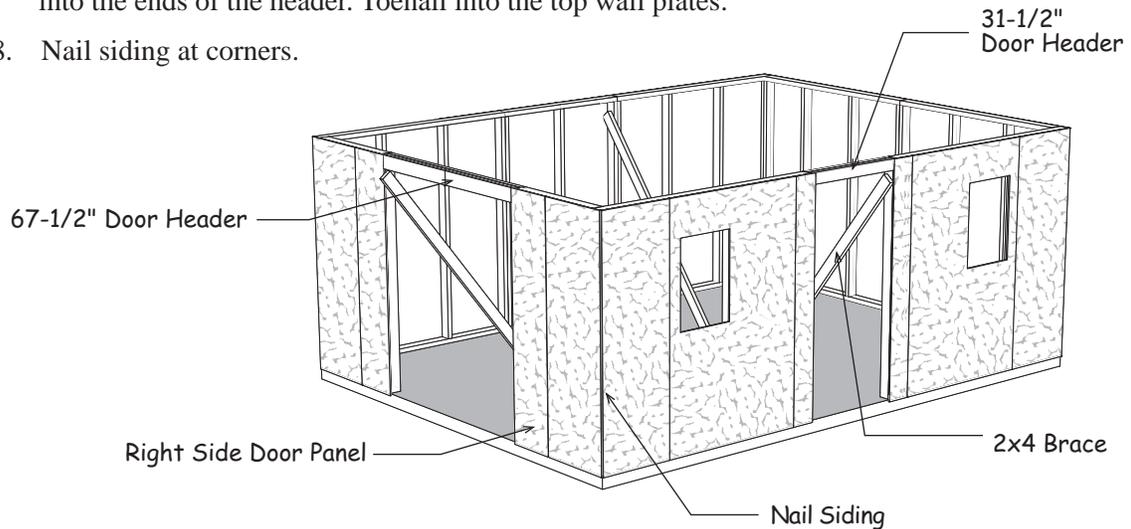


4. Nail wall panels to the floor through the bottom plate. Space 10d sinkers 24" apart.
5. Install (2) two siding panels on the back wall. Nail along the siding where the panels overlap.



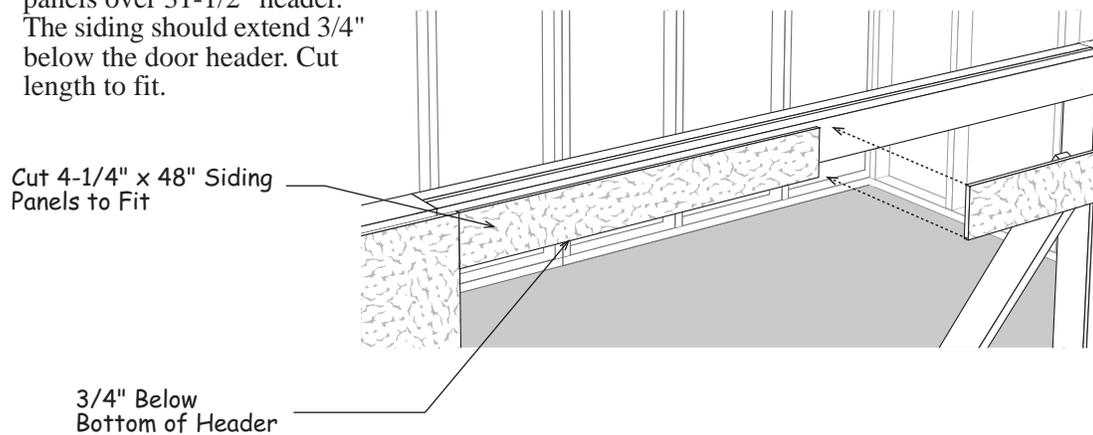
Step 11 Set Wall Panels Continued

6. Set the remaining wall panels as shown.
7. Install 2x4 door headers between the wall panels. Nail through the wall studs into the ends of the header. Toenail into the top wall plates.
8. Nail siding at corners.



Step 12 Install Header Siding

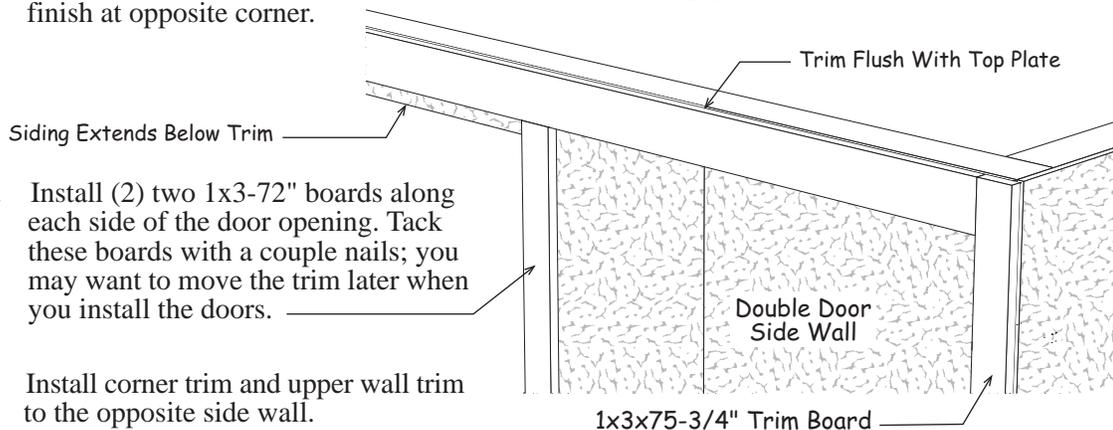
1. Install (2) two 4-1/4" siding panels over 67-1/2" door header on the end wall. The siding should extend 3/4" below the door header. Cut length to fit. Wall trim, installed later, will hide where the siding butts the end wall siding.
2. Install (1) one 4-1/4" siding panels over 31-1/2" header. The siding should extend 3/4" below the door header. Cut length to fit.



Step 13 Install 12' Side Wall Trim

 *Tip; Paint the siding and trim boards before installing the trim.*

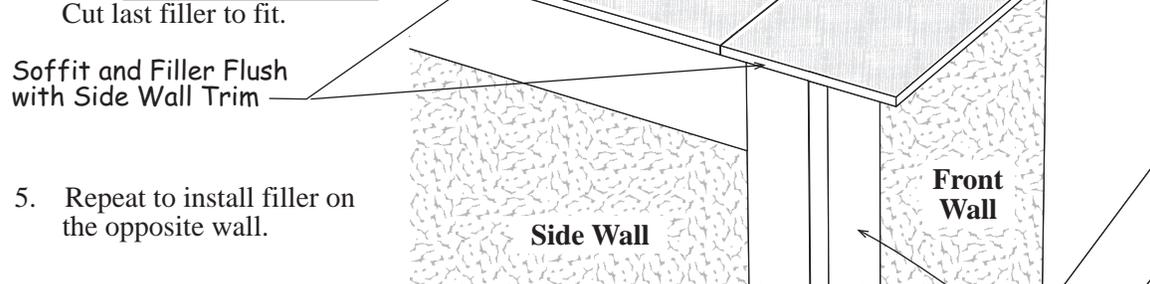
1. Install (2) two 75 3/4" long 1x3 corner trim boards to the side wall. Install trim flush with top plate and flush with the siding on the front and back walls. Use 8d galv. nails, spaced 12" apart.
2. Butt a 1x4-6' board against corner trim and flush with top plate. Cut a second 1x4-6' board to finish at opposite corner.



3. Install (2) two 1x3-72" boards along each side of the door opening. Tack these boards with a couple nails; you may want to move the trim later when you install the doors.
4. Install corner trim and upper wall trim to the opposite side wall.

Step 14 Install Primed Soffit, Filler and Trim

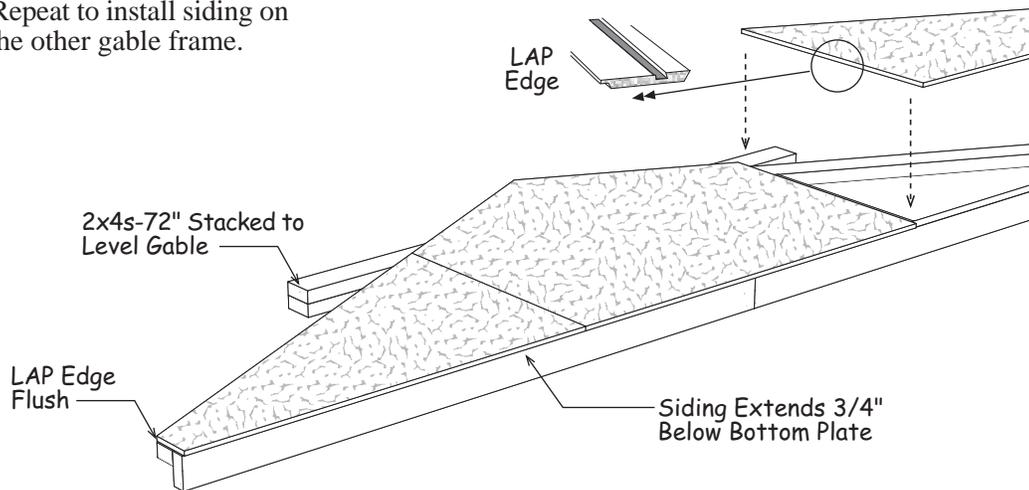
1. Locate (1) one 7" wide x 48-3/4" long siding panel and cut in half. Install one half over the front wall with the primed side facing down. Cut edges should be flush with the inside of the top 2x4 wall plate and flush with the trim on the side wall. Tack the soffit with a couple 6d common nails. Installing 2x4 tie plates in a later step will provide more nailing.
2. Install (4) four more 7"x48-3/4" soffit panels cutting the last panel flush with the side wall trim.
3. Repeat to install 7" soffit boards on the back wall.
4. Install (3) three 4-1/4" wide x 48-3/4" filler panels over the side walls. Install the filler flush with the 1x4 trim. Cut last filler to fit.



5. Repeat to install filler on the opposite wall.
6. Install (4) four 1x4-75 3/4" corner trim boards to the front and back walls flush with 1x3 trim.

Step 15 Install Siding on Gables

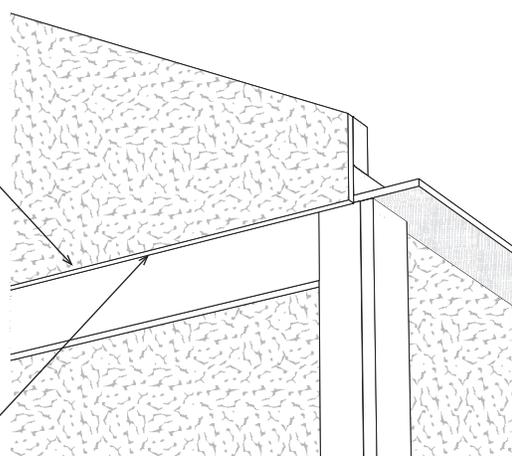
1. Select one of the gable frames. Turn the gable over so bottom plate is on edge on floor. Support gable studs and rafters with (2) two 2x4-72" boards stacked. This will give you a solid surface when nailing siding.
2. Install left gable siding panel with the 'LAP' edge flush with the end of of bottom plate. Use 6d galv. nails across the top of the 2x4 frame and gable studs. Use 8d galv. nails across the bottom plate. The siding will extend 3/4" below the bottom 2x4.
3. Install center and right panels. Cut last panel flush with end of bottom plate.
4. Repeat to install siding on the other gable frame.



Step 16 Install Gables

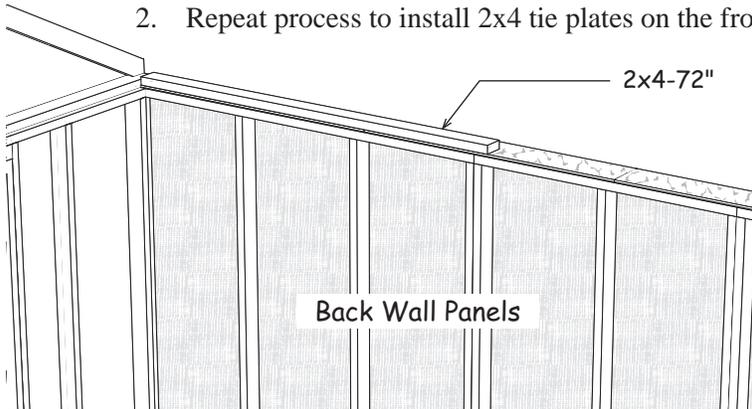
1. Install a gable on the left sidewall. The gable siding will extend over the 1x4 trim on the lower wall. Secure gable to wall by nailing through the gable plate with 10d sinkers. Nail siding along the 1x4 trim board with 8d galv. nails.
2. Install gable on the opposite sidewall.

Important: Bottom edge of siding extends over 1x4 trim. Paint this edge.



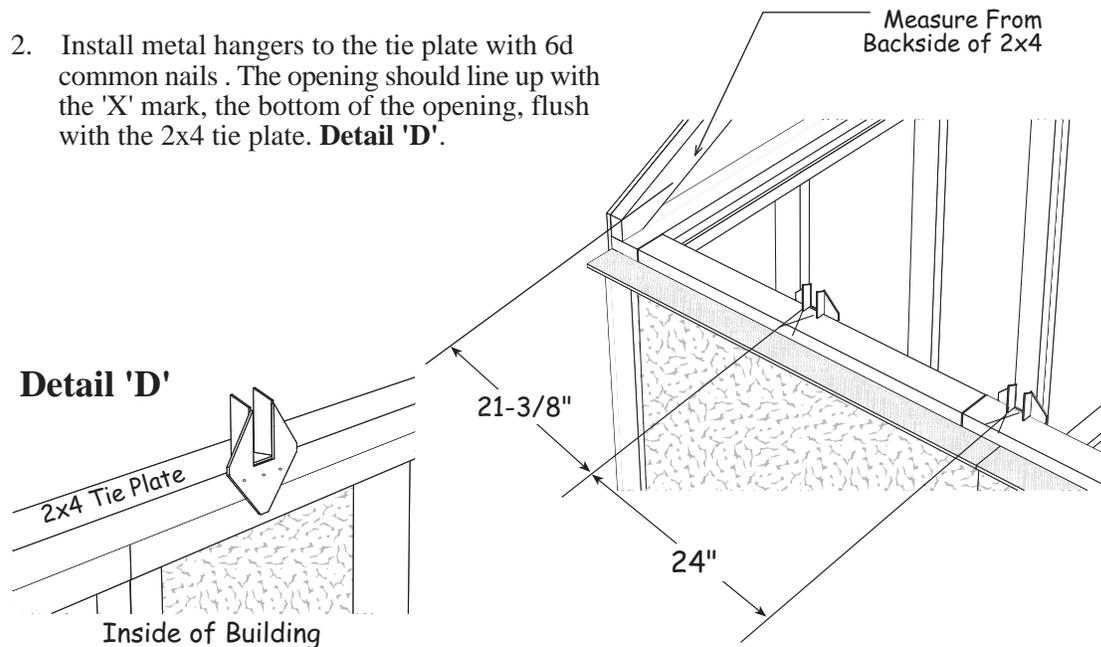
Step 17 Install 2x4 Tie Plates

1. Install (2) two 72" long 2x4s over the soffit panels on the back wall. Install the 2x4s flush with the inside of the back wall. Use 10d sinkers. Cut to fit a 2x4-4' to finish.
2. Repeat process to install 2x4 tie plates on the front wall.



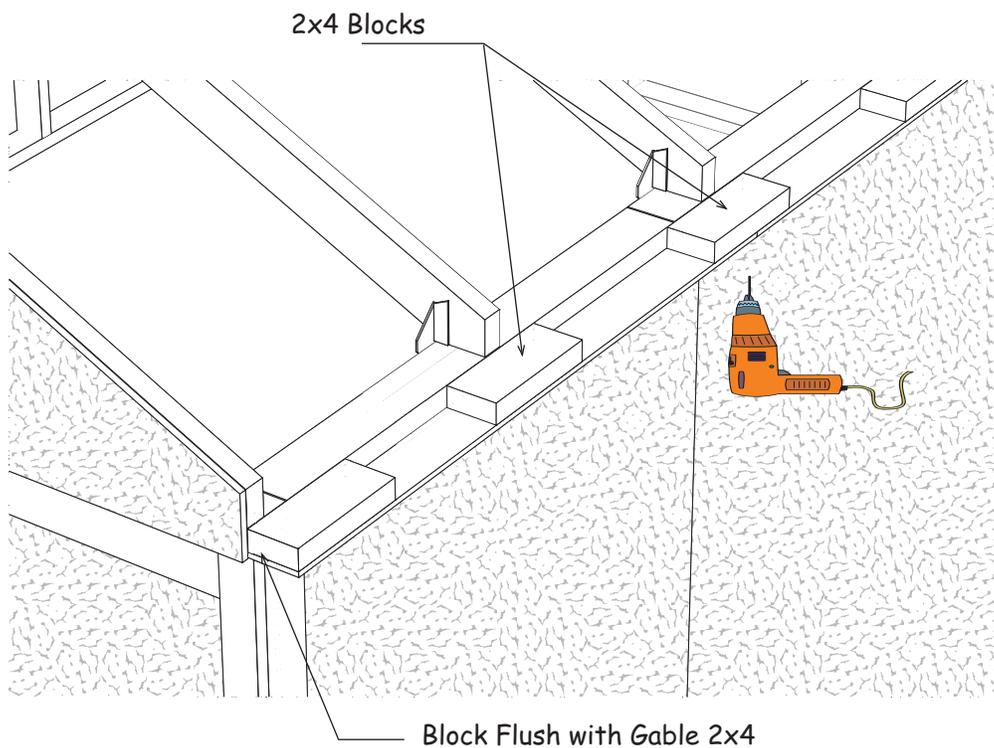
Step 18 Layout Roof Trusses

1. Layout the truss spacing from the left sidewall of the building. Measure from the backside of the 2x4 gable frame when marking the location of the first truss. Continue 24" spacing to other gable. **Important:** When marking the opposite wall, place the 'X' mark on the same side of the line so your trusses are parallel when they are installed.
2. Install metal hangers to the tie plate with 6d common nails. The opening should line up with the 'X' mark, the bottom of the opening, flush with the 2x4 tie plate. **Detail 'D'**.



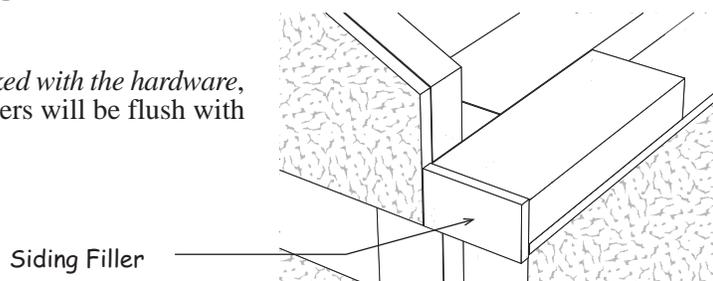
Step 19 Set Roof Trusses and Soffit Blocks

1. Set roof trusses. Secure trusses to metal hangers with 6d common nails.
2. Install short 2x4 blocks in front of each truss. Secure 2x4 blocks to the soffit panel using (2) two 1-1/2" long exterior screws.
3. Install a 2x4 block at each end of the soffit, flush with the 2x4 gable frame.



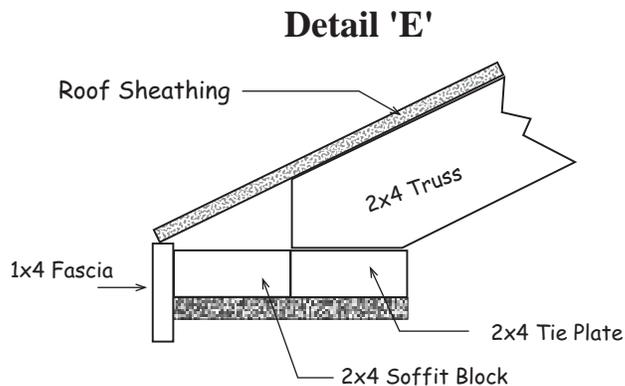
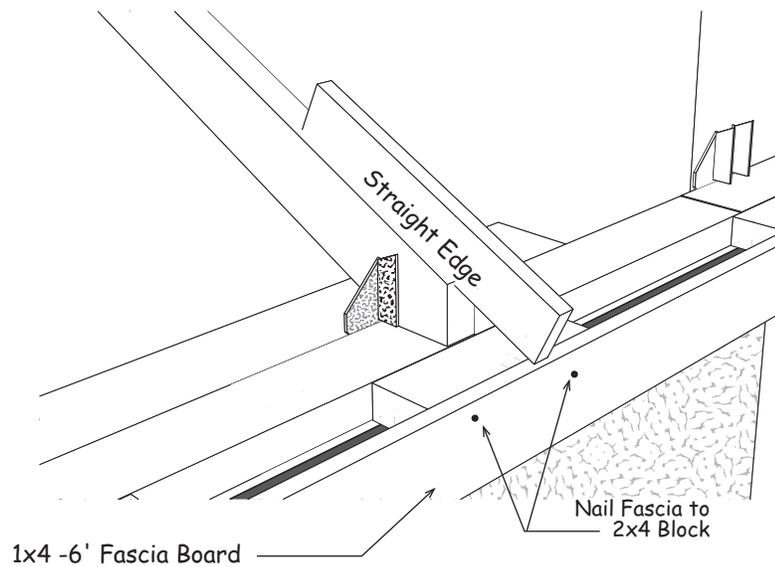
Step 20 Install Siding Filler

Install small primed siding fillers, *packed with the hardware*, over the 2x4 soffit blocks. Siding fillers will be flush with the gable siding. Use 6d galv. nails.



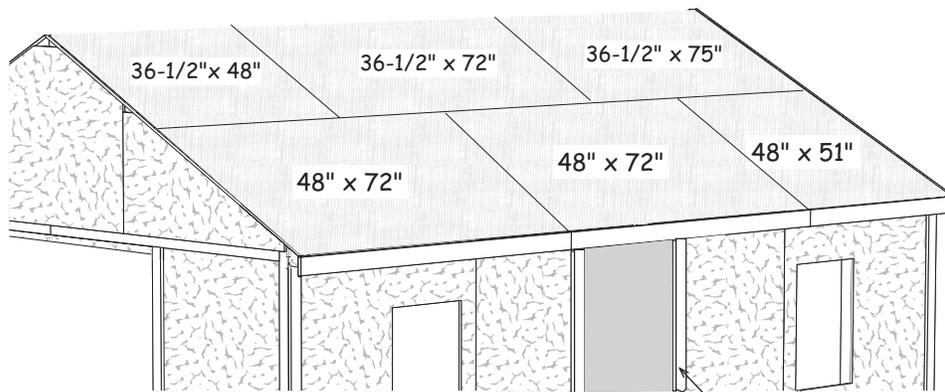
Step 21 Install 1x4 Fascia

1. Starting at the front left of the building, install a 1x4-6' white pine fascia board flush with the face of the siding on the left gable. Install the fascia so the bottom edge of the roof sheathing will rest on the edge of the 1x4. **See Detail 'E'**. Use a straight edge to align the 1x4 boards with the top of the trusses. Install fascia with 8d galv. nails.
2. Install (2) two more 1x4-6' trim boards, cut the last board to fit.
3. Repeat steps to install 1x4 fascia on the back.

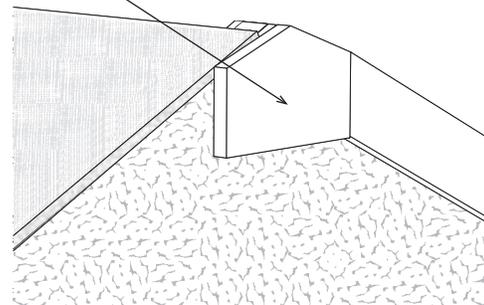
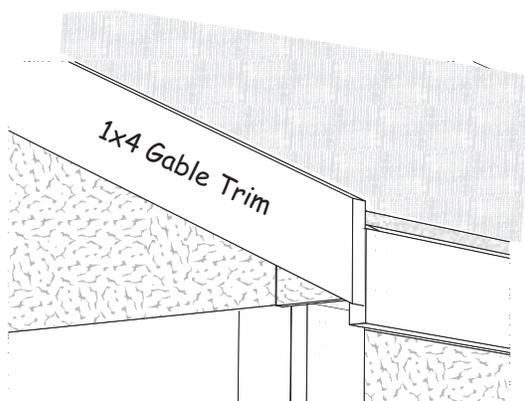


Step 22 Install Roof Sheathing, Gable and Door Drim

1. Install roof sheathing per layout below. Make sure the trusses are plumb and the sheets meet at the center of truss. Starting on lower front left corner install sheathing flush with gable siding. Use 7d sinkers spaced 12" apart. The top row of roof sheathing will be about 1" below the ridge to allow for ventilation.
2. Repeat on back of building.

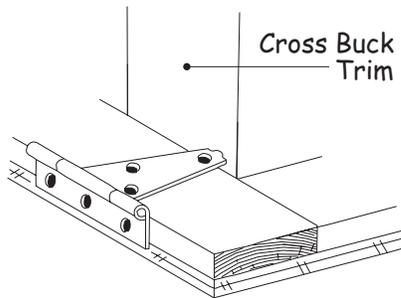


3. Install a 35" long 1x3 board over the single door opening. Position this board $3/4"$ above opening and centered.
4. Install (2) two $1 \times 3 \times 73\text{-}1/4"$ boards along each side of the front door opening and butted to the bottom edge of 35" trim. Tack these boards with a couple nails; you may want to move the trim later when you install the doors.
5. Install a $8\text{-}1/2"$ long trim board, called a keystone, at the top of the gable flush with the top of the roof sheathing. Use 8d galv. nails.



2. Install (2) two $82\text{-}1/2"$ long 1x4 trim boards flush with the top of the roof sheathing. Use 8d galv. nails.
3. Repeat to install trim on other gable end.

Step 23 Install Hardware



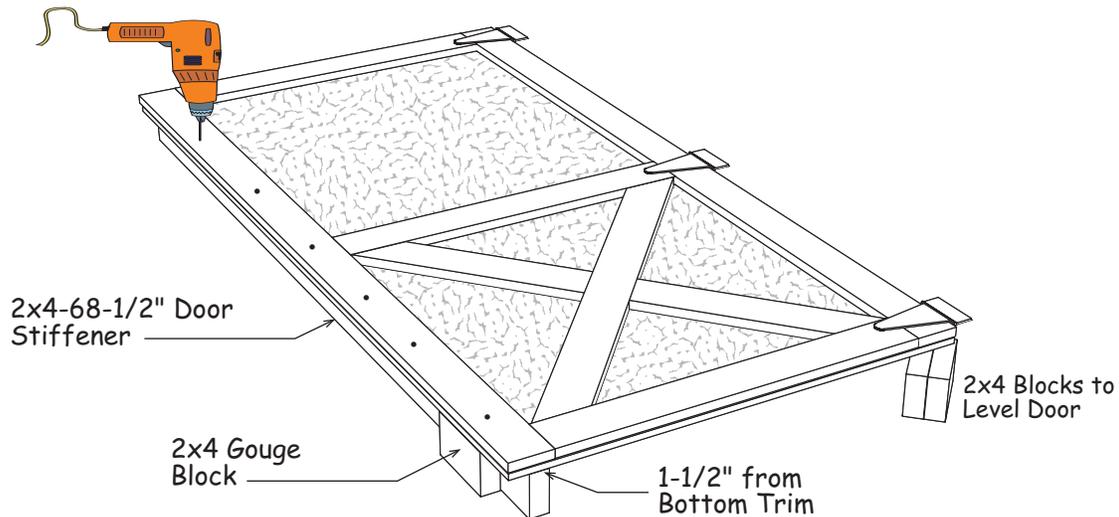
Install Hinges on Double Barn Doors

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.

Step 24 Install Door Stiffener on Single Door

Locate the 28" wide door. This door will be installed in the front door opening. The instructions below describe installing a 2x4 as a door stiffener. Decide which way the door will open and secure the 2x4 on the opposite side where the hinges will be installed.

1. Locate a 68-1/2" long 2x4 and position the 28" door with trim facing up. Place the 2x4 on edge under the door. The 2x4 should be 1-1/2" from long edge of trim and 1-1/2" from bottom of trim. Use a 2x4 block as a gauge and another to help level door while installing 2x4.
2. Fasten the 2x4 to the door using (6) six 2-1/2" long deck screws. Install the first screw 6" from the bottom of the door. Space the remaining screws 12" apart.
3. Install hinges as described in **Step 23** on opposite side of 2x4.



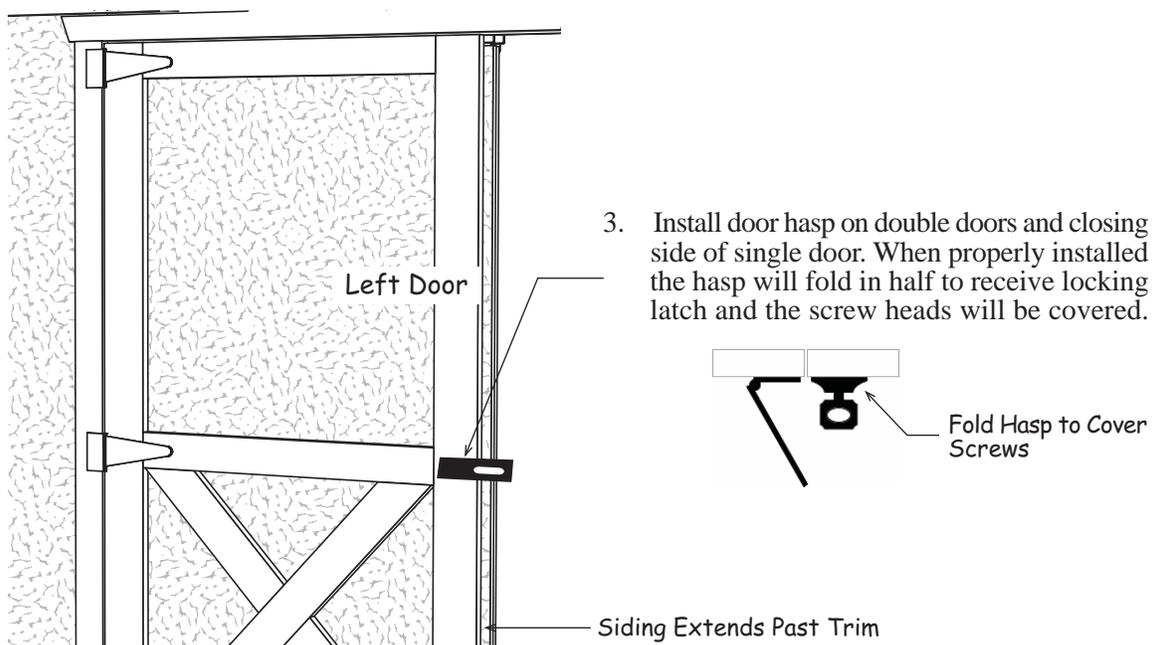
Reverse the position of 2x4 and hinges if you want the door to open in the opposite direction

Step 25 Install Doors

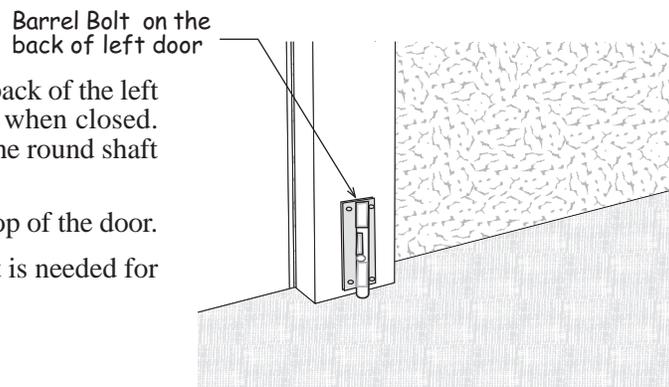
1. Before fastening the hinges to the side trim, temporarily prop the doors in the opening. Leave a space at the top and bottom of the doors and between the doors and the side trim to allow room for the doors to expand due to humidity.

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.

2. Determine position of hinges and install to side trim with 2" screws.

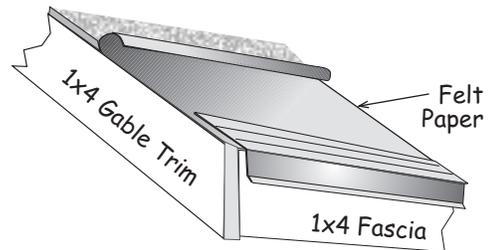


3. Install a barrel bolt on the lower back of the left door to secure this door in place when closed. You will need to drill a hole for the round shaft to drop into.
4. Install another barrel bolt at the top of the door.
5. Install single door. No barrel bolt is needed for this door.



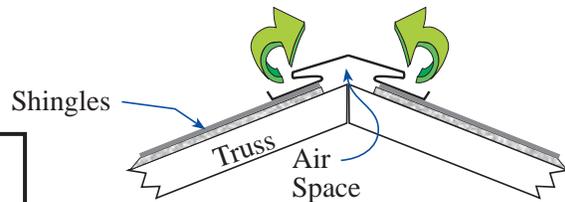
Step 26 Install Roofing — Not Supplied in Kit

1. Install metal roof edging on the perimeter of the roof area. If you are not installing shingles at this time, you can purchase felt paper to protect the roof sheathing. Install the felt paper before you install the metal roof edge.



2. Install shingles according to the instructions on the wrapper. If you need more detailed instructions on installing shingles, there are good publications online.

Building Tip: Install ridge vent in lieu of shingles caps. Ridge vent provides ideal ventilation, preventing heat and moisture from damaging your building or its contents.



Optional ridge vent provides ideal ventilation.

Building Size		Material List
16' x 12'	20' x 12'	
9 bdl.	11 bdl.	Roof Shingles <i>by Owner</i>
8 pcs.	9 pcs.	Roof 'drip' Edge-10' <i>by Owner</i>

Easton 12x16 Material List

7	2x4 for Collar Ties	82"
18	2x4 for Truss Rafters	80-1/2"
4	2x4 for Wall Plates	80-1/4"
51	2x4 for Wall Studs & Plates	72"
5	2x4 for Wall Plates	68-1/2"
2	2x4 for Door Header	67-1/2"
4	2x4 for Wall Plates	48"
4	2x4 for Wall Plates	34-3/4"
4	2x4 for Gable Studs	23-1/2"
2	2x4 for Door Header	31-1/2"
22	2x4 for Soffit Blocks	5" or longer
14	Truss Gussets	7/16" 10" x 24"
28	Truss Gussets	7/16" 12" x 24"
2	Plywood Gusset	3/4" 3-1/2" x 32"
1	ea Pre-built Doors	28" x 71-3/4"
2	ea Pre-built Doors	32" x 71-3/4"
<i>LP Primed Exterior Siding</i>		
9	ea Siding Panels	48" x 75-3/4"
4	ea Siding Panels	24" x 75-3/4"
2	ea Siding Panels	16" x 75-3/4"
2	ea Siding Panels	9-3/4" x 75-3/4"
2	ea Gable Siding	48" x 40" <i>angle cut</i>
4	ea Gable Siding	48" x 28" <i>angle cut</i>
9	ea Soffit Panels	48" x 7"
6	ea Filler Panels	48" x 4-1/4"
3	ea Siding Panels	48" x 4-1/4"
1	ea OSB Door Filler	3-1/4" x 67-1/4"
1	ea OSB Door Filler	3-1/4" x 31-1/4"

Revised August 13, 2018

3	1 lb. box	10d	Sinkers
3	1 lb. box	8d	Galv.
2	1 lb. box	7d	Sinkers
1	1 lb. box	6d	Galv.
1	5 lb. box	6d	Common
9	ea. 5"		Door Hinges
2	ea. 4"		Door Latch
2	ea. 6"		Barrel Bolts
38	ea. 2"		Hinge Screws
38	ea. 1-1/4"		Hinge Screws
45	ea. 1-1/2"		Exterior Screws
25	ea. 2-1/2"		Deck Screws
6	ea. 1"x4"		Metal Plates
14	ea. 2"x4"		Metal Truss Hangers
2	ea.		Bottle Glue
4	ea.		Siding Fillers 3-1/2" x 2-1/2"
4	ea.	1x4 Gable Trim	82-1/2"
6	ea.	1x4 Fascia Trim	72"
4	ea.	1x4 Corner Trim	75-3/4"
4	ea.	1x3 Corner Trim	75-3/4"
4	ea.	1x4 Wall Trim	72"
4	ea.	1x3 Door Trim	72"
1	ea.	1x3 Door Trim	35"
2	ea.	1x6 Keystone	8-1/2"
<i>Roof Sheathing</i>			
4	ea.	Sheathing 7/16"	48" x 72"
2	ea.	Sheathing 7/16"	48" x 51"
2	ea.	Sheathing 7/16"	36-1/2" x 75"
2	ea.	Sheathing 7/16"	36-1/2" x 72"
2	ea.	Sheathing 7/16"	36-1/2" x 48"