Best Barns USA

Assembly Book

revised March 23, 2016

the Brookhaven 10' x 16'

Manufactured by Reynolds Building Systems, Inc.

205 Arlington Drive Greenville, PA 16125 724-646-3775

Important Information About Your Shed Kit

Thank you for your purchase. I want you to be completely satisfied with your building. The 2x4s are imported from Europe. Their lumber is the highest quality available, they grade lumber all four sides. If you are dissatisfied with any lumber, 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) 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.

You will need to purchase the finish roof covering (shingles or metal panels) locality. Refer to **Step 20** for information on suggested material. 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.

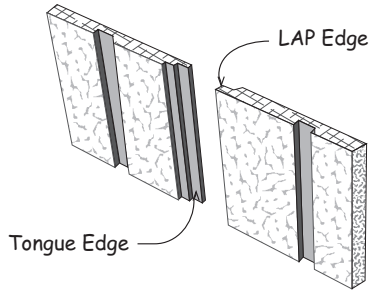
Most buildings are installed on a wood floor and the siding was designed to extend over the wood flooring. If the foundation is a concrete floor cut the siding flush with the bottom of the wall plate to prevent the concrete from contacting the siding.

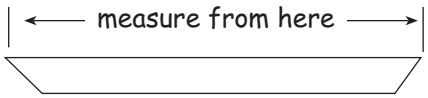
Stacking the boards, according to size, will make them easier to find when needed. **Do Not** discard any material until your building is complete.

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 8d galv. nails, spaced 12" apart.





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

Tool List

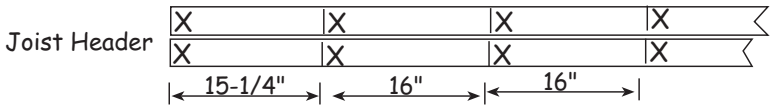
- ❑ Hammer & Phillips Screwdriver
- ❑ Framing Square & Level
- ❑ Hand Saw
- ❑ Power Drill/Screwdriver
- ❑ Measuring Tape
- ❑ 1 - 8' and 1 - 10' Step Ladder

Always wear safety glasses when cutting or nailing!

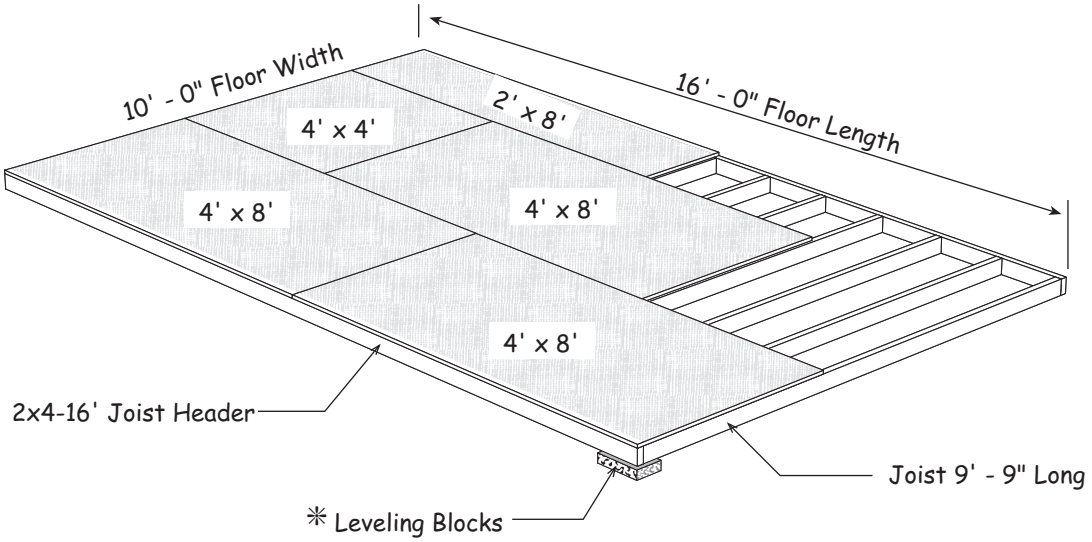
Construction Details for Optional Floor System

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 2x4-16' joist headers to 16'-0". Layout for 16" on center joist spacing. 'X' marks where floor joist will be placed.



2. Cut 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 10'-0" building width.*



✳ *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 16' long.*

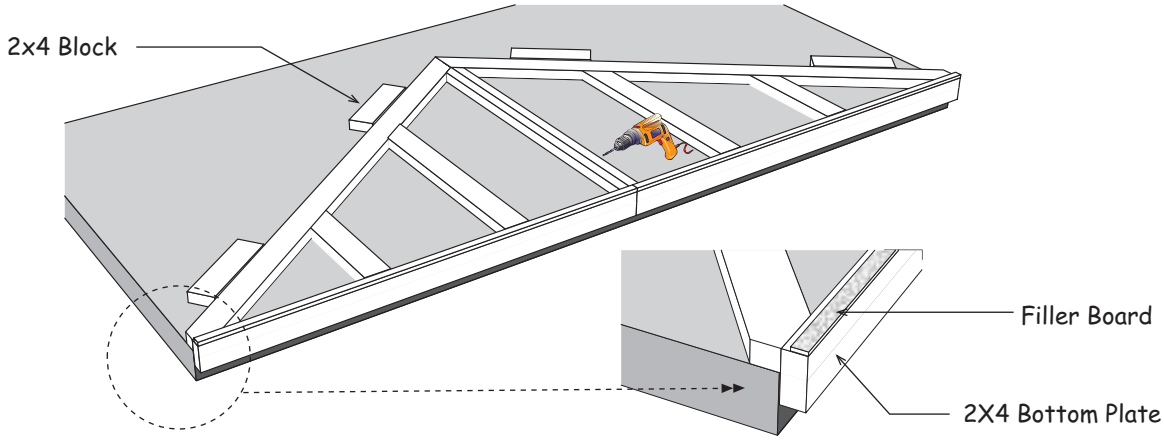
It is important that the floor be level and square. Before nailing the flooring, measure the floor diagonally (corner to corner). Then measure the opposite corners. These measurements will be the same if the floor is square (226-1/2").

Material Description	**10' x 16' floor**	
2x4 Treated Joist Headers	2 pcs.	16'
2x4 Treated Floor Joist	13 pcs.	10'
Flooring 5/8" or 3/4"	5 pcs.	4x8
Screw Floor Nails	2 lb.	8d
Galv. Box Nails	2 lb.	16d

Step 1 Assemble Upper Roof Gable

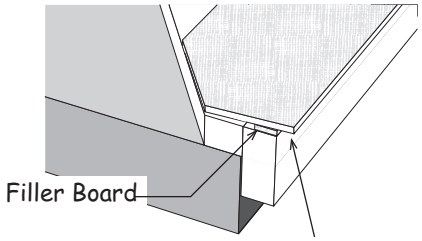
1. Select a left and right pre-built gable frame. Positions gable frames on the floor as shown below. Screw the frames together using (4) four 2-1/2" long deck screws. Temporarily screw 2x4 blocks to the floor. There are short 2x4 blocks, *that may have an angle on one end*, supplied in the kit. This will trap the gable frames and aid in the assembly. Use 2-1/2" deck screws.

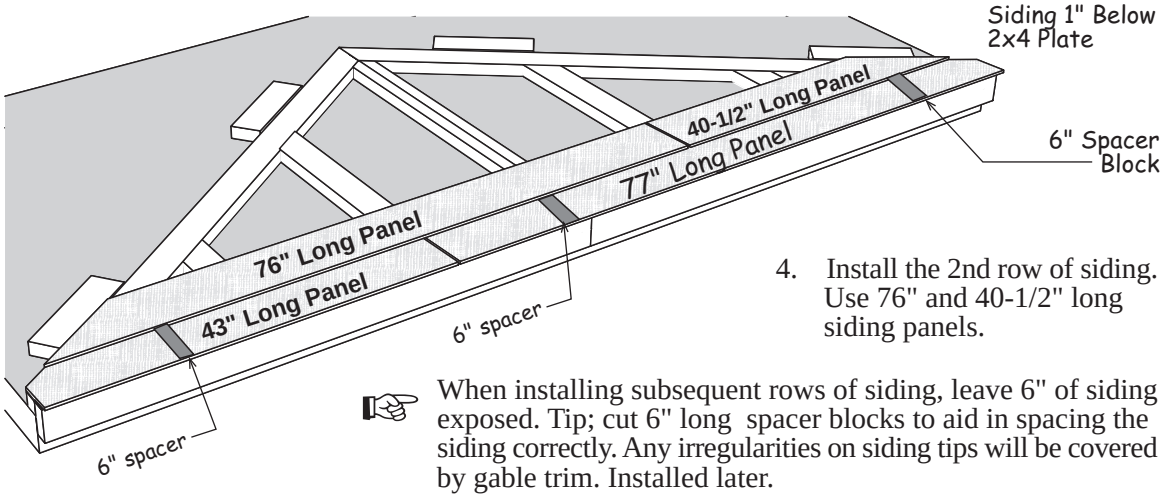
☞ Nails and wood gussets are packed between the doors.



2. Install a 43" long siding panel, flush at the left end and extending 1" below the 2x4 bottom plate. Nail siding to the 2x4 frame, along the top edge with 6d galv. nails. The nails should be placed 1" from the top of the siding board so they are covered by the next row of siding.

3. Install 77" long siding panel against the 43" panel .



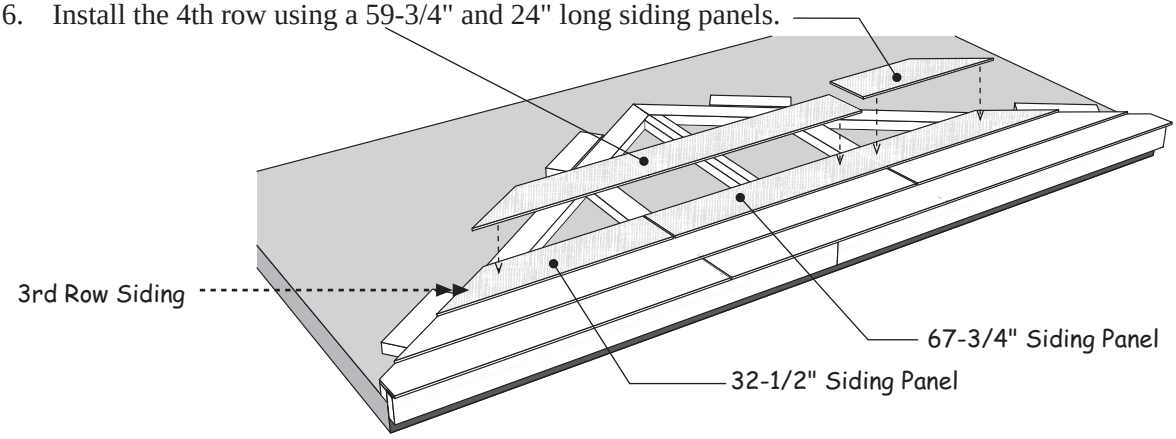


4. Install the 2nd row of siding. Use 76" and 40-1/2" long siding panels.

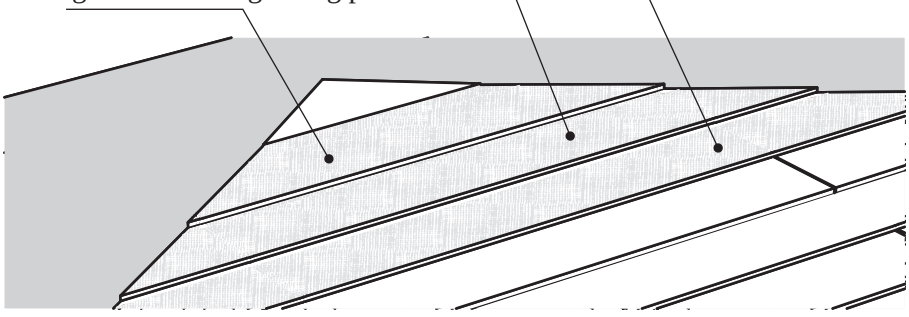
☞ When installing subsequent rows of siding, leave 6" of siding exposed. Tip; cut 6" long spacer blocks to aid in spacing the siding correctly. Any irregularities on siding tips will be covered by gable trim. Installed later.

Step 1 Assemble Upper Roof Gable Continued

5. Install the 3rd row of siding. Use 32-1/2" and 67-3/4" long siding panels.
6. Install the 4th row using a 59-3/4" and 24" long siding panels.

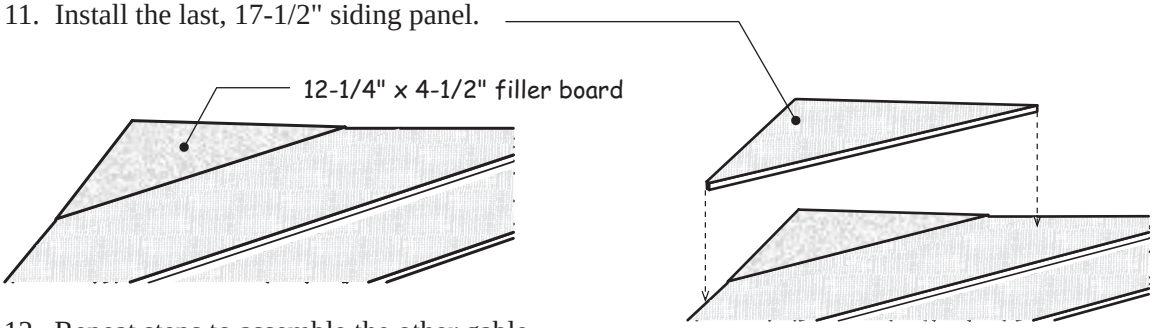


7. Install the 5th row of siding using a 67-1/4" long siding panel.
8. Install the 6th row using a 50-3/4" long siding panel.
9. Install the 7th row using a 33-3/4" long siding panel.



10 Install a 12-1/4" wide x 4-1/2" long OSB filler at the top of gable. This filler board will enable the last piece of gable siding to be installed flat (not angled) so the gable trim will fit properly.

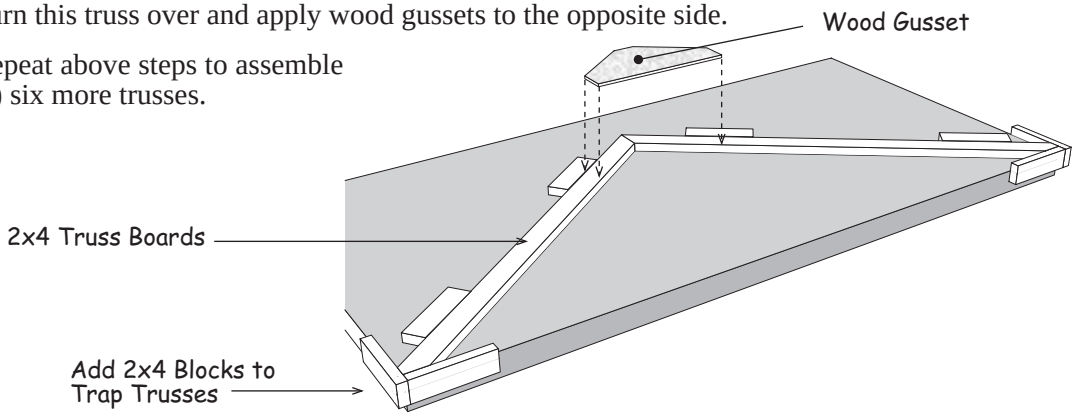
11. Install the last, 17-1/2" siding panel.



12. Repeat steps to assemble the other gable.

Step 2 Assemble Roof Trusses

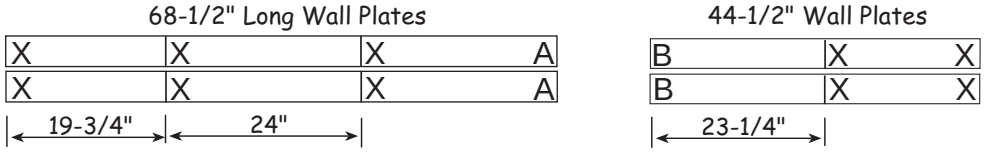
1. Place (2) two 75-3/8" long 2x4 truss boards together, inside the 2x4 blocks,as shown below. Add (4) four more 2x4 blocks at corners to trap truss bottoms.
2. Secure the tops together with a wood gusset. Nail the gusset to the 2x4s with 6d common nails. Use 14 nails per gusset. Angle nail slightly so nails do not protrude through the 2x4 boards.
3. Turn this truss over and apply wood gussets to the opposite side.
4. Repeat above steps to assemble (6) six more trusses.



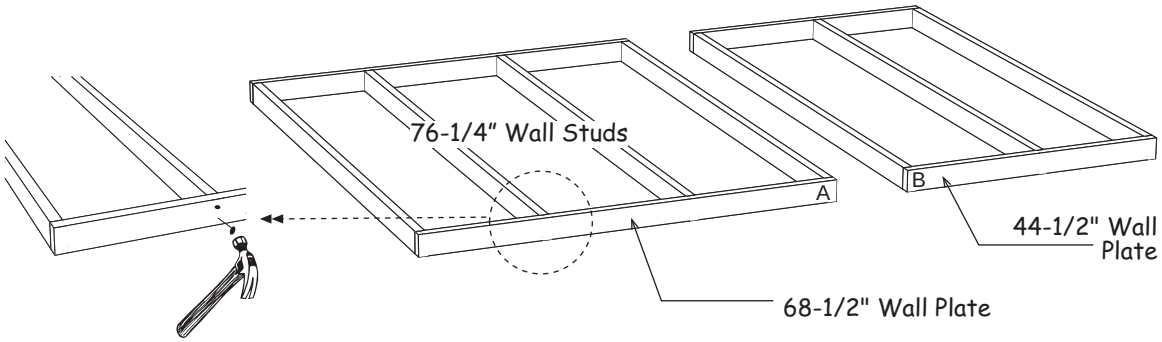
5. Remove 2x4 blocks.

Step 3 Assemble Sidewall Frames

1. Position (2) two 2x4-68-1/2" and (2) two 44-1/2" long 2x4s and indicate with an 'X' where the wall studs will be located. Mark the ends that will butt together with and 'A' and 'B'.



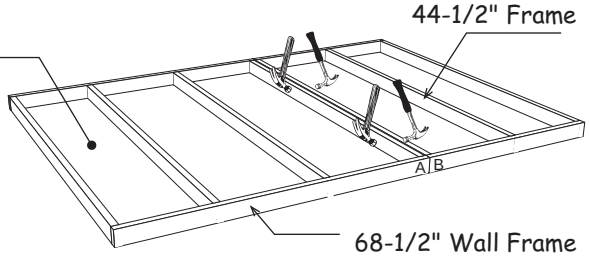
2. Install 76-1/4" long wall studs, between the wall plates, over the 'X' marks. Use (2) two 10d sinkers at each end of stud.



Step 3 Assemble Sidewalls Continued

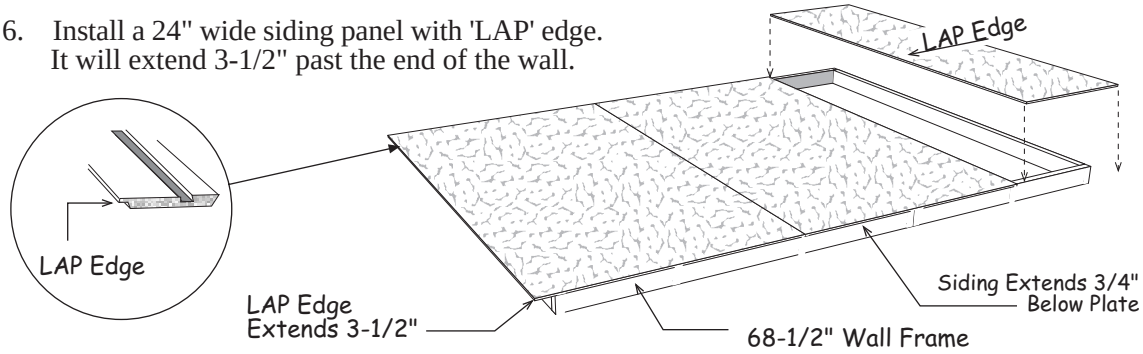
3. Nail both wall frames together with the small stud spaces towards the ends of the wall.

   Use (4) four 10d sinkers on each side of the double studs.

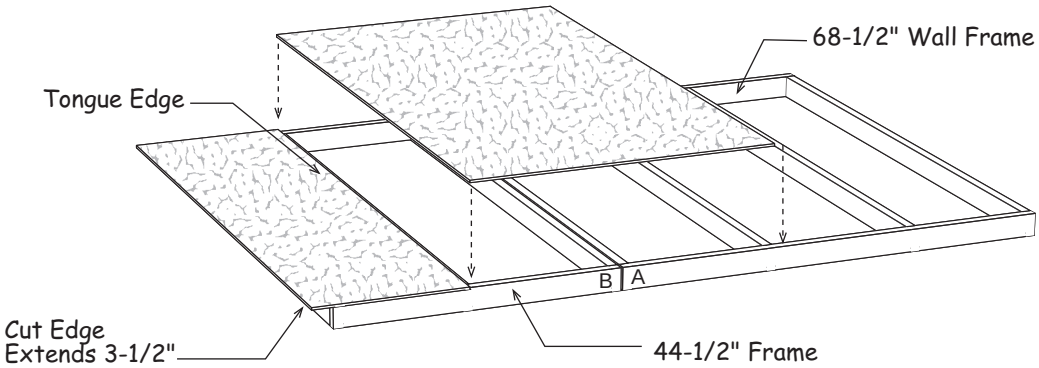


☞ **IMPORTANT: Select 80-1/2" Long Siding For these Steps**

4. Square wall frame. *Measure diagonally (corner to corner). The measurements will be the same (138") when the wall is square*. Install a full width siding panel with the 'LAP' edge extending 3-1/2" beyond the end of the wall end of the wall frame. The siding will extend 3/4" below the bottom plate and 1/2" above the top plate. Use 8d galv. nails spaced 12" apart.
5. Install another full width siding panel.
6. Install a 24" wide siding panel with 'LAP' edge. It will extend 3-1/2" past the end of the wall.

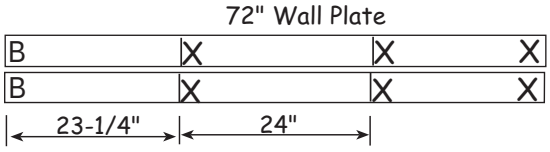


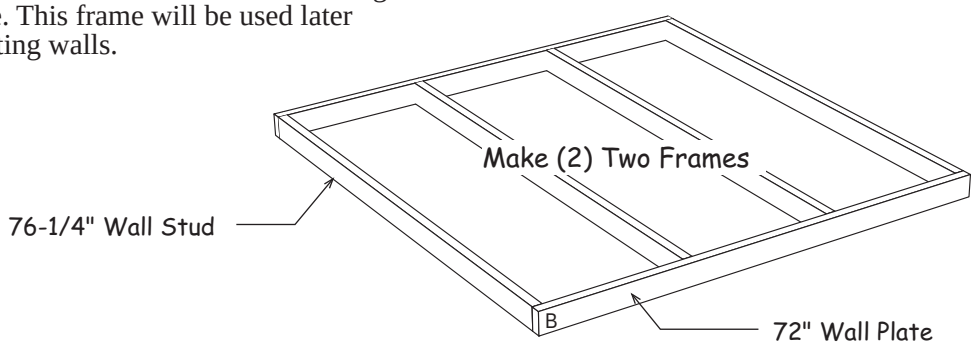
7. Repeat steps 1-3 to assemble another side wall panel. Flip frame so the 44-1/2" frame is located on the left end as shown below.
8. Install a 24-3/4" panel with 'Tongue' edge so the cut edge extends 3-1/2" past the wall frame.
9. Install (2) two full width siding panels. The last panel will extend 3-1/2" beyond wall frame.



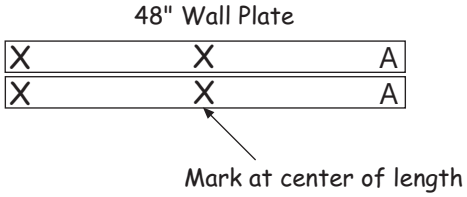
Step 5 Assemble Back Wall

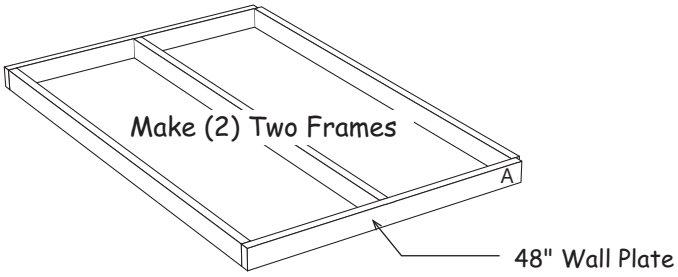
1. Position (2) two 2x4-72" boards together and indicate with 'X' marks where the wall studs will be located. Mark an 'B' for left stud.
2. Install (4) four 76-1/4" long wall studs between the wall plates.
3. Repeat process to assemble another 72" long wall frame. This frame will be used later when erecting walls.





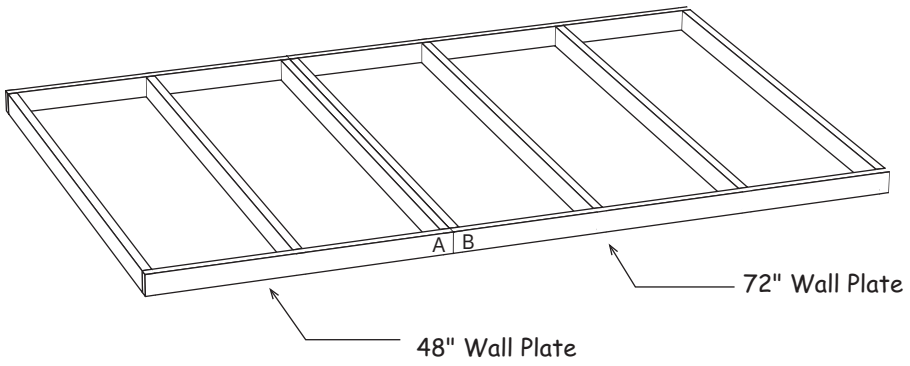
4. Position (2) two 2x4-48" boards together and indicate with 'X' marks where the wall studs will be located. Mark an 'A' for right stud.
5. Install (3) three 2x4-76-1/4" wall studs between wall plates. Install 2nd stud in the center of the wall frame.
6. Repeat to make (1) one more 48" frame. This frame will be used later for the front wall.



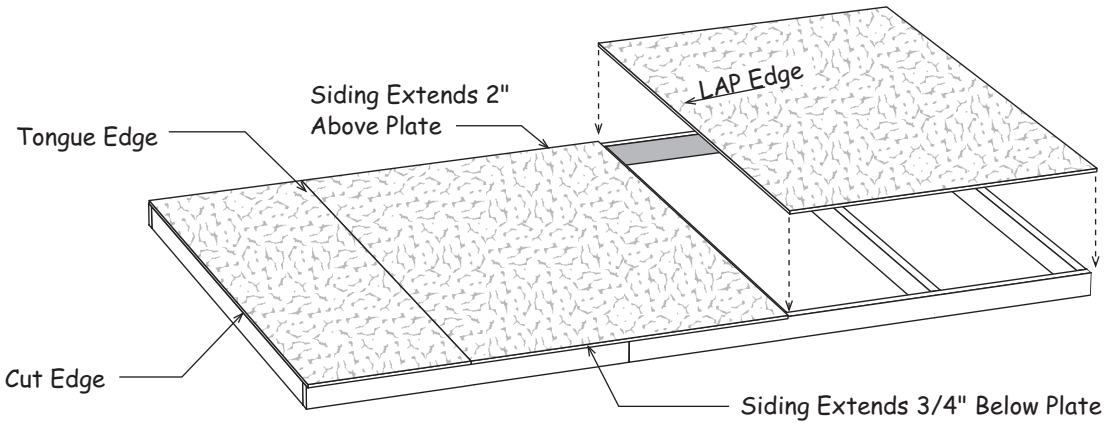


Step 5 Assemble Back Wall Continued

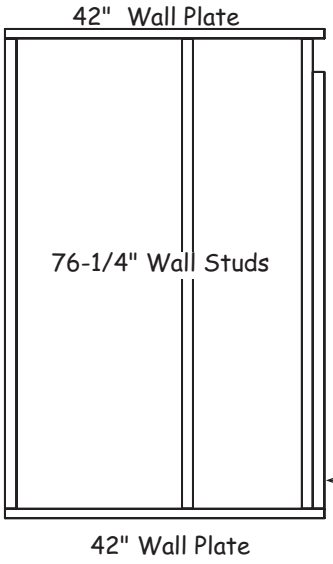
7. Position frames as shown below with the 48" frame on the left and 'A' and 'B' butted together. Nail frames together with 10d sinkers.
8. Square wall frame (143-3/4" diagonally).



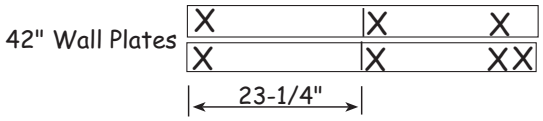
9. Select a 24-3/4" wide panel, *with 'tongue' edge*, and install this panel with the 'cut' edge flush with end of the wall. Siding will extend 3/4" below the bottom plate and 2" above top plate.
10. Install (2) two full width siding panels next.



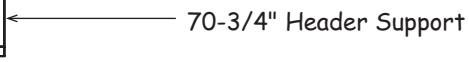
Step 6 Assemble Front Wall



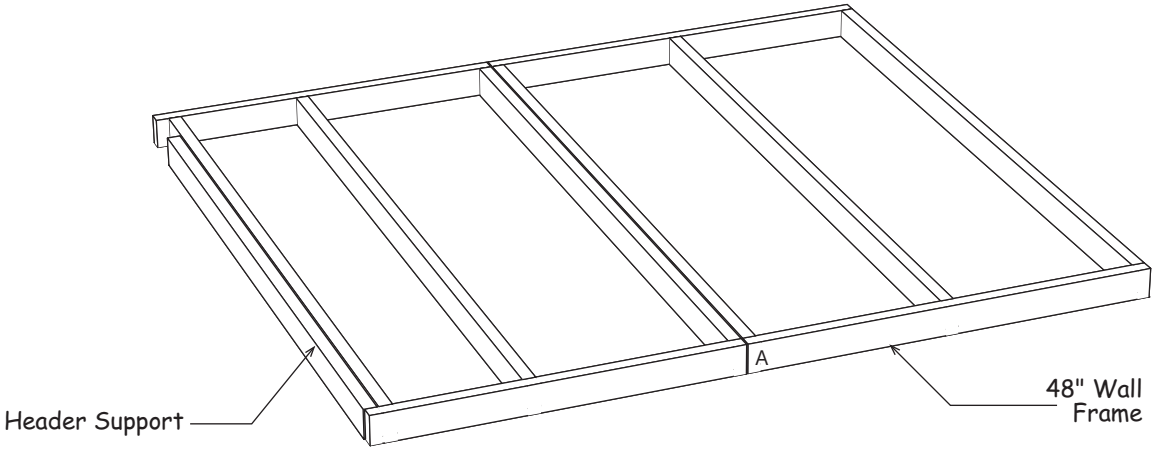
1. Cut (2) two 72" long 2x4s to a length of 70-3/4" for header support.
2. Position (2) two 2x4-42" boards together and indicate with 'X' marks where the wall studs and header support will be located.



3. Install (3) three 76-1/4" wall studs between top and bottom plates. Nail 70-3/4" long 2x4 cut above to last wall stud.
4. Repeat steps 2-3 to assemble another wall frame.



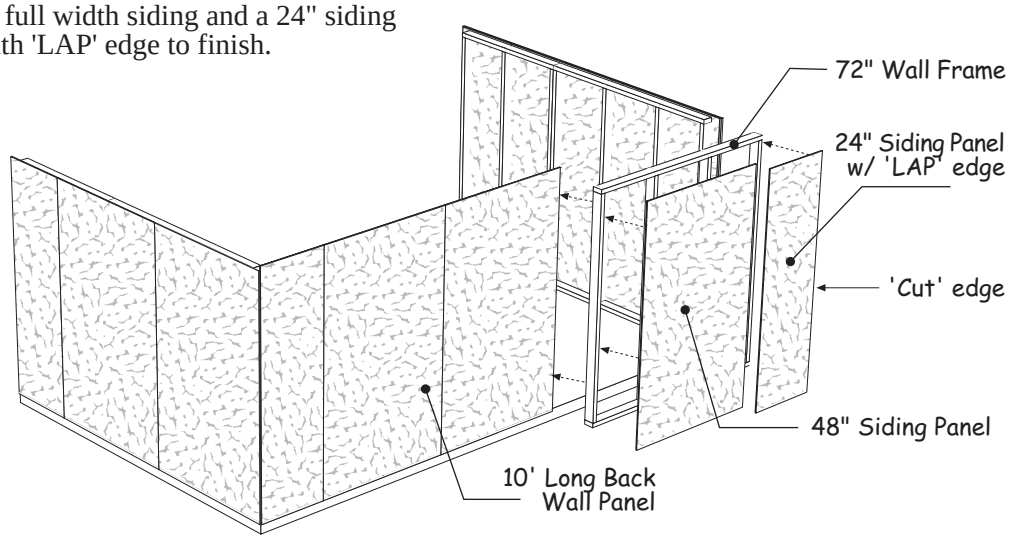
5. Select one of the frames assembled above and a 48" frame assembled in **Step 5**. Position frames as shown below with the 48" frame on the right. Nail frames together with 10d sinkers.



Step 7 Set Walls

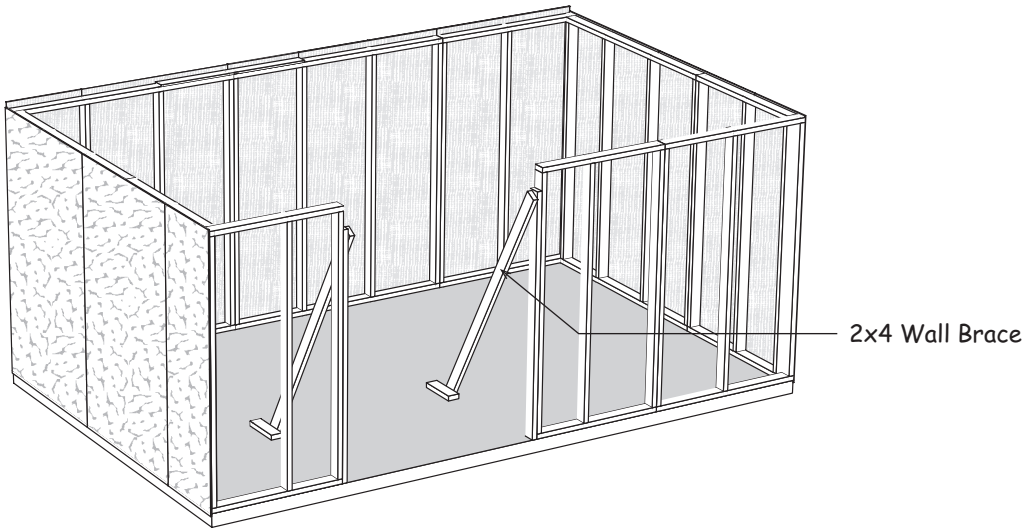
1. Secure the left sidewall to the 10' back wall panel together at the corners. Use (4) four 10d sinkers. Install the 72" wall frame from Step 5 to right sidewall and 10' wall panel. Nail wall panels to the floor through bottom plate using 10d sinkers spaced 24" o.c.

2. Install a full width siding and a 24" siding panel with 'LAP' edge to finish.



3. Disassemble the shipping pallets and remove the (4) four 2x4s from each pallet. The bit for the screws is in the hardware bag. These 2x4s will be used for bracing and for tie plates in a later step.

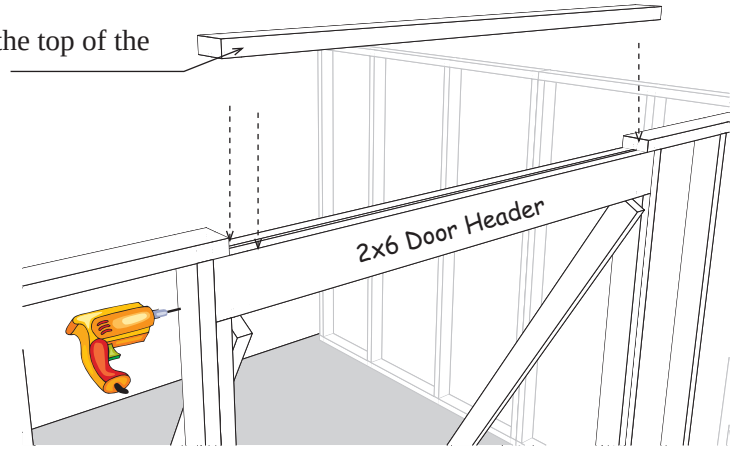
4. Secure the front wall panels, *from **Step 6***, to the sidewalls and floor. You may reverse framing for door placement on right. Use (2) two 2x4s from the shipping pallet to hold the walls straight.



Step 7 Set Walls Continued

5. Install the 63" 2x6 door header between the front wall panels. Use (2) two 2-1/2" deck screws on each end of the header.

6. Install a 2x4-60" plate across the top of the door header. Use 10d sinkers.



Step 8 Install Siding on Front Wall Frames

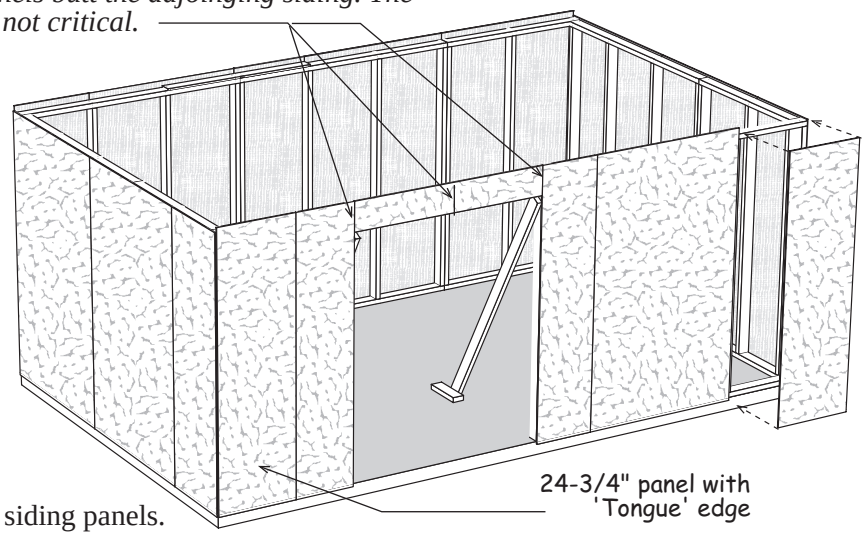
1. Select a 24-3/4" siding panel with a 'Tongue' edge and install it on the left corner with the 'cut' edge flush with the sidewall. *If door is on right work from right to left.*

2. Install an 18" siding panel with 'LAP' edge next. 'Cut' edge should be flush with door opening.

3. Install (2) two 30" x 6-3/4" siding panel over the door header

Note: These panels will be covered with a soffit box and door trim, hiding where the panels butt the adjoinging siding. The fit on the siding panels is not critical.

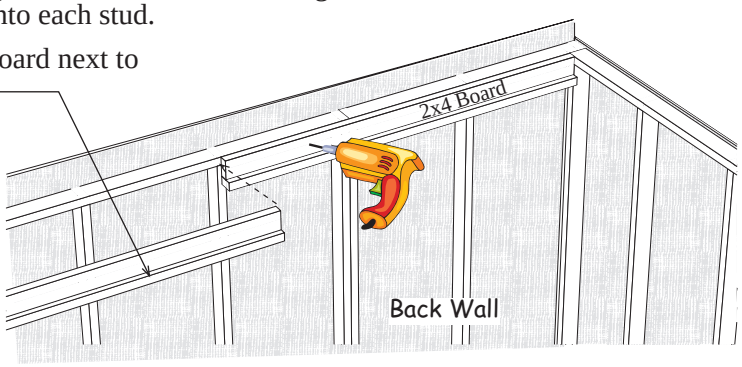
4. Install an 18" wide siding panel with 'Tongue' edge on the right of the door opening.



5. Install the remaining siding panels.

Step 9 Install Loft Floor Joist Headers

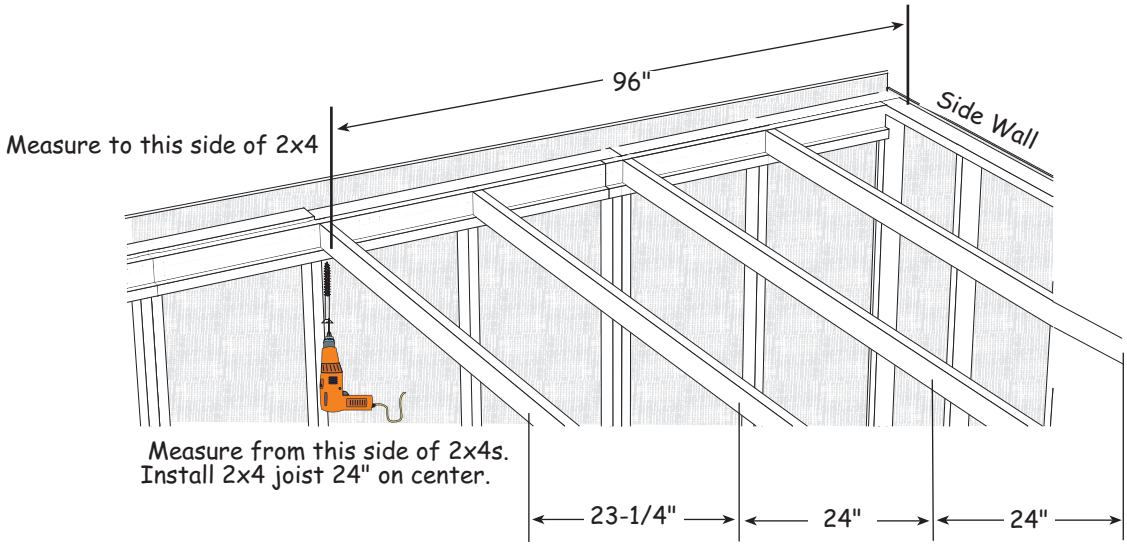
1. Install a 68-1/2" long 'L' shape board on the back wall with 2x4 board flush with top wall plate. Butt against right sidewall. Use 2-1/2" long deck screws. Screw into 2x4 top plate every 24" and into each stud.
2. Install a 48" long 'L' shape board next to the one installed above.
3. Install another 68-1/2" long 'L' shaped board to finish.
4. Repeat to install 'L' shape boards to the front wall.



Step 10 Install Loft Floor Joist

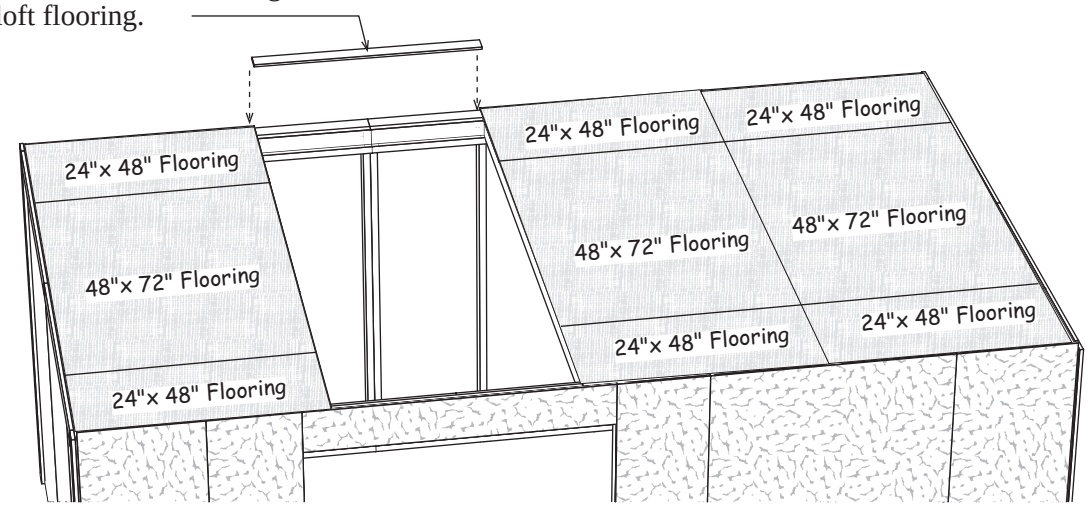
1. Install (4) four 110" long 2x4 loft joist between the 'L' shape boards at the right end of the building. Install the 1st loft joist. Measure 96" from the inside of the siding on the sidewall to outside of 2x4. Secure using 2-1/2" long deck screws through bottom of 'L' shaped boards. Install (3) three more joists in the middle. See measurements below.

2. From opposite sidewall install (2) two joists. Install the 1st loft joist. Measure 48" from the inside of the siding on the sidewall to outside of 2x4. Install a 2nd joist centered between joist and wall.



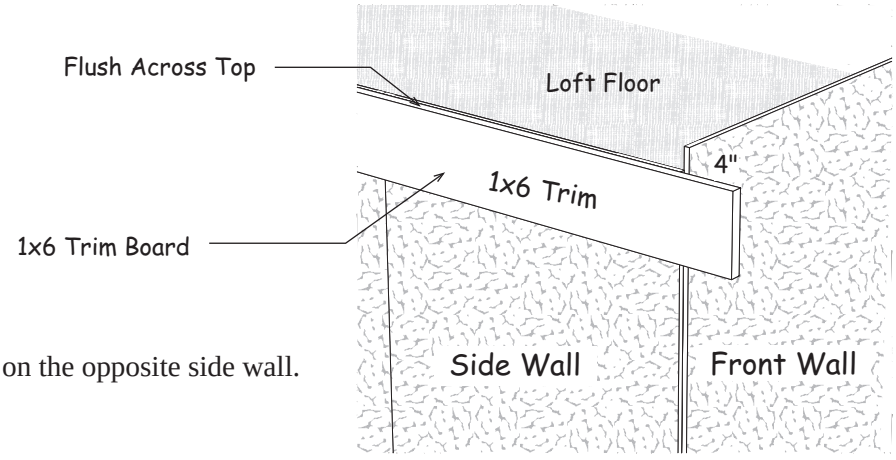
Step 11 Install Loft Floor

1. Install 7/16" OSB loft flooring over loft floor joists. Install flooring flush with outside of top wall plate. Use 7d sinkers spaced 12” apart. *See layout pattern below: Note; because of the narrow width, do not stand on the 24" wide floor panel.*
2. Install 3-1/2" x 48" long floor fillers to fit between the loft flooring.



Step 12 Install Sidewall Trim

1. Install (2) two 1x6-64-3/8" trim boards, on the side wall, flush with the top of the loft flooring. The 1x6 will extend 4" beyond the siding on the front wall and back wall. Use 8d galv. nails, spaced 12" apart.



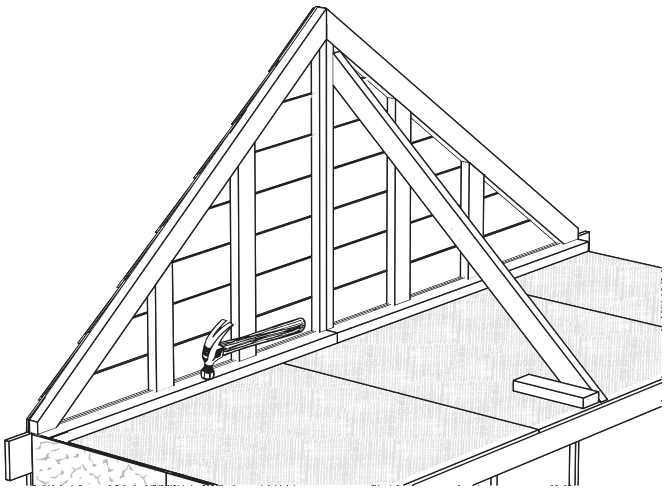
2. Install 1x6 trim on the opposite side wall.

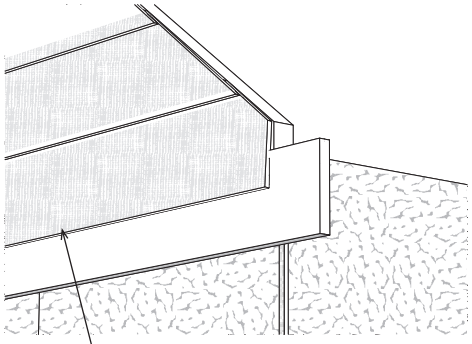
Step 13 Install Gables

1. Install a gable on the left side wall. The gable siding will extend over and butt against the 1x6 trim on the lower wall.

   Secure gable to wall by nailing through the gable plate with 10d sinkers. If windy, brace the gable to secure it. Use a 2x4 from one of the pallets.

2. Install gable on the opposite sidewall.

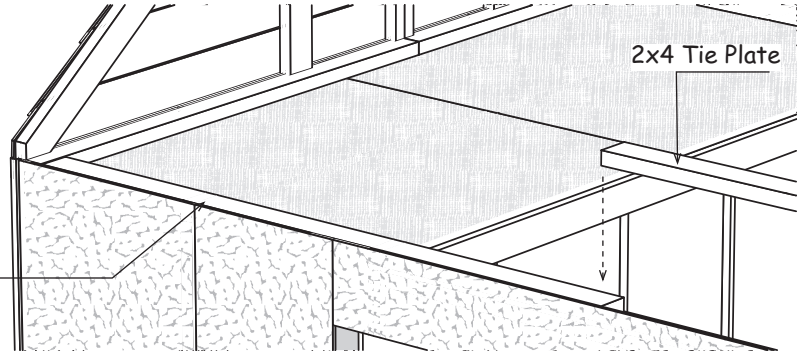




Bottom edge of siding extends over 1x6 trim.

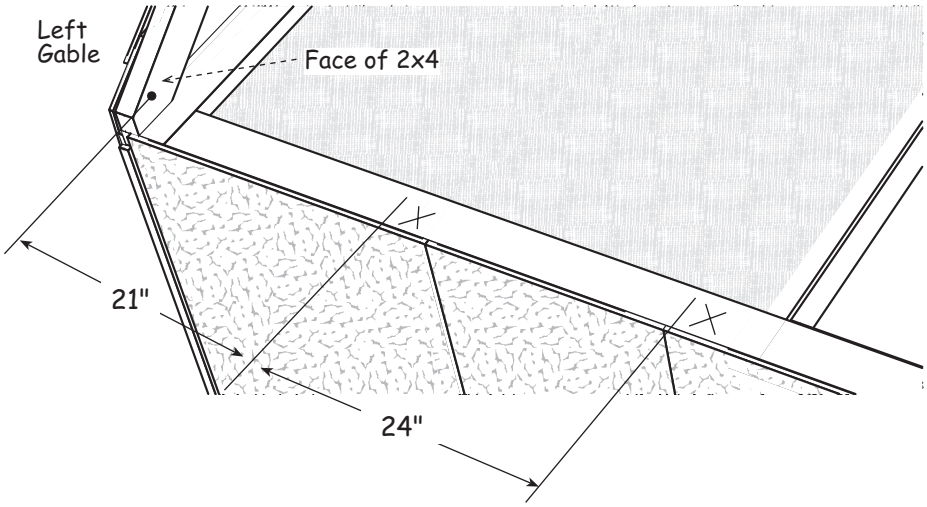
Step 14 Install Tie Plates

1. Install 2x4 tie plates over the front wall between the gables. Remove and use the 2x4s used to brace the front wall and (2) two 2x4s from the shipping pallet. Use 10d sinkers.
2. Cut to fit a 77" long 2x4 to finish.
3. Repeat to install tie plates on the back wall.

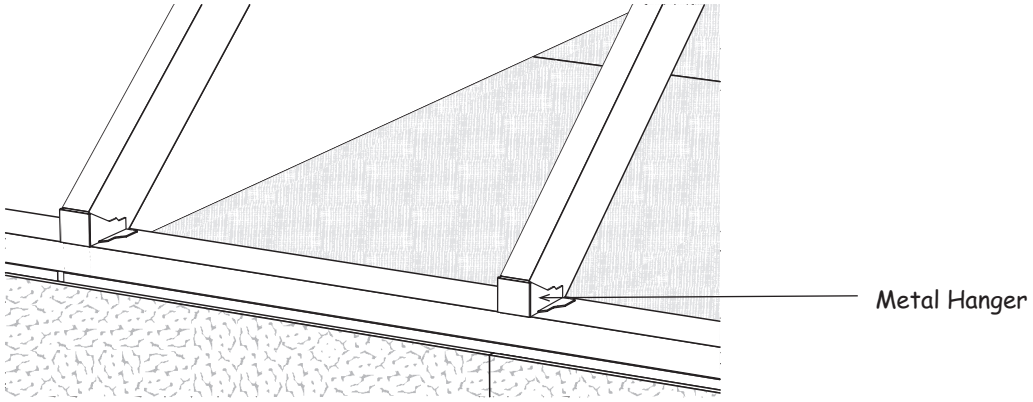


Step 15 Install Roof Trusses

1. Starting at the left gable, measure from the face of the 2x4 when marking the location of the first truss. Trusses are spaced 24" on center. **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. Note: The last truss space will be wider than 21".



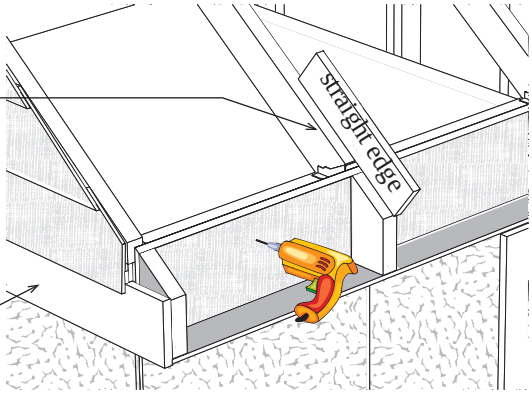
2. Install trusses over the 'X' marks. Nail the metal hanger flush with outside of tie plate then insert truss and nail. Use 1-1/2" hanger nails.

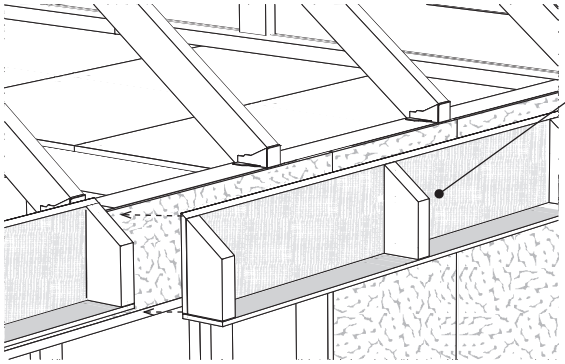


Step 16 Install Soffit Boxes and Corner Trim

1. Install a pre-built 71-3/4" soffit box on the left corner of the front wall. Position the soffit so the 2x4 blocks in the soffit are aligned with the top of the truss.

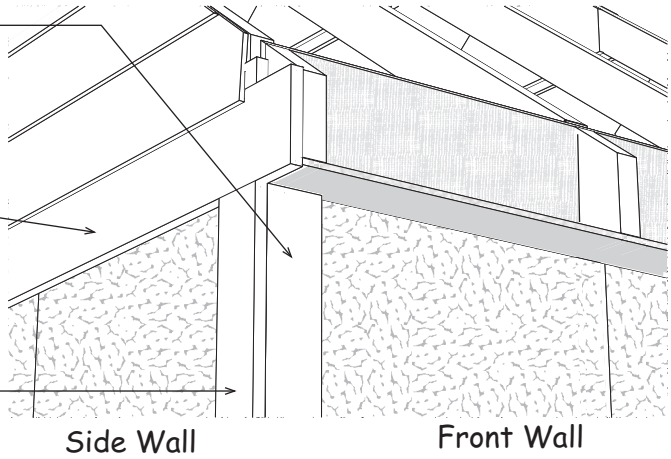
   Install the soffit box to the 2x4 top and tie plates using 2-1/2" deck screws.





2. Install the longer 73" long soffit box next to the first one.
3. Install a 48" long soffit overhang to finish.
4. Repeat on back wall. Start on right corner working left.

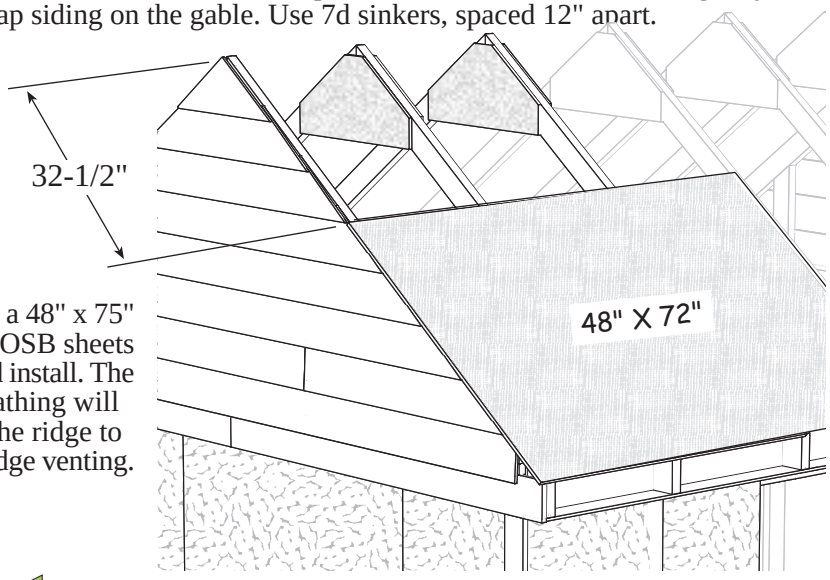
5. Install a 75" long 1x4 trim board under the soffit, flush with siding on the side wall. Use 8d galv. nails spaced 12" apart.



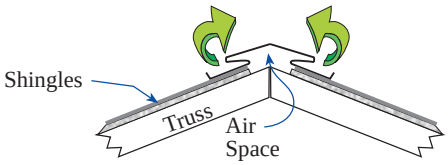
6. Install another 75" long 1x4 trim board under the 1x6 trim on the side wall.
7. Repeat steps 5-6 for the last 3 corners.

Step 17 Install Roof Sheathing

1. The gable and trusses should be plumb before installing the roof sheathing . Install a 48" x 72" piece of roof sheathing on the lower left corner. The sheathing should end in center of the 3rd truss and 32-1/2" from the peak of the trusses. The sheathing may not overlap all the lap siding on the gable. Use 7d sinkers, spaced 12" apart.



2. Remove from pallet a 48" x 75" OSB sheet. Gather OSB sheets per layout below and install. The top row of roof sheathing will be about 1" below the ridge to allow for optional ridge venting. See detail below.



Optional ridge vent provides ideal ventilation.

☞ *Building Tip; If you are installing metal roof panels, you may want to install metal panels on the front roof area before installing the roof sheathing on the back side. This will provide a working space to stand when installing the font metal panels.*

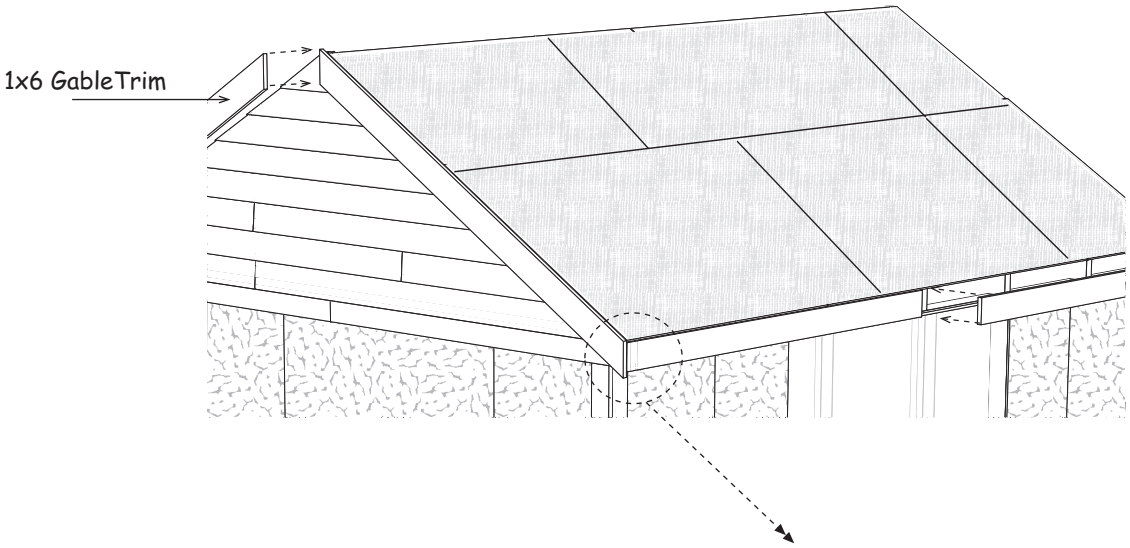
Roof Sheathing Layout

31-1/2" x 48"	31-1/2" x 72"	31-1/2" x 75"
48" x 72"	48" x 48"	*Remove from shipping pallet* 48" x 75"

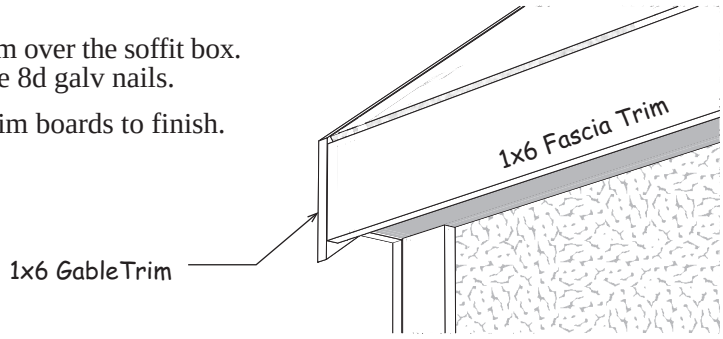
3. Install sheathing on the opposite side. Mirror layout of front side.

Step 18 Install 1x6 Gable & Fascia Trim

1. Install 1x6 gable trim flush with the top of the roof sheathing. The gable trim should extend 3/4" beyond the soffit box to receive the 1x6 fascia trim installed next.. Use 8d galv. nails.

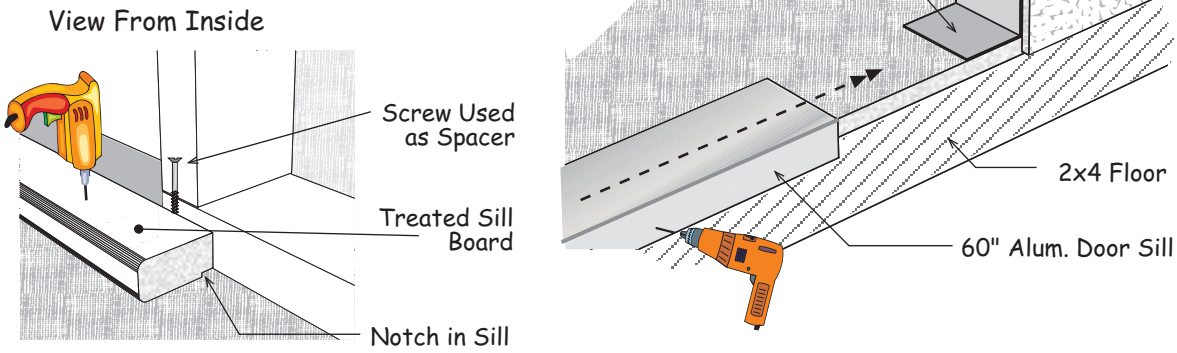


2. Install a 48" long 1x6 fascia trim over the soffit box. Install a 74" long 1x6 next. Use 8d galv nails.
3. Cut and install 74" long 1x6 trim boards to finish.
4. Repeat on opposite side.



Step 19 Install Door Sill

1. Bend a 3-1/2" x 5" metal flashing in half and install at each corner of the door opening.
2. Install a 4" x 60" long aluminum door sill between the door opening. Drill 1/8" hole and secure to the 2x4 floor board with (6) six pan head screws.

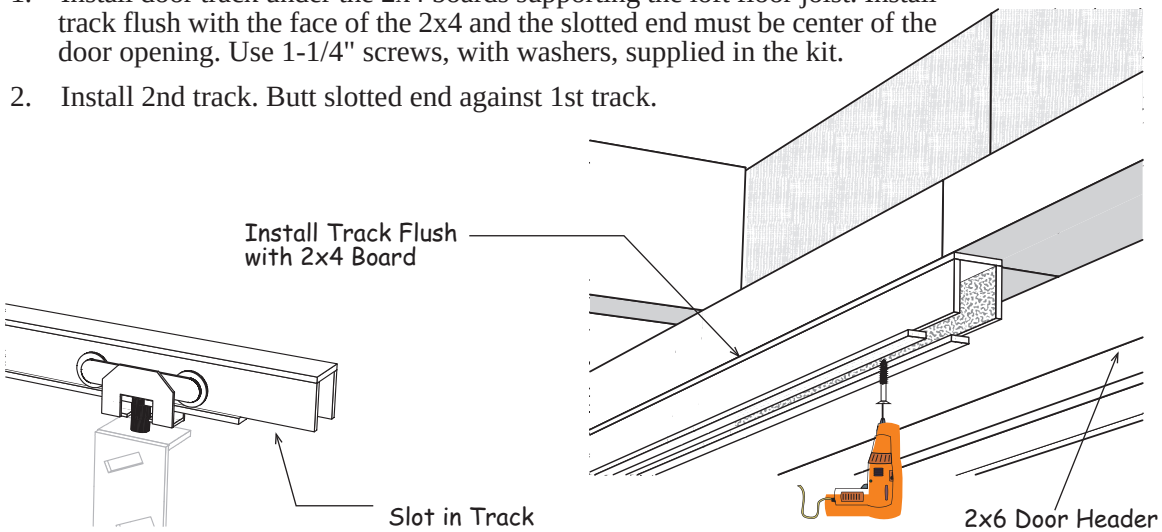


3. Install a 2-1/2" x 63" Treated Sill Board over the aluminum sill. There needs to be a space between this board and inside wall frame. This space receives the bottom of door track. Insert a 2-1/2" screw between the Treated Sill Board and the inside wall as a spacer. Screw the board to the floor with 2-1/2" long screws. Remove the screw used as a spacer.

☞ *Building Tip; run a bead of caulking where flashing, treated sill and aluminum sill meet to prevent moisture from penetrating.*

Step 20 Install Door Track

1. Install door track under the 2x4 boards supporting the loft floor joist. Install track flush with the face of the 2x4 and the slotted end must be center of the door opening. Use 1-1/4" screws, with washers, supplied in the kit.
2. Install 2nd track. Butt slotted end against 1st track.



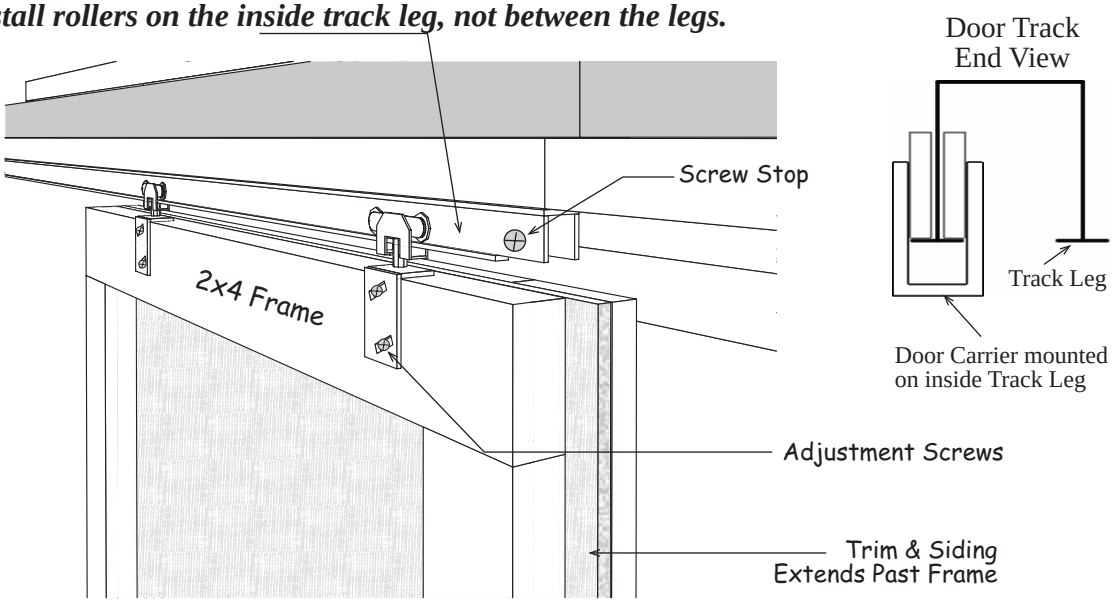
Step 21 Install Doors

1. Locate the door with the siding and trim extending past the 2x4 frame, *see detail below.* Hang this door on the left when standing inside of the building.

   Slide the rollers on the track as shown below. If necessary, adjust door so the bottom of the door does not rub on the treated threshold. To adjust the door height, loosen two screws that secure the carrier to the door. Adjust height and tighten the screws.

   Inserting a screw, *shown below,* will prevent the doors from falling through the opening between the track. Insert another screw at the rear of the track.

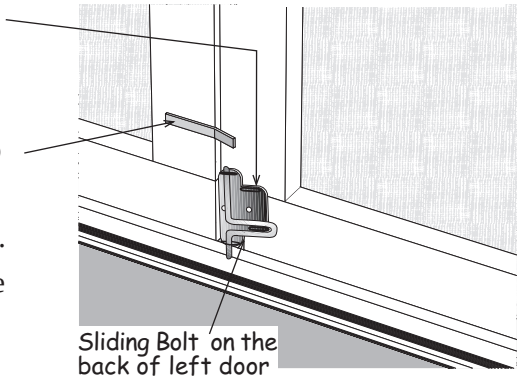
Install rollers on the inside track leg, not between the legs.



View From Inside

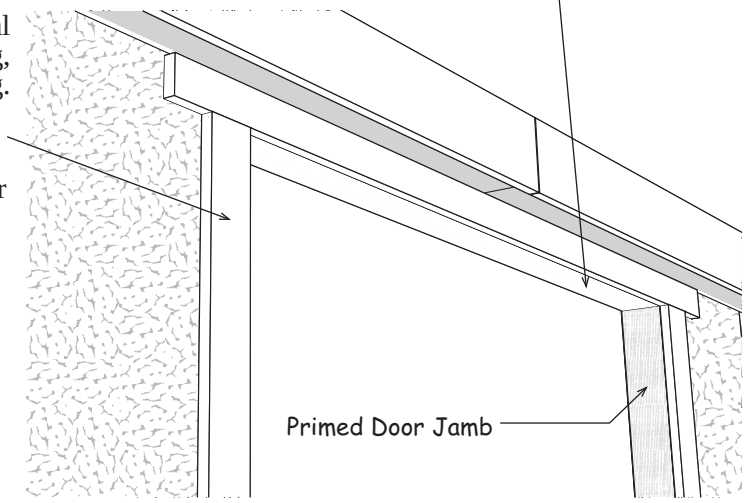
2. Hang the other door. Install a sliding latch on the lower back of the door to secure this door in place when closed. You will need to drill a hole in the Treated Door Sill for the round shaft to drop into.
3. A metal bar with a slight bend is provided to help align doors eveningly when closed. This may be mounted on either door as necessary. Place bend flush with door edge. Use 1-1/4" pan head screws.
4. Install the door handles and door hasp on the outside of the doors.

View from Inside



Step 22 Install Door Jamb & Trim

1. Cut to fit a 3-7/8" wide primed door jamb material under the door header flush with the face of the siding. Use 6d galv nails.
2. Install (2) two 3-7/8" x 71-1/2" long primed door jamb material on the sides of the door opening, flush with the face of the siding.
3. Install 72-1/2" long 1x4 door trim on each side of the door opening flush with top of door opening. Use 8d galv. nails
4. Install a 70" long 1x3 trim centered across the top of the door opening.



Step 23 Install Roofing — Not Supplied in Kit

If you are installing shingles, install metal roof edging around the perimeter of the roof area. Follow the instructions on the shingle wrap. If you need more detailed instructions there are good publications at book stores or 'youTube' videos on the web. If you are not installing shingles at this time, you can purchase felt paper to protect the roof sheathing. Otherwise, check the manufacturer's instructions if felt paper is necessary. Install the felt paper before you install the metal roof edge.

If you are installing metal roof panels, refer to the information in the box below when ordering. Install the roof panels per the instructions provided by the manufacture.

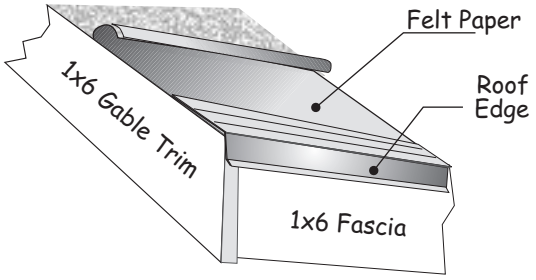
Finish Roof Covering

Roof Shingles

9 bdl. shingles& 7 pcs. drip edge

Metal Roof Panels

Rafter Length.....6' - 9".
Roof Length.....12' - 4".
Roof Pitch ..... 9/12.



Brookhaven 10' x 16' Shed Kit

☞ *Packing List For Material Shipped in Cardboard Wrap*

6	2 x 4	110"	Loft Floor Joist

April 4, 2016

☞ *Packing List For Material Shipped on 42" Wide Pallet*

	2x4 Framing & Trim				
28	2 x 4	76-1/4"	8	1 x 4	75"
10	2 x 4	75-3/8"	2	1 x 4	72-1/2"
5	2 x 4	72"	1	1 x 3	70"
4	2 x 4	68-1/2"	4	1 x 6	64-3/8"
4	2 x 4	44-1/2"	4	1 x 6	74"
4	2 x 4	42"			
8	2 x 4	Blocks 10" to 12" for truss jig			
	Primed Lap Gable Siding				
2	pcs.	77"	2	pcs.	43"
2	pcs.	76"	2	pcs.	40-1/2"
2	pcs.	67-3/4"	2	pcs.	33-3/4"
2	pcs.	67-1/4"	2	pcs.	32-1/2"
2	pcs.	59-3/4"	2	pcs.	24"
2	pcs.	50-3/4"	2	pcs.	17-1/2"
2	pcs.	4-1/2" x 12-1/4" fillers			
3	Primed Door Jamb 3/8" x 3-7/8" x 71-1/2"				

	Hardware		
1	Door Hasp	3	lb. 10d Sinkers
2	Door Handles	3	lb. 8d Galv.
1	Sliding Door Latch	3	lb. 7d Sinkers
10	Truss Hangers	2	lb. 6d Common
1	60" Alum Door Sill	1	lb. 6d Galv.
2	Alum. Door Track	8	Pan Head Screws
2	3"x5" Step Flashing	12	1-1/2" Screws
2	Steel Door Guides	2	Bits for screws
100	2-1/2" Deck Screws		
	Miscellaneous Material		
4	L' Shape 2x4 Floor Joist Headers - 68 1/2"		
2	Pocket Doors 32" x 72"		
1	Door Header 5-1/2" x 63"		
1	Sheathing 7/16" x 31-1/2" x 72"		
10	Wood Gussets for Trusses 12" x 22"		
4	2 x 4 - 78" - Attached to Shipping Pallet		

☞ *Packing List For Material Shipped on 49" Wide Pallet*

	Framing, Trim & Hwd.				
6	2 x 4	76-1/4"	4	1 x 6	84"
4	2 x 4	72-1/2"	2	1 x 6	48"
1	2 x 4	72"			
1	2 x 4	60"	1	Treated Door Sill	
4	2 x 4	48"	4	2x4 Truss Hangers	
	Pre-Built Components				
2	L' Shape 2x4 Floor Joist Headers - 48"				
4	Roof Gable Frames	48" x 60"			
2	Soffit Box Overhangs	8" x 4" x 73"			
2	Soffit Box Overhangs	8" x 4" x 71-3/4"			
2	Soffit Box Overhangs	8" x 4" x 48"			

	7/16" OSB Sheathing		
5	48" x 72"	2	31-1/2" x 48"
2	48" x 75"	1	31-1/2" x 72"
2	48" x 48"	2	31-1/2" x 75"
6	48" x 24	2	3-1/2" x 48"
	Primed Siding		
4	48" x 82"	4	48" x 80-1/2"
4	24" x 82"	2	24" x 80-1/2"
2	18" x 82"	2	9" x 30"
	Miscellaneous Lumber		
4	Wood Gussets for Trusses 12" x 22"		
4	2 x 4 - 84" - Attached to Shipping Pallet		