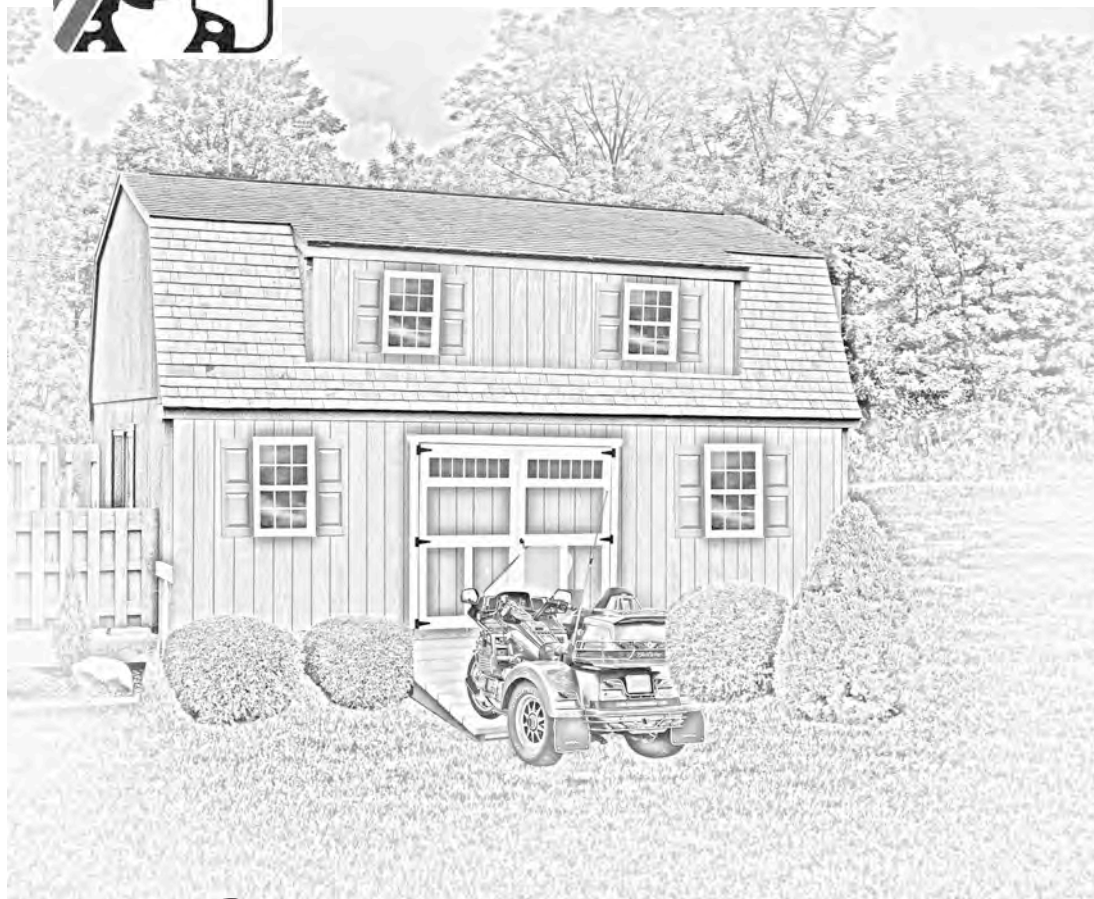




Sentry Buildings

Assembly Book

Revised January 22, 2024



the Ravenna

16'x32' Building

Manufactured by RBS Holdings, LLC

205 Arlington Drive

Greenville, PA 16125

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IMPORTANT INFORMATION ABOUT YOUR KIT

Building Permits: Check with your local HOA or building code office for any requirements, restrictions or permits necessary for construction.

Foundation: By owner. Refer to next page for foundation suggestions and size.

What's Included: Our package includes pre-cut materials for the 2nd floor roof gables, roof trusses and gable trim. See back page for material list. The nails and hardware are packed in the top of 'A' pallet. The other materials on the pallet will not be used until the first floor walls and loft floor are completed.

Framing lumber for the first floor walls and loft floor, exterior siding, loft flooring and roof sheathing will be delivered by a local supplier. See back pages for material list

Owner Supplied: Roof shingles, metal roof edge, felt and ventilation accessories. Paint for siding and trim. Lumber to frame rough openings for any additional windows and or doors not included in our kit.

Assembly Help: Monday thru Friday 800-245-1577 8:00 to 5:00 ET
Weekend - after hours 724-866-4357
email to: help@barnkits.com

Care of product prior to assembly: Assembly should begin promptly to prevent the twisting of lumber. If assembly is not immediately after opening pallets you will need to tightly stack material and do not expose material to inclement weather. Organize all material prior to construction.

Building Tips: IMPORTANT: Follow the assembly Steps in sequence. Skipping steps will result in components not fitting properly.



Tools

Required:

- | | | |
|---|---|---|
| <input type="checkbox"/> Hand or Circular Saw | <input type="checkbox"/> Level | <input type="checkbox"/> Phillips Screwdriver |
| <input type="checkbox"/> Cordless Drill | <input type="checkbox"/> Measuring Tape | <input type="checkbox"/> Framing Square |
| <input type="checkbox"/> Caulking Gun | <input type="checkbox"/> 8' & 10' Ladder(s) | <input type="checkbox"/> Hammer |
| <input type="checkbox"/> Safetyglasses: Always wear safety glasses when cutting or nailing! | | |
| <input type="checkbox"/> * Scaffolding | | |

- * It is highly recommended to rent (6) six sections of scaffolding to safely install the second floor material. Use safety harnesses when on the scaffolding. Consider hiring a professional roofer to install the shingles or metal roof.

Foundation Types & Measurements

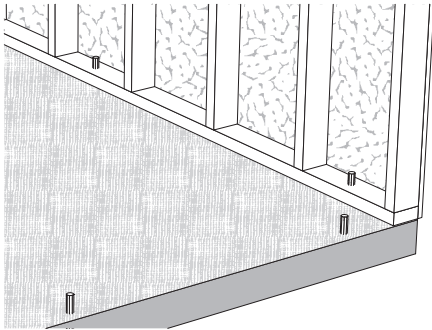
Important: You will need to have a proper foundation installed to support the building. Depending on the intended use determines what type of foundation is best.

Do Not make the foundation larger than the building size. When installing the building on a concrete slab, install the siding flush with the bottom plate. When installing on a wood floor, extend the siding 3/4" below the bottom plate to cover the edge of the flooring.

Foundation Types: What foundation is best depends on what type of items will be stored. The building code in your area will also determine what type of foundation can be used. A few different types of foundations are shown below. Check the zoning and building code requirements in your area.

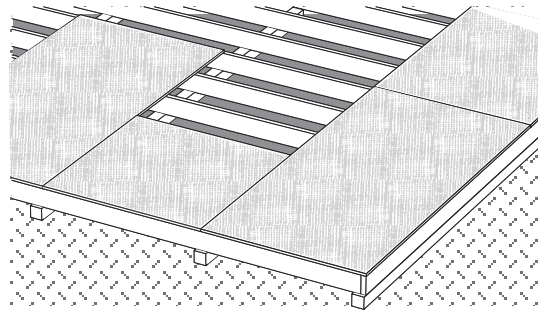
Foundations Types

Floating Slab A concrete slab is ideal for storage of cars or other types of heavy items.



Floating Cement Slab

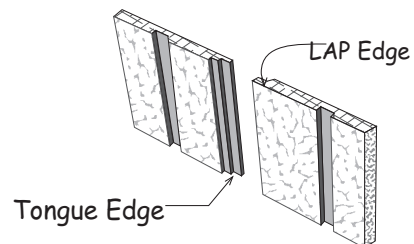
Wood Floor on Runners: Suitable for storage or workshop. Treated 6x6 lumber over a bed of gravel. Floor joist should be treated 2x6 spaced 16" on center and covered with 3/4" tongue and groove wood flooring.



Wood Floor on Wood Runners

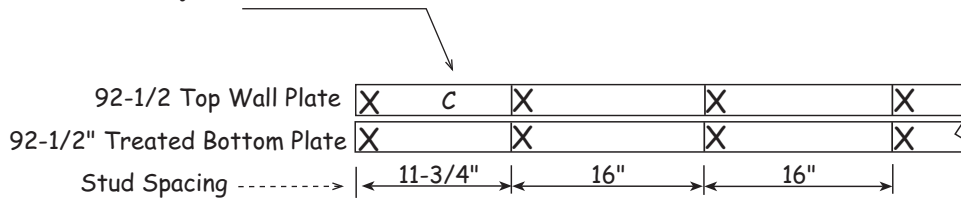
Exterior Siding Information

LP siding has a 50 year warranty and is already primed. Apply two coats of latex acrylic paint for the finish coat. Paint the bottom edge of the siding, *this is important*. Maintain 6" to 8" of clearance from the bottom edge of the siding and the ground. Don't allow garden mulch to build up and keep shrubs a minimum of 1' away from the building.



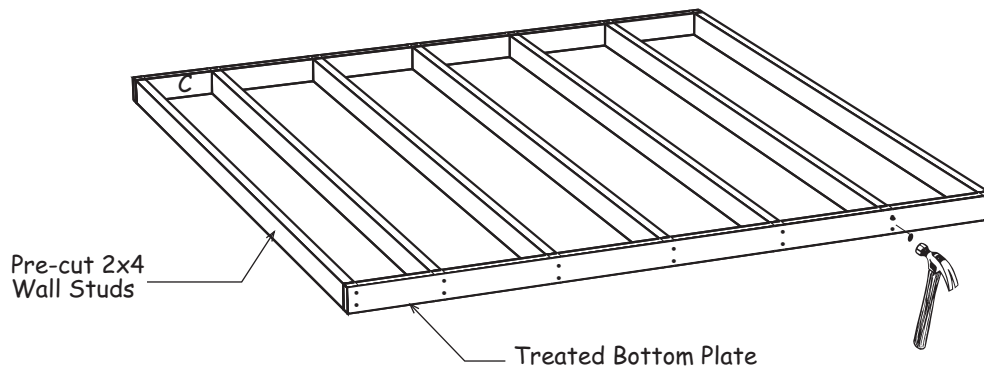
Step 1 Assemble (4) Four 92-1/2" End Wall Frames

1. Cut (2) two 2x4-8' (one will be treated) to a length of 92-1/2". Position the boards together and indicate with 'X' marks where the wall studs will be located.
2. Mark a 'C' anywhere between first two stud marks. This is referenced in a later step.



The length of pre-cut wall studs will vary from 92-1/4" to 93" depending on your locality.

Note: When building the lower walls, use treated 2x4s for the bottom wall plates.



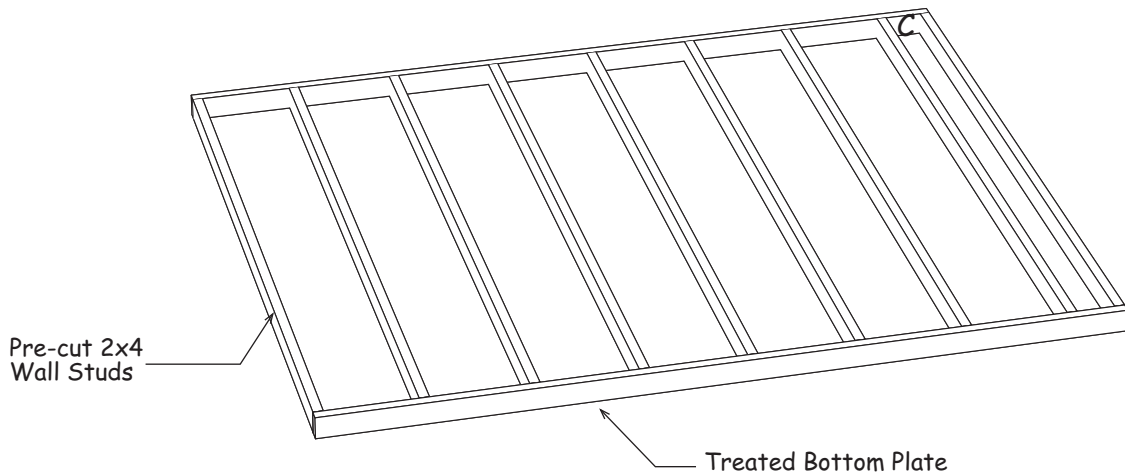
3. Install (7) seven pre-cut wall studs between the top and bottom plates. Nail the treated bottom plate to each wall stud with (2) two 16d galvanized deck nails. Use (2) two 10d coated sinker nails per stud to secure the top plate.
4. Repeat to build (3) three more 92-1/2' long wall frame.
5. Mark both frames '**End Wall Frames**' and set frames aside.

Step 2 Assemble (2) Two 10' Back Wall Frames

1. Select (2) two 2x4-10' (one will be treated) if necessary trim to a length of 120". Position the boards together and indicate with 'X' marks where the wall studs will be located.
2. Mark a 'C' between the last two studs. This is referenced in a later step.

10' Top Wall Plate	X	X	X	X	X	X	X	X C X
10' Treated Plate	X	X	X	X	X	X	X	X X
Stud Spacing	←15-1/4"→	←16"→	←16"→	←16"→	←16"→	←16"→	←16"→	

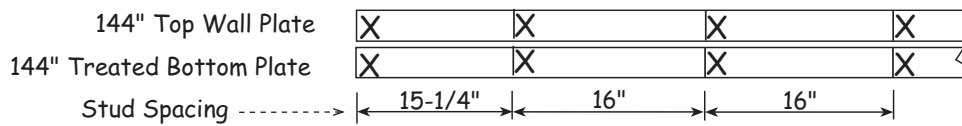
3. Install (9) nine pre-cut wall studs between the top and bottom plates. Nail the treated bottom plate to each wall stud with (2) two 16d galvanized deck nails. Use (2) two 10d coated sinker nails per stud to secure the top plate.



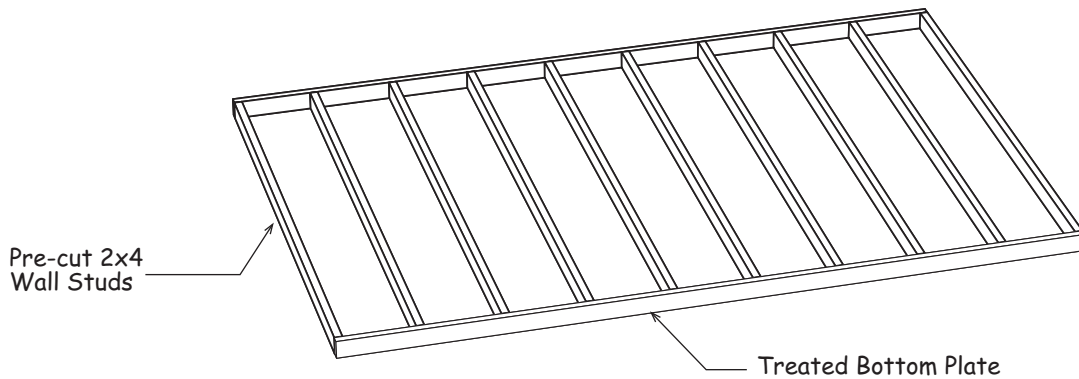
4. Repeat to build another 10' long wall frames.
5. Mark the (2) two frames '**Back Wall Frames**' and set frames aside.

Step 3 Assemble 12' Back Wall Frame

1. Trim, *if necessary*, (2) two 2x4-12' boards (one will be treated) to a length of 144". Position the boards together and indicate with 'X' marks where the wall studs will be located.

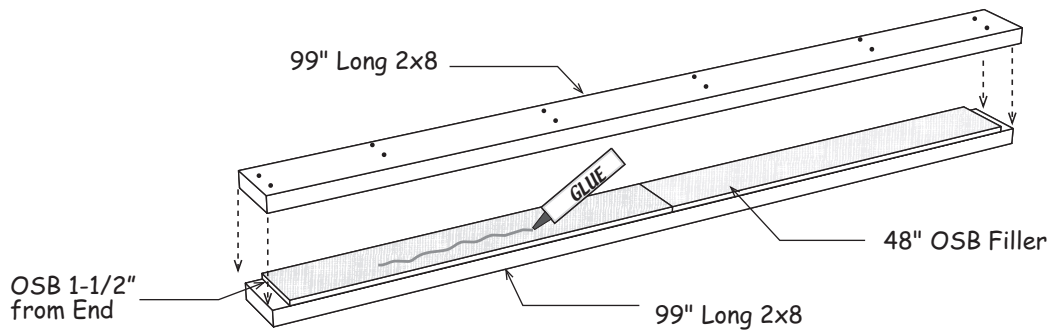


2. Install (10) ten pre-cut wall studs between the top and bottom plates. Nail the treated bottom plate to each wall stud with (2) two 16d galvanized deck nails. Use (2) two 10d coated sinker nails per stud to secure the top plate.
3. Mark frame '**Back Wall Frame**' and set frame aside.



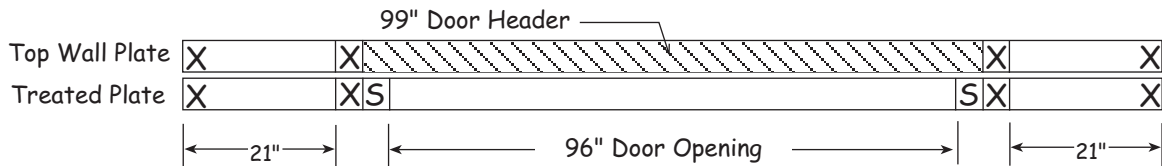
Step 4 Assemble Door Header

1. Locate (2) two 10' long 2x8 boards and (2) two 7-1/4" x 48" OSB fillers. Cut the 2x8s to a length of 99". Take OSB and install 1-1/2" from either end of 2x8 boards. Nail together using (12) twelve 10d coated sinkers spaced evenly on each side.

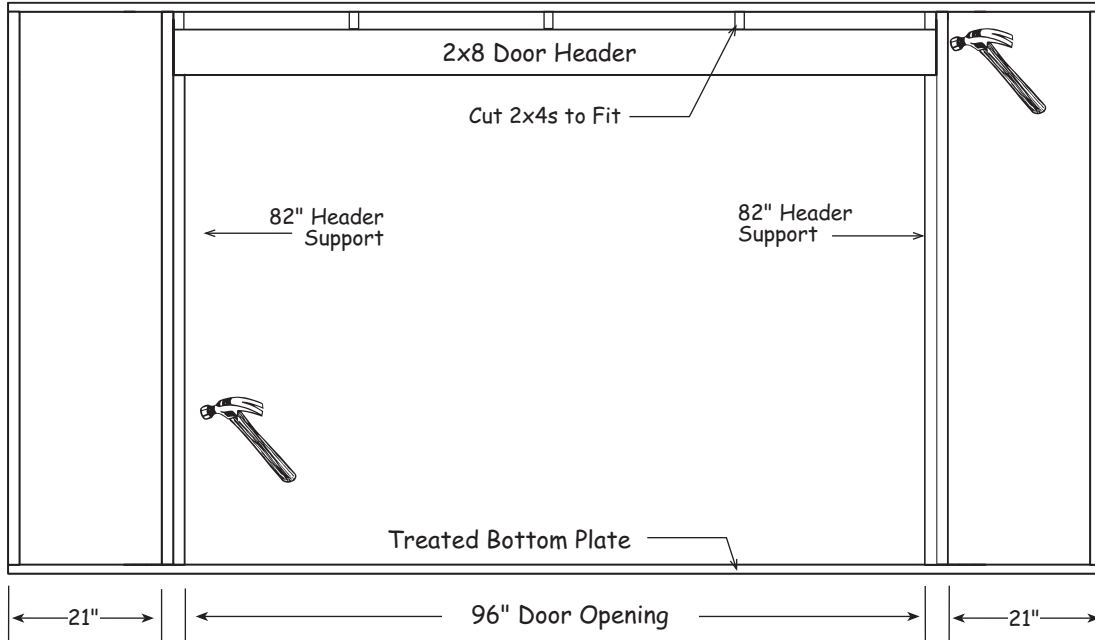


Step 5 Assemble 12' Front Center Wall Frame

1. Trim, if necessary, (2) two 2x4-12' boards (one will be treated) to a length of 144". Position the boards together and mark with 'X' marks where the wall studs will be located and an 'S' where the door header support will be located.

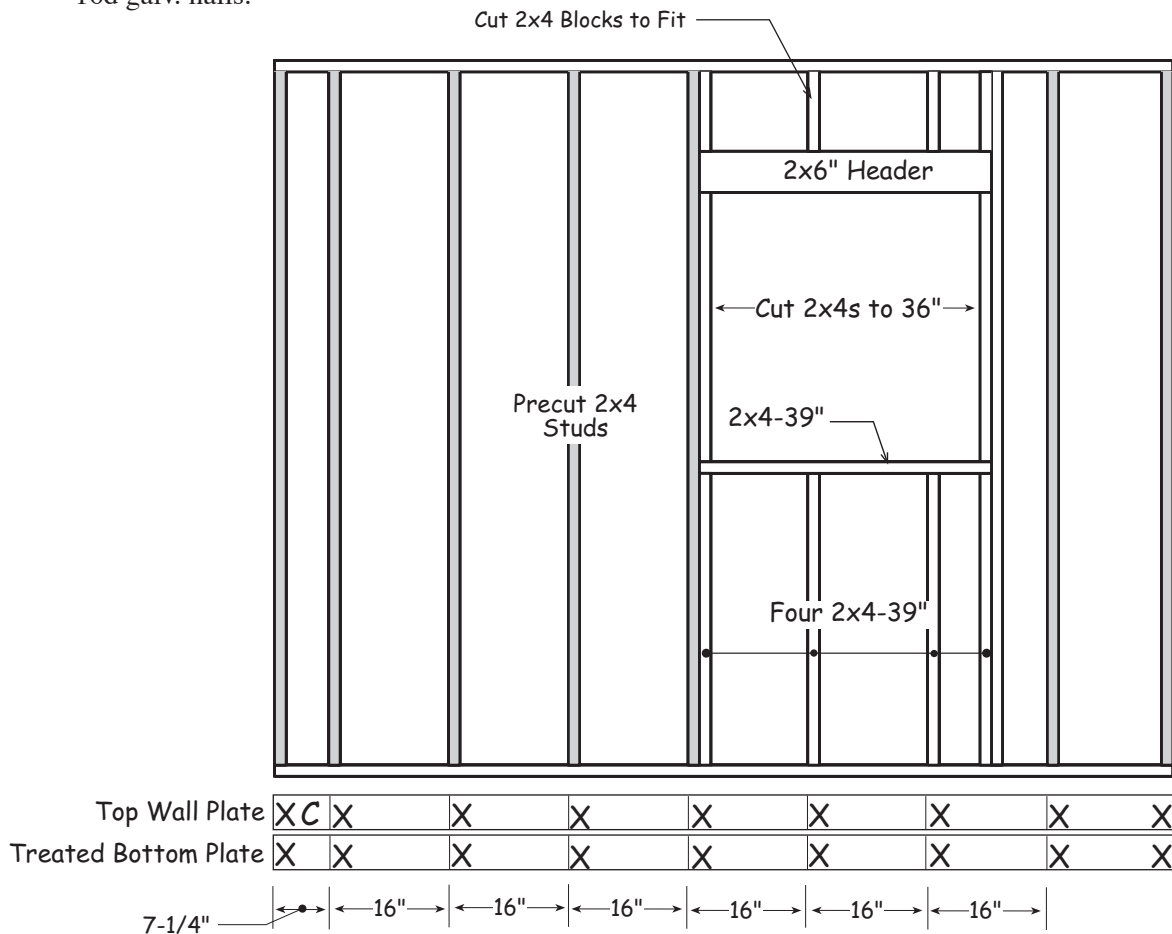


2. Install (4) four pre-cut wall studs over 'X' marks using 10d sinkers and 16d galv. nails.
3. Cut (2) two pre-cut 2x4s to a length of 82" and install as header supports over the 'S' marks. Use (10) ten 10d sinkers to nail to stud.
4. Install the 2x8 header over the header supports. Use (4) four 10d sinkers to nail to studs.
5. Cut (5) five pieces from a pre-cut stud to fit between header and top 2x4 plate. Evenly space blocks using 10d sinkers through top plate and toenail into header. Save left over board for the next step.



Step 6 Assemble (2) Two 10' Front Wall Frames

1. Trim, if necessary, (2) two 2x4-10' boards (one will be treated) to a length of 120". Position these boards together and indicate with 'X' marks where pre-cut wall studs and the 2x4s below the window opening will be located.
2. Mark a 'C' between the first two studs. This is referenced in a later step.
3. Install (7) seven pre-cut wall studs (shown in gray) over the 'X' marks using 10d sinkers and 16d galv. nails.

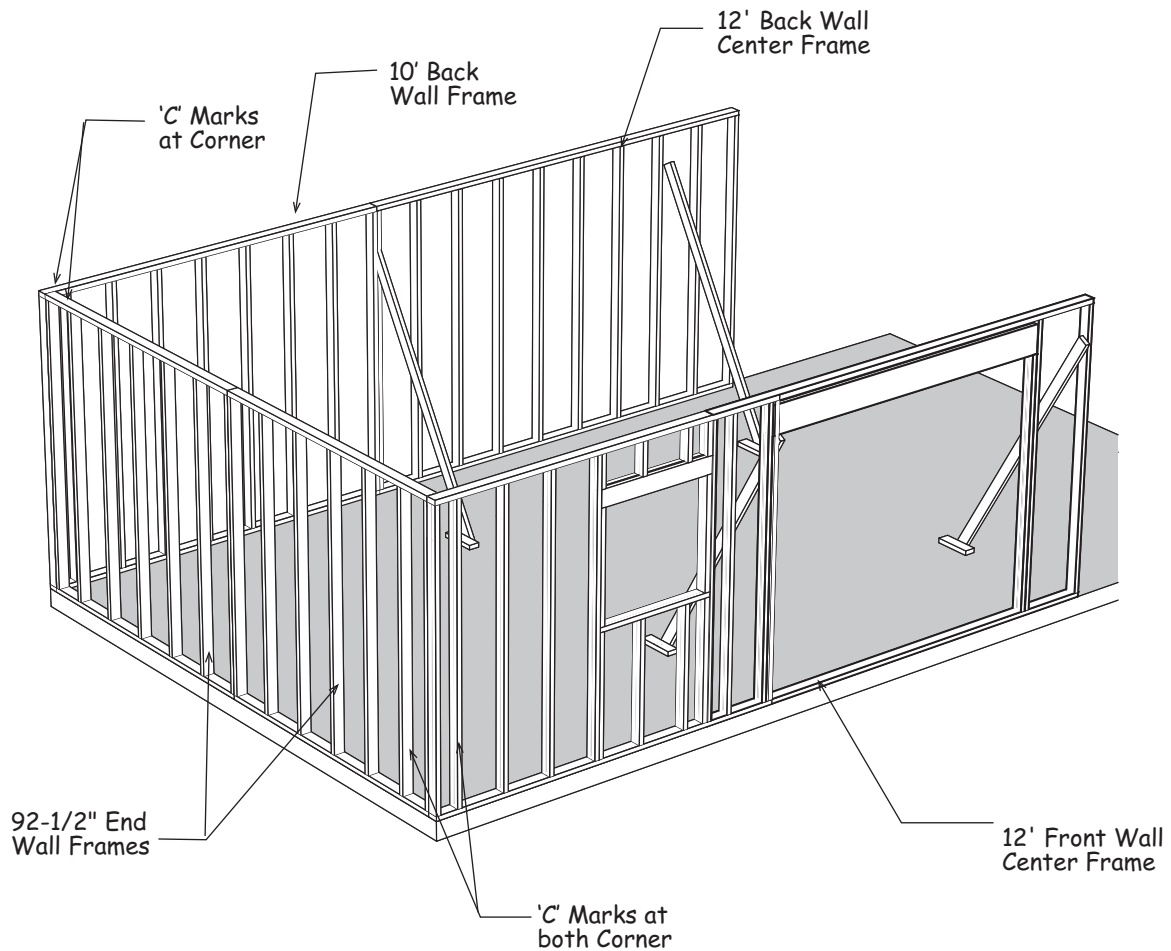


4. Gather (7) seven 39" long 2x4s, a 39" long 2x6 pre-built header and a pre-cut wall stud. Cut (2) two of the 39" long 2x4s to a length of 36"
5. Frame in the window opening per drawing above. Use 10d sinkers on header and untreated 2x4s. Use 16d galv. nails for bottom plate.
6. Using left over board from last step or a pre-cut wall stud cut (4) four 2x4 blocks to fit above the window header. Use 10d sinkers.
7. Repeat steps to assemble another wall frame.

Step 7 Set Wall Frames

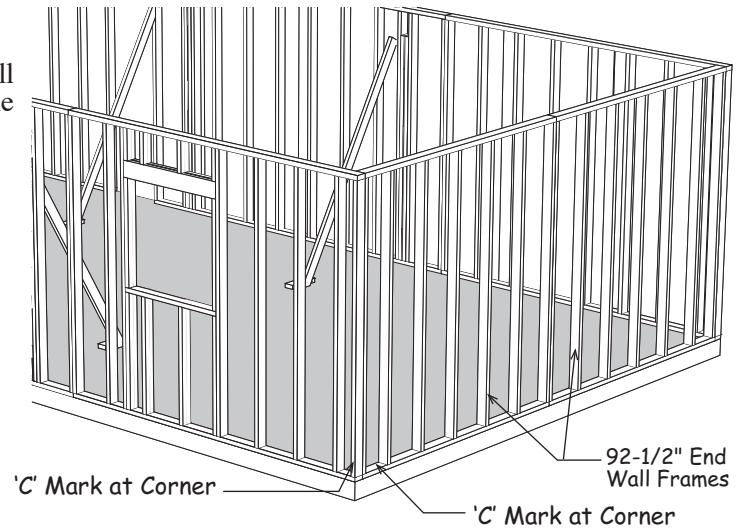
 **End wall frames set between front and back wall frames.**

1. Install one of the 92-1/2" end wall frames against a 10' back wall frame. **IMPORTANT:** Place both wall frames with the ends marked with a 'C' toward the corner. Secure frames together at the corner using (4) four 10d sinkers. Brace walls with pre-cut studs.
2. Install another 92-1/2" end wall frame to the other end wall frame. Nail the frames together with (8) eight 10d sinkers (stagger nails on each side of the studs).
3. Install a 10' front wall frame with the 'C' mark to the end wall corner.
4. Install the 12' long back and front center frames. Brace wall frames with pre-cut wall studs.



Step 8 Set Wall Frames continued

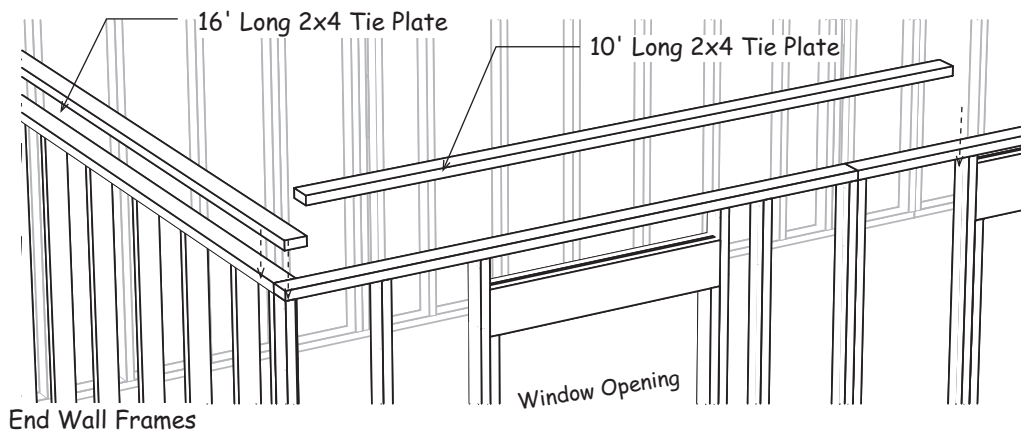
1. Install a 10' back wall frame against 12' back wall frame.
2. Install remaining 92-1/2" end wall frames with 'C' marks toward the corners..
3. Install 10' front wall frame with 'C' mark to the end wall corner.



4. Nail frames to the floor using 16d Galv. spiral nails or, if erecting on a cement slab, concrete anchor bolts (*not included*) spaced 24" on center. Do not nail the 2x4 plate in the door opening.

Step 9 Install 2x4 Tie Plates

1. Install a 16' long 2x4 on the left end wall. Use 10d sinkers space 16" apart to secure tie plates.
2. Repeat to install a 16' long 2x4 tie plate on the opposite end wall.
3. Install a 12' long 2x4 on the front wall. The 2x4 will butt against the 16' long tie plate on the end wall. Use 10d sinkers.
4. Install (2) two 2x4-10' boards on the front wall frame. Cut the last board to fit.
5. Repeat to Install tie plates on the back wall frame.



Step 10 Install Siding on Back and End Wall



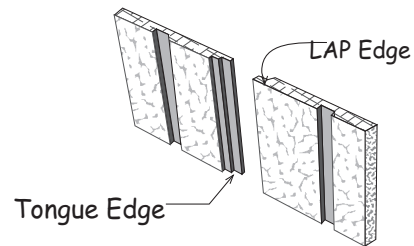
If a siding panel has a damaged edge, install this edge at a corner where it will be covered with corner trim.

Concrete Slab Foundation: Install siding flush with the bottom plate.

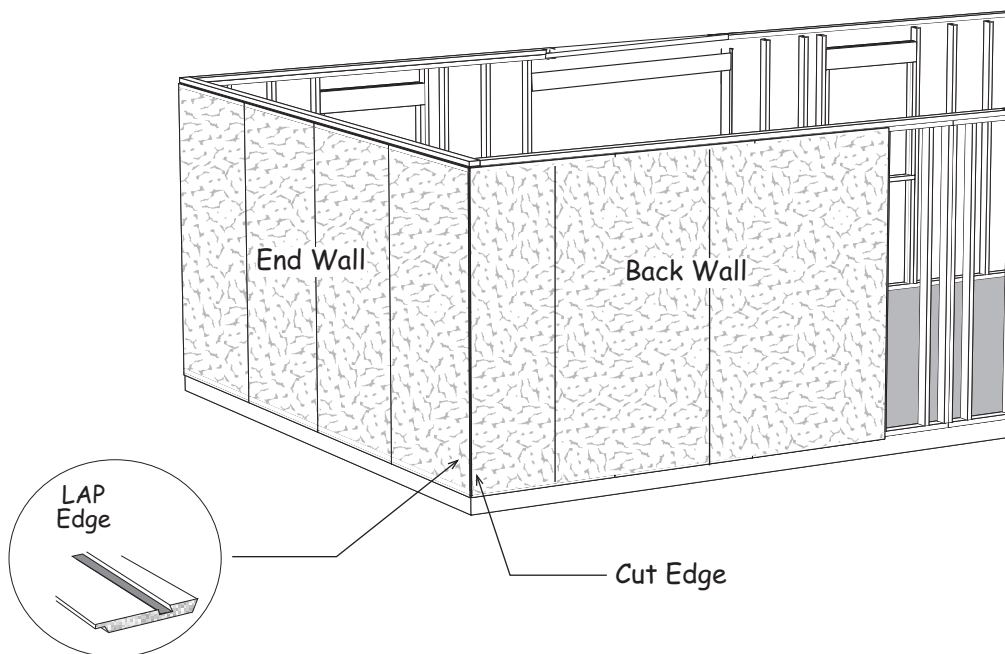
Wood Floor Foundation: Extend the siding 3/4" below the bottom plate.

Exterior Siding Information

LP siding has a 50 year warranty and is already primed. Apply two coats of latex acrylic paint for the finish coat. Paint the bottom edge of the siding, *this is important*. Maintain 6" to 8" of clearance from the bottom edge of the siding and the ground. Don't allow garden mulch to build up and keep shrubs a minimum of 1' away from the building.

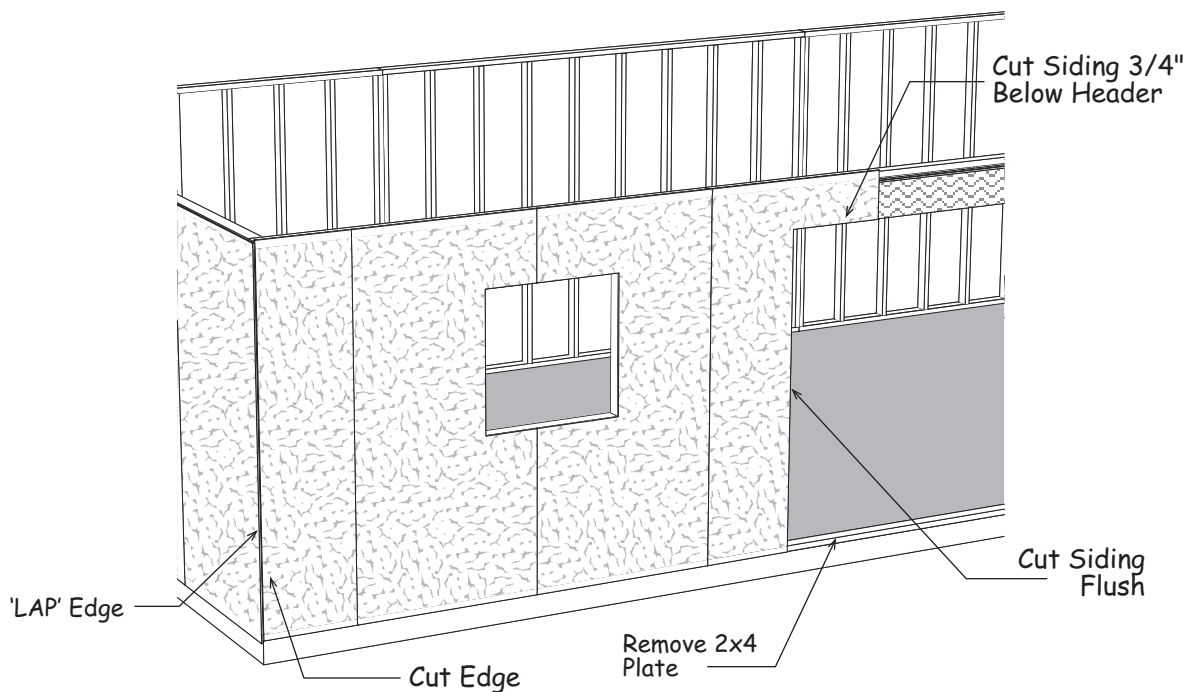


1. Cut a full width panel in half lengthways. Select the half with a 'Tongue' edge. Install panel on back wall with the cut edge flush with corner. Install (7) seven more siding panels. Finish with remaining 24" wide panel. Use 8d galv. siding nails spaced 8" apart.
2. Install a siding panel on the end wall with the 'LAP' edge flush with the siding on the back wall. Install (3) three more panels.



Step 11 Install Siding on Front Wall

1. Cut a full width panel in half lengthways. Select the half with a 'Tongue' edge. Align the cut edge flush with corner. Install (2) two more siding panels. Cut and remove siding around the window. Use 8d galv. siding nails spaced 8" apart.
2. Install another siding panel. Cut siding 3/4" below bottom of header and flush with header supports.
3. Locate a 13"x48" siding panel. Install flush with top of adjacent siding and cut to extend 3/4" below bottom of header.
4. Install a siding panel on the right side of door and cut as described above. Install (2) more siding panels and finish with remaining 24" wide panel.
5. Install a siding panel on the end wall with the 'LAP' edge flush with the siding on the front wall. Install (3) three more panels.



5. Cut and remove 2x4 that extends across the door opening.

Step 12 Install Stairs

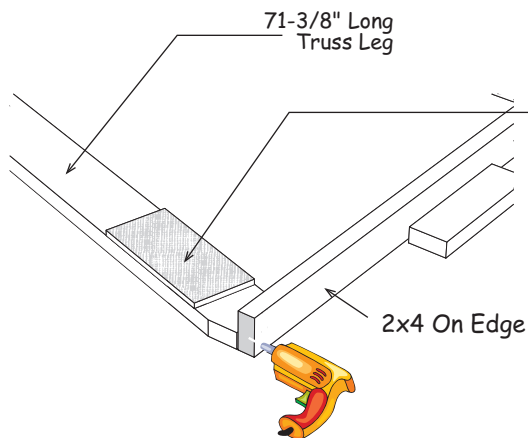
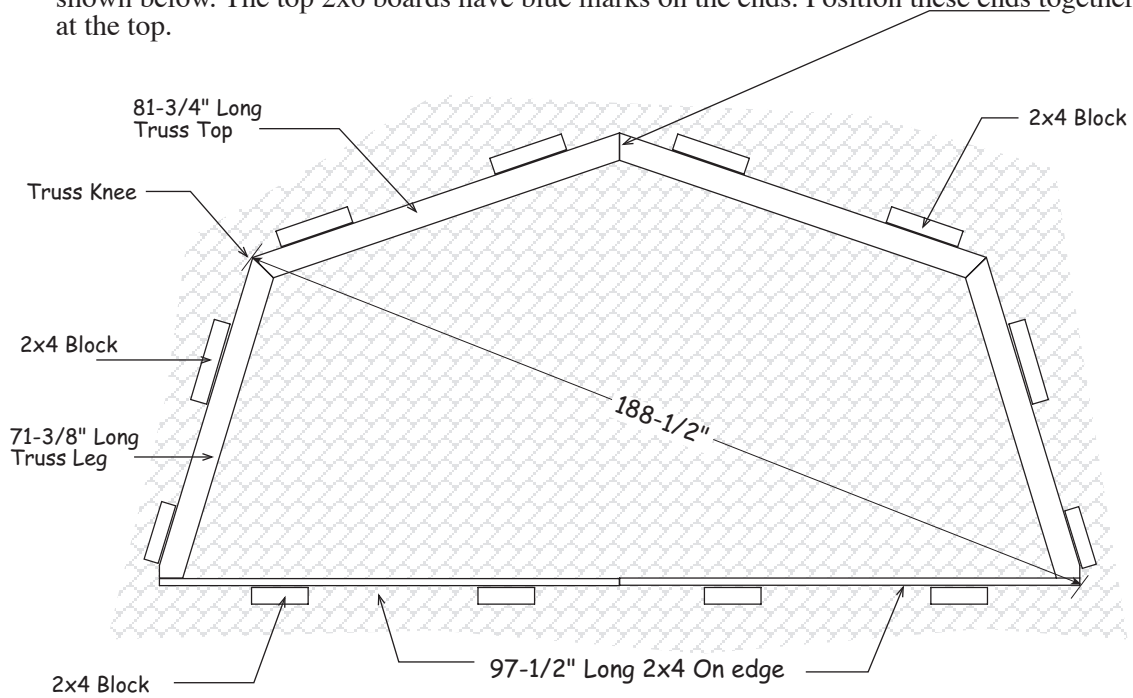
IMPORTANT: Go now to the instructions in the stair kit book to install the stairs, floor joist and flooring.

Step 13A Assemble Gable Frame



Assemble the roof gables and trusses on the center of the loft floor. This will make it easier to stand the gable upright over the lower wall.

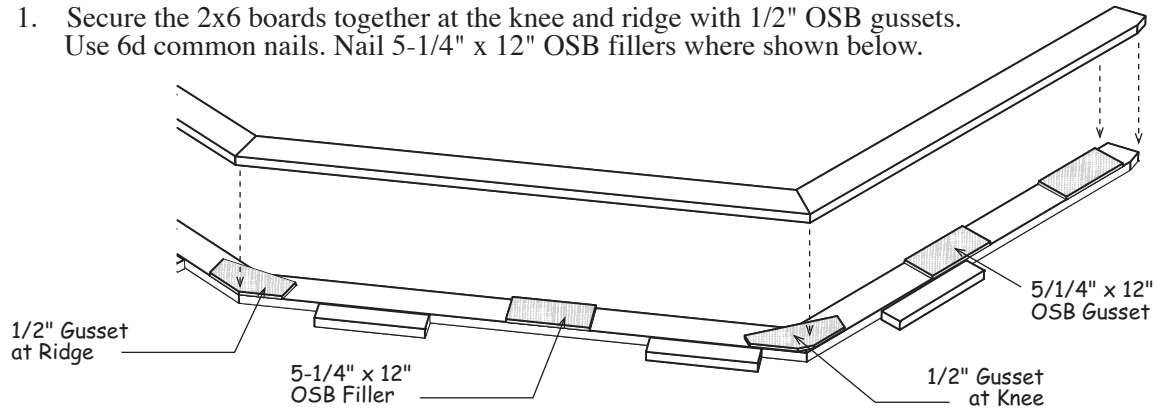
1. Cut (2) two 2x4-10' boards to a length of 97-1/2". Position these 2x4s on edge and butt together.
2. Position (2) two 81-3/4" long 2x6s and (2) two 71-3/8" long 2x6 boards on the 2x4 plates as shown below. The top 2x6 boards have blue marks on the ends. Position these ends together at the top.



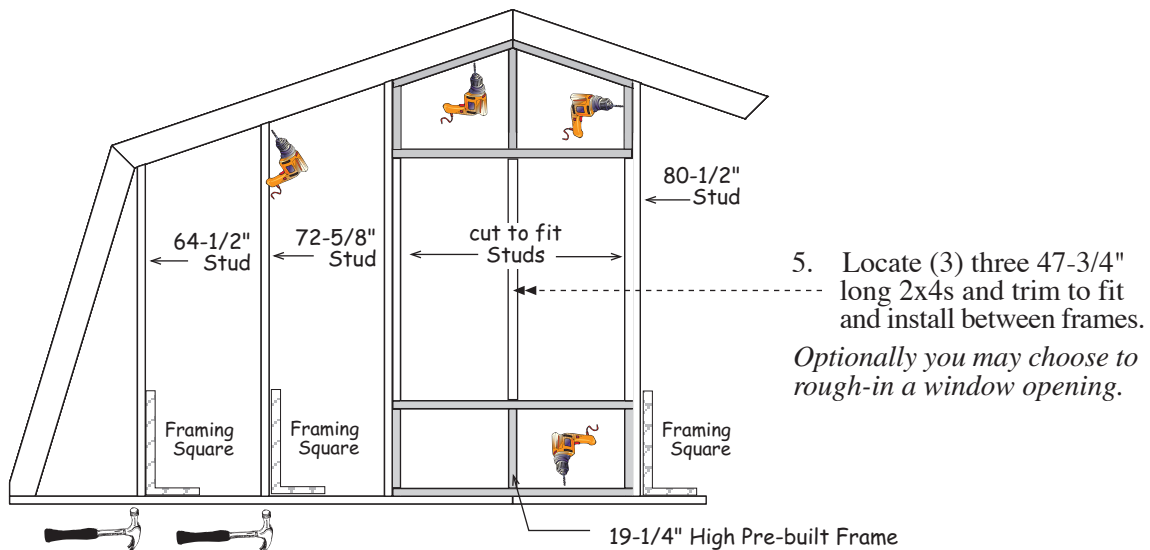
3. Secure the truss leg to the 2x4 plate with (2) two 2-1/2" long deck screws.
4. Install 5-1/2" x 12" OSB fillers on the 2x6 truss legs near 2x4 with 6d common nails. Exact spacing isn't important.
5. Square truss. Measure diagonally from the knee of the 2x6 truss to the bottom corner of the 2x4 plate. The measurements will be the same (188-1/2") when the truss is square.
6. Cut 2x4 removed from door opening into 8" long blocks. Tack nail or screw the blocks around the perimeter of the gable frame to prevent the gable from moving.

Step 13B Assemble Gable Frame continued

1. Secure the 2x6 boards together at the knee and ridge with 1/2" OSB gussets. Use 6d common nails. Nail 5-1/4" x 12" OSB fillers where shown below.



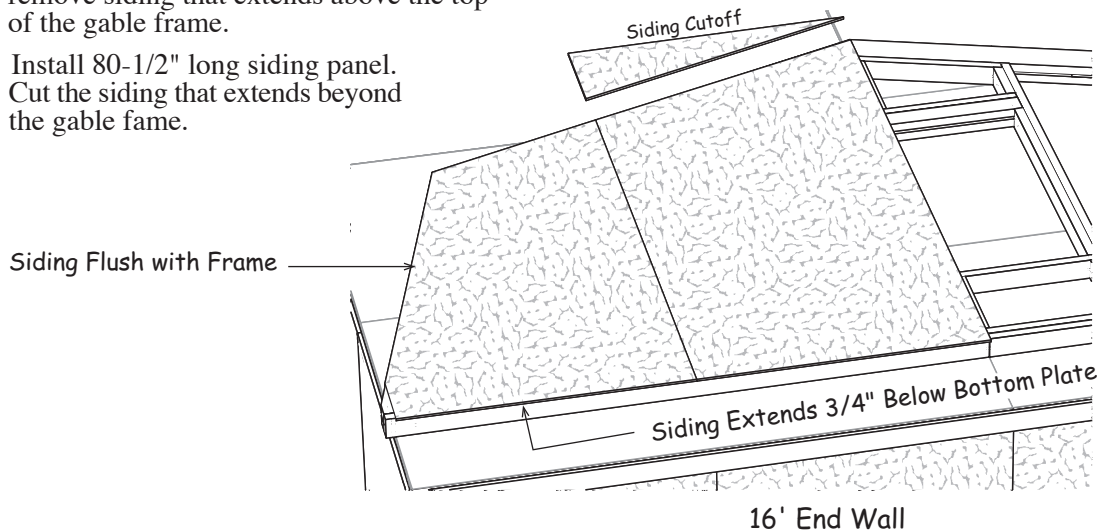
2. Place (2) two 81-3/4" and (2) two 71-3/8" 2x6s over the fillers. Secure using (6) six 10d sinkers where fillers are located.
3. Install a 21-3/4" high pre-built gable frame at the peak of the double row of trusses. Secure the frame to the 2x6 truss boards with (6) six 2-1/2" deck screws.
4. Position a 19-1/4" pre-built frame directly below the top frame. Use (2) two 80-1/2" long studs to help align the upper and lower frames. Use a framing square to ensure the studs are plumb. Screw bottom frame to 2x4 plate using 2-1/2" screws. Secure the 80-1/2" studs to the pre-built frames using 2-1/2" screws.



6. Install a 72-5/8" and a 64-1/2" wall stud on the left side of the gable frame. Use a square to ensure the studs are plumb. Nail to 2x4 bottom plate with 10d sinkers and screw to 2x6s with 2-1/2" screws. Repeat to install studs on right side of gable frame.


Step 14 Install Siding on Gable Frame

1. Stand up the gable frame and slide it to the left end wall of the building. Position the frame with the bottom towards the rear wall so it can be erected after the siding is applied.
2. Install a pre-cut siding panel with the 'cut edge' flush with the left side of the gable frame. The siding should extend $\frac{3}{4}$ " below the bottom 2x4 gable plate. Install siding with 8d galv. nails.
3. Install (2) two 4x8 siding panels. Cut and remove siding that extends above the top of the gable frame.
4. Install 80-1/2" long siding panel. Cut the siding that extends beyond the gable frame.

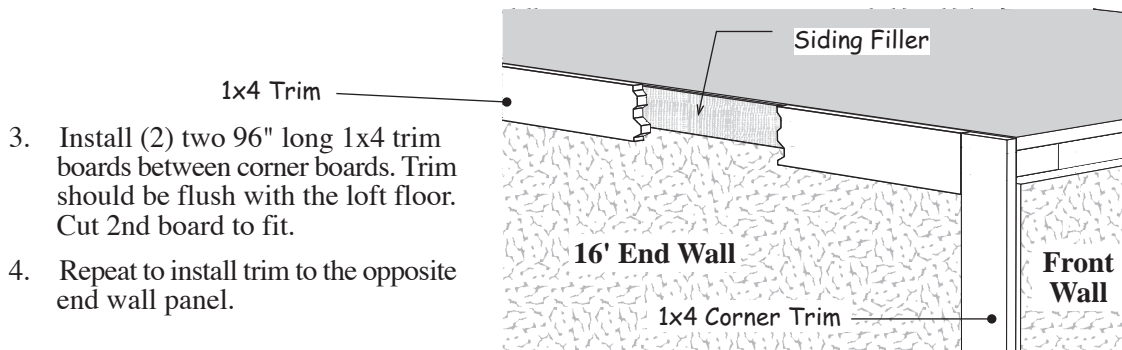


Step 15 Install Trim on 16' End Walls

IMPORTANT: Trim Must Be Installed Before Installing Roof Gables!

 Depending on the pre-cut stud length and if the siding extends below the bottom plate, you may have a space between the top of the siding and the loft floor. If necessary tack nail 1-1/2" x 10" fillers, *included in the kit*, to prevent the 1x4 trim from tipping when nailing the trim. Space fillers 12" apart.

1. Cut and install (2) two 1x4 -10' trim boards flush with top of floor and bottom of the siding. Install trim flush with the siding on the front and back walls. Use 8d galv. nails spaced 12" apart. All trim will be installed with 8d galv. nails spaced 12" apart.

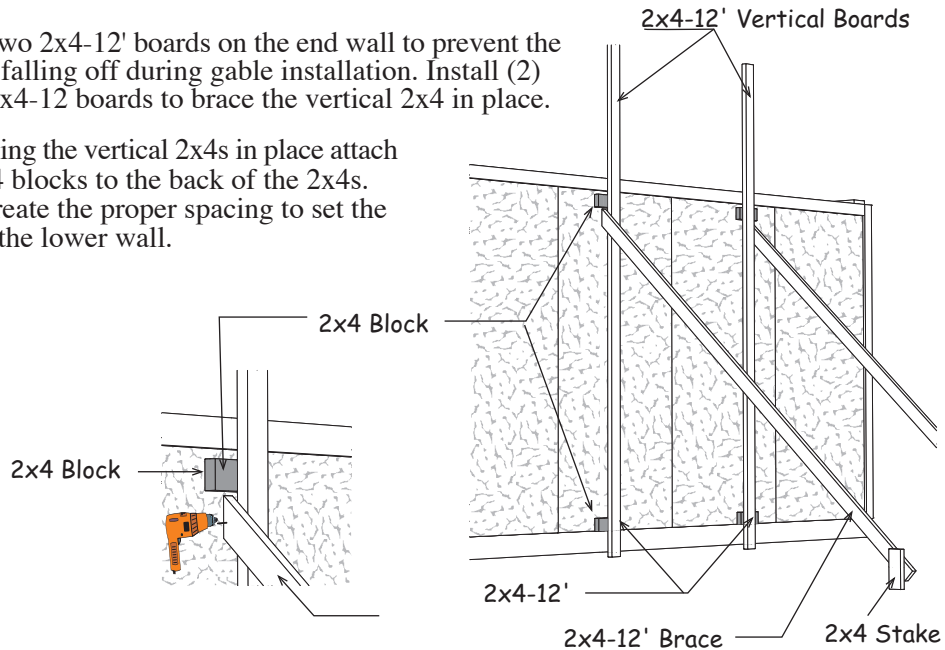


3. Install (2) two 96" long 1x4 trim boards between corner boards. Trim should be flush with the loft floor. Cut 2nd board to fit.
4. Repeat to install trim to the opposite end wall panel.

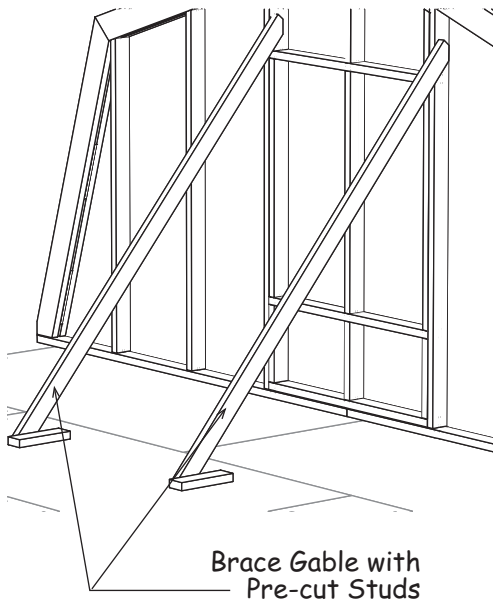
Step 16A Install Roof Gable

1. Install (2) two 2x4-12' boards on the end wall to prevent the gable from falling off during gable installation. Install (2) two more 2x4-12 boards to brace the vertical 2x4 in place.

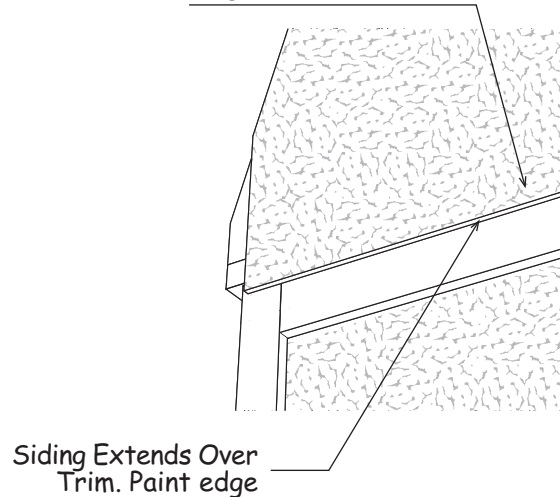
Before bracing the vertical 2x4s in place attach (2) two 2x4 blocks to the back of the 2x4s. This will create the proper spacing to set the gable over the lower wall.



2. Erect the gable on end wall. Be cautious and ensure gable siding extends over trim on end wall. Center gable with bottom 2x4 extending 1-1/2" past lower wall 2x4s on both sides. Nail to floor using 10d sinkers.
3. Remove the wall braces from interior walls and use them to brace the gable to the loft floor.



4. Nail bottom edge of siding to 1x4 trim with 8d galvanized box nails.

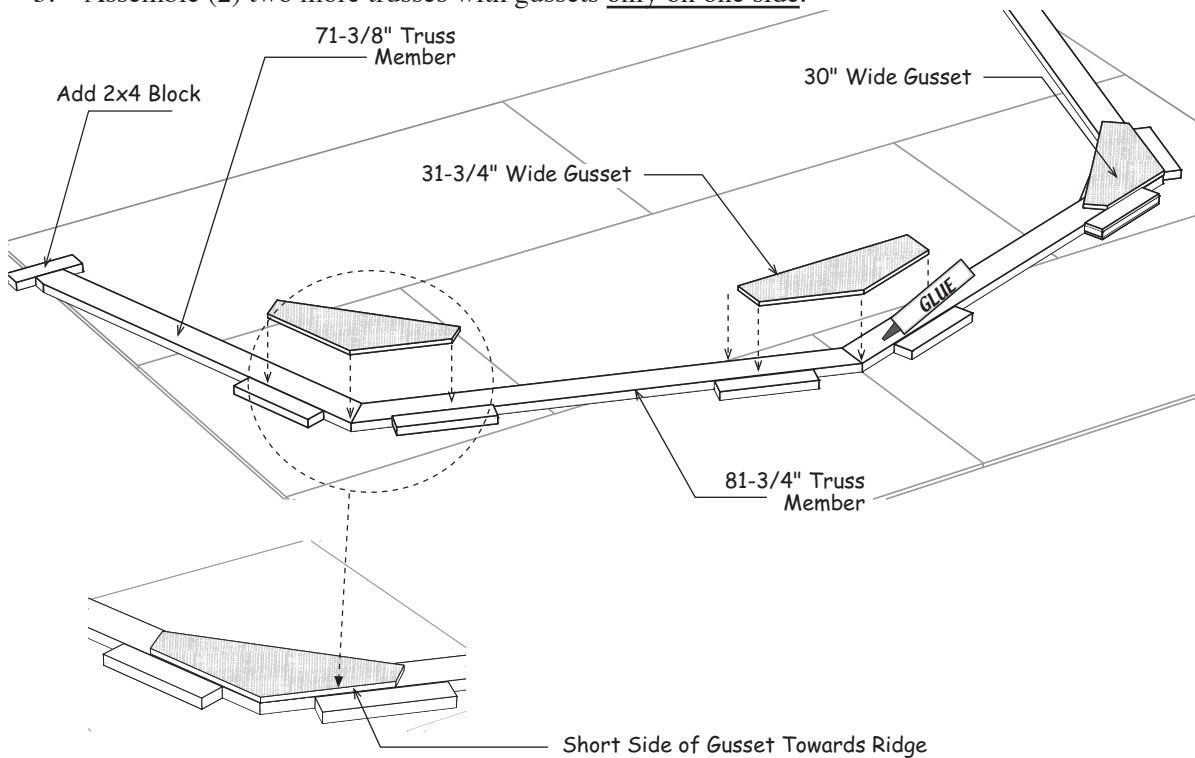


Step 16B Install Roof Gable continued

1. Repeat **Step 13** to assemble another gable.
2. Stand up the gable frame and position it at the end of the building.
3. Repeat **Step 14** to apply gable siding.
4. Remove the 2x4-12' bracing on the end wall and install on the opposite end wall.
5. Repeat **Step 16A** to install the gable.

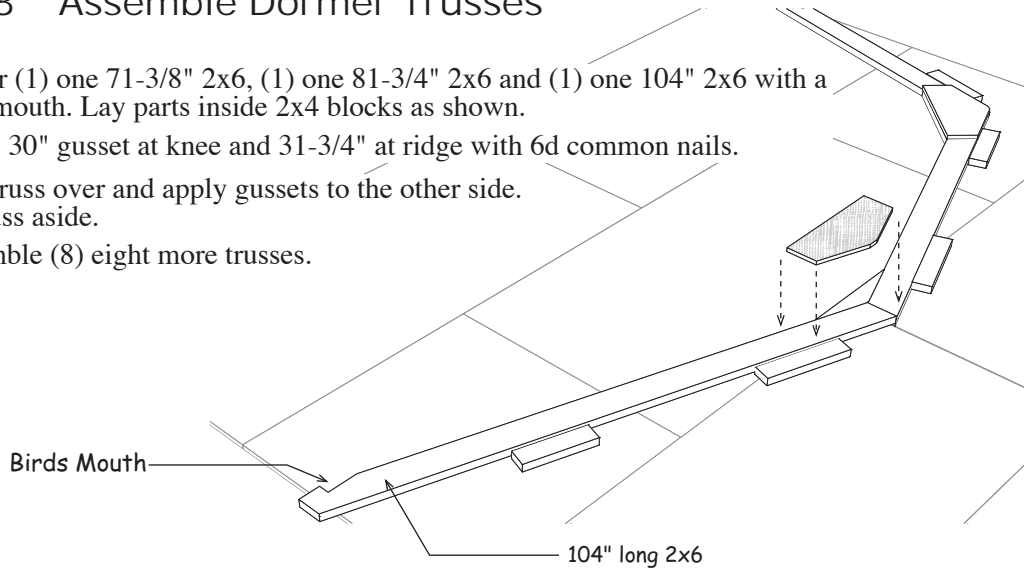
Step 17 Assemble Gambrel Trusses

1. Lay truss parts inside the 2x4 blocks used around gable frames. One end of the 81-3/4" long 2x6 boards have a blue mark. Place these ends together at the ridge. Add a 2x4 block at the bottom of the truss leg to keep this 2x6 from moving.
2. Secure the 2x6 boards together using pre-cut wood gussets. Knee gussets are 30" wide. Ridge gusset is 31-3/4" wide. Take the gussets and the 2x6 boards and secure gussets with (3) three rows of 6d common nails spaced 6" apart. **Important:** when installing the gusset at the knee, install gussets with the short side towards the ridge. *See detail at bottom of page.*
3. Turn truss over and apply gussets to the other side. Set truss aside.
4. Repeat to assemble (3) three more truss with gussets on both sides.
5. Assemble (2) two more trusses with gussets only on one side.



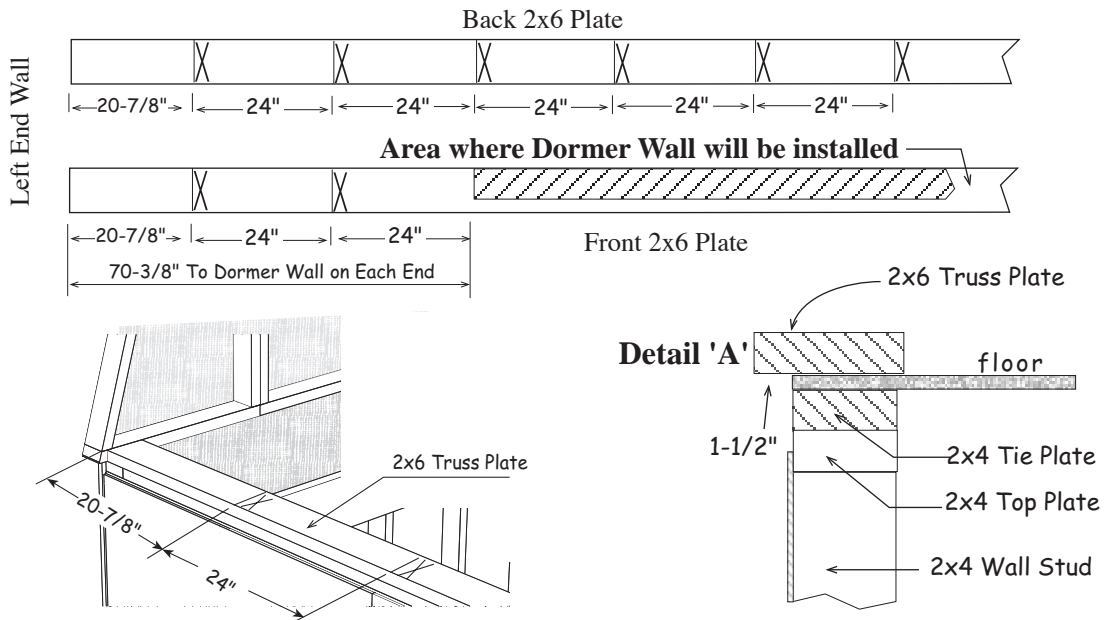
Step 18 Assemble Dormer Trusses

1. Gather (1) one 71-3/8" 2x6, (1) one 81-3/4" 2x6 and (1) one 104" 2x6 with a birds mouth. Lay parts inside 2x4 blocks as shown.
2. Install 30" gusset at knee and 31-3/4" at ridge with 6d common nails.
3. Turn truss over and apply gussets to the other side.
Set truss aside.
4. Assemble (8) eight more trusses.



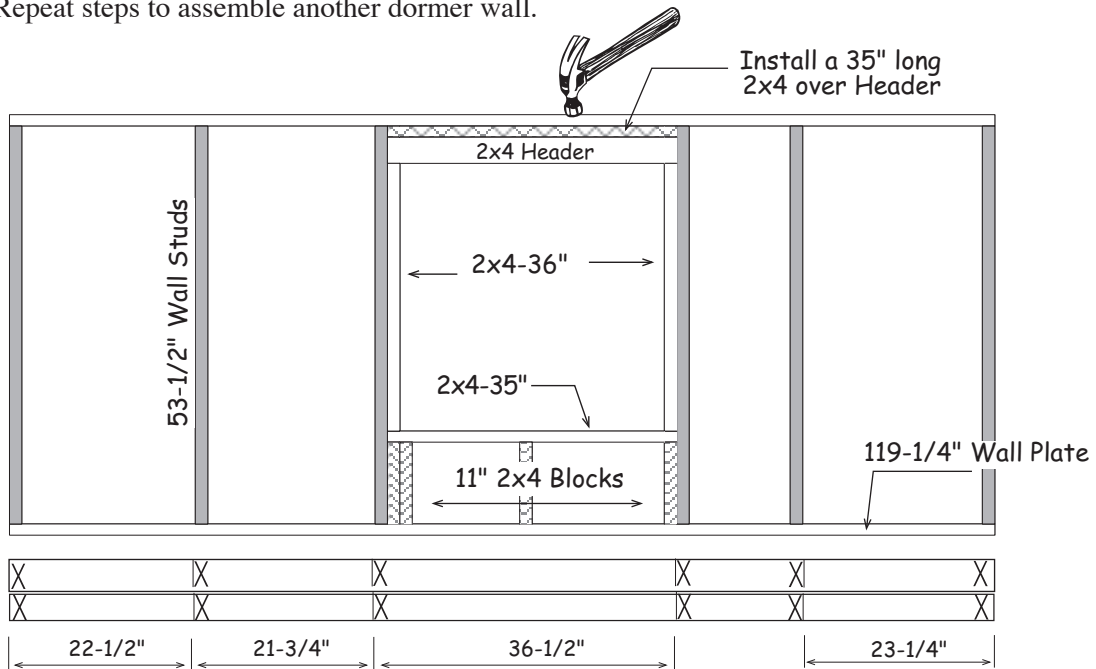
Step 19 Layout & Install 2x6 Truss Plates

1. Install (4) four 2x6-7' as plates between the gable wall panels on front wall. Cut a 2x6-8' to fit, save cut off. The 2x6s should project 1-1/2" past the 2x4 tie plate (see Detail 'A' below). Nail 2x6s to the floor with 10d coated sinker nails; double row spaced 16" apart.
2. Repeat on back wall using cut off to finish.
3. Indicate with 'X' marks where the trusses will be located down length of back wall 2x6. Only mark two 'X' marks at each end of front wall 2x6.

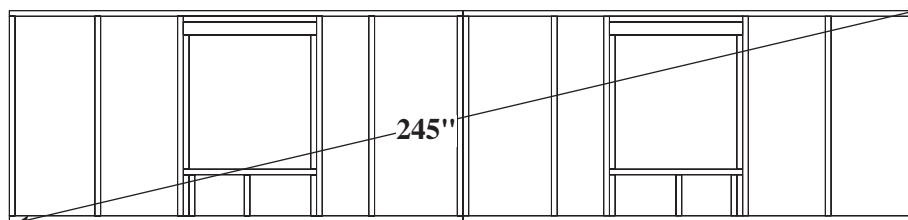


Step 20 Build Dormer Wall Frame

1. Cut (2) two 2x4-10' boards to a length of 119-1/4".
2. Position boards together and indicate with 'X' marks where the wall studs will be located.
3. Locate, *from our kit*, (6) six 53-1/2" long 2x4s. Install the 2x4s (shown in gray) as wall studs between the top and bottom plates.
4. From a pre-cut wall stud cut (2) two 36". From another pre-cut stud cut (2) two 35" long boards. From another pre-cut stud cut (8) eight 11" long 2x4 boards (save four for other dormer wall).
5. Locate a 35" long pre-built 2x4 header. Frame window opening as shown. Use 10d sinkers.
6. Repeat steps to assemble another dormer wall.

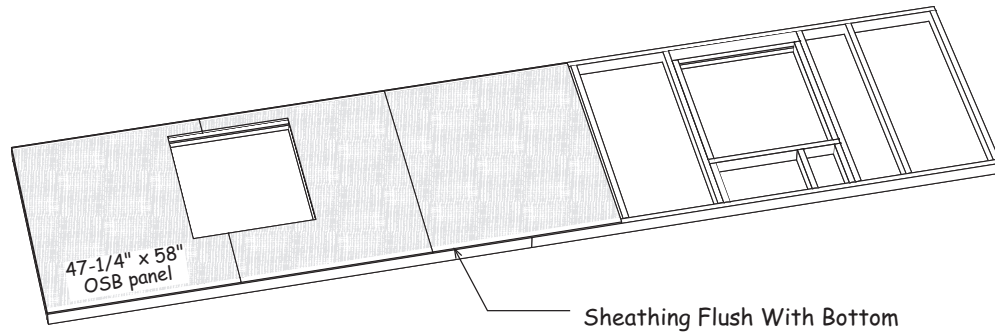


6. Position the dormer wall frames together as shown below. Nail frames together with 10d sinkers.
7. Square wall frame. *Measure diagonally (corner to corner). The measurements will be the same (245") when the wall is square.*



Step 21 Apply OSB Sheathing to Dormer Wall

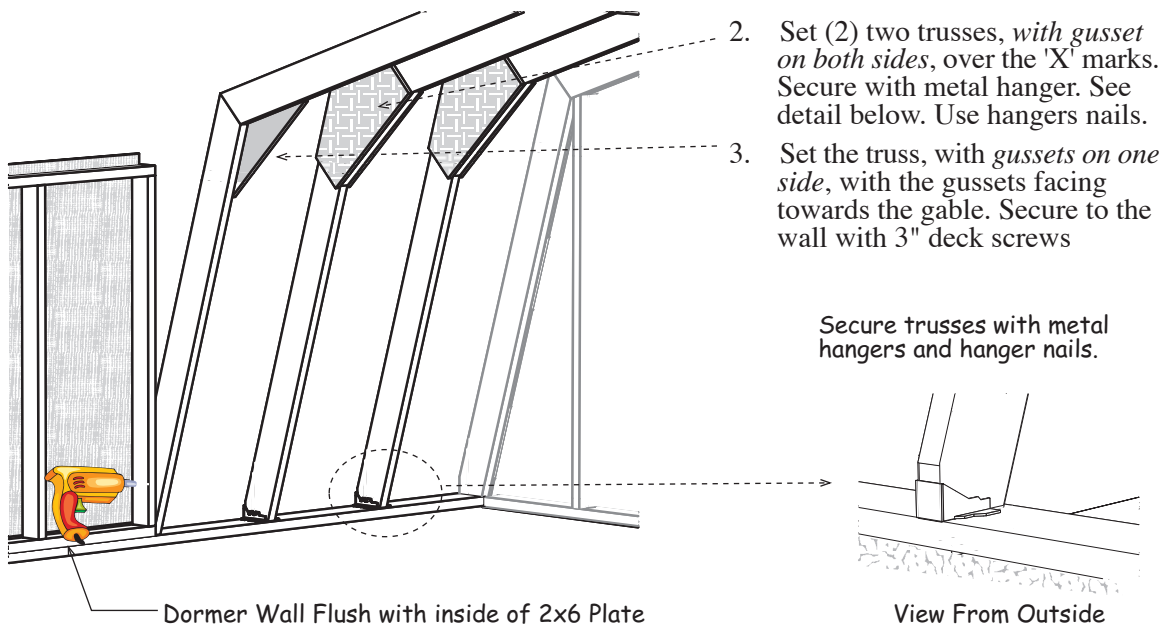
1. Cut a 58" OSB sheathing panel (*from our kit*) to a width of 47-1/4" Install this panel flush with the left end of the wall frame and the bottom of the frame. The OSB will extend 1-3/4" above the wall frame. Cut and remove the sheathing covering the window openings. Install sheathing with 7d sinkers spaced 12" apart.



2. Install (3) three 48" x 58" sheathing panels. Cut siding from the window openings.
3. Cut the last 48" x 58" sheathing panel flush with the end of the wall frame

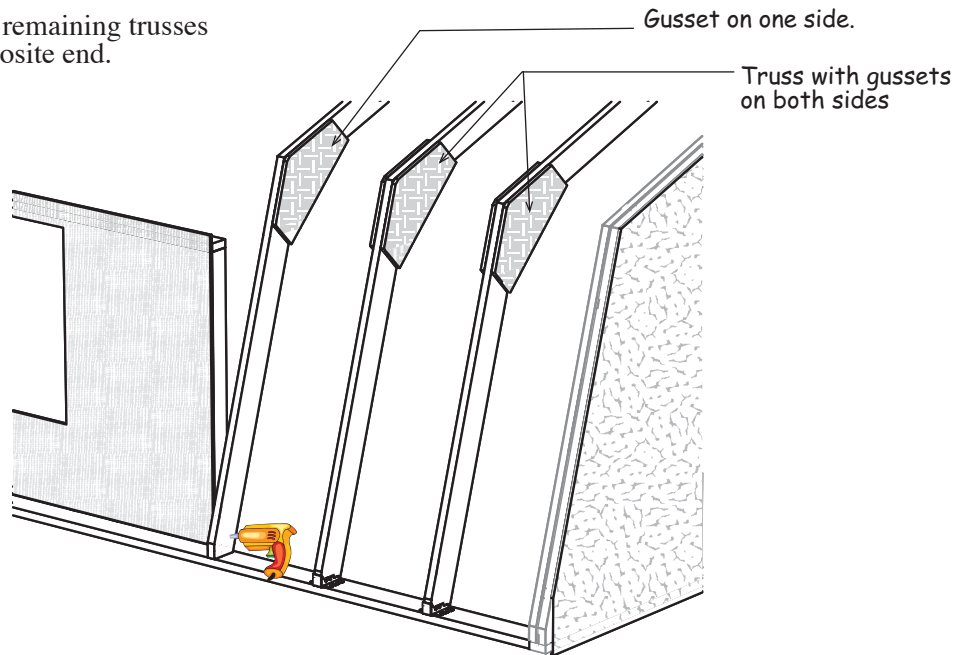
Step 22A Set Dormer & End Trusses

1. Install the dormer wall 70-3/8" from both gables with the back of the wall frame flush with the inside of the 2x6 truss plate. Nail to truss plate with 10d sinkers.



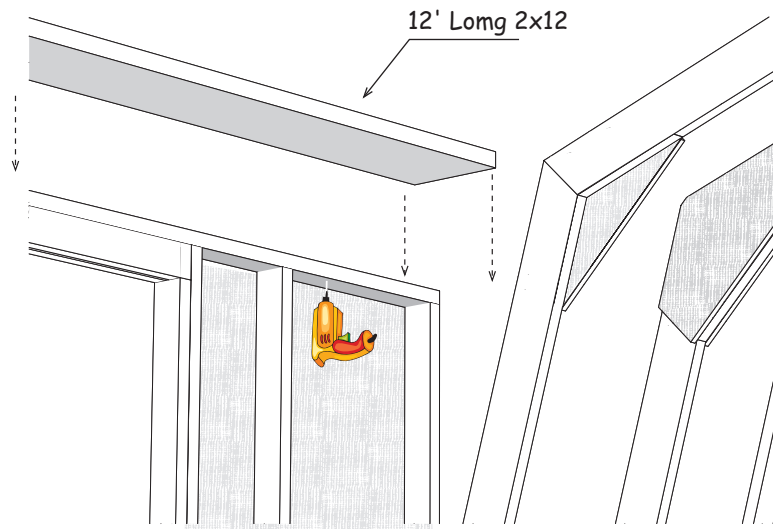
Step 22B Set Dormer & End Trusses continued

4. Install the remaining trusses on the opposite end.



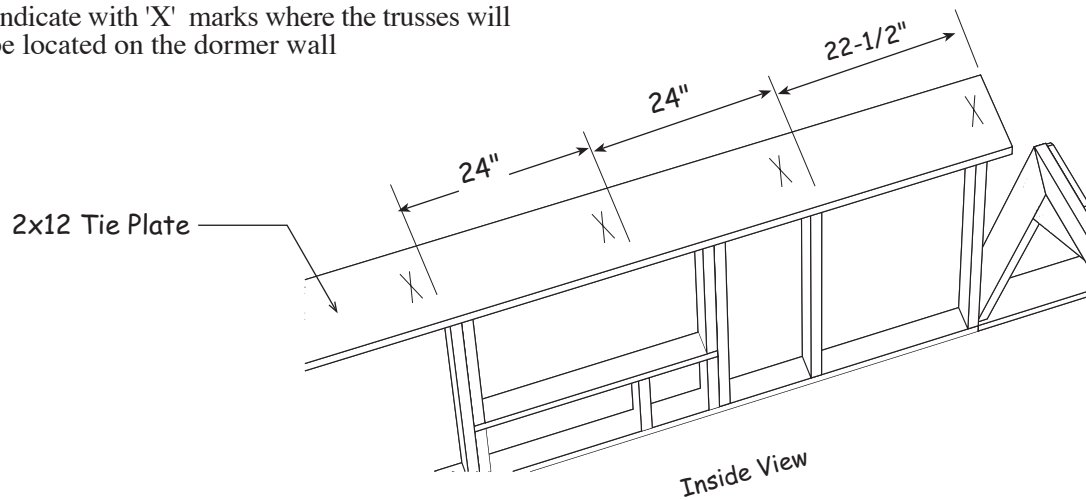
Step 23 Install 2x12 Tie Plate on Dormer

1. Install a 12' long 2x12 to the top of the dormer wall. Secure with (2) two rows of 3" deck screws spaced 12" apart.
2. Cut a 8' long 2x12 to length and install on the dormer wall.

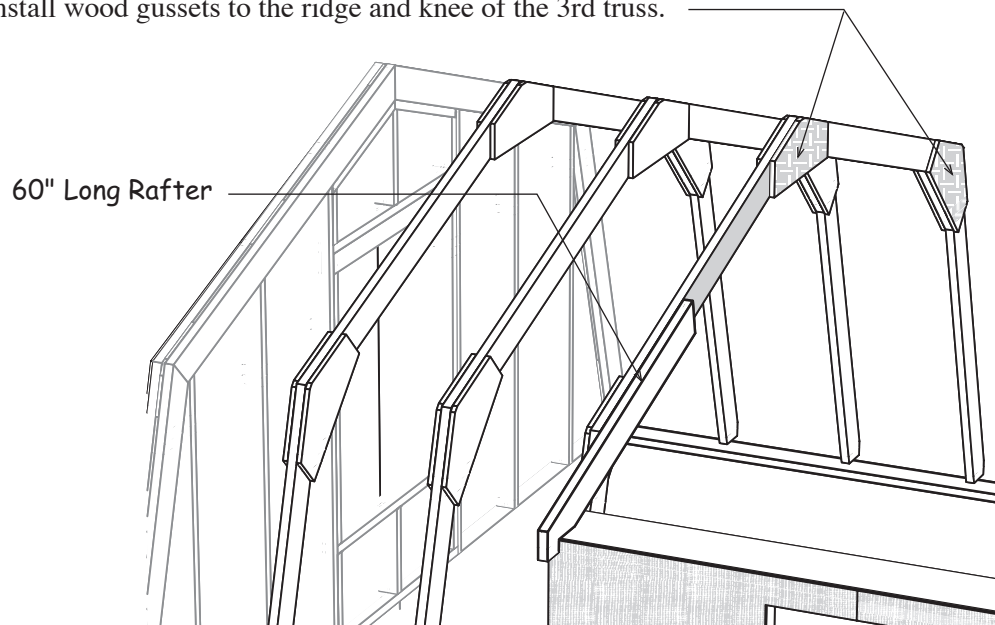


Step 24A Install Dormer Trusses

1. Indicate with 'X' marks where the trusses will be located on the dormer wall



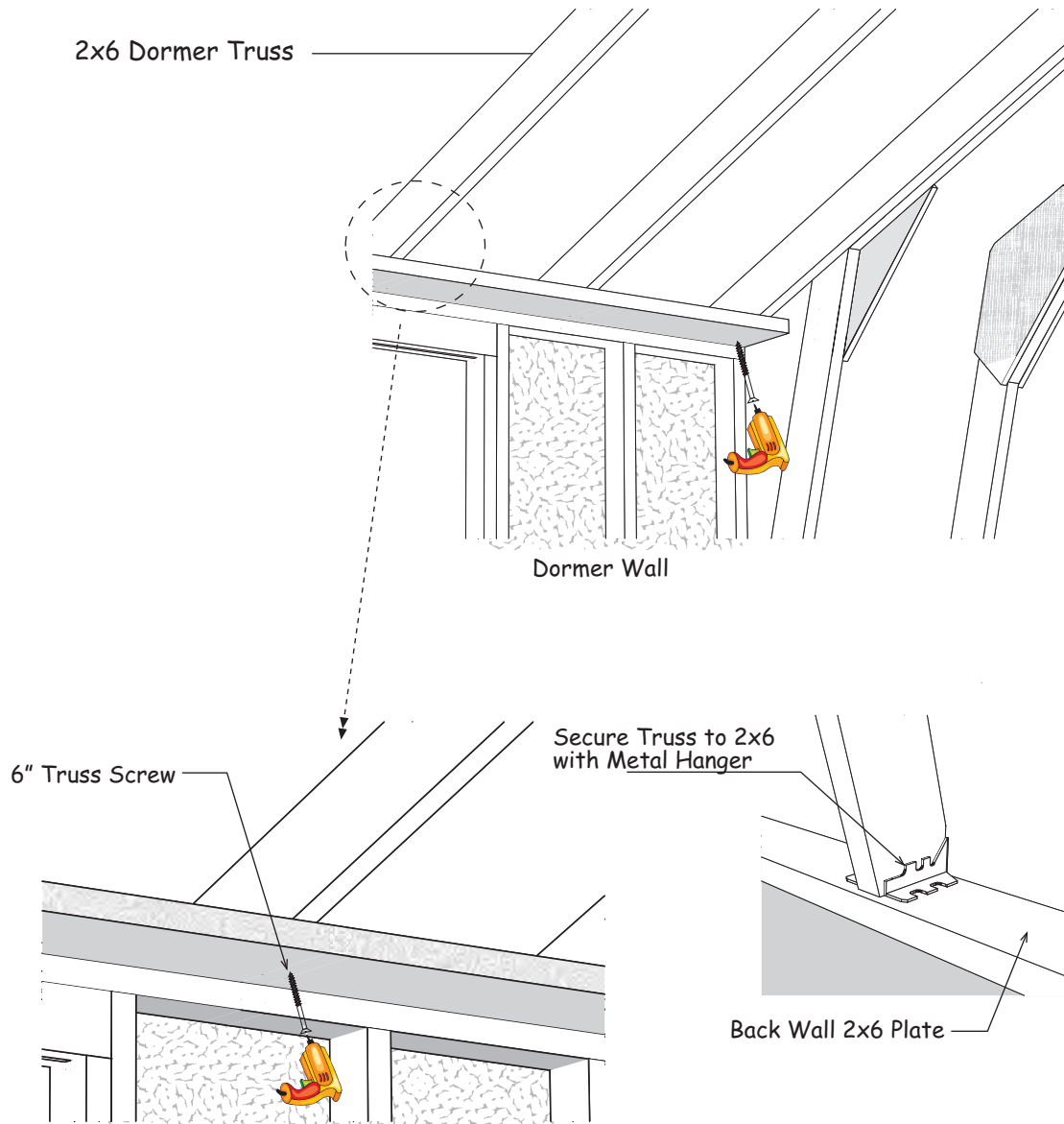
2. Install a 60" long truss rafter with a birds mouth to the 3rd truss. The birds mouth will lip over outside of the 2x12. **IMPORTANT:** Make sure dormer wall is plumb before nailing in place. Secure to truss with (10) ten 10d sinkers spaced evenly.
3. Install wood gussets to the ridge and knee of the 3rd truss.



4. Repeat steps to install truss rafter and gussets at the other end of the dormer.

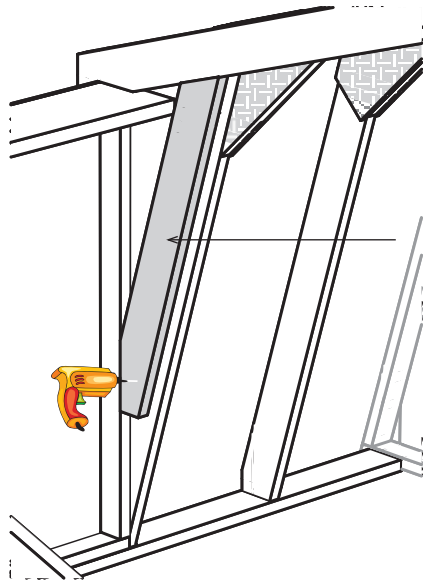
Step 24B Install Dormer Trusses continued

5. Install (9) nine dormer trusses over the 'X' marks on 2x12. Secure trusses to back wall using metal hangers and 1-1/2" hanger nails. Secure the front of the truss to the 2x12 using (1) one 6" long truss screw on each truss. Screw through underside of 2x12. See details below.
6. Secure the first and last rafter with 6" truss screws.



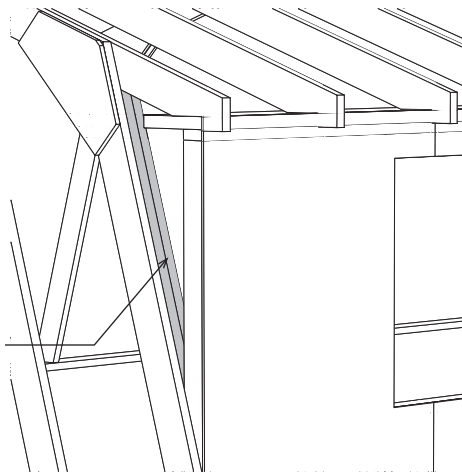
Step 25 Install OSB Sheathing On Dormer

1. Install a 2x6 as a backer (shown in grey) on the 3rd truss and against back of dormer frame. Secure with 3" deck screws.
2. Repeat on other end of dormer wall.



view from inside

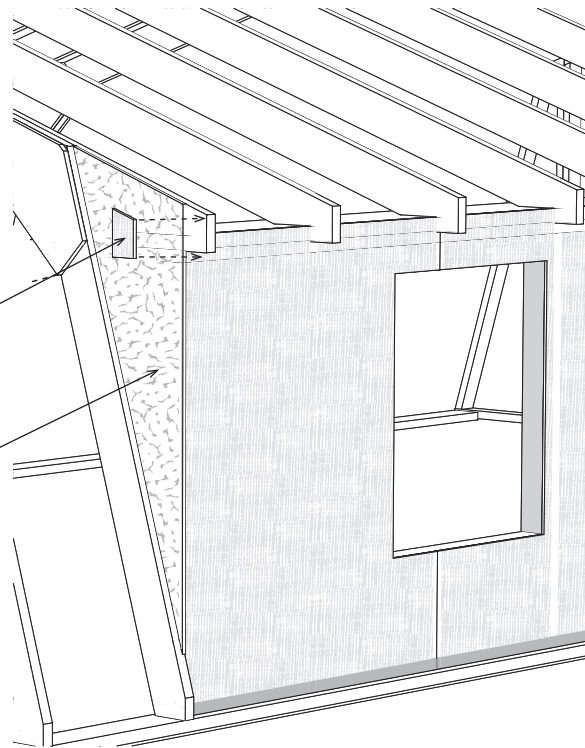
47" long
2x6 Backer



view from outside

3. Locate a pre-cut triangle OSB sheathing and install over the end of the dormer wall. Nail to wall, rafter and 2x6 backer. Use 7d sinkers.
4. Install a small OSB filler, *packed with the hardware*, to cover end of the truss rafter.
5. Install OSB sheathing and filler on the opposite end.

OSB Filler

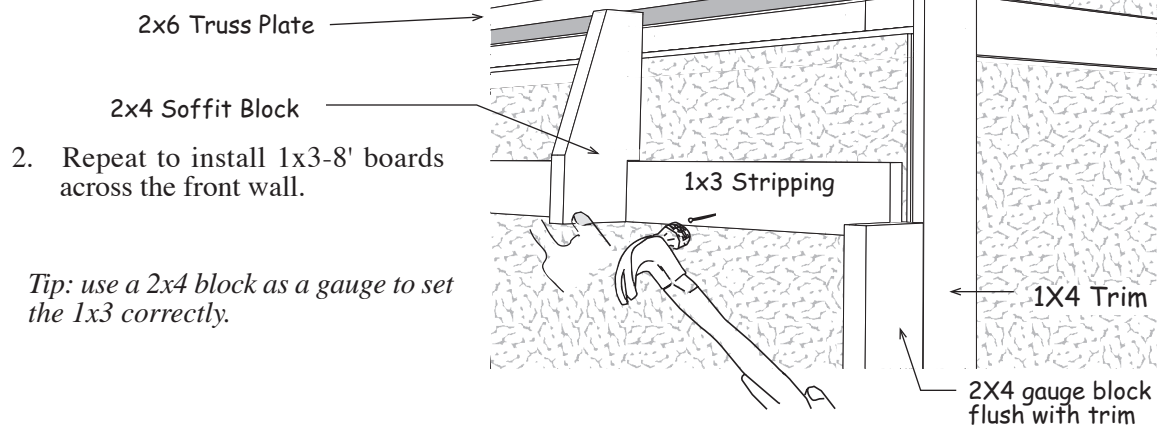


Step 26 Install Soffit

1. Install (4) four 1x3-8' stripping on the back wall using 7d sinkers. Cut last 1x3 to fit. To install the 1x3 at the correct height, butt a 2x4 soffit block against the bottom of the 2x6 truss plate while inserting a 1x3 board into the notch. Install the 1x3 board 1-1/2" back from the 1x4 corner trim on each end wall.



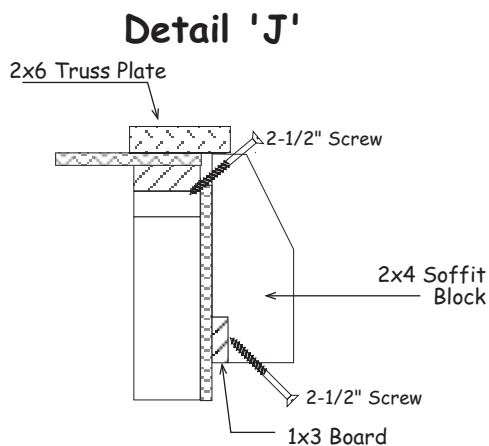
Use the siding nails as a reference to locate the wall stud spacing.



2. Repeat to install 1x3-8' boards across the front wall.

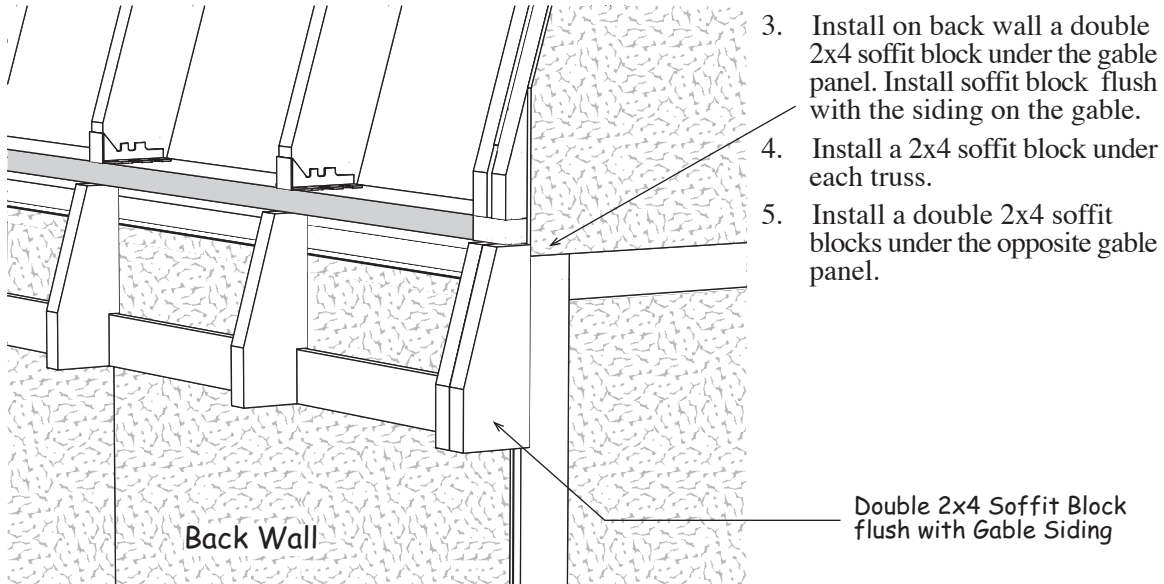
Tip: use a 2x4 block as a gauge to set the 1x3 correctly.

Refer to Detail 'J' and notes below for proper installation of soffit blocks

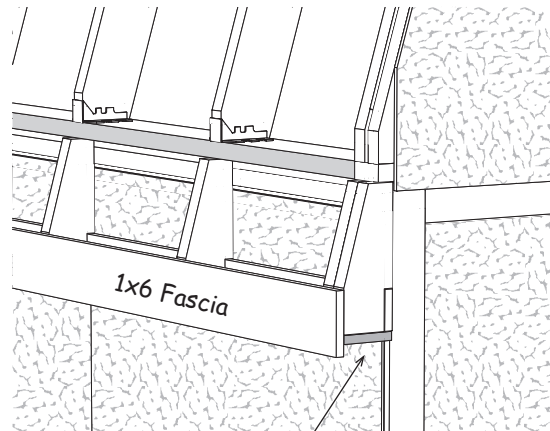


Position the 2x4 soffit blocks between the 1x3 board and the 2x6 truss plate. Secure the top of the soffit blocks in place by screwing through the top of the block. Secure the bottom by screwing through the bottom of the 2x4 soffit block into the 1x3 board. Drill holes in the 2x4 blocks to prevent the wood splitting. Use 2-1/2" screws.

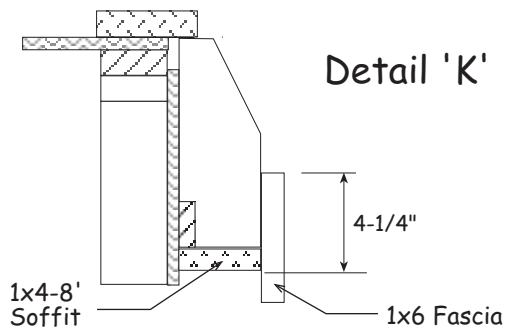
Step 27 Install Soffit continued



6. Install the soffit blocks under front wall gables and trusses. Install 24" on center under dormer.
7. Cut an 10' long 1x4 so the end is flush with double soffit block and to middle of 4th soffit block. Install to underside of soffit blocks. See **Detail 'K'**. Use 1-1/2" trim screws. Install (2) two 1x4-12' cutting last one to finish.
8. Repeat to install 1x4 soffit on the back of the building.



1x4-8' Soffit Board



9. Repeat the above steps to install (1) one 1x6-10' fascia board and (2) two 1x6-12' boards to the face of the soffit blocks. Install the 1x6 fascia 4-1/4" from the bottom of the 1x4 soffit boards. Use 8d galv. nails.

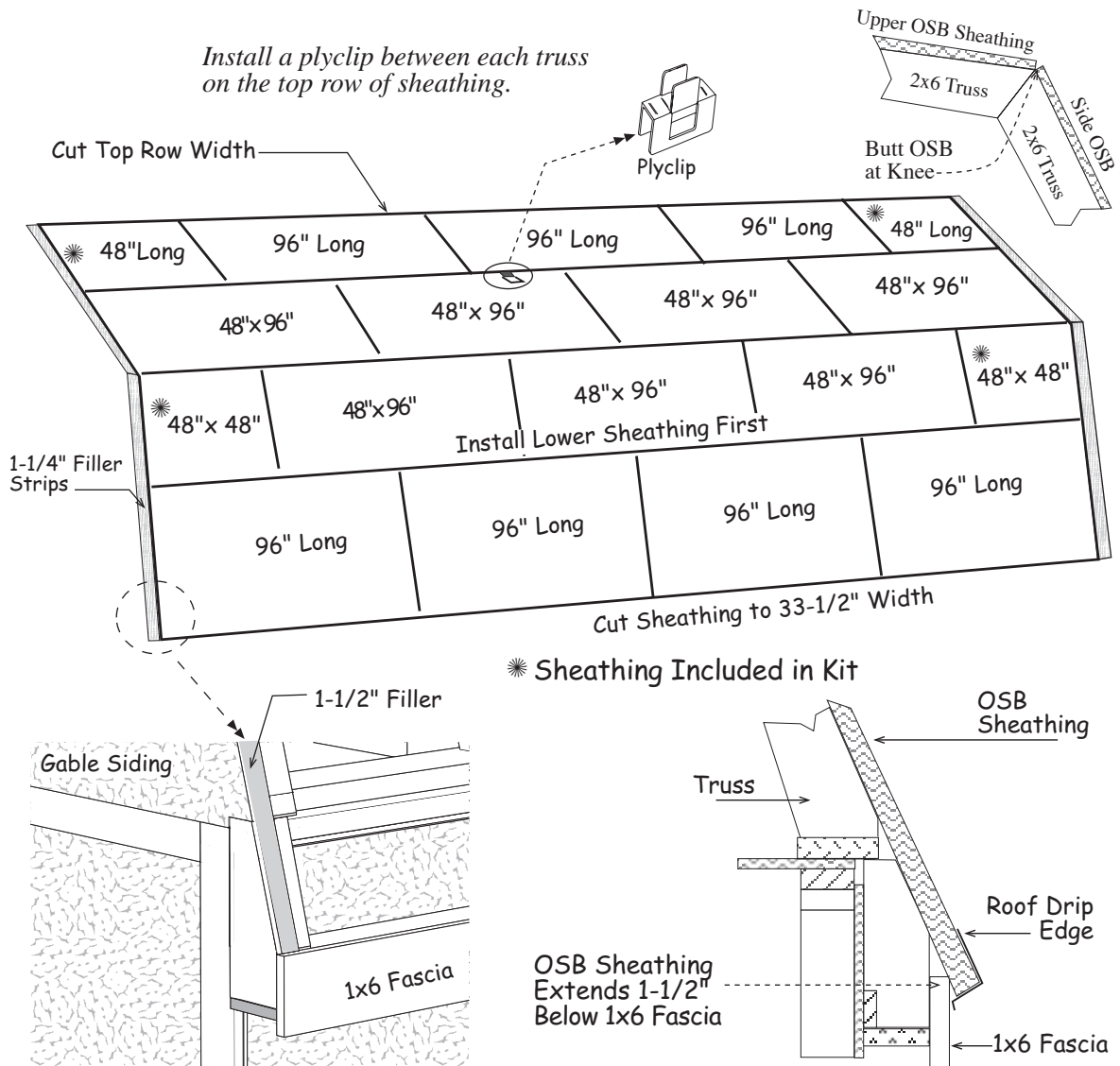
See **Detail 'K'**.

Step 28 Install Roof Sheathing on Back

Install 7/16" OSB roof sheathing at the back of the building, see layout below. Make certain the trusses and the gables are plumb. Install 1-1/2" wide filler strip, *included in our kit*, flush with the siding on the gable panels so the sheathing will break on the center of the trusses. Install a plyclip between each truss on the top row of sheathing. Install fillers on the opposite end, trim if necessary.

If you are installing ridge vent, cut the roof sheathing at the top of the building to be 1" below the peak of the truss. This will allow air circulation through the ridge vent. *See Detail L on next page.* If you are applying insulation between the trusses use ridge vent the length of the roof.

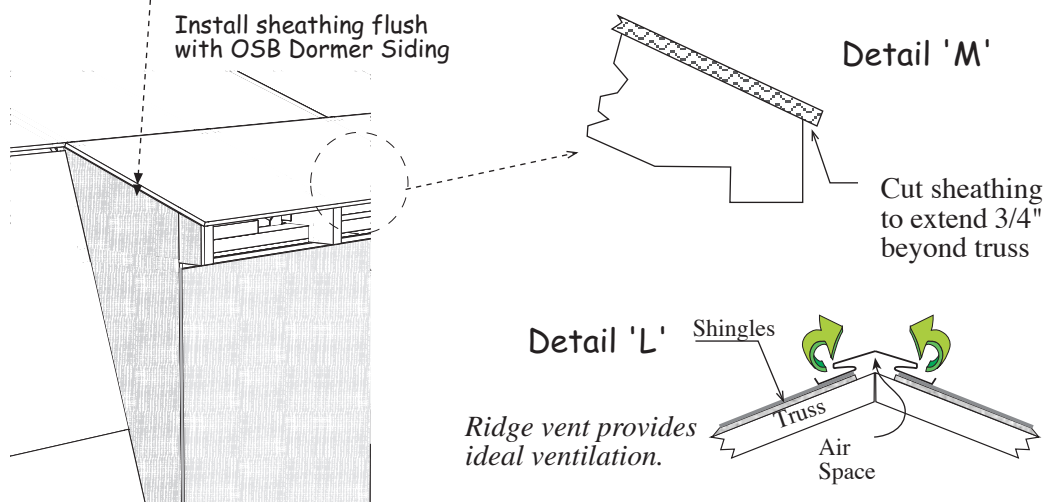
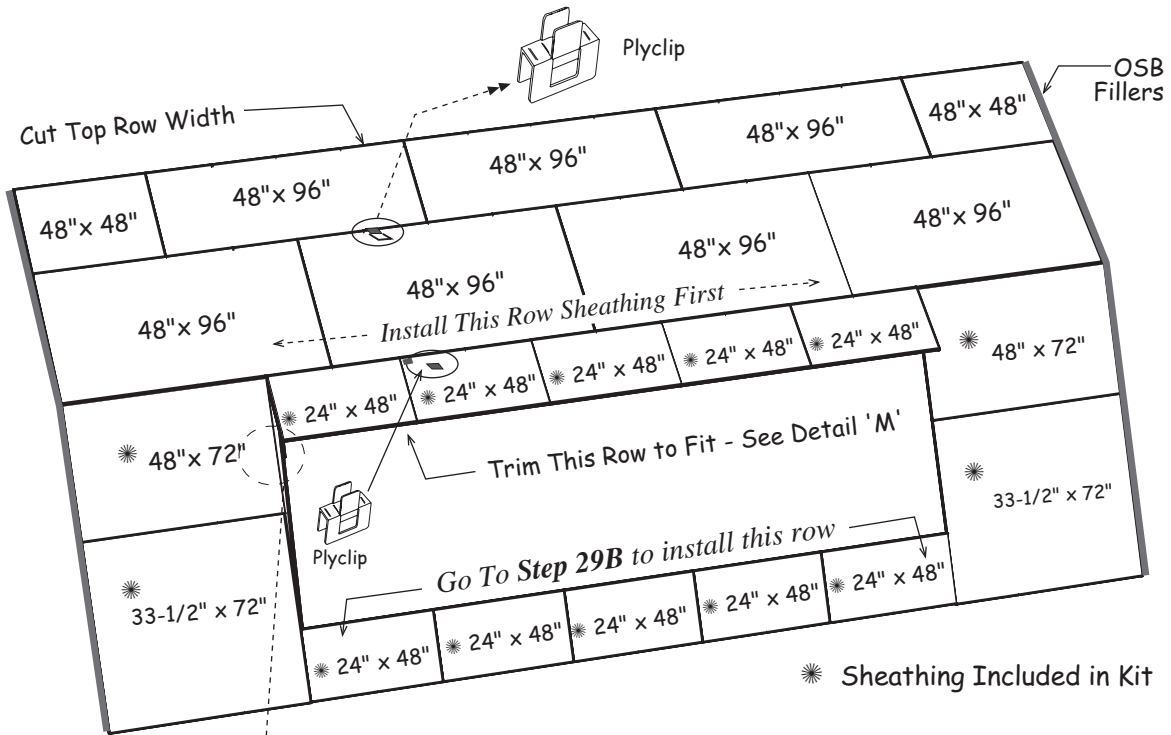
Install sheathing using 7d coated sinker nails spaced 9" apart along trusses and gable ends.



Step 29A Install Roof Sheathing on Front

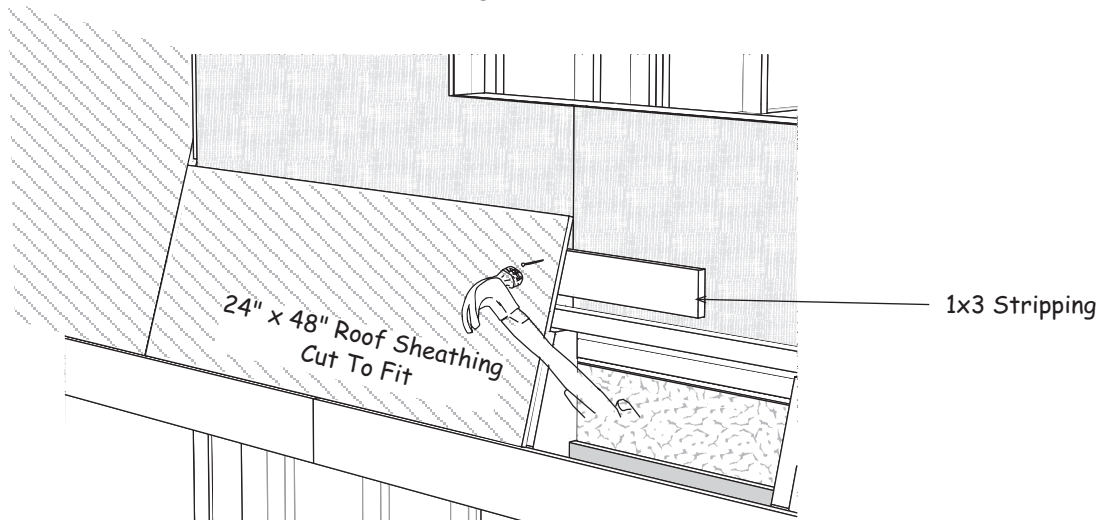
Important: The pre-cut 24"x48" OSB sheathing may need to be cut to fit above and below the dormer. See *Detail M* below and next step.

1. Cut a sheet of OSB in half to make (2) two 48"x48 sheets. Install roof sheathing at the front of the building per layout below.



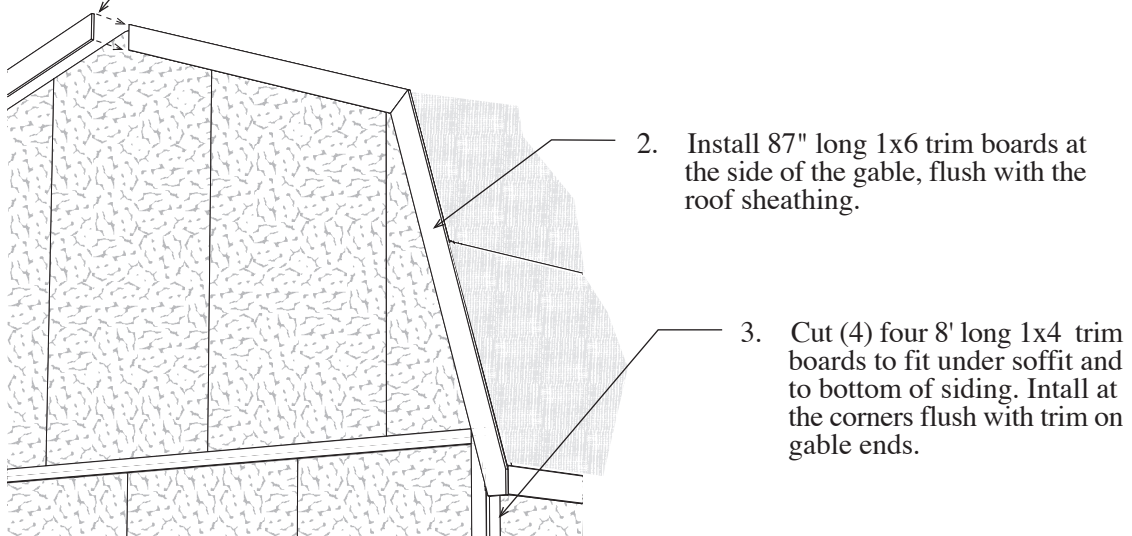
Step 29B Install Roof Sheathing on Front

1. Install (3) three 1x3-8' stripping to the dormer wall to support the roof sheathing. Adjust height as appropriate. Cut last 1x3 to fit. Use 7d sinkers.
2. Cut (5) five 24" x 48" OSB sheathing to fit and install under the dormer wall.



Step 30 Install Gable & Corner Trim

1. Install 82-1/4" long 1x6 trim boards at the top of the gable. Install the end with the blue marking at the ridge. Install 1x6 flush with the top of the roof sheathing. Use 8d galv. nails.



Step 31 Install Roofing — Owner Supplied



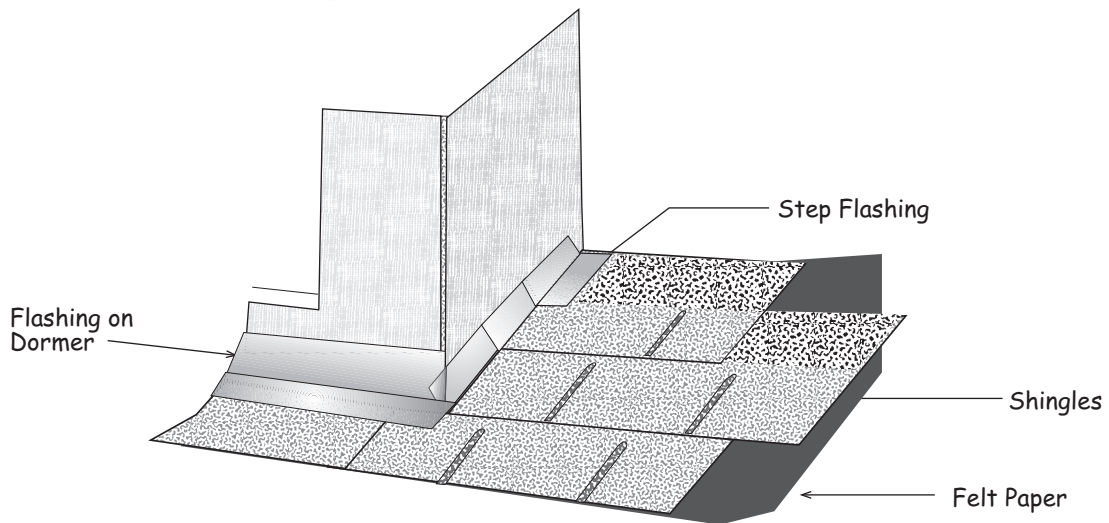
This roof design is more complex than a straight roof and requires flashing to be installed. It's very important that the flashing is installed properly. Consider hiring a professional roofer who has the necessary knowledge and material to install the flashing.

Shingles and metal flashing must be installed on lower roof prior to applying siding in next step. After siding and trim are installed you may continue shingling roof.

Optional Roof Covering		
28	bdl.	Roof Shingles
15	pcs.	Roof 'drip' Edge-10'
950	sq. ft.	Felt Paper

Install felt paper, drip edge and shingles per the instructions from the shingle manufacturer.

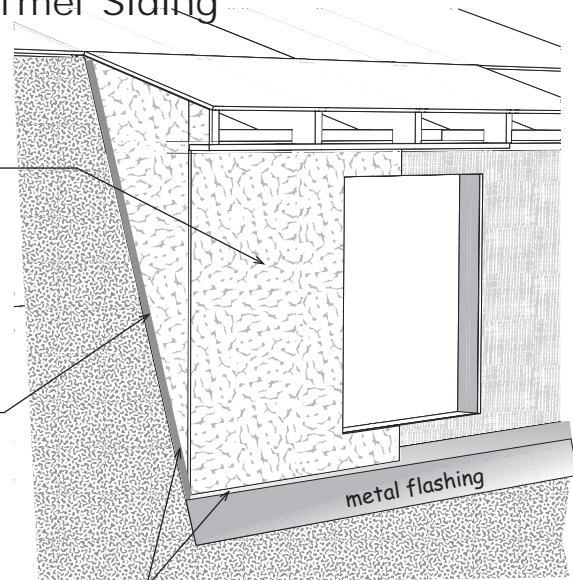
Example installation for flashing around dormers



Step 32 Install LP Primed Dormer Siding

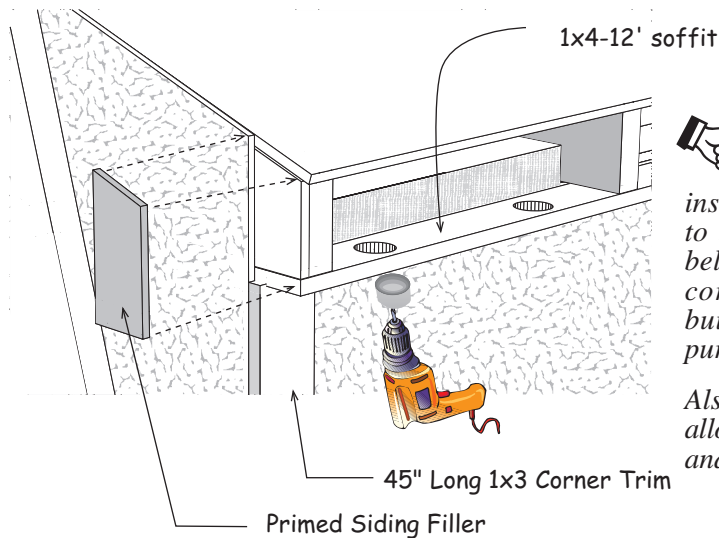
1. Install 45-1/4" long siding panels. Cut siding flush with window openings. Use 8d galv. nails.
2. Install siding panels, *supplied in our kit*, on the sides of the dormer. If necessary, cut siding, to allow 1" between the bottom edge of the siding and the shingles.

Paint bottom edges of the siding.



Step 33A Install Dormer Soffit & Trim


1. Cut a 12' long 1x4 so the end is flush with the OSB filler and center of the 5th truss. Cut to fit another 12' long 1x4 to finish. Use 1-1/2" trim screws.
2. Install 45" long 1x3 corner trim flush with the siding on the dormer sides. Use 8d galv. nails.
3. Install small siding fillers, *packed with the hardware*, to cover the end of the rafters and the 1x4 soffit boards. Install with 8d galv. nails.



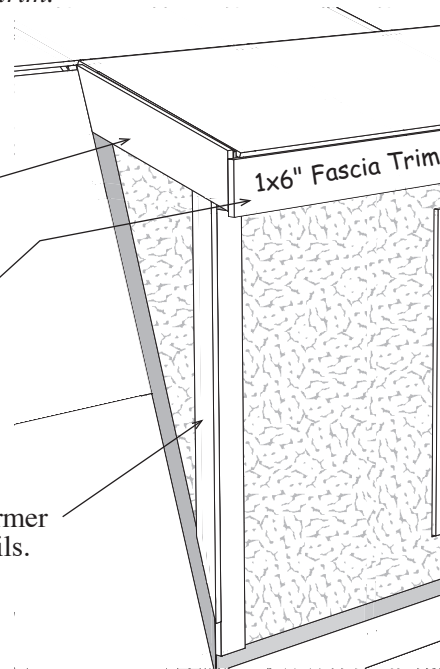
If you intend to insulate the roof, install round soffit vents. You also need to install soffit vents in the soffit area below the gambrel trusses at the front corners and across the back of the building. A hole saw drill bit can be purchased at any hardware store.

Also install pre-vent under sheathing to allow air flow between the roof sheathing and insulation.

Step 33B Install Dormer Soffit & Trim continued

 *If necessary cut the trim allowing a space between the trim and shingles to prevent trim from wicking moisture. Paint the edges of the trim.*

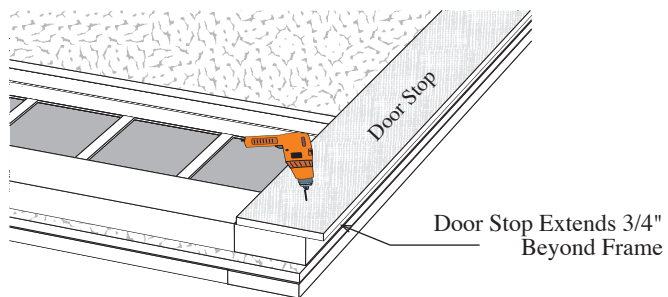
1. Install 22-1/4" long 1x6 trim on each end of dormer. Install trim flush with the end of the truss and the top of the roof sheathing. Cut to fit as necessary. Use 8d galv. nails.
2. Cut a 12' long 1x6 so the end is flush with the face of the 22-1/4" long 1x6 on left side of dormer and center of the 5th truss. Install as fascia on the dormer. Cut to fit and install another 12' long 1x6 to finish. Use 8d galv. nails.
3. Install 42-1/2" long 1x4 trim on each end of the dormer flush with the face of the 1x3 trim Use 8d galv. nails.



Step 34 Install Door Stop on Left Door

	<i>Material Shipped in 48" Door Kit</i>	2	ea.	3-7/8" x 84" LP 3/8" Primed Door Jamb
2	ea. 48" x 84" Pre-built Doors	6	ea.	6" Door Hinges
2	ea. 12" x 42" Transom Windows	1	ea.	Door Handle w/key
2	ea. 1x4" x 84" Door Trim	1	ea.	6" Barrel Bolt
2	ea. 1x4" x 48-3/4" Door Trim	75	ea.	2" Hinge Screws
1	ea. 1x6" x 10" Keystone	16	ea.	White Window Screws

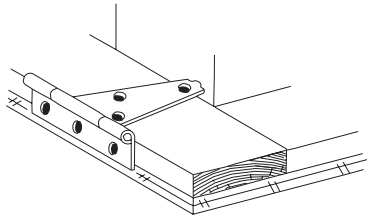
1. Select the door without the pre-drilled hole on long edge. Lay door face down.
2. Install a 4-1/2" x 83" long siding panel as a door stop on right side of door. The door stop should extend 3/4" beyond the frame of the door and flush with top of door. Use 1-1/2" exterior screws spaced 12" apart.



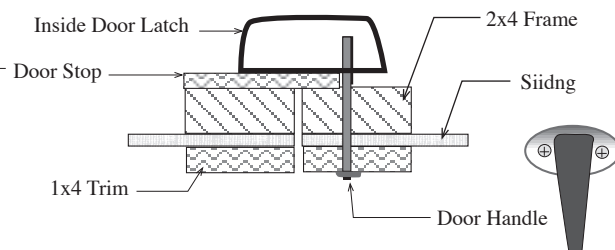
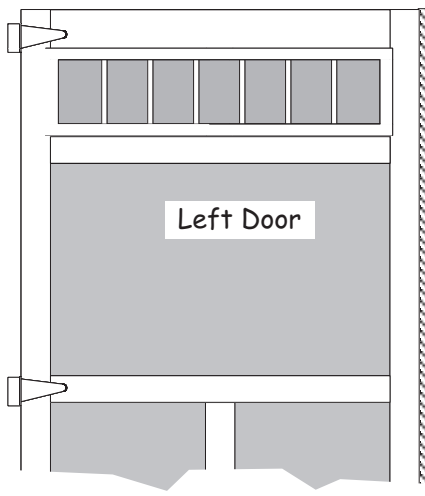
Step 35 Install Doors



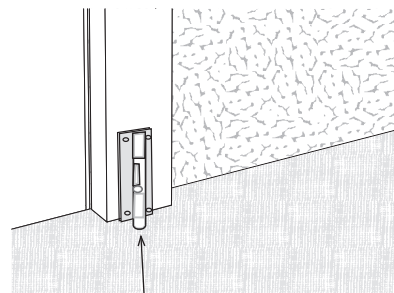
If your door opening is out of square, the space around the doors will not be even. You can remove and re-position the side trim to make allowances for this. The side trim does not have to be flush with the frame of the door opening. You can move the trim in or out to make the door spacing equal.



1. Install (3) three 6" hinges to sides of the doors. To position the hinge properly, hold the rectangular plate against the frame. Use 2" black screws.
2. Before fastening the hinges to the trim, temporarily prop the doors in the opening. Leave a space at the top and between the doors and the side trim to allow room for the doors to expand due to humidity.
3. Determine position of hinges and install to side trim with 2" screws.
4. Install the window using the short white screws.
5. Install door handle into the pre-drilled hole on right side door. When the handle is turned the inside latch will hold doors closed. Tighten set screw to finish.



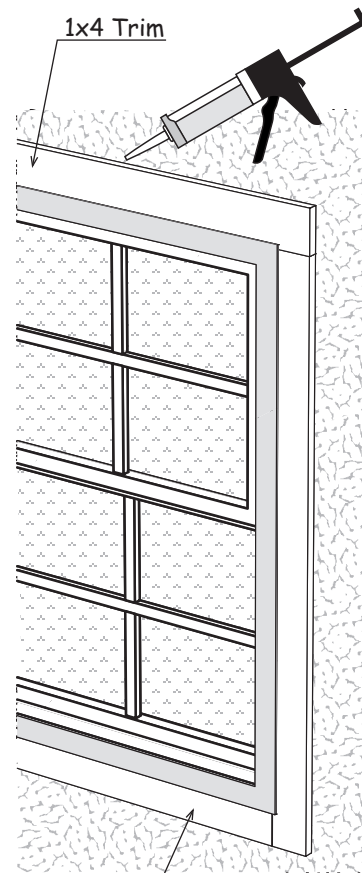
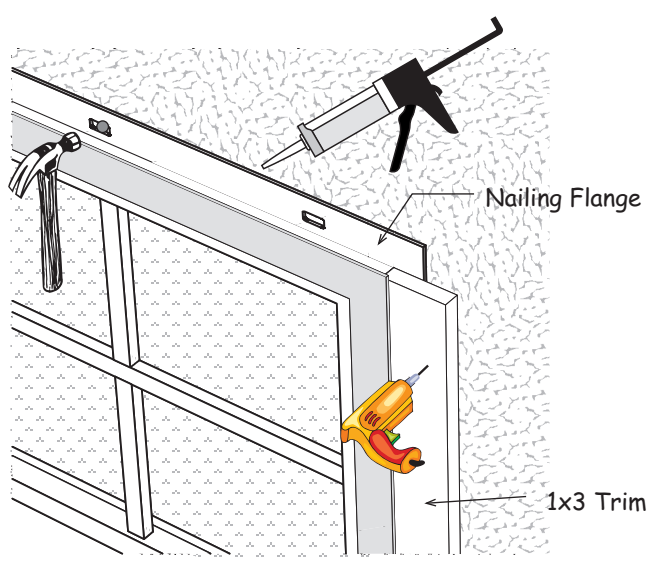
6. Install a barrel bolt on the lower back of the door to secure this door in place when closed. You will need to drill a hole for the round shaft to drop into.
7. Install another barrel bolt at the top of the door.



Barrel Bolt on the back of left door

Step 36 Install Windows

1. Apply caulking on siding around the window opening before installing the windows.
2. Insert window in opening. Hold the window in place using a few 8d galv. nails.
3. Butt 1x3 trim boards along each side of the window, flush with the top frame. The 1x3 side trim will extend 3-1/2" below the window frame to receive the bottom trim. The top trim will rest on the side trim. Refer to the chart below for the trim width and length to be used.
4. Secure the trim boards using (6) six stainless trim screws.
5. Install 1x4 trim across the top. Apply caulking along the top of the trim board.
6. Cut to fit a 1x4 trim board and install under the window between the 1x3 side trim.
7. Install shutters with 1-1/2" zinc plated screws provided.



<i>Window</i>	<i>Trim Size</i>	<i>Where Used</i>
36" x 36"	1x4 x 40-1/2"	Top & Bottom Trim.
	1x3 x 39"	Side Trim
32" x 36"	1x4 x 36-1/2"	Top & Bottom Trim.
	1x3 x 39"	Side Trim

Cut Trim to Fit

Qty.	Material Shipped on 'A' Pallet		
2	Pre-built Gable Frames	21-3/4" x	48"
2	Pre-built Gable Frames	19-1/4" x	48"
2	Pre-built Window Header	2x6 x	39"
25	Trusses - Top Cord	2x6 x	81-3/4"
8	Truss Plates	2x6 x	84"
4	Gable Wall Studs	2x4 x	80-1/2"
4	Gable Wall Studs	2x4 x	72-5/8"
4	Gable Trim	1x6 x	82-1/4"
4	Window Trim	1x4 x	40-1/2"
5	7/16" OSB Sheathing	48" x	58"
1	7/16" OSB Sheathing	48" x	48"
6	7/16" OSB Sheathing	24" x	48"
4	LP Siding Panels	80-1/2" x	48-3/4"
28	Soffit Blocks w/notch	4-3/4" x	12-1/4"
4	Double Soffit Blocks	4-3/4" x	12-1/4"
2	Single Hung Windows	36" x	36"
2	1-3/4" Six Step Stringers	11-7/8" x	75-5/8"



Five Step Stringer shipped on 'B' pallet

1/2" OSB Gable Fillers 2 Ridge 4 Knee 12 Straight



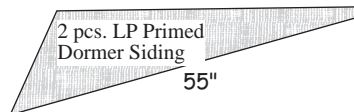
Truss Gussets



32 pcs. Gussets
12" x 30"



26 pcs. Gussets
10-1/2" x 32"



2 pcs. LP Primed
Dormer Siding
55"

Qty.	Material Shipped on 'B' Pallet		
25	Truss- Legs	2x6 x	71-3/8"
2	Dormer Truss Members	2x6 x	60"
2	Pre-built Window Headers	2x4 x	31"
4	Gable Wall Studs	2x4 x	64-1/2"
12	Dormer Wall Studs	2x4 x	53-1/2"
6	Gable Wall Framing	2x4 x	47-3/4"
14	Window Framing	2x4 x	39"
2	Dormer Gable Trim	1x6 x	22-1/4"
4	Window Trim	1x3 x	39-7/8"
4	Window Trim	1x3 x	39"
4	Window Trim	1x3 x	32-3/4"
2	Dormer Corner Trim	1x4 x	42-1/2"
2	Dormer Corner Trim	1x3 x	45"
5	LP Siding Panels - dormer	45-1/2" x	48-3/4"
2	LP Siding panels over door	13" x	48-3/4"
4	7/16" OSB Roof Sheathing	48" x	72"
3	7/16" OSB Roof Sheathing	48" x	48"
4	7/16" OSB Roof Sheathing	24" x	48"
2	7/16" OSB Door Fillers	7-1/4" x	48"
2	7/16" Dormer Sub-siding angle shaped		63"
16	7/16" OSB Fillers	1-1/2" x	48"
2	Single Hung Window	32" x	36"
8	Raised Panel Shutters	12" x	43"
2	1-3/4" Five Step Stringers	11-7/8" x	63-1/2"
11	Stair Treads	10-1/2" x	36"
9	Risers	7-1/4" x	36"
2	Risers	6-1/2" x	36"
1	Landing Material	2x12 x	48"
1	Landing Material	2x12 x	36"
2	Landing Material	2x6 x	45"
2	Landing Material	2x6 x	34-1/2"
3	Stair Material	2x6 x	32-1/2"
1	Stair Material Treated	2x6 x	32-1/2"

Qty.	Hardware Breakdown 'A' Pallet		
5	lbs.	16d	Galvanized Spiral Nails
13	lbs.	10d	Coated Sinkers
15	lbs.	8d	Galvanized Nails
7	lbs.	8d	Galvanized Spiral Nails
5	lbs.	7d	Coated Sinkers
10	lbs.	6d	Common Nails
6	lb.	1-1/2"	Hanger Nails
150	1-5/8"	Stainless Screws w/bit	
125	2-1/2"	Wood Screws	
175	3"	Wood Screws (50 for stairs)	
11	6"	Dormer Truss Screws	
50	3/4"	Shutter Screws	
40	2x8	Joist Hangers	
15	2x6	Truss Hangers	
45	7/16"	Plyclips for roof sheathing	
1	bag	2-OSB & 2- LP Fillers	
16	LP 3/8"	Siding Fillers	1-1/2" x 10"
2	Tubes Caulking		

Qty.	Material Shipped in Extension Kit		
4 ea.	2x6	x 81-3/4"	Truss Top Cord
4 ea.	2x6	x 71-3/8"	Truss Leg
4 ea.	4-3/4"	x 12-1/4"	Truss Soffit Blocks
4 ea.	32"	x 10-1/2"	Truss Ridge Gusset
8 ea.	30"	x 11-1/2"	Truss Knee Gusset
4 ea.	2x6	Metal Hangers	
6 ea.	2x10	Metal Hangers	

Qty.	Material Shipped by Local Supplier		
103	2x4	-	Pre-cut Wall Studs
6	2x4	8'	Wall Plates (treated)
4	2x4	10'	Wall Plates (treated)
2	2x4	12'	Wall plates (treated)
4	2x4	8'	Framing Lumber
16	2x4	10'	Framing Lumber
8	2x4	12'	Framing Lumber
2	2x4	16	Framing Lumber
8	1x4	8'	Trim Boards
6	1x4	10'	Trim Boards
6	1x4	12'	Trim Boards
2	1x6	10'	Fascia Boards
6	1x6	12'	Fascia Boards
11	1x3	8'	Stripping Boards
1	2x6	8'	Truss Pkate
2	2x8	10'	Door Header
8	2x10	8'	Floor Joist & Header
9	2x10	12'	Floor Joist & Header
17	2x10	16'	Floor Joist
1	2x12	12'	Dormer Tie Plate
1	2x12	8'	Dormer Tie Plate
16	4x8	3/4"	T&G Loft Flooring
28	4x8	3/8"	LP Primed Siding
22	7/16"	OSB Roof Sheathing	

Qty.	Material Shipped in Truss Wrap 'A'		
4	ea.	2x6 x 105-1/4"	Dormer Trusses
2	ea.	2x6 x 47-5/8"	Dormer Siding Backer
2	ea.	1x6 x 86"	Gable Trim

Qty.	Material Shipped in Truss Wrap 'B'		
5	ea.	2x6 x 105-1/4"	Dormer TRusses
2	ea.	1x6 x 86"	Gable Trim