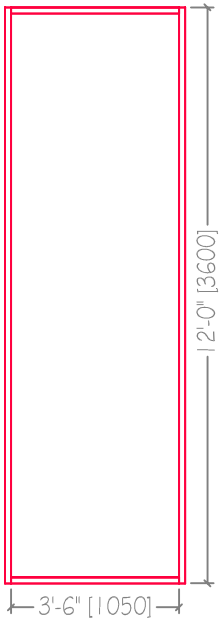
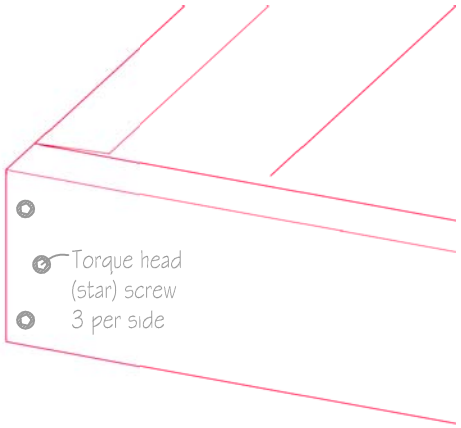
1) Image shown with green tin roof and stained white pine.
2) These plans are intended as a guide ONLY! Feel free to make changes, adjustments and revisions to suit your requirements.
3) We do not assume to know the size and type of fowl being harbored in this coop. Adjustments may be necessary on a project-per-project basis.
4) This coop is large enough for approximately 10-15 chickens. Geese, turkey and other fowl will require revisions.
5) Always use safety equipment and safe construction practices! We will not be held liable for any personal injuries that may occur.

Material List

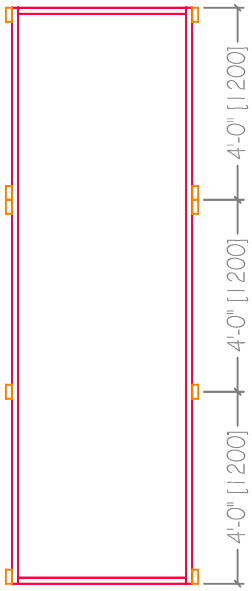
Description	Dimensions mm	Dimensions english	Quantity
Base			
Base & Sill Plank	45x90x3600	2x4x12'	4
6' Base Support Plank	45x90x1800	2x4x6'	4
4' Base Support Plank	45x90x1200	2x4x4'	6
Sill Brace	45x90x3600	2x4x4'	2
Nesting Box			
Nesting Box Plank	45x90x2400	2x4x6'	2
Nesting Box Brace	45x90x2400	2x4x4'	1
Nesting Sill Plank	45x90x2400	2x4x4'	4
Nesting Support	45x90x2400	2x4x4'	2
Plywood Sheets	1200x2400x19	4x8'x$\frac{3}{4}$"	7
Roost and Box Fronts	45x90x2400	2x4x4'	3
Windows			
Exterior Frame	45x90x2400	2x4x8'	2
Interior Frame	45x90x2400	2x4x8'	1
Pane Material	By Builder	By Builder	4
Mesh	By Builder	By Builder	1
Glue, Epoxy, Etc.	By Builder	By Builder	Varies
Hinges	By Builder	By Builder	8
Roofing			
Rafters	45x90x2400	2x4x8'	5
Purlins	45x90x2400	2x4x4'	18
Access Planks	45x90x2400	2x4x4'	2
Sheathing	1200x2400x19	4x8'x$\frac{3}{4}$"	5
Glue, Epoxy, Etc.	By Builder	By Builder	Varies
Hinges	By Builder	By Builder	8
Miscellaneous			
Handles	By Builder	By Builder	4
Veneer/Siding	By Builder	By Builder	100 sq. ft.
Wood Sealant	By Builder	By Builder	2 Gallons
Paint	By Builder	By Builder	2 Gallons
Screws	#20-30x40mm	#20-30x1$\frac{1}{2}$"	150 Min.
Shingles/Tin Roofing	If Desired	If Desired	1 Box Min.

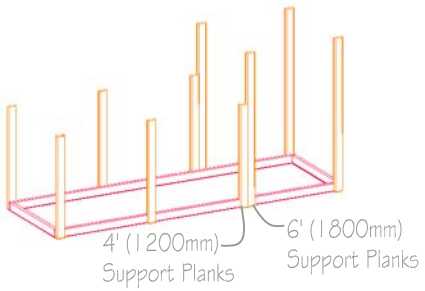
1) To begin, cut the two (2) base planks and the two (2) end planks as dimensioned below. Remember, these should be treated or sealed to prevent water damage!.
2) Layout planks as diagrammed below on a smooth, level surface.
Attach with three (3) - #20-#30x1½" (40-50mm) star (torque) head screws each.

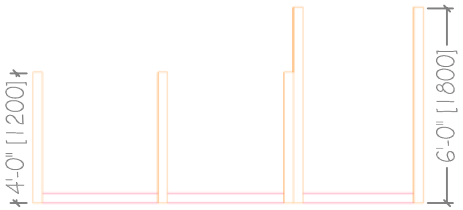




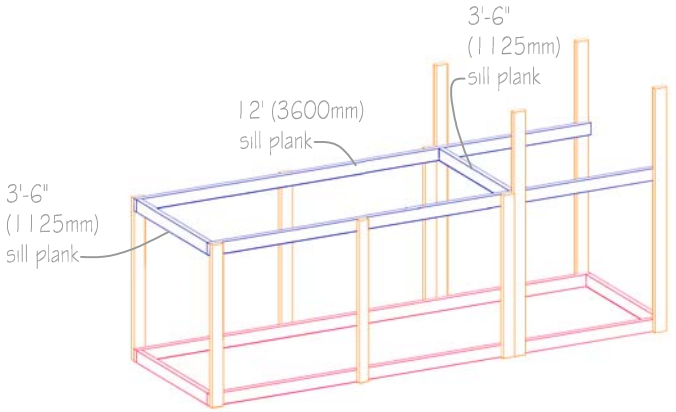
3) Cut four (4) base support planks at 6'-0" (1800mm) and six (6) base support planks at 4'-0" (1200mm).
4) Attach them to the base sill as diagrammed below. Follow the drawings and you should end up with something that looks like the diagram in the upper right below.

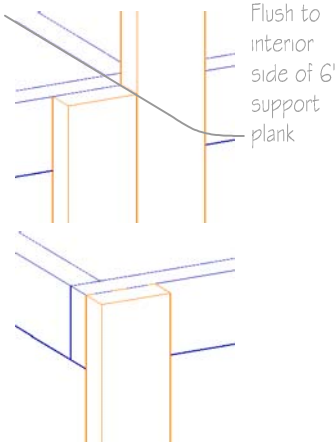




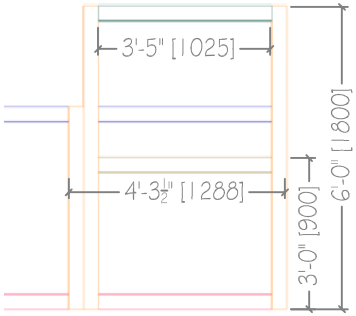


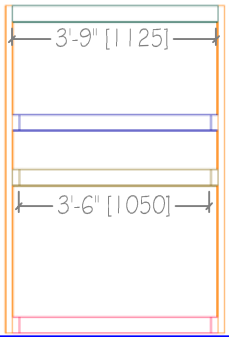
5) Now we need to attach some top sill planks to give the structure some rigidity. Start by attaching a 12' (3600mm) plank on the interior top of the 4' (1200mm) base support planks. Be sure the planks are FLUSH with the top, not on the top of the structure (as diagrammed). Use a level to ensure the planks stay level and attach starting at the 4' (1200mm) end working toward the 6' (1800mm) end. Repeat with opposing plank.
6) Add a 3'-3" (1125mm) bracer plank flush with the edge of the 6' (1800mm) base support plank (see diagram).
7) Add another 3'-6" (1125mm) bracer plank across the top front edge of the 4' (1200mm) side. Be sure to leave the rear open for access to the nesting boxes!



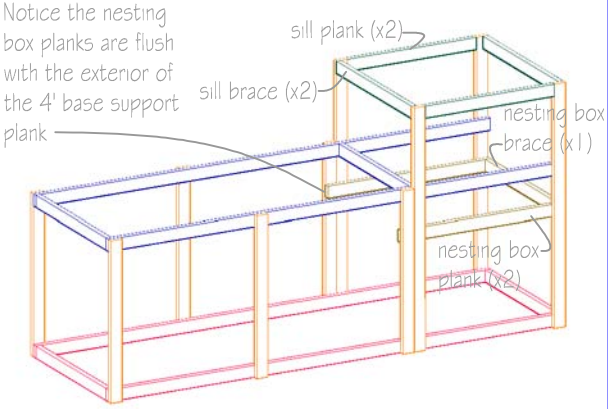


8) Now would be a great time to get the nesting box supports in place. Measure as diagrammed below and cut two (2) nesting box supports and one (1) nesting box brace.
9) Now we need to brace the top. Measure and cut the coop sill planks as diagrammed. Cut two (2) sill braces and two (2) sill planks.





Notice the nesting box planks are flush with the exterior of the 4' base support plank

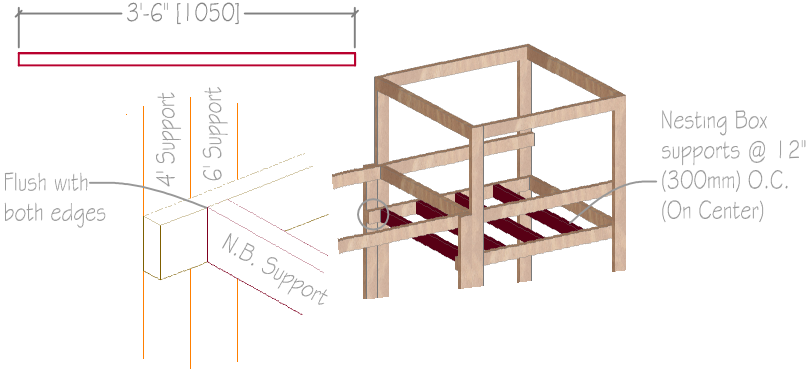


3D imensional concepts
15726 N. Park Dr.
Frenchtown, MT, USA 59834
Cell: 406-546-6672
E-Mail: jsguptill@hotmail.com

Title: Base Details		Drawn: JSG	Approved:
		Revision: 0	Drawing:
Date: 23-Jun-09		Scale: Specified	

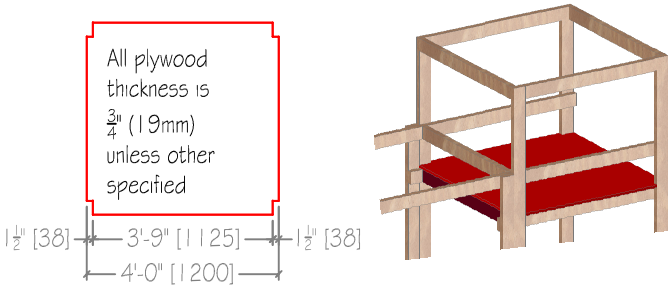
1) Now that the structure is almost complete, you need to begin work on the nesting box. The nesting box will be the place the chickens (or other applicable fowl) can go to escape weather and lay eggs. Before we get too far along, we need some support for the nesting box base sheathing.

2) To begin, measure and cut five (5) support planks. Be sure to measure the length carefully as these will go in between the nesting box supports that we added to the structure earlier (see diagrams below)

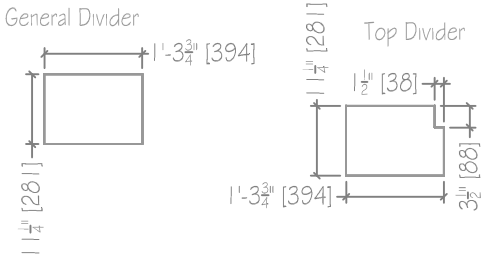


3) To make the nesting box base, use a jig saw to cut a 4'x4' (1200x1200mm) sheet of plywood as detailed below. Save the other half sheet for the nesting box platforms. Slide the sheet into the nesting box at an angle and simple "lay" it on top of the supports. Attach to supports with #20-#30x1½" (35-50mm) torque (star) head screws.

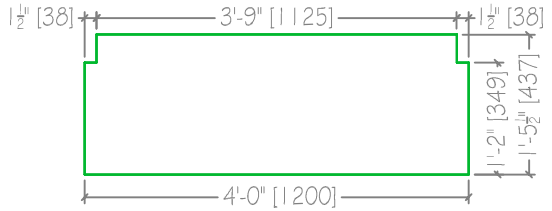
NOTE* We recommend using a fiberglass or other waterproof flooring on top of the base plywood for easy cleanup and to prevent damage. If flooring will not be applied, a coat of polyurethane or other sealant would be a good idea!



4) Layout and cut dividers as shown below. There should be six (6) general dividers and three (3) top dividers (see diagrams below). Set these aside for now.

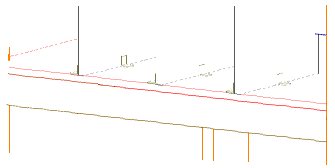


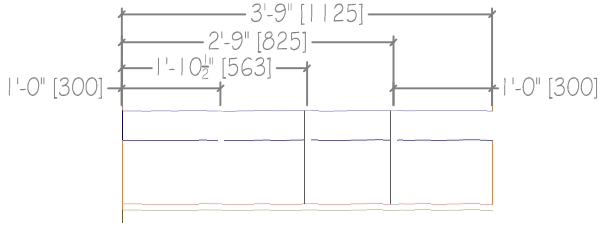
5) Layout and cut 2 nest platforms from the remaining 4'x4' sheet of plywood left over from the nesting box base sheathing as diagrammed below. Once cut set aside.



All plywood thickness is ¾" (19mm) unless other specified

6) Use angle brackets to set the first row of nesting box dividers (see diagram). The diagram below should be used as a guide for spacing. Fowl sizes vary and spacing dimensions may need to be adjusted!



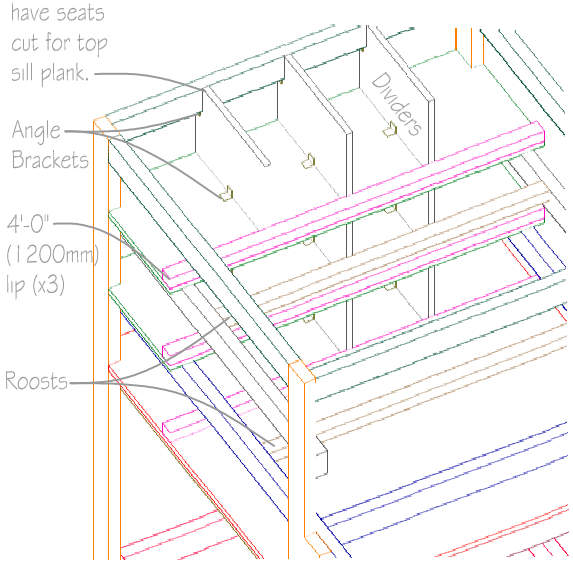


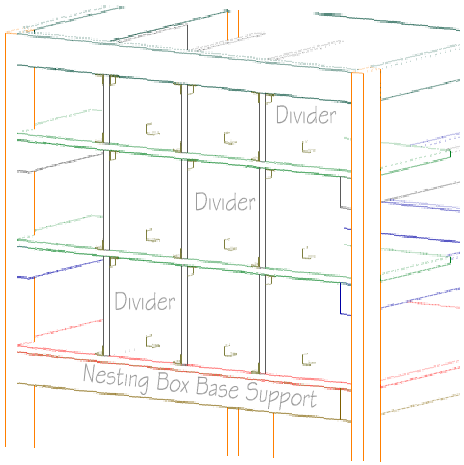
7) Now, carefully place a nesting platform on top of the bottom row of dividers. Use a level to make sure the dividers below are level vertically and attach to the platform with screws. The platforms should sit on the supports (see below).

8) Repeat steps 6 and 7 for the remaining two (2) rows. Make sure the top row of dividers is flush with the rear wall of the coop. The dividers should fit right under the top sill. Again, attach all dividers with angle brackets (see diagram) below. The nesting boxes should make a pattern of four (4) wide and (3) three tall.

9) If you have a table saw, rip 3 4'-0" (1200mm) 2x4 (25x90mm) into six (6) sections lengthwise. Use half of them on the front of the nesting boxes to form a lip to contain straw (see diagram). *Note: A 1½" (35mm) dowel will also work.

10) Use 2 of the remaining pieces as roosts. Attach these to the nesting box supports to make two (2) roosts. You may use the third piece as another roost (locations by builder).



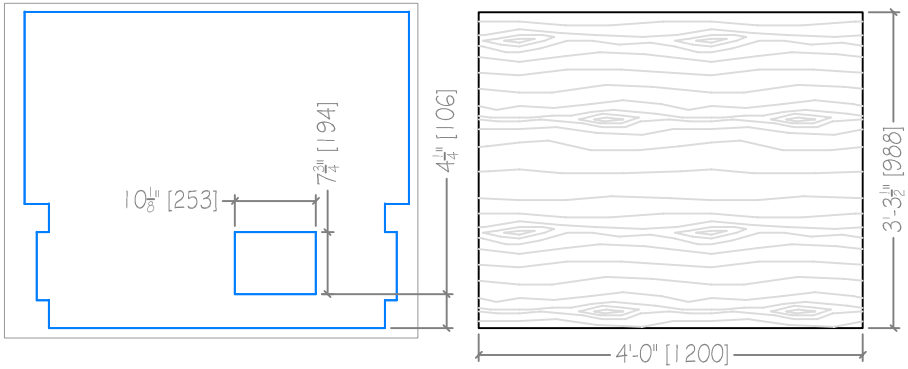


3D Dimensional Concepts
15726 N. Park Dr.
Frenchtown, MT, USA 59834
Cell: 406-546-6672
E-Mail: jsguptill@hotmail.com

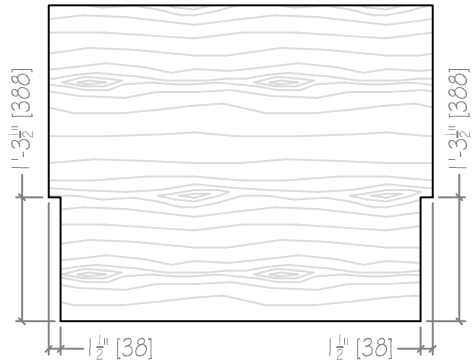
Title: Nesting Box	Drawn: JSG	Approved:	
	Revision: 0	Drawing: 2	
Date: 23-Jun-09	Scale: Specified		

At this point, the structure should look something like the diagram below.
1) The next step will be to enclose the coop before we finish the structure with the roof.

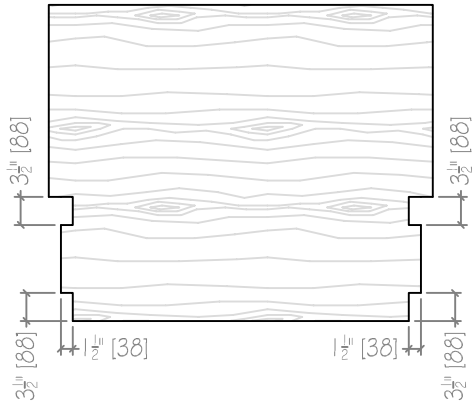
2) The Piece below may look scary, but anyone with some jigsaw skills should be able to cut it out in about 5 minutes. Start by cutting the overall dimensions shown.



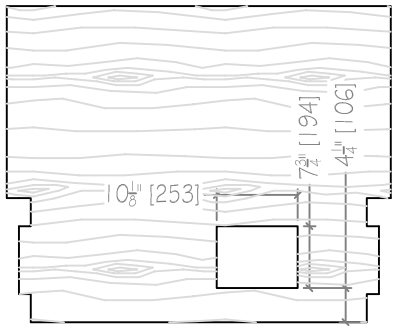
3) Next, layout the lower cut as shown below. Use a jigsaw or table saw to cut.



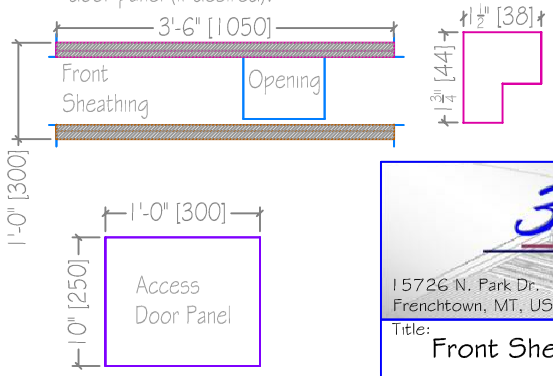
4) Now, use a jigsaw to cut out the seats for the supports. Layout the sheet as detailed below.

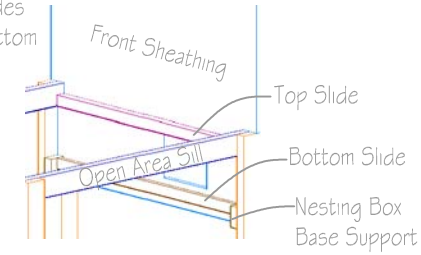


5) At this step, all that is left of the front sheathing is the access to the coop. Layout thedoor CAREFULLY! Draw the lines so you can clearly see the entire shape of the access hole. Make sure to include the width of any differing plywood or support plank thickness.



6) Use a table or circular saw to rip a 4' (1200mm), 2x4 (45x90mm) in half lengthwise.
7) Use a router to create two (2) doors slides. Attach the bottom slide flush with the nesting box base support as shown below. Be sure to router JUST OVER 3/4" (19mm) to allow the door to slide easily!
8) Place the door panel in the slot and make sure it slides easily and freely. Attach the top slide flush with the bottom edge of the open area sill plank. Attach a handle to the door panel (if desired).



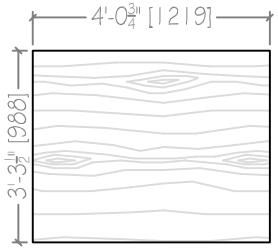


3D Dimensional Concepts
15726 N. Park Dr.
Frenchtown, MT, USA 59834
Cell: 406-546-6672
E-Mail: jsguptill@hotmail.com

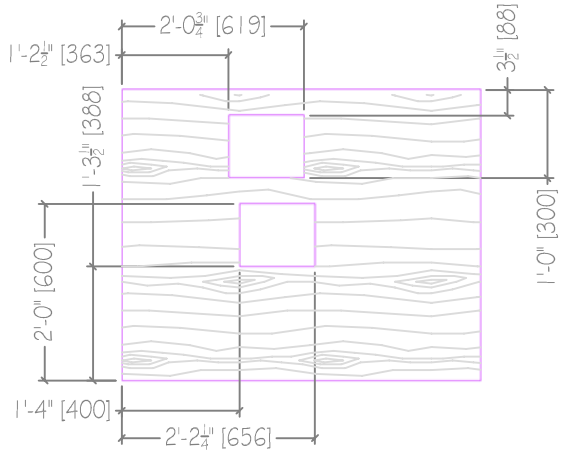
Title: Front Sheathing	Drawn: JSG	Approved:	
	Revision: 0	Drawing: 3	
Date: 23-Jun-09	Scale: Specified		

Now we need to work on the windows. These instructions will cover both a very general window to let light in, and a very nice and functional window. Both windows will require a bit of planning ahead. First, the builder needs to determine what kind of window they need. The windows in these instructions will both double as vents. Second, the materials the windows will be made of will NOT be assumed in these instructions. We will make recommendations based upon strength of materials and types of weather, temperatures and types of fowl.

1) Begin by cutting two (2) sheets of plywood as dimensioned below.



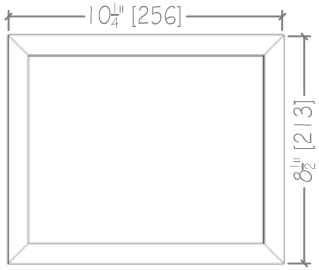
2) Use a jigsaw to cut out the windows in each side. Layout the design with pencil and cut out the squares.Be sure to drill pilot holes to prevent bending and/or breaking the blade.
*NOTE: IF a basic window is desired, keep the cut outs for window covers!

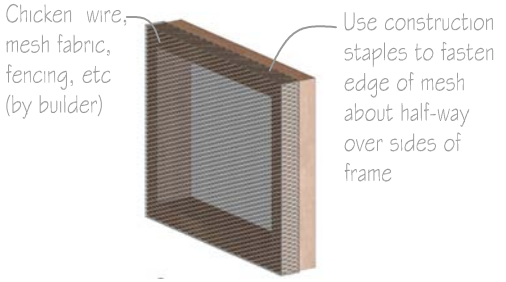


For those who do not require or desire to input more effort than is necessary, a very basic set of instructions is below. These are VERY basic and do not reflect the design shown on the front! It is a simple vent and vent cover type of window. For those building the see-through style of window, skip to step 6.

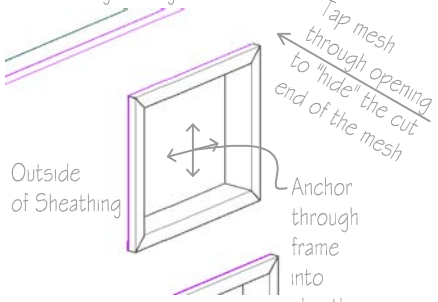
3) OK, if this is all the effort the builder is willing to put into construction, cut some chicken wire or mesh and staple to the inside of all four (4) windows.
4) Attach hinges to the cut pieces and use the cut pieces as vent covers. We recommend attaching slide pins to the opening-sides of the vent covers so you can lock or open vent covers as you wish.
5) With assistance, hold the side walls against the nesting box and attach with #20-#30x1½" (35mm) torque (star) head screws. Make sure the sheathing sits flush with the top sill and both the front and rear edges.

6) If you are reading this, congratulations, you want the challenge of building your own basic windows which will add beauty and functionality to the coop design. To start, you will need the 1x4 (25x90mm) planks listed on the materials sheet. We are going to start with the exterior frame.
7) Use a table or circular saw to CAREFULLY rip the 1x4 (25x90mm) planks lengthwise.
8) Layout and cut eight (8) top and bottom pieces and eight (8) side pieces to length. Use a miter saw to cut the ends off at 45°. BE CAREFUL TO MITER THE ENDS THE CORRECT WAY!





9) Attach two (2) short and two (2) long pieces to form the frame pictured above. Slide this frame into one of the holes in the sheathing and make sure is slides loosely. Note: These drawings are very precise and you may need to sand the edges of the frame and the interior edges of the holes a smalll amount to get the frame to fit!
10) Cut a sheet of mesh so it is just big enough to fold around the back and over half of the sides of the frame (as detailed above). HINT: Lay a large piece of mesh material (by builder) over the rear of the window, staple the mesh down to the frame and cut with scissors, wire cutters, etc (by builder).
11) With a dead-blow hammer or soft mallet, gently tap the frame with the mesh into one of the openings in the nesting box sheathing. Make sure the mesh end goes in FIRST and try to cover the mesh with the inside edges of the hole in the sheathing. HINT: If you don't have a deadblow hammer or soft mallet, use a piece of soft scrap and gently tap around the corners. Anchor the frame into the sheathing through the frame.



12) Repeat steps 9-11 for the remaining three (3) frames.

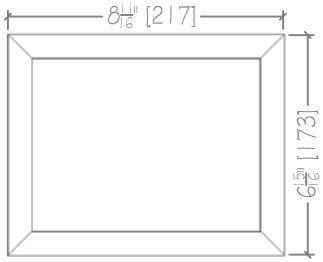
3Dimensional concepts

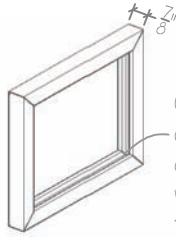
Title: Side & Windows	Drawn: JSG	Approved:
	Revision: 0	Drawing: 4
Date: 23-Jun-09	Scale: Specified	

Now that the frames are complete and they each have a protective mesh around them, it is time to build the actual windows. Up to this point, the coop should look something like this:

Again, windows require a decent amount of construction aptitude. Use extreme caution, double check all measurements, use protective measures when cutting, routering or ripping small pieces!

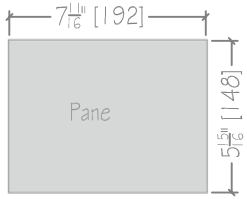
1) Use a table or circular saw to rip a 1x4 lengthwise in half and then in half again. The resulting frame pieces should be about $\frac{7}{8}$"x$\frac{3}{4}$" (22x19mm). Always use a guard and a push-stick when ripping small dimension pieces! Use EXTREME caution! Depending on availability, square dowels the same approximate sizes may be available at your local hardware or lumber supplier. Adjust measurements accordingly if purchasing small dimension pieces!
2) Use a router or table saw to gouge the thickness of the window material out of the center of each piece. We recommend at least $\frac{1}{4}$" (6-7mm) glass pane (see isometric below for an example). Pane materials may vary and is by builder.
3) Cut eight (8) long pieces and (8) short pieces as detailed below. This is one of the few times, where extreme accuracy counts. If you cut a piece too long, it will not close. Too short, and there will be a draft. We have allowed a total of $\frac{1}{16}$" (1-2mm) clearance on all sides in these details. Builder WILL have to adjust lengths slightly to ensure the glass frames will open and close freely!





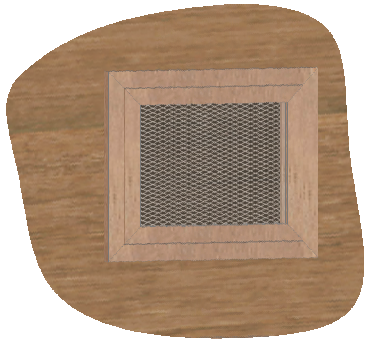
Gouge out the center of each piece BEFORE cutting to length. This will ensure the groove in the frame is flush.

4) Cut or purchase four (4) panes as shown and assemble frame pieces around each pane to ensure a good fit. Be sure the frame fits snugly around the pane before gluing frame ends together and sealing glass inside frame! Builder may need to adjust dimensions depending on pane size, thickness, and material.



5) Make sure the assemblies will fit in the frames and swing freely, label each if necessary! HINT: To do this, drill and screw the frame together. Make sure each piece is flush and even (use the pane as a guide if desired). Check for fit with the assembled frame. (You REALLY DO want to check for fit before you have an assembled and sealed window that will not fit or open!)
6) This step is NOT REQUIRED but it is RECOMMENDED for longevity! IF all pieces fit snugly around each pane AND fit easily into the window frame AND will swing freely, apply an exterior coat of polyeurthane or equivalent sealant to the outside edges of the frame.
7) Apply a layer of epoxy or silicone sealant inside the grooves on the pieces of frame and CAREFULLY assemble frame around the pane. Glue AND tack the ends of the frame pieces to each other with wood glue and screw straight down into each corresponding piece. Use a rag to wipe away any glue and/or sealant that runs onto the pane before it dries. Clamp and let dry.
8) The completed window assembly should look something like the diagram below.

9) Attach hinges to the exterior of the frame. Use shims to center the window in the frame and hinge the window to the window frame. The completed window assembly should look like the diagram below.
10) Repeat steps 5-9 for the remaining windows.
11) We recommend either a slide bolt or an eye hook and pin to lock the window closed.

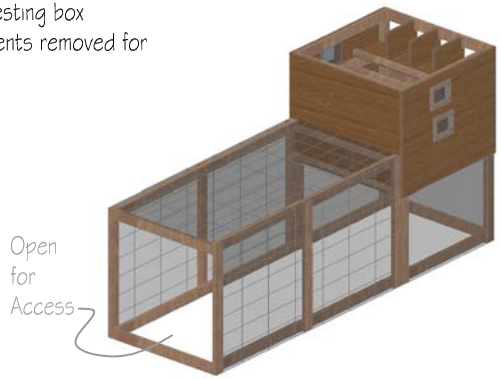


3D imensional concepts
15726 N. Park Dr.
Frenchtown, MT, USA 59834
Cell: 406-546-6672
E-Mail: jsguptill@hotmail.com

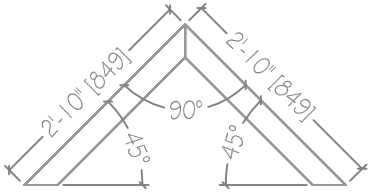
Title: Windows Cont.	Drawn: JSG	Approved:
	Revision: 0	Drawing: 5
Date: 23-Jun-09	Scale: Specified	

Before we finish the coop, with the roof, we need to cover the coop with some type of mesh or chicken wire. Simply unroll the wire or mesh and drape it over the open sill. Use carpenter staples to attach the open end on one side and cut the other end flush with the base on the opposing side. Wrap mesh around the bottom half under the nesting box and staple. See the diagram below for an example.

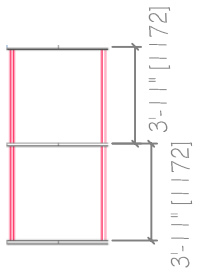
Some nesting box components removed for clarity!

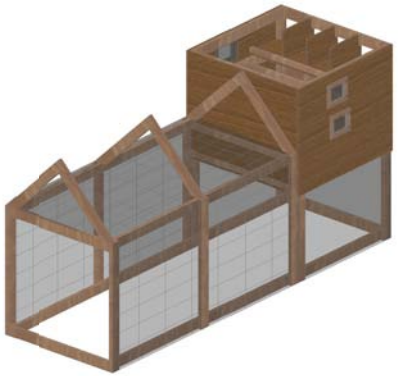


First we need to assemble the roof structure. Feel free to improvise and attach more rafters depending on the expected snow loads in your area.
1) Measure and cut six (6) 2x4 (45x90mm) planks as shown below. Assemble two (2) planks as shown to form a basic truss.

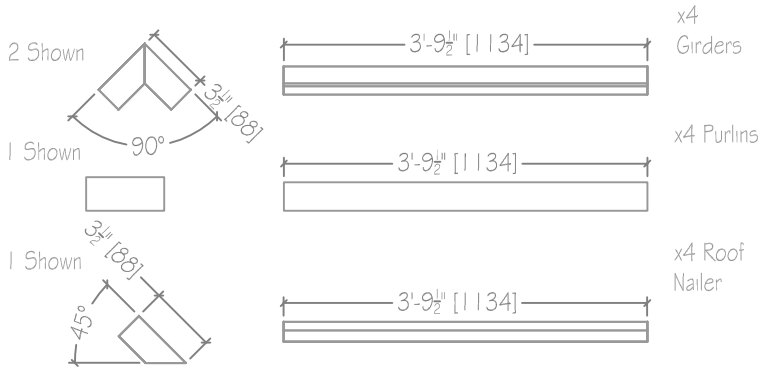


2) Place the trusses in the locations shown. Place one flush with the front, place one flush with the back, and split the difference as detailed below.

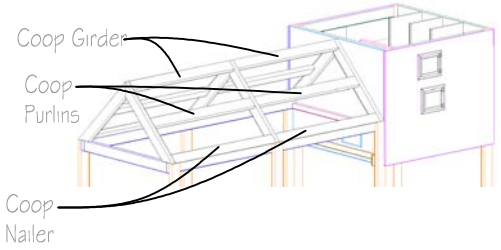




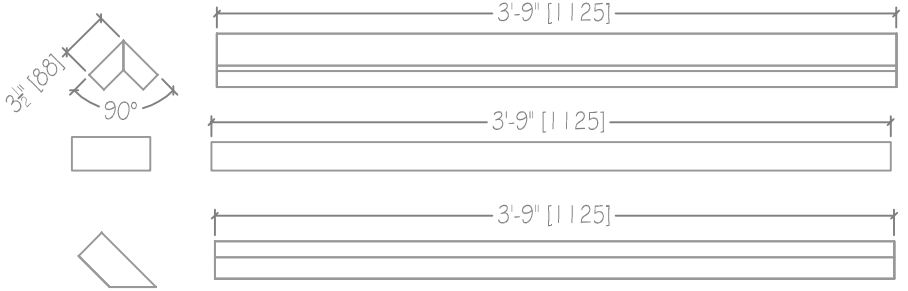
3) Cut 4 planks each as detailed below. Label them accordingly. Use a circular saw or table saw to rip planks as needed.

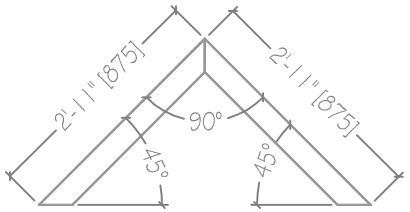


4) Assemble the roof supports as detailed below. Toenail purlins, girders and nailers onto rafters. Make sure girders connect annd all supports are flush with the top edge of the rafters on both sides!



3) Measure and cut planks for the nesting box roof as detailed below. Label them accordingly. Use a circular saw or table saw to rip planks as needed. Assemble rafters as shown.

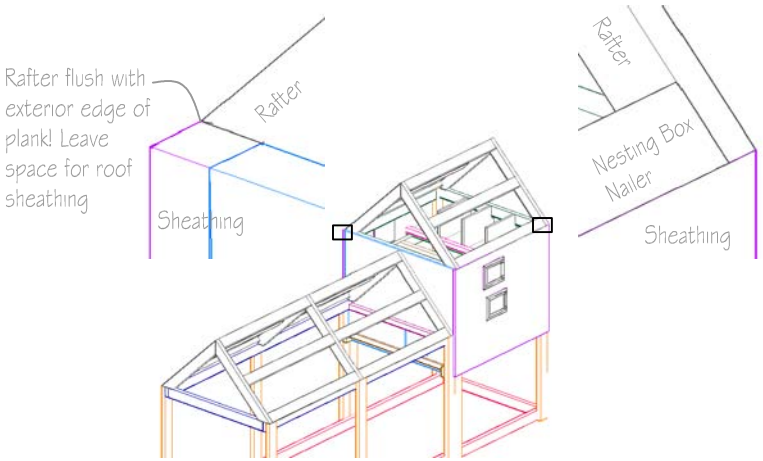




3Dimensional concepts
15726 N. Park Dr.
Frenchtown, MT, USA 59834
Cell: 406-546-6672
E-Mail: jsguptill@hotmail.com

Title: Roof Details		Drawn: JSG	Approved:
		Revision: 0	Drawing: 6
Date: 23-Jun-09		Scale: Specified	

6) Assemble the nesting box roof in much the same manner as the coop roof supports. There will be no middle rafter on the nesting box, however.

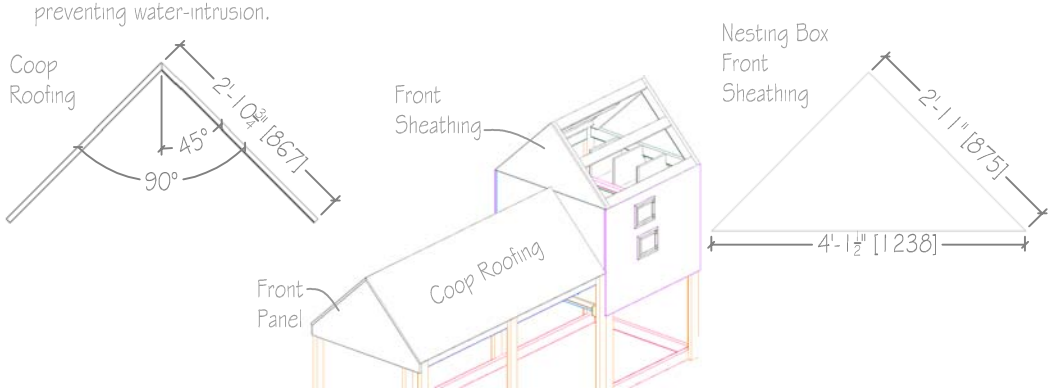


Rafter flush with exterior edge of sheathing. Roof will overlap and allow for nesting box access.

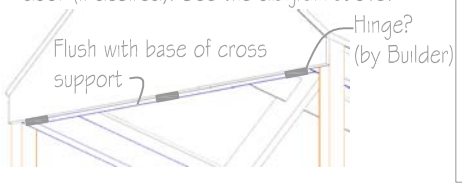
7) Now it is time to sheath the coop roof. At this point, it is really up to the builder on how they wish to complete the roof. This example will show the sheathing ripped at the crown, but if you are intending on installing tin roofing or shingles, ripping the plywood is not necessary. It is recommended to assist with a water-tight seal.

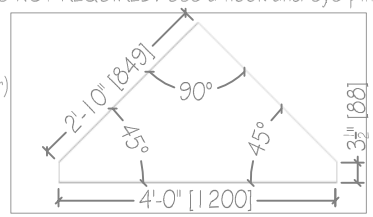
8) We will start with the coop roof. Cut a 4'x8' sheets of plywood to the dimensions shown. Attach the nesting box front sheathing first. Have an assistant hold it flush with the nesting box roof supports.

9) If you are intending on water-proofing with roofing, angling the edges on the coop roofing is not necessary. We would recommend mitering the long edges simply to aid in preventing water-intrusion.



10) Cut a front sheathing piece as shown below. This piece will go over the very front face of the coop. We would recommend attaching the piece with hinges attached to the bottom of the sill plank to create a storage area (nifty idea, huh?) this is NOT REQUIRED. Use a hook and eye pin to latch the door (if desired). See the diagram above.

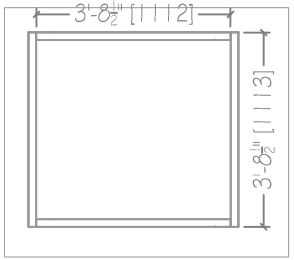




Now we need to enclose the open area to allow human access.

11) Rip a 8' (2400mm) plank in half lengthwise. Cut and assemble as shown below.

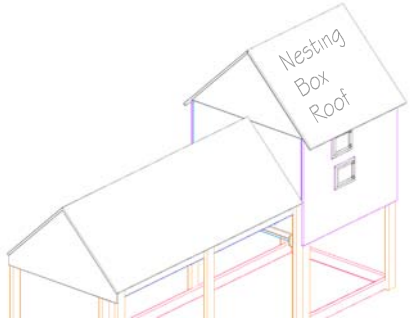
12) Attach mesh with carpenter staples and attach door frame to door with hinges. Placement of the hinges is up to the builder.

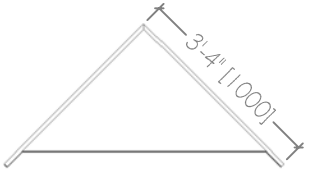


13) Use a hook and eye pin to latch the door closed.

14) Cut a 4'x8' (1200x2400mm) sheet of plywood into two (2) four foot sections.

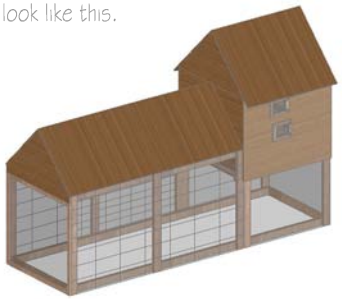
15) Attach the roofing to the the supports on the nesting box in the same manner as the roofing for the coop in the previous steps (see diagram).





You will notice an overhang on this roof. This is to keep water from running down the side into the windows.

Up to this point, the coop should look like this.



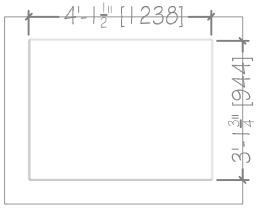
3Dimensional concepts
15726 N. Park Dr.
Frenchtown, MT, USA 59834
Cell: 406-546-6672
E-Mail: jsguptill@hotmail.com

Title: Roof Cont.		Drawn: JSG	Approved:
		Revision: 0	Drawing: 7
Date: 23-Jun-09		Scale: Specified	

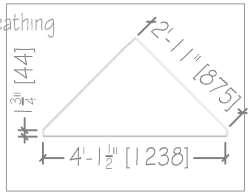
Now all that is left is to enclose the rear wall and make it so the user can get to the eggs.

1) Layout and cut two pieces of ¾" plywood sheathing as diagrammed below.

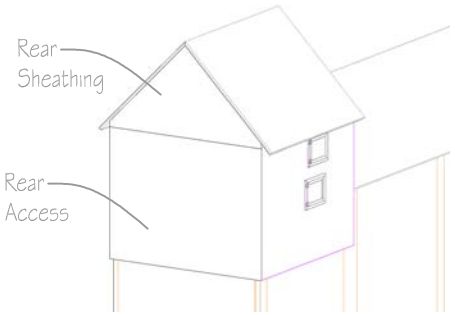
Door Panel



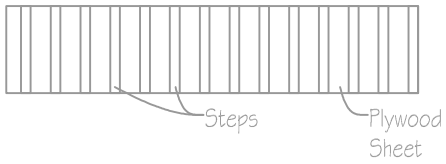
Nesting Box Rear Sheathing



2) Attach the rear sheathing and the door panel as shown below. Hinge placement is again dependent upon the builder and the user requirements. We recommend using a slide pin or a hook and eye pin to hold the rear access shut. Make sure both sides are flush and that the roof pitch matches that of the rear sheathing.



3) Ramparts (ramps) are easily constructed with spare materials. Simply rip or cut a plywood sheet to the size of the door opening and attach scrap pieces across the top as shown below. HINT: We recommend attaching to the nesting box with hinges so the ramp will not blow down in wind and can easily be folded up and strapped to the top of the coop area if needed to move.



Lengths and widths may vary upon user requirements. Placement of steps may also vary!

Some points to remember:

1) We do not pretend to assume we know the size of the user's chickens or other applicable fowl. Measurements MAY need to be adjusted to suit the user requirements.

2) Attachments will generally be #20-#30 x 1½" (35mm) torque (star) head screws (unless specified otherwise).

3) Make this coop your own. Most builders can easily modify these instructions to suit a variety of needs and fowl types.

4) We do not accept any responsibility for erroneous measurements. These drawings are VERY precise and measurements should ALWAYS be double checked! Equipment types, lumber thickness and skill levels MAY vary greatly, always check measurements before cutting!

5) Veneers, paints, sealant, etc. are the responsibility of the builder! Cover image is white pine board and batten with green tin roofing.

6) Have fun with this project and, again, make it your own!

3Dimensional concepts
15726 N. Park Dr.
Frenchtown, MT, USA 59834
Cell: 406-546-6672
E-Mail: jsguptill@hotmail.com

Title: Finishing Details	Drawn: JSG	Approved:
	Revision: 0	Drawing: 8
Date: 23-Jun-09	Scale: Specified	