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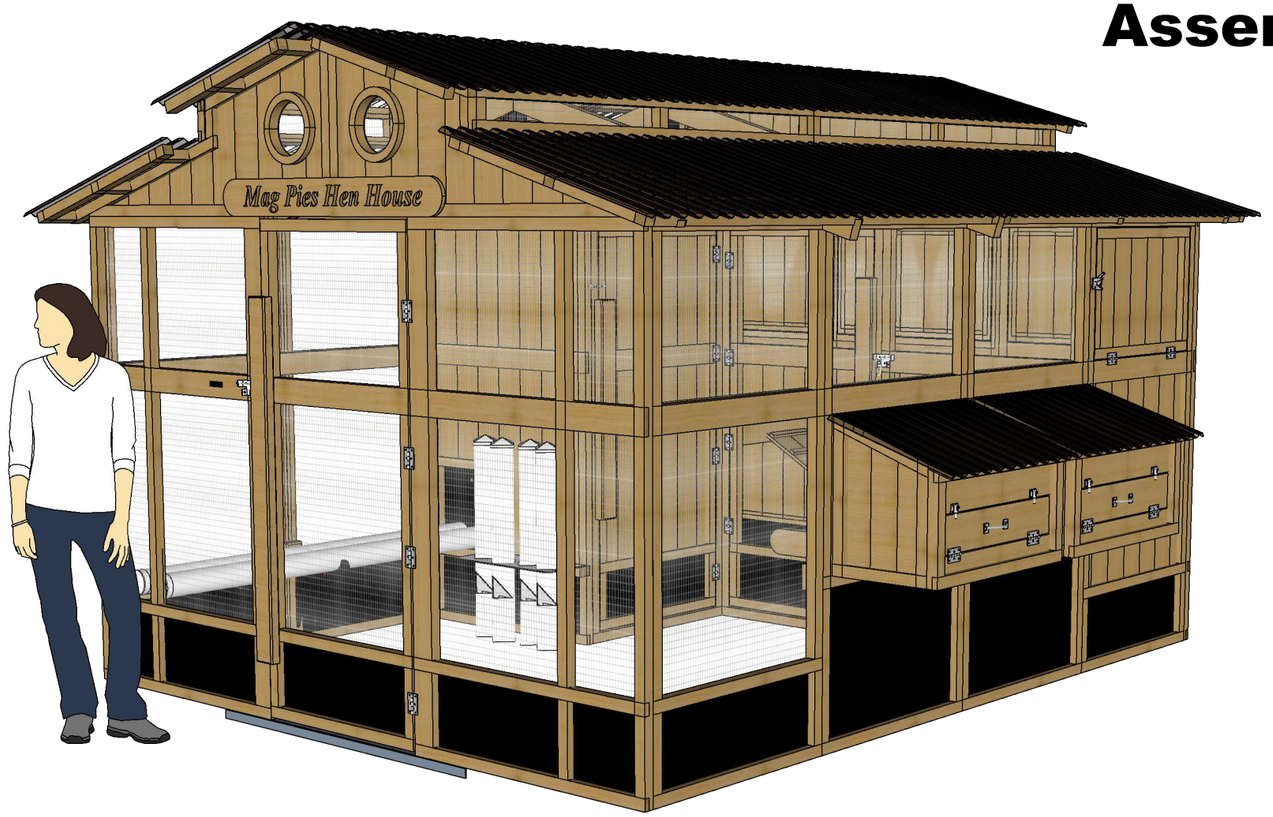
Heritage Series Chicken Coops™

Assembly Instructions for Model 12



Help Text-line: 512-596-5200
EMAIL: support@roostandroot.com

VOICE: 877-741-COOP
Assembly Support ext 3

Watch the YouTube Assembly Overview Video For Heritage Series

V1.0 | Spring 2024

Take Note...

- Your new coop won't gain full strength until completed. It must be protected from high winds until completed and properly anchored.
- Having a very level very flat area is required for the coop to assemble properly. It's impossible to overstate how much easier and better assembly will go with things square and level. A properly prepared concrete footer is preferred.
- We estimate about 30 man hours to fully assemble the model 12 Heritage Coop. Two people are required for the build in many of the steps.
- You will need a chuck type drill (preferably cordless, preferably two) and a hammer and a tape measure. Everything else is provided.
- We think we put extra screws and other fasteners in the kit. If you run out, one of us goofed up :-)
- Using the instructions is part reading, part illustrations, part photos and part watching videos. Please know that we value your input to an ongoing process. We try hard but writing good instructions on complex objects for a variety of learning styles is an imperfect science. We're genuinely sorry for any confusion our instructions cause.
- We indicate in the instructions where all screws go. All of the screws in the kit are aggressive enough to self drive. If concerned, we also include a pilot bit. Position, count and direction of screws are indicated by various colored arrows.
- When we build your coop the cedar wood has about 12% moisture. If you wait a long time to assemble your coop it may dry out and shrink by up to 1/8". When it get rained on, it will swell back. Human error, machine error and believe it or not computer error can cause parts to be off by as much as 1/8th inch. Most of the design can tolerate small errors. Where it cannot we give you a measurement that must be adhered to. Like doors, for instance.
- Panels are not marked and we omit a section in the instructions for parts ID to save complexity. All wire sides face inward and the 3D renderings will allow you to identify panels as you go. Spacing them out for easy ID is advised.

We include a gallon of Eco Sealer and a sprayer to treat the bottom rails of ground contact panels if you desire. Even panels that sit on concrete footer will benefit. Cedar is proven to last 10+ years outdoors even when in ground contact. Sealing bottom rails will extend this time. This product allows re-sealing and even color staining after application. In our opinion it is a premium grade product. We do not recommend painting cedar but you can. Whatever you decide to do, a product that allows the wood to breathe is best. Keep toxicity in mind too. With modest care, we would expect your coop to last 20+ years.

Pro Tips

Best practice would be to pour a concrete footer. Guidance is found in the following pages. You can most certainly build this coop directly on the ground. In either case, great care must be taken to make the surface both level and square. A concrete footer will simplify proper anchoring which is **required** to prevent high wind damage both during and after construction.

It will be pretty much <u>impossible</u> for you or your contractor to assemble your new coop without...

(1) pre-reading these instructions to create familiarity,

(2) watching our assembly overview video, and...

(3) following instructions on each page. Concepts on one page are built upon in the next pages and we often don't repeat in hopes of saving complexity. Any time taken up front going through everything will save you many hours (and grief) in the end.

Provided Supplies Listing

Model 12 Supply List

(5) Standard **OR** Freeze Guard Drinkers
(1) Eco Sealer 1Gal
(1) Eco Sealer Sprayer
(1) Small Bottle of Gorilla Glue
(1) Ratchet Strap
(1) 4' Level
(1) Automatic Door Kit (2 doors)
(1) Roll of String
(1) Countersink Bit
(1) 5/32 Drill Bit
(2) 5lb Boxes 3" T-25 Screws
(1) 1lb Box T-20 1 1/4" Screws
(1) 1lb Box T-20 1 5/8" Screws
(8) 4 1/2" T25 GRK Screws
(1) 400 count 1½ #9 Roof Screws
(4) 3/4" Bolt - Nut - 2 Washer Sets
(3) Bolt Style Gate Latches & Hardware
(16) Stainless Steel Hinge Screws
(1) 3" Hook & Eye Door Catch
(5) Gravity Gate Latches & Screw Sets
(8) D-Ring Anchors & Bolt Sets
(1) Small SOCKiT Box & Screws
(8) Spring Snap "Clips"
(2) Bit Holders
(2) T25 Bits
(1) T20 Bit
(1) Phillips Bit

Parts Listing

"A" Run

A1 36" Wired Side Panels x3
A2 Left Front Panel
A3 Right Front Panel
A4 Door

"B" Roost

B1 36" Roost Side Panels x2
B2 L&R Roost Back Panels
B3 Back Middle Roost Panel
B4 Roost Entry Door
B5 Roost Side Door Panel
B6 Roost Bunks x2
B8 Roost Ramp

"C" Egg Box

C1 36" Egg Box Panels x2
C2 Egg Box Assemblies x2
C3 Egg Box Roof Panels x4

"D" Roof

D1 Left Front Gable
D2 Right Front Gable
D3 Left Back Gable
D4 Right Back Gable
D5 Left Mid Gable
D6 Right Mid Gable
D7 Left Notched Rafter Assembly x1
D8 Right Notched Rafter Assembly x1
D9 Left No Notch Rafter Assembly x1
D10 Right No Notch Rafter Assembly x1
D11 Collar Tie x2

D15 Left Front Upper Purlin Panel
D16 Right Front Upper Purlin Panel
D17 Left Back Upper Purlin Panel
D18 Right Back Upper Purlin Panel

D20 Left Front Lower Purlin Panel
D21 Right Front Lower Purlin Panel
D22 Left Back Lower Purlin Panel
D23 Right Back Lower Purlin Panel

D30 Left Front Transom Panel
D31 Right Front Transom Panel

D33 Left Back Transom Panel
D34 Right Back Transom Panel

D40 Upper Roof Panels 32" x16
D41 Lower Roof Panels 40" x16
D42 Ridge Cap x4

"E" Trim

E1 Upper 2x4 Wall Stiffener Set x3

E3 Optional Name Board
E4 Bird Stop Trim Package x8

"F" Storage Room

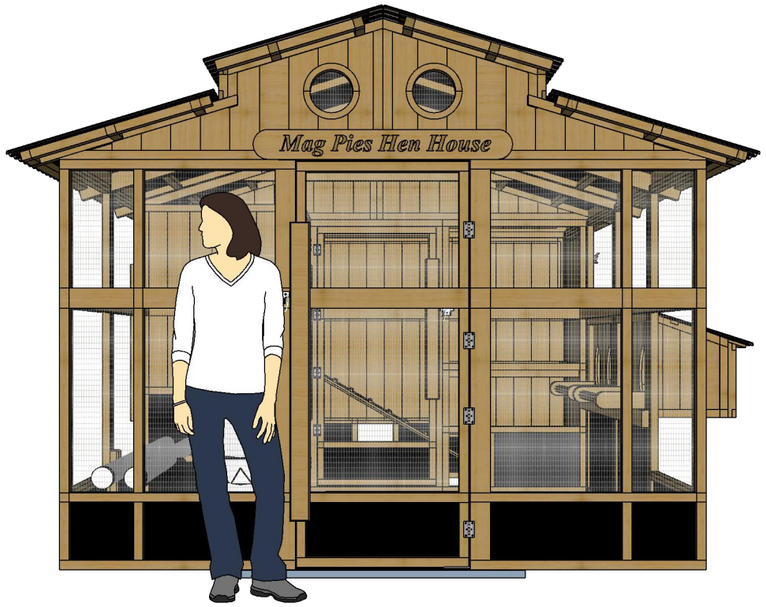
F1 Exterior Door Panel
F3 Ceiling Panel
F4 Roost Wall Panel
F5 Run Wall Panel
F6 Interior Door Panel

"G" Misc

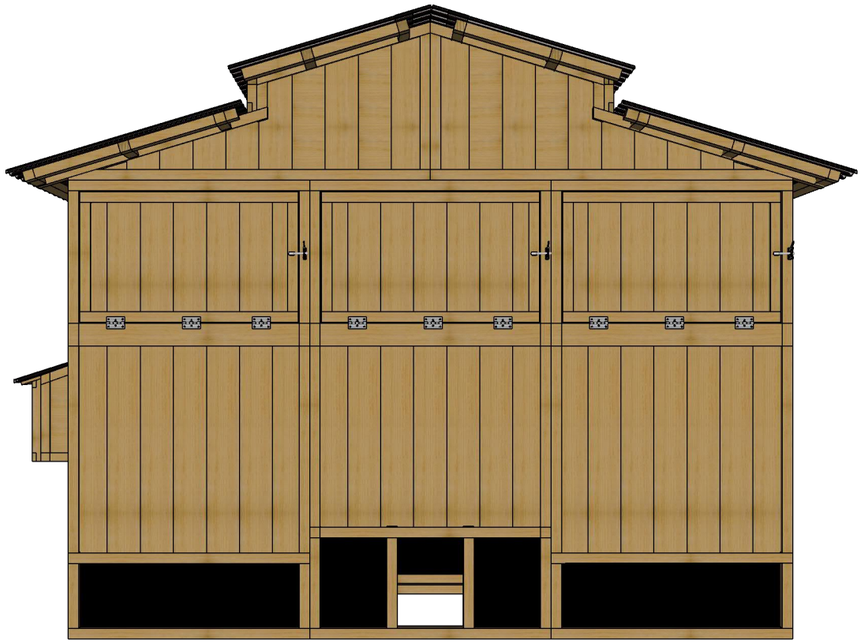
G1 EZ Fill Feeder² x4
G1A Feeder Bracket x1
G2 Easy Fill Waterer Parts Set
G3 Water Door Slide Set
G4 Egg Box Liners x4

Parts that are obvious to identify in illustrations are not labeled. Parts that could be confusing are both labeled and dimensions are provided for proper ID.

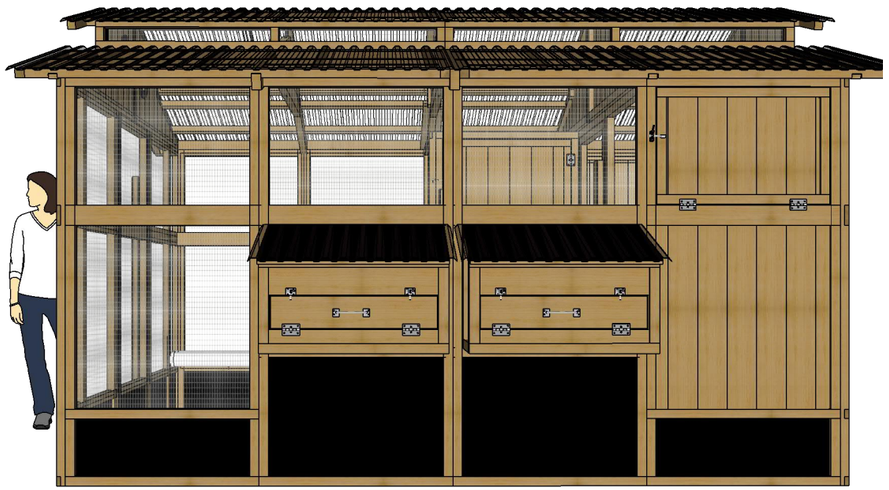
Front



Back



Left



Right

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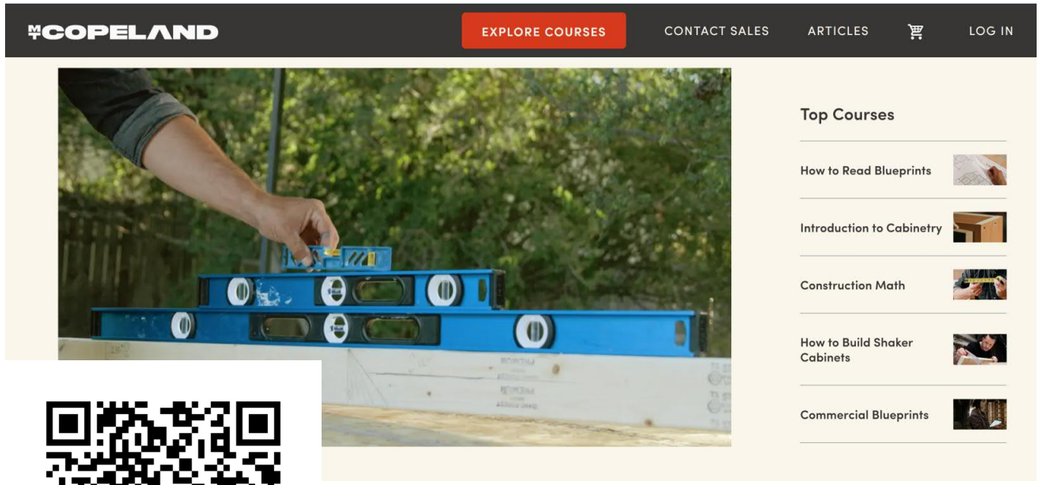
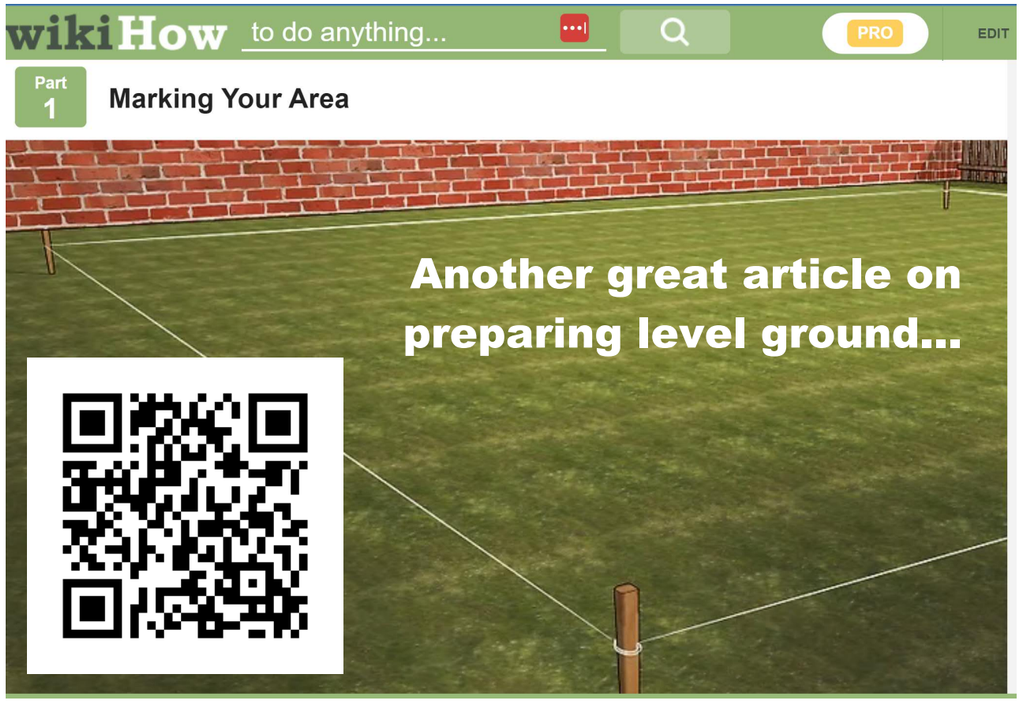
Orientation

https://mtcopeland.com/blog/plumb-level-square-and-true-what-they-mean-and-how-to-measure/



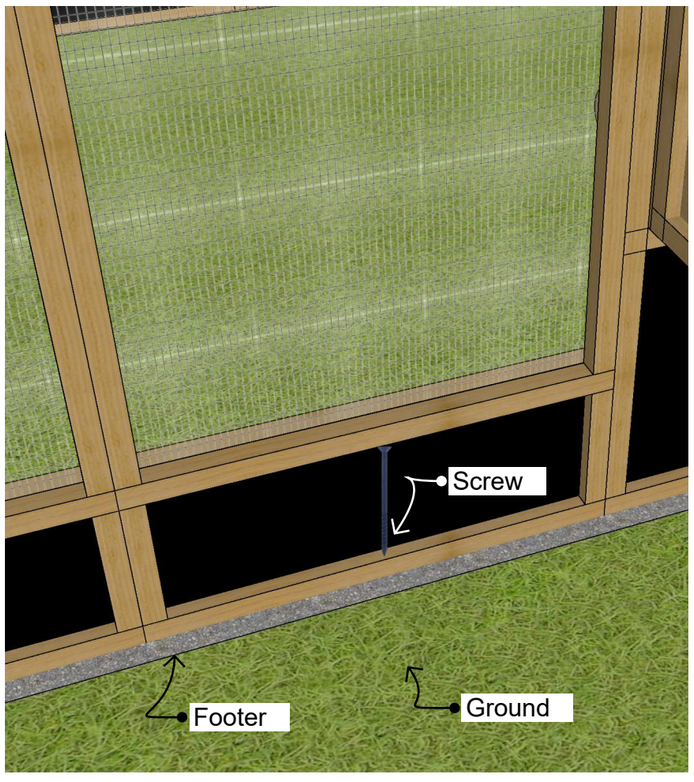
Good resource for squaring and leveling...

https://www.wikihow.com/Level-Ground



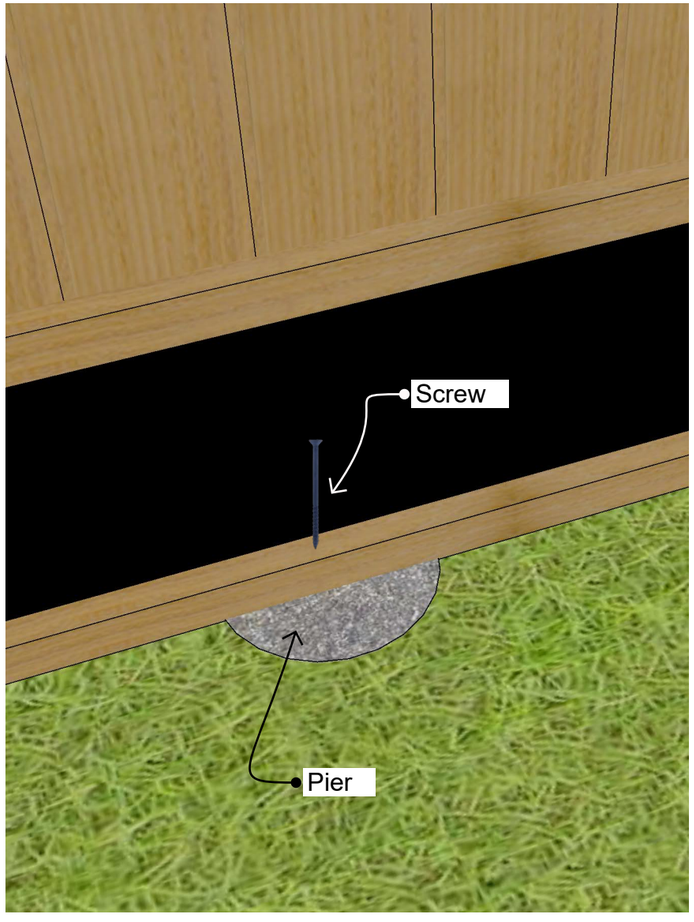
YOU MUST ANCHOR YOUR COOP: 3 Possible ways to anchor your coop... there are more, here are three.

Screw in one or two Tapcon screws into the bottom rails of panels and into your concrete footer. This is done after you're absolutely sure walls are set and won't be moved. A percussion style drill is best. Let your footer dry for at least 2-3 weeks or you'll risk fracturing. Center screw in bottom rail.



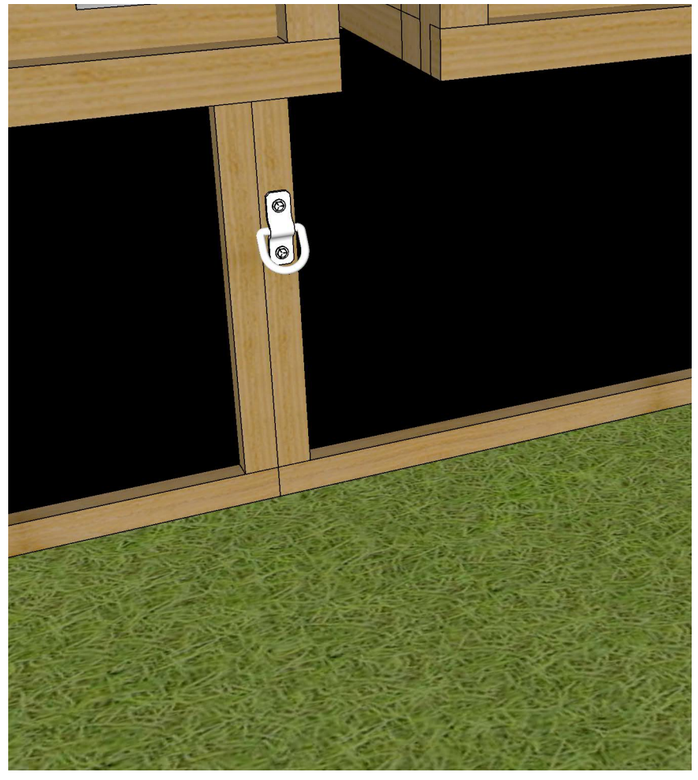
1. Concrete Screws To Concrete Footer

Instead of pouring a complete perimeter footer, concrete "piers" can be poured every 3 to 6 feet and near corners. The same 3/16 3-1/4 Tapcon screw can be used to screw down rails into piers. If you have bedrock near the surface, pour piers where they can reach into the bedrock. You can also drive 3/8 rebar down into the pier hole and leave rebar below grade but into pier hole... so that when concrete is poured the rebar "connects" the pier into the bedrock. Same wait time applies as to footer.



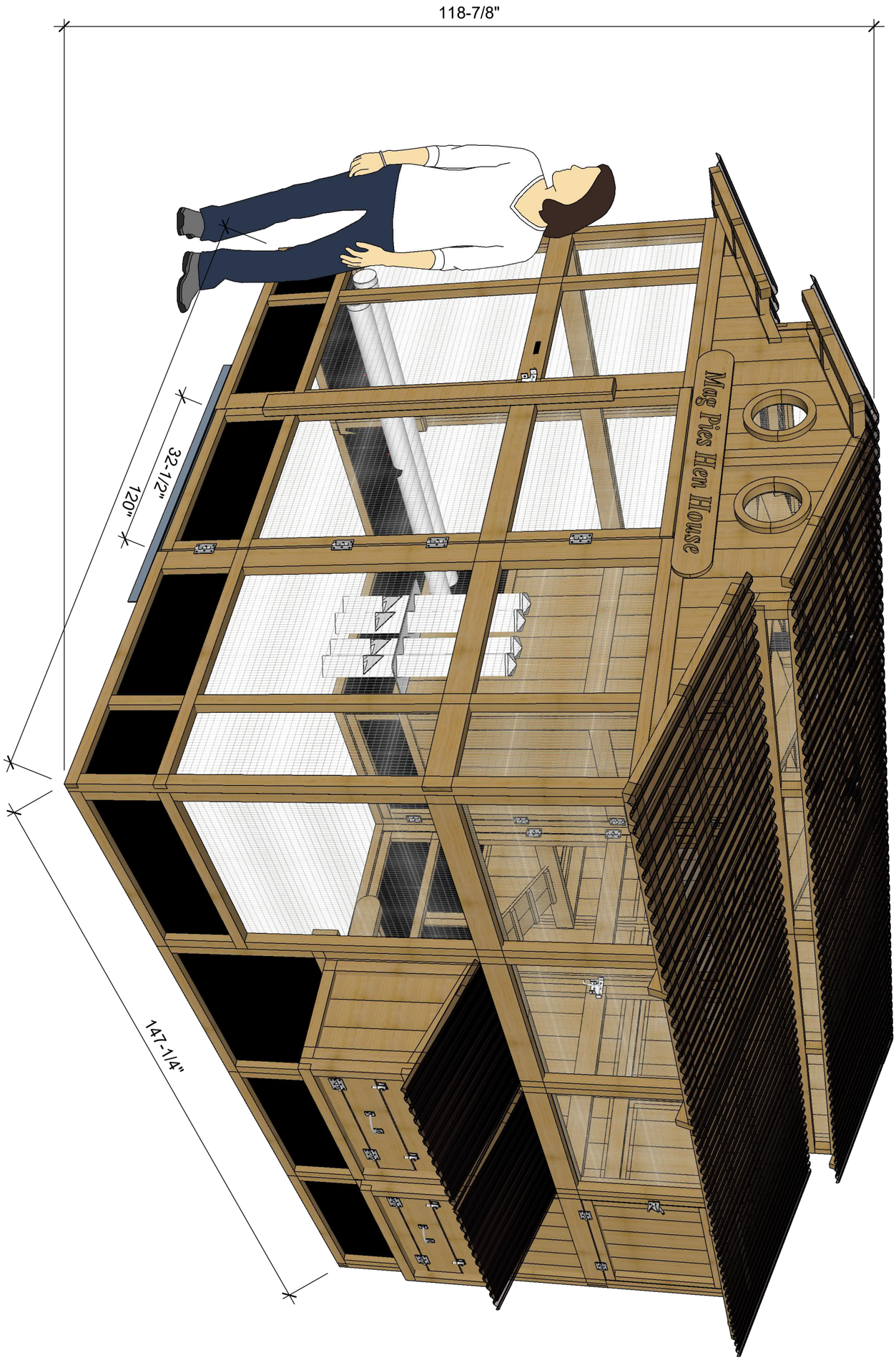
2. Concrete Screws To Concrete Pier

There's nothing wrong with building your coop directly on the ground and securing with the included D-Ring Anchoring Kit. D-Rings are comprised of the ring, the holder, 2 bolts and 2 t-nuts each. They are placed along the sides and near the corners. Different styles of anchors are then used to "anchor" to the ground. Our video we use for our greenhouse anchoring is a good primer. You will need to choose and purchase the proper types of anchors and tie devices for your area and your preference.



3. D-Rings & Stakes

Be careful. Coop must be anchored to avoid damage from excessive winds during and after construction. We do not know your ground conditions or your locale and whether you live in an area subject to excessive winds. Please seek local guidance if you are unsure. Coop is heavy and very wind resistant. But for extreme conditions anchoring is necessary. Many of our products have survived hurricane force winds. Panel or roof strength isn't the main worry... securing prevents the coop from "toppling" or walls moving in high winds.



Dimensions

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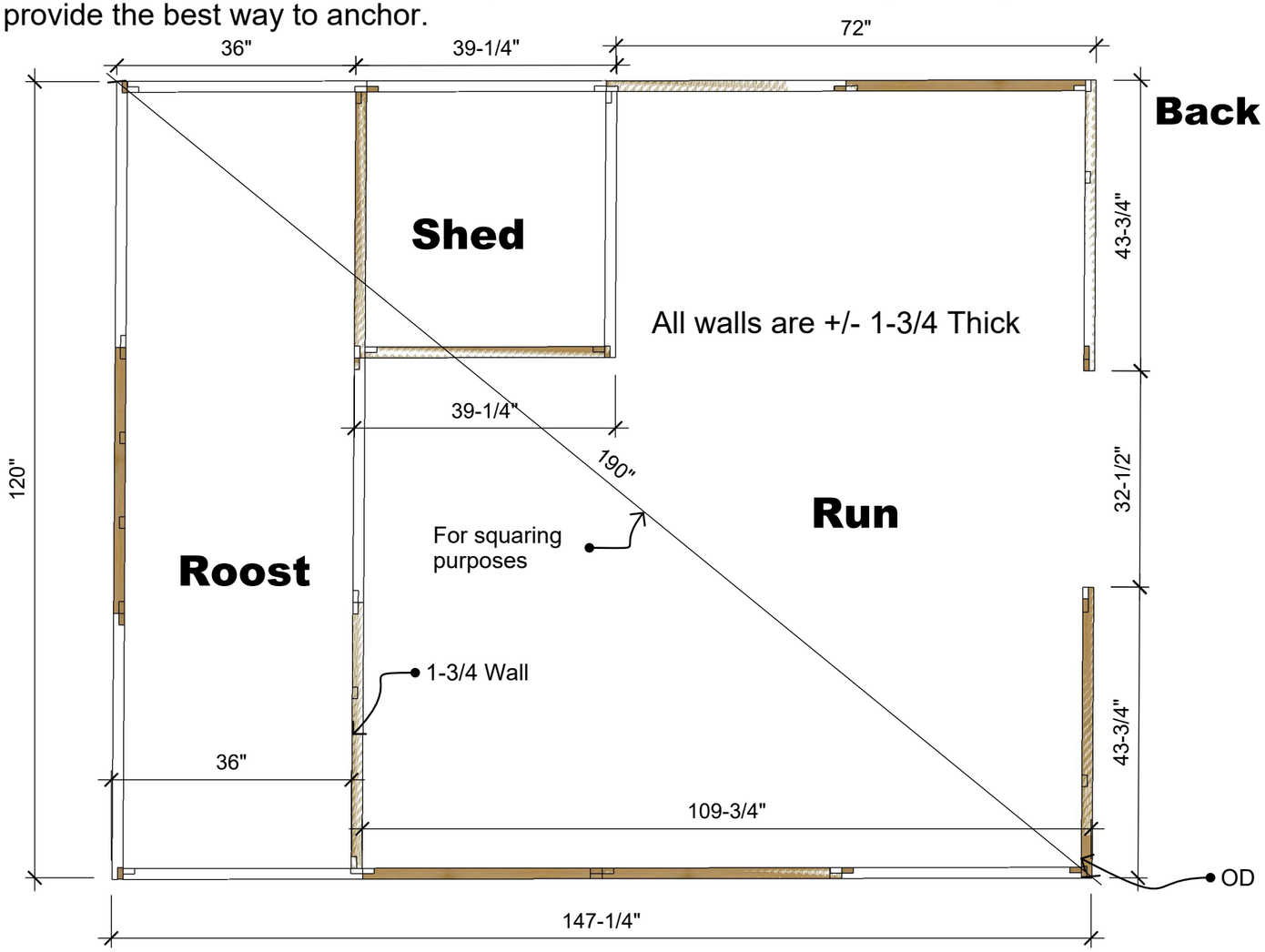
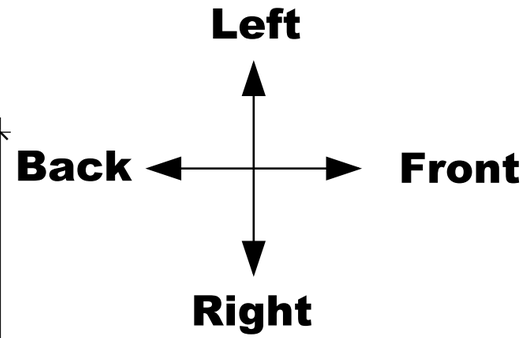
Note: If a concrete footer is poured and it is flush with ground level, you can omit pouring footer for interior roost and shed walls. If it is elevated any above ground level, you should pour footer under interior walls too for support. Pouring a concrete footer will simplify leveling and squaring and provide the best way to anchor.

Bottom View

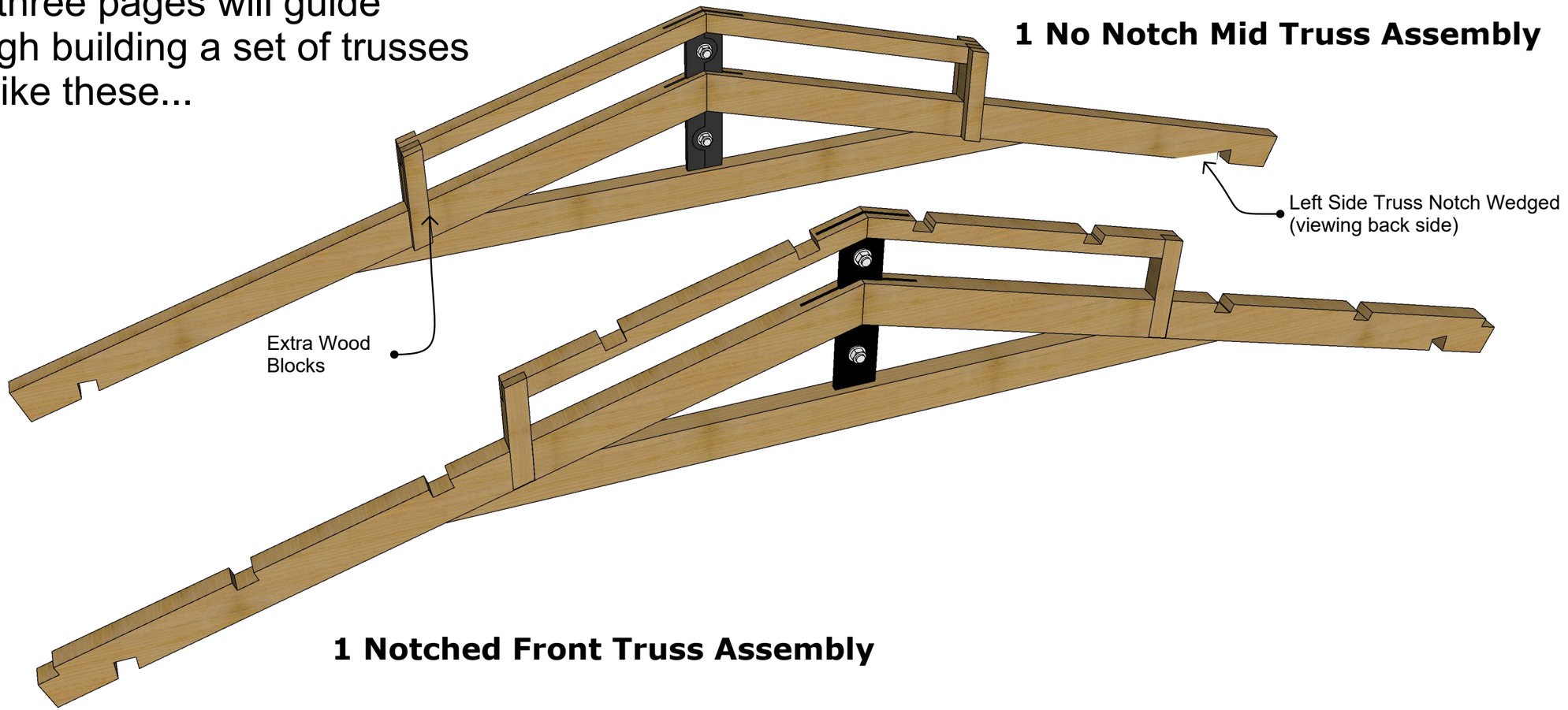




* Measurements can vary by up to 1/8" and rough cedar and shop variations can add up to an inch over long distances. A 6" wide or greater footer with walls centered will provide margin for error. If your footer is on slope, backfill inside of coop to the level of the footer with sandy loam dirt. Footer depth is a matter of preference and ground conditions. Set footer into rocky soil or at least 12" deep for anchoring purposes. Use of 1 or 2 Tapcon 3/16 (3-1/4") concrete screws in the bottom rail of each wall panel will provide good anchoring from wind. Make sure coop is level and square before anchoring.

Be careful. Coop must be anchored to avoid damage from excessive winds during and after construction. We do not know your ground conditions or your locale and whether you live in an area subject to excessive winds. Please seek local guidance if you are unsure. Coop is heavy and very wind resistant. But for extreme conditions anchoring is necessary. Many of our products have survived hurricane force winds. Panel or roof strength isn't the main worry... securing prevents the coop from "toppling" or walls moving in high winds.

The next three pages will guide you through building a set of trusses that look like these...



These two trusses are what you are going to build.

Looking from back side...

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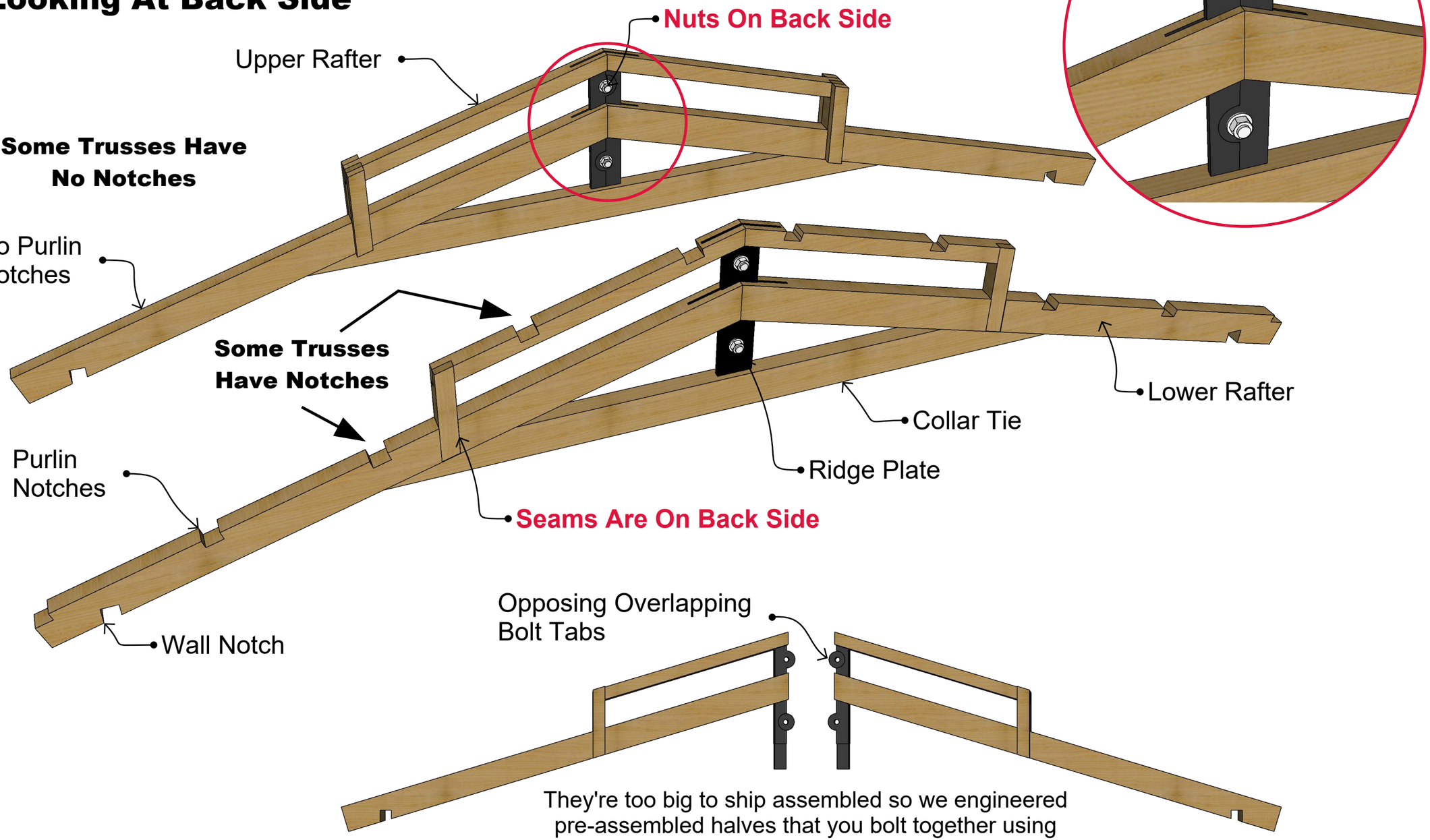
1.0 Trusses Overview

Familiarize yourself with these illustrations and terminology.

Looking At Back Side



They're too big to ship assembled so we engineered pre-assembled halves that you bolt together using giant 3/4" bolts that are both strong and beautiful. When they're halves, they're called "rafter" halves. Once assembled, we call them "trusses".

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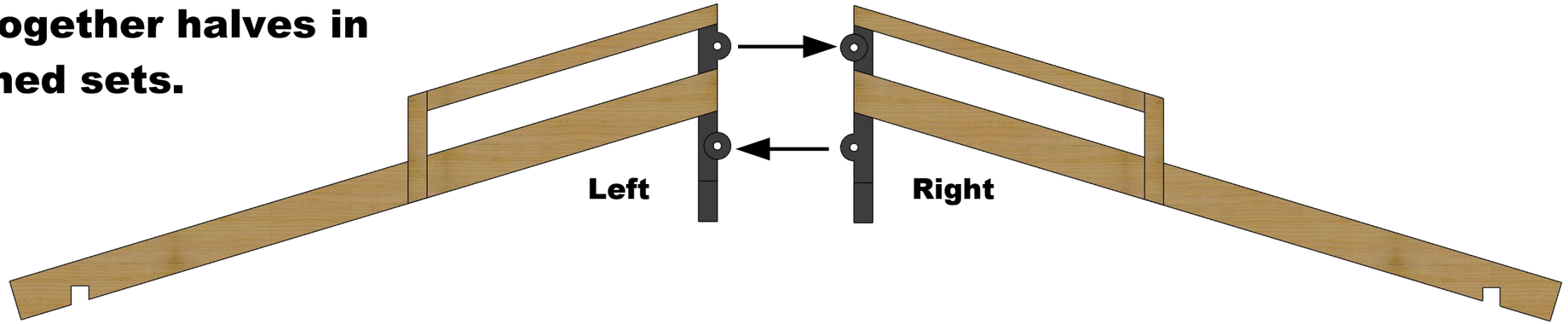
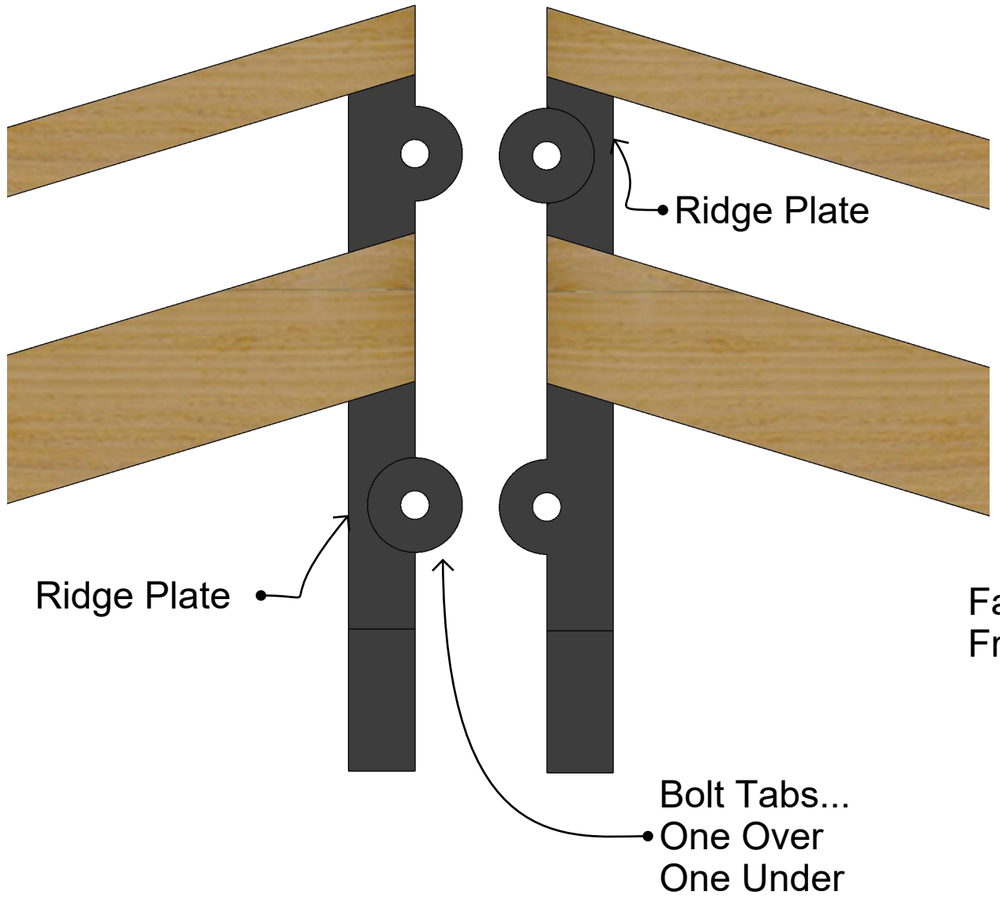
1.1 Trusses Concept - Terminology

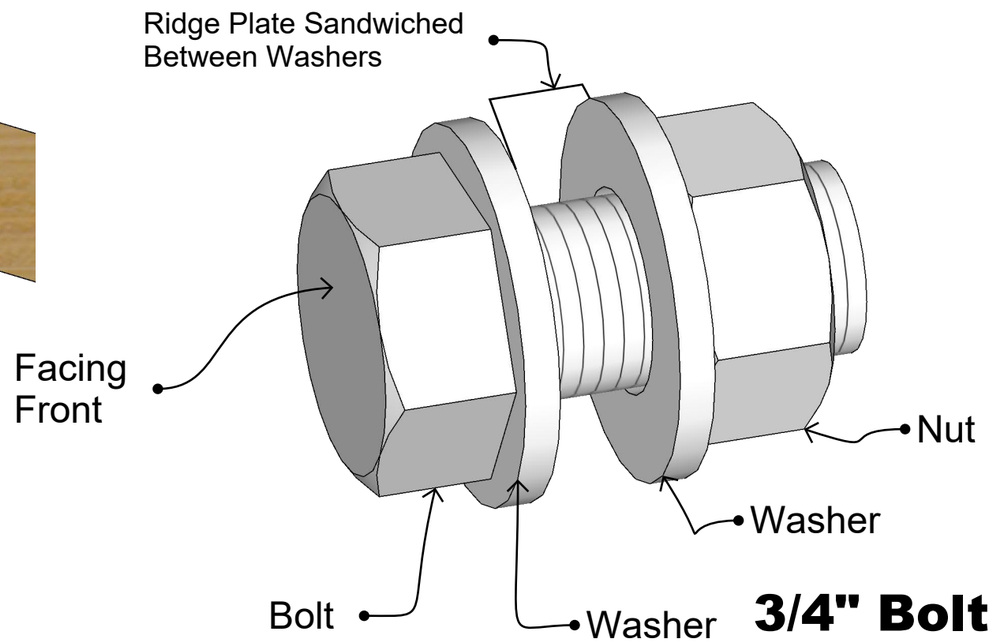
Bolt together halves in matched sets.



1 Select a left and a right half of either a notched or not notched truss half and slide the ridge plate halves together so that the bolt holes line up. Insert the bolt with a washer on it through both bolt tabs <u>from the front side</u>, insert another washer on the back side, and hand tighten a nut onto the bolt to hold the assembly together. Flex the ridge plate halves a little if needed to make sure bolt hand tightens down on halves. Repeat for all truss halves until all the trusses in your kit are assembled.



Refer to first page in this section for counts of each type...



3/4" Bolt Set

Looking At Front Side

Use these procedures to build both trusses.
(use this page for reference)

= **3 Inch T25 Screw**
(color may vary due to supply)

= **4-1/2" Inch GRK T25 Screw**

Provided T25 Bit

Provided Bit Holder

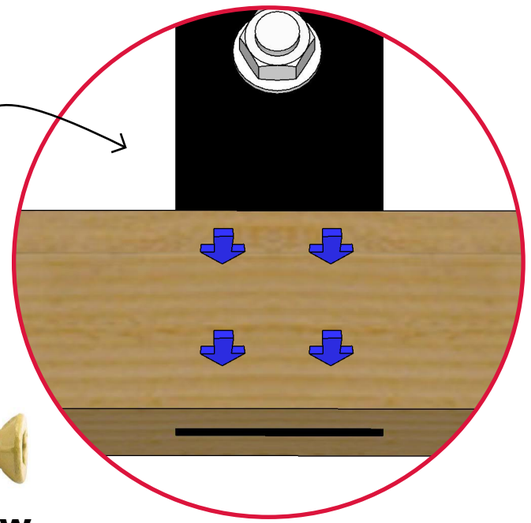
Your Drill

1 Force up collar tie slot onto tail of ridge plate to position collar tie properly.

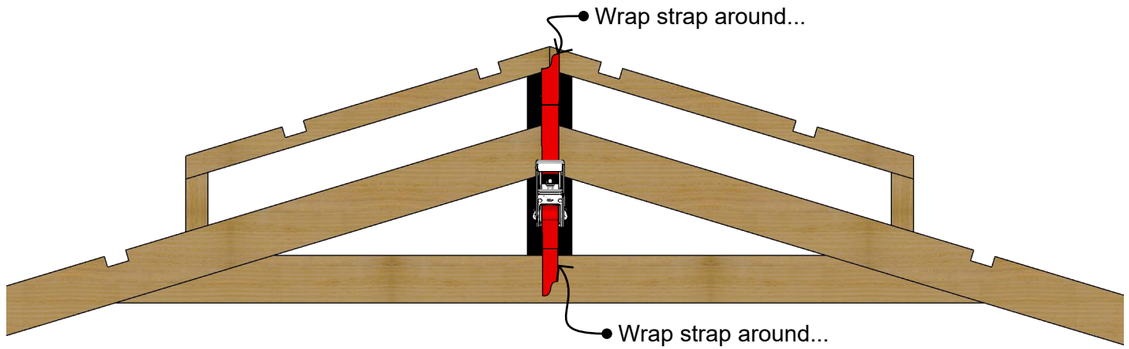
2 Install screws as indicated on both sides to affix collar tie onto rafters.

From the backside install 4 T20 screws as indicated to hold middle of collar tie to the ridge plate.

3



= **1-1/4" T20 Screw**
(shorter so it does not go through front)



If necessary use provided ratchet strap to help apply force to fully position the collar tie slot over the tail of the ridge plate while driving in screws.

Collar Ties

Model 20 (5) Model 30 (8) Model 40 (11)

Pro Tips

Drive screw heads only deep enough to pull parts firmly together. Use the slower speed on your drill or if your drill has a clutch feature, adjust it to not drive screws too deeply. We try to "hide" heads of screws from facing up whenever possible so that the heads of the screws don't hold water. Driven too deeply, the divot they make can hold moisture.

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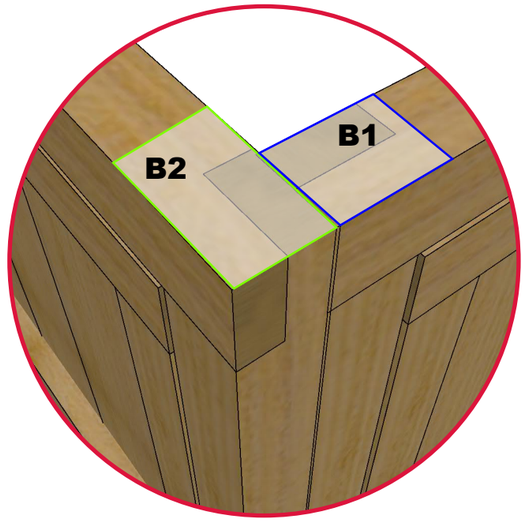
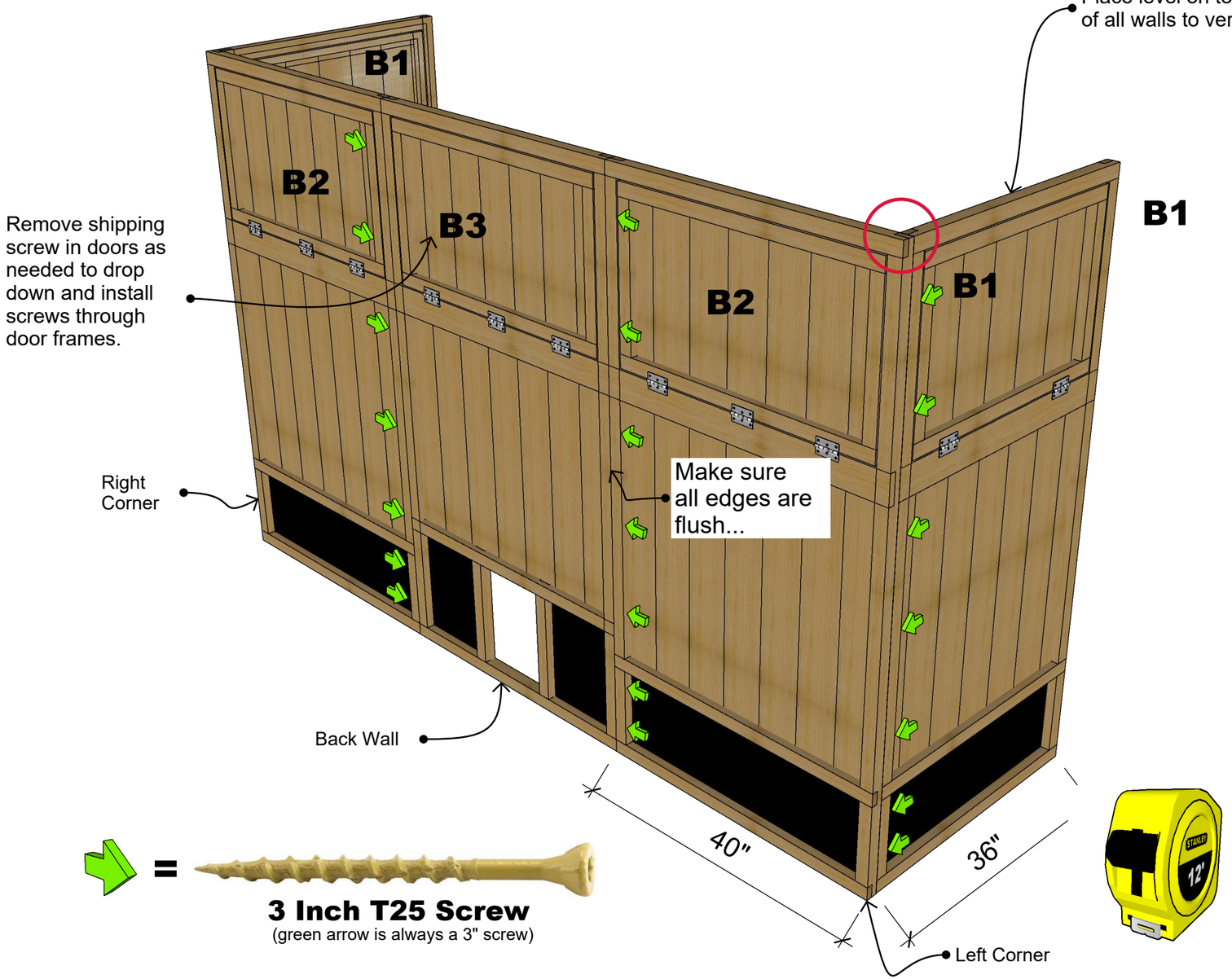
1.3 Trusses
Concept - Collar Ties

Be sure to start with the back of the coop placed in such a way that by the time you get to the front, it falls where you want it to be. Align all edges and corners and make flush. Variations in how level your ground is, rough cedar tolerances, shop variances, and your assembly precision will all add up over the course of the project and we want to minimize the impact these imperfections cause. Front to back and left to right level is key.





= 3 Inch T25 Screw
(green arrow is always a 3" screw)

1 **Connect B1 & B2 corner panels together as illustrated making sure edges top and bottom are flush. Repeat for both left and right corners.**

Make sure to overlap as indicated in red "call out".

After corners are assembled join them together with a helper by installing the B3 panel between them.

Use three inch T25 screws as illustrated. Arrows indicate both position and direction.

2 **Connect forward B1 panels to finish up roost side walls. With a helper, install the B3 panel between two B2's.**

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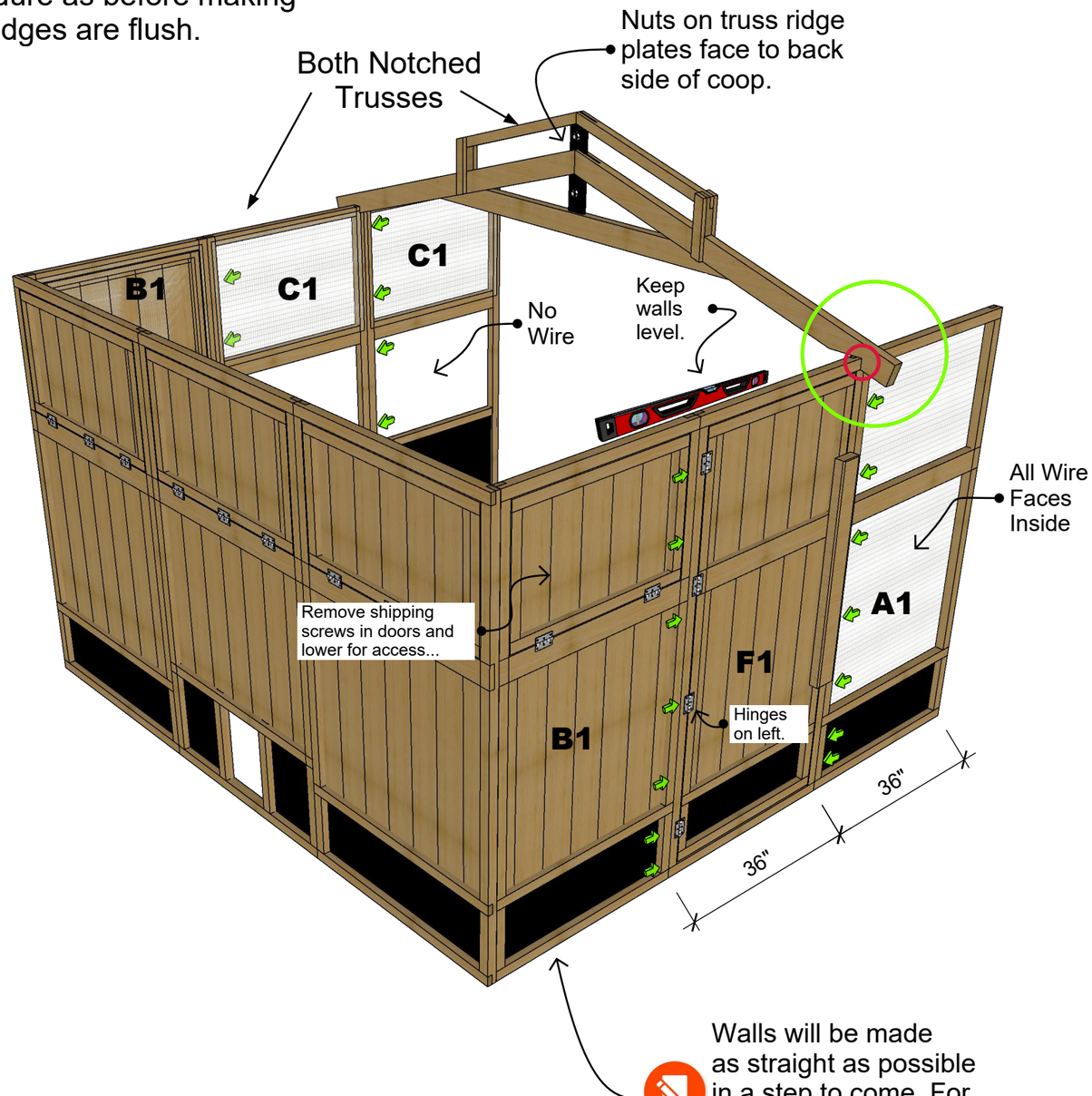
1.4 Roost Walls (Back of Coop)

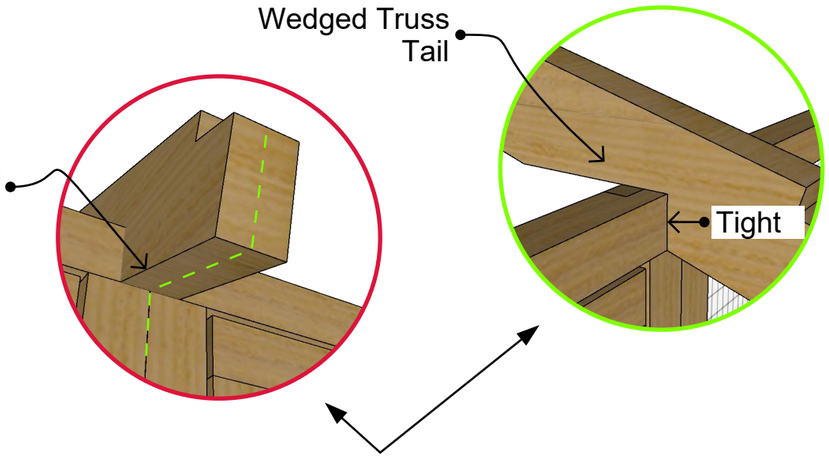
Start adding the sides to the back...

1 Connect F1 & A1 panel to B1 on the left side and C1 panels on the right. Use same screw procedure as before making sure edges are flush.

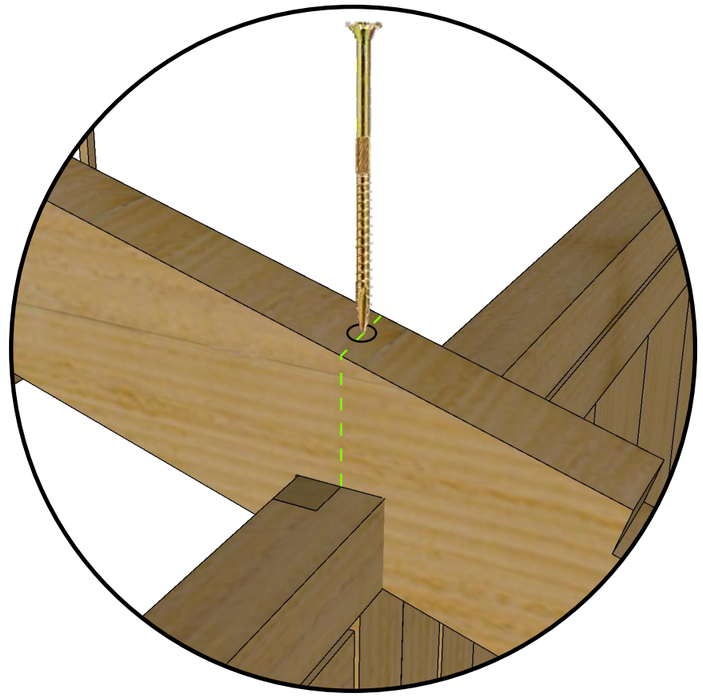


Walls will be made as straight as possible in a step to come. For now keep them "visually" straight.

Truss tail wall notches are all centered between wall panel verticals unless noted otherwise.



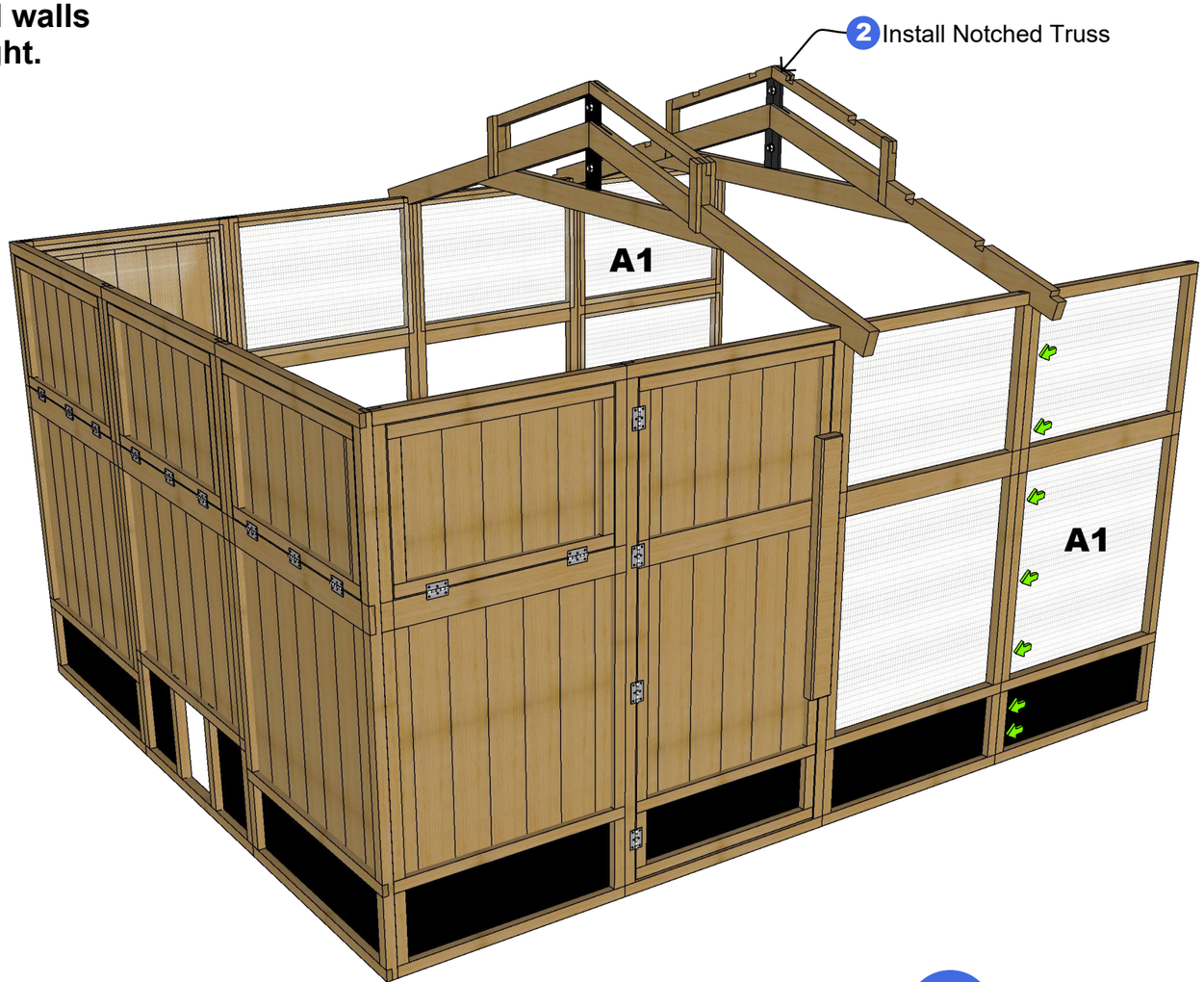
2 Identify the correct truss and place over the tops of left and right walls in positions indicated and attach using one long T-25 screws as illustrated below, screwed into centers as shown.



4-1/2" Long GRK T25 Screw

Build out the remainder of the side walls.

1 **Extend out remaining A1 panels using the same screw pattern and procedure in prior steps taking care to keep edges flush and walls "visually" straight.**

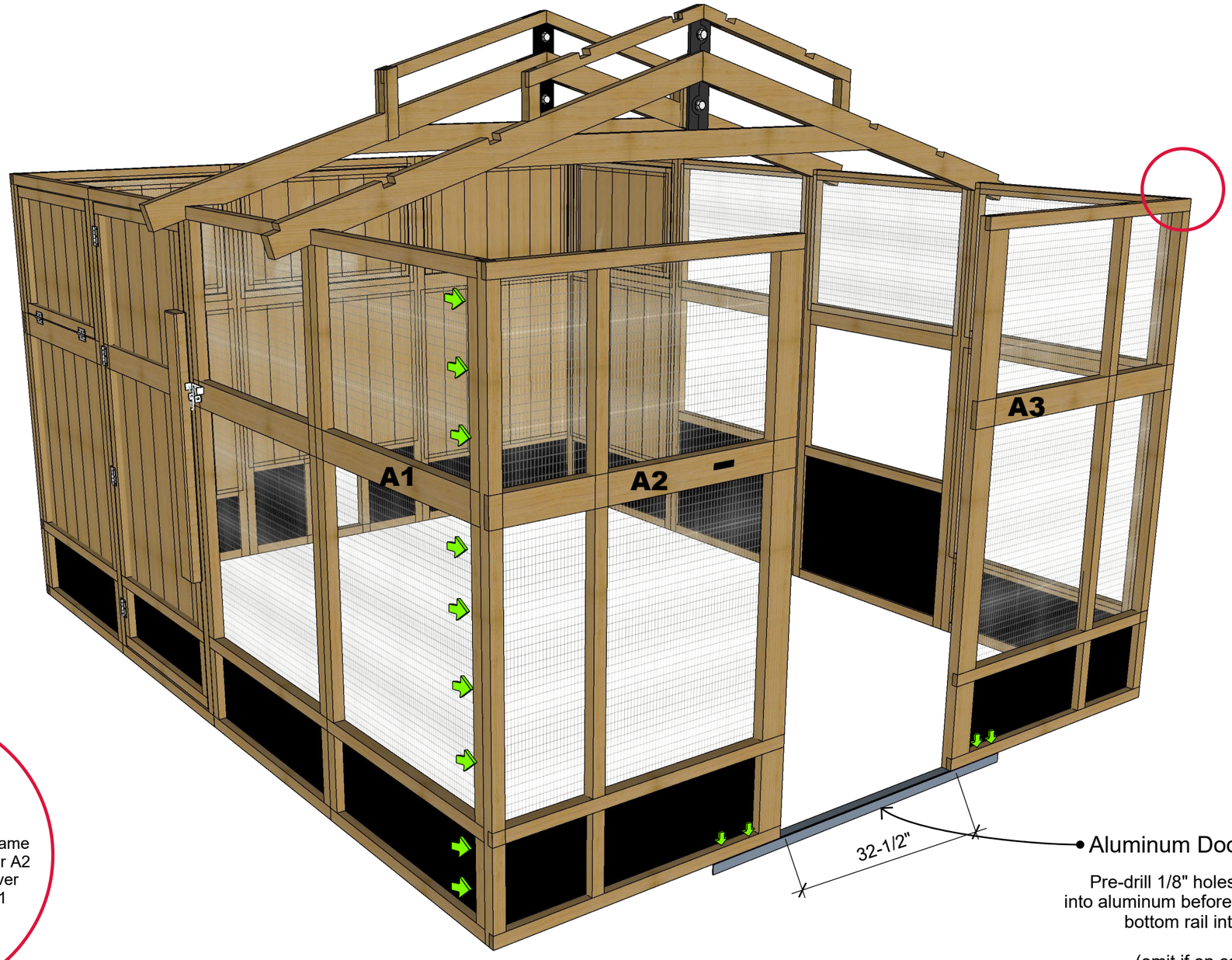


2 Using the same methods used in prior step, install the notched truss in the position as indicated.

The front wall of the coop...

1 Screw the A2 and A3 panels onto fronts of the A1 panels screwing through the A1 panels back into the A2 and A3 panels as indicated by the green arrows using 3" T25 screws.

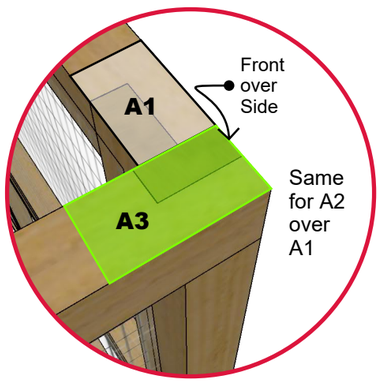
2 If you're building your coop directly onto the ground an optional Aluminum Door Spreader can be installed to maintain the 32-1/2" gap in the door bottom. Omit if you are using a concrete footer.



Pre-drill 1/8" holes through bottom rail into aluminum before driving screws through bottom rail into aluminum bar.

(omit if on concrete footer)

Panel Lap Detail



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1.7 Coop Front Wall

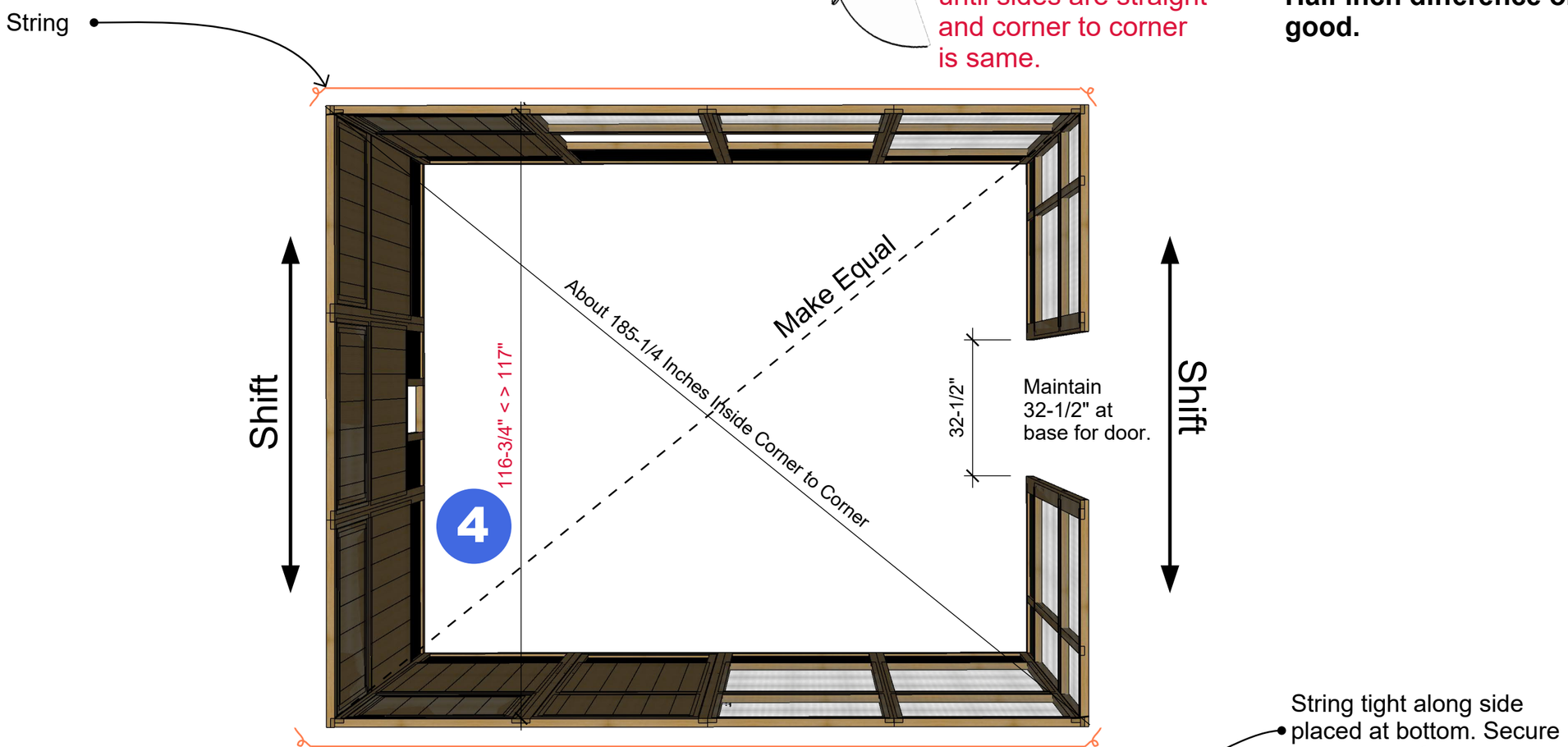
Straightening and squaring the coop is a 3 part repetitive procedure...

1 **Use included string to tie a piece along bottom edge and tie around corners or use a little nail so that it runs tightly along edges.**

2 **Start pulling out bottoms of walls on both sides until the walls run along the string equally along the length of the coop. Move tops if needed too.**

3 **Using another piece of string (or a long tape measure if you have one) shift ends (front and back) of coop left or right until the inside corner to corner to corner measurement of the coop is pretty much equal. Half inch difference or less is good.**

Repeat steps 2 & 3 until sides are straight and corner to corner is same.



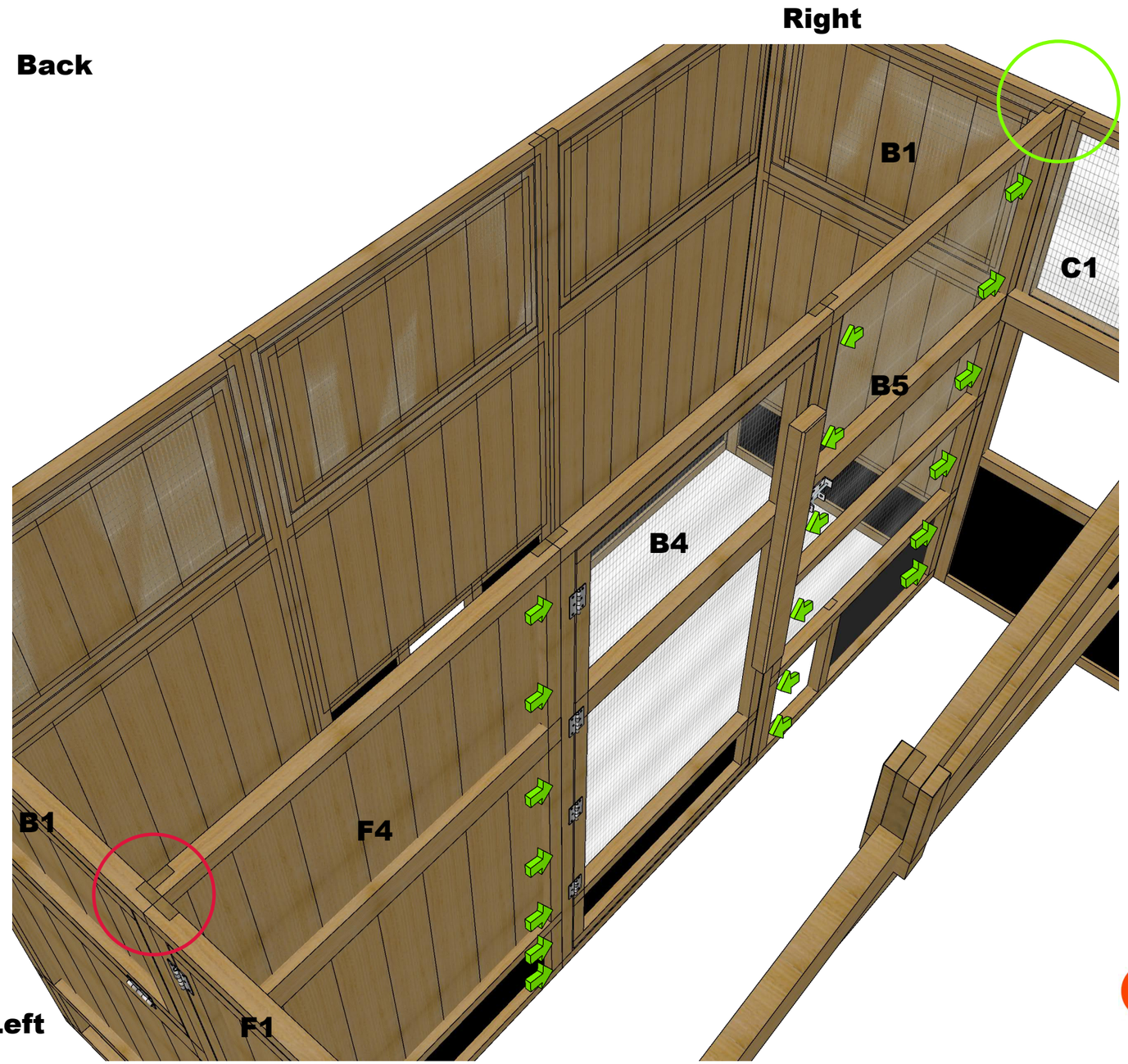
Goal is to make both corner to corner measurements the same. Exactly what that number is, is less important than being equal. Measurement that is shown is just a guide.

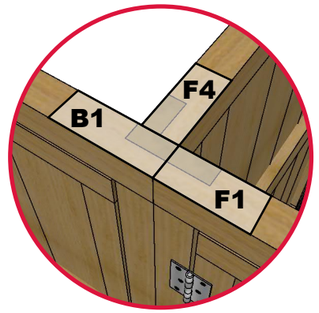
1. Trusses omitted for illustration purposes.
2. Even if you poured a concrete footer, verify using this step.
3. Any "waves" in the wall are taken out by stiffeners in next steps.
4. Try to make it to where it feels structure is straight and relaxed. Not under tension.

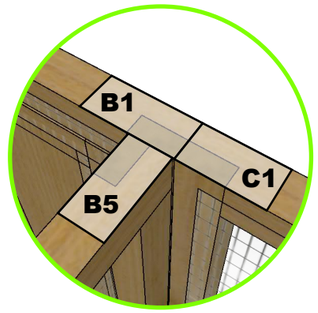
4 **Using whatever anchoring method you choose (see anchoring page) put in at least enough of your anchors in the bottom rails to keep from shifting during the balance of construction. Take note at position (4) in the diagram to not let distance between base of walls be less than 116-3/4" or greater than 117".**

In this step we'll start adding some stability to the structure.

1 **Screw B5 panel into vertical side rail of right B1 panel as illustrated. See blow up diagrams for placement. Make sure top edges are flush. Next screw the F4 panel into vertical side rail of left B1 panel making sure top edges are flush. Use a similar screw pattern as indicated on B5 panel.**







2 **Insert the B4 panel between the B5 and F4 panels. Spread B5 and F4 if needed to squeeze the B4 panel in.**

At this point, do not remove shipping screw(s) from door.

Screw from B5 and F4 into B4 as indicated pulling panels together to close any gaps as needed.

Aerial View

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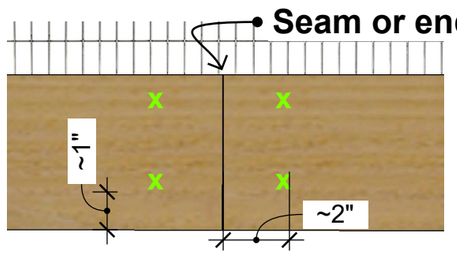
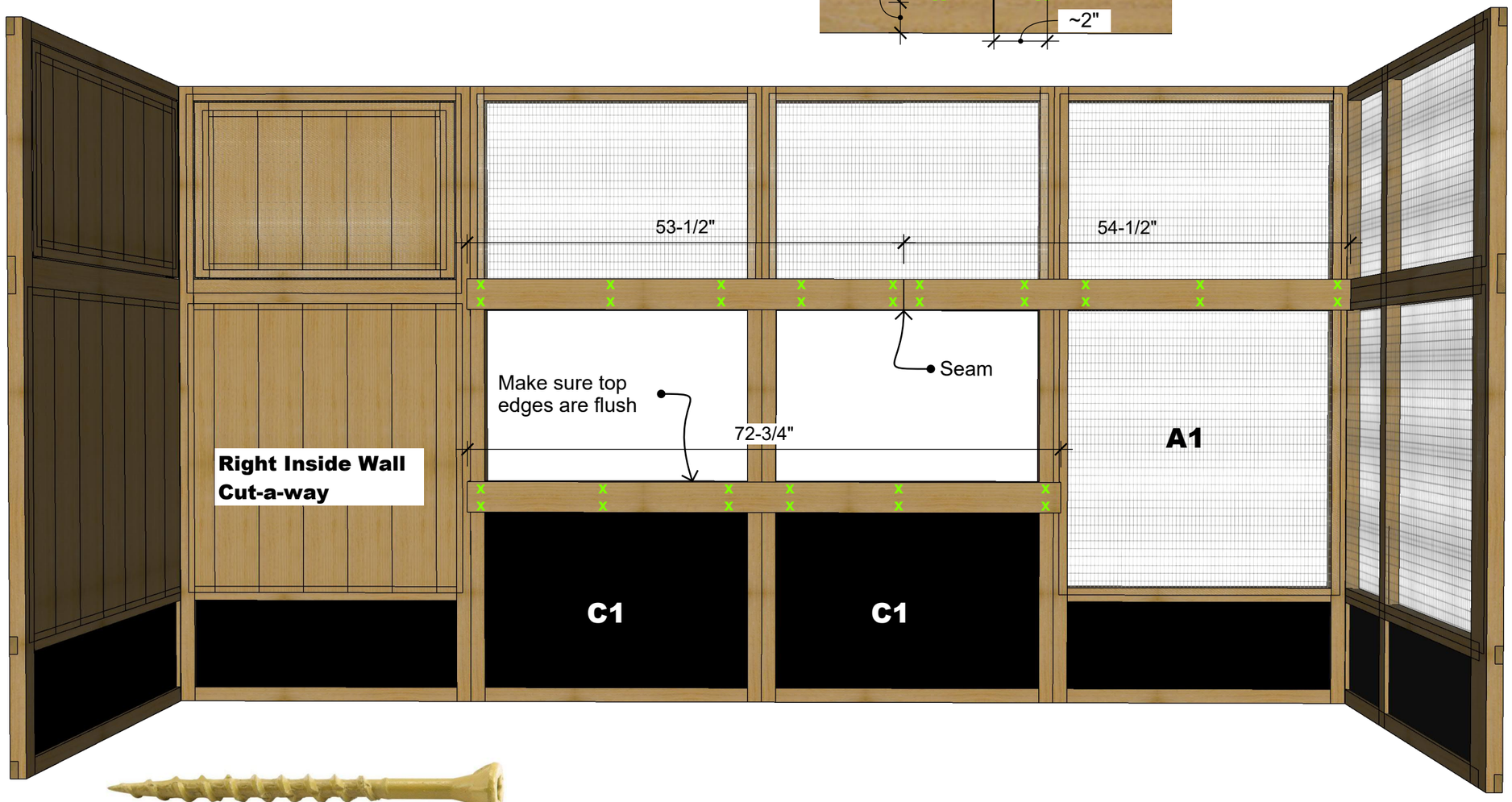
2.0 Roost Entry Wall

In this step we'll stiffen up the right run inside walls so that they are straighter and stronger.

1 Using T25 3" screws identify the proper length 2x4 stiffener boards and place the three of them as indicated in the diagram. Green X's are used instead of arrows in previous steps and shows pattern to use.

2x4 Screw Pattern



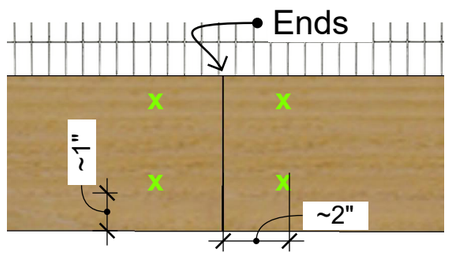


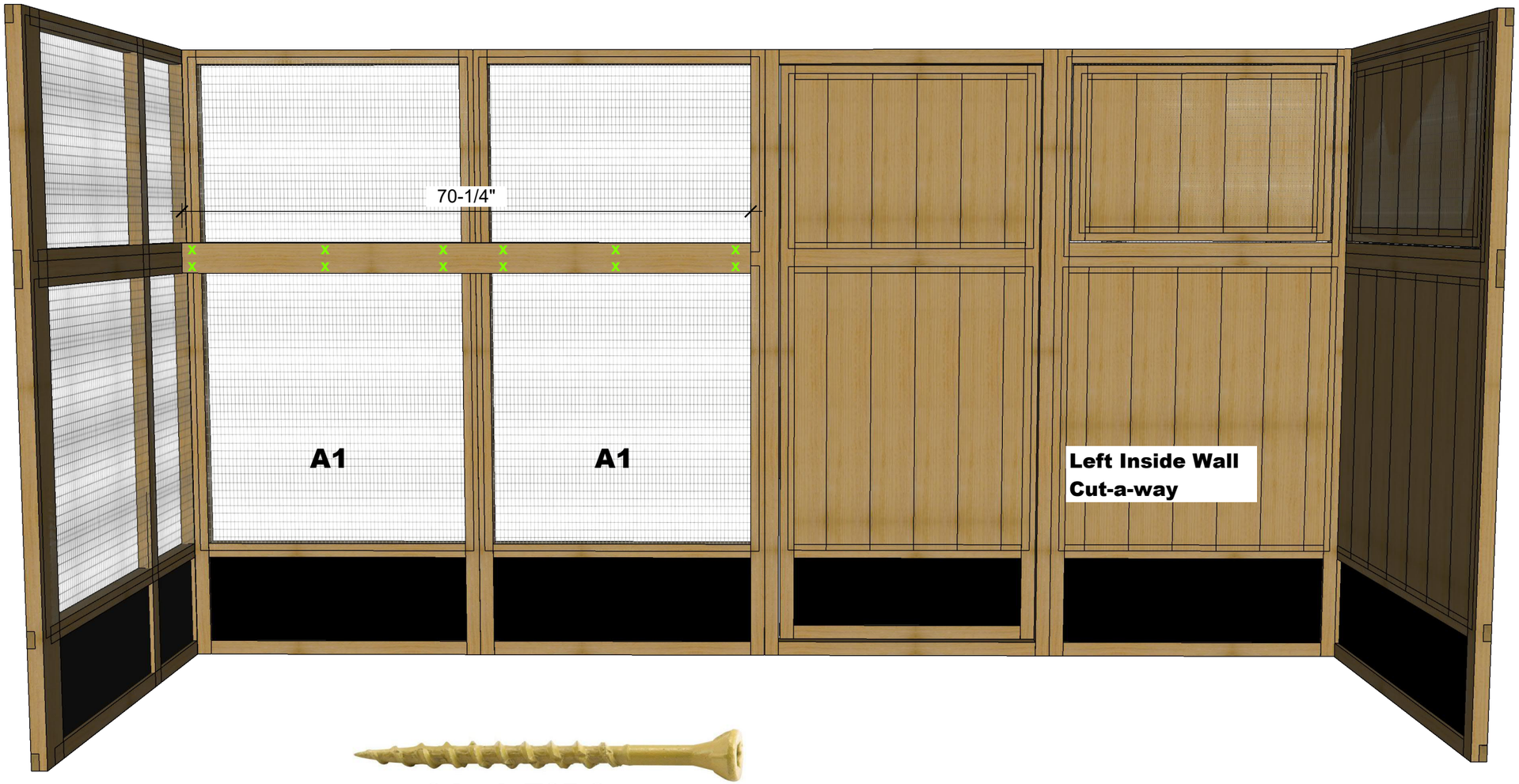
3 Inch T25 Screw

In this step we'll stiffen up the left run inside walls so that they are straighter and stronger.

1 Using the same teachings and procedures from step 2.1 place the 2x4 left inside wall stiffener as illustrated.

2x4 Screw Pattern





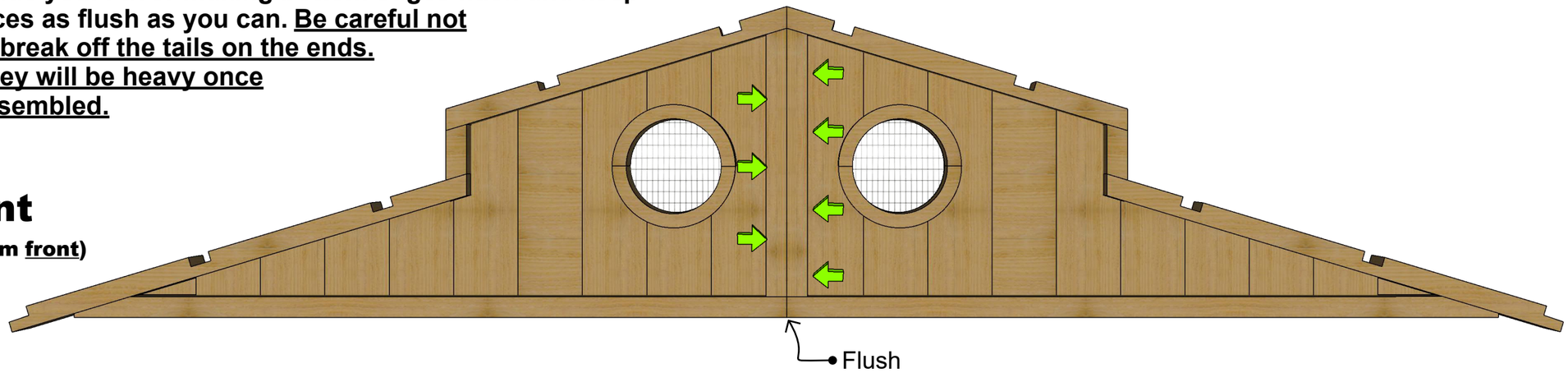
3 Inch T25 Screw

In this step we'll assemble the three roof gables...

1 **Using T-25 3" screws assemble the gable halves using the illustrations to guide you. Favor making bottom edges flush and keep faces as flush as you can. <u>Be careful not to break off the tails on the ends. They will be heavy once assembled.</u>**

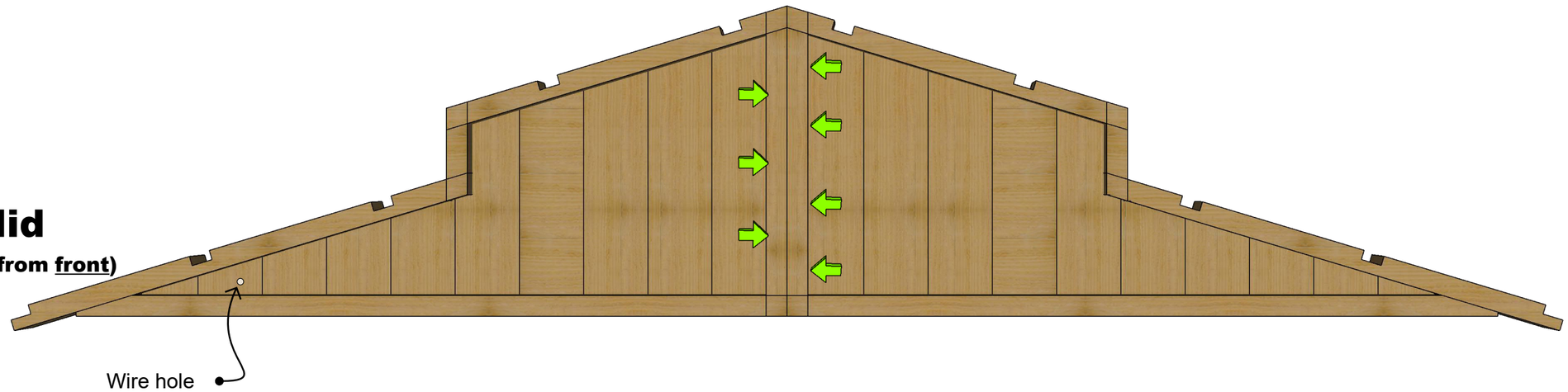
Front

(looking from <u>front</u>)



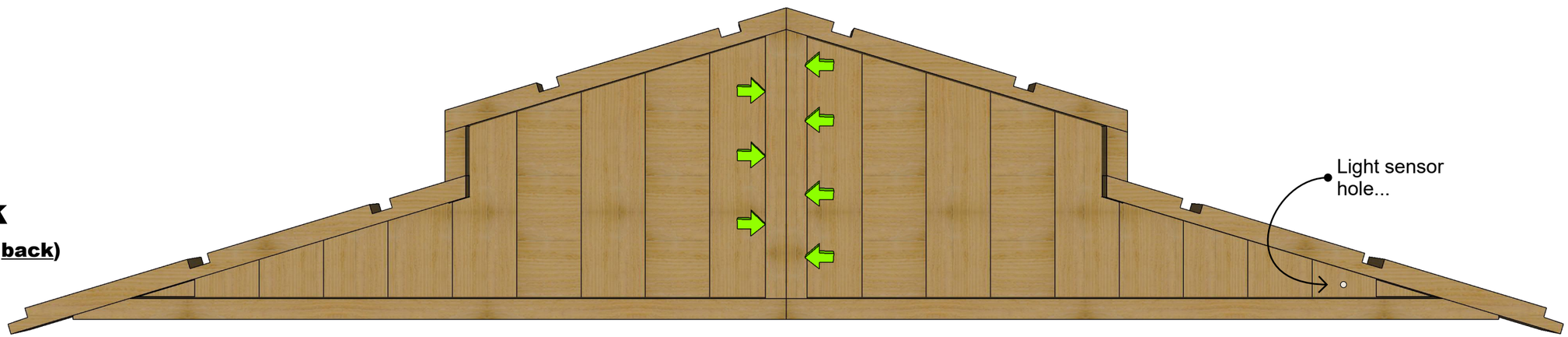
Mid

(looking from <u>front</u>)



Back

(looking from <u>back</u>)

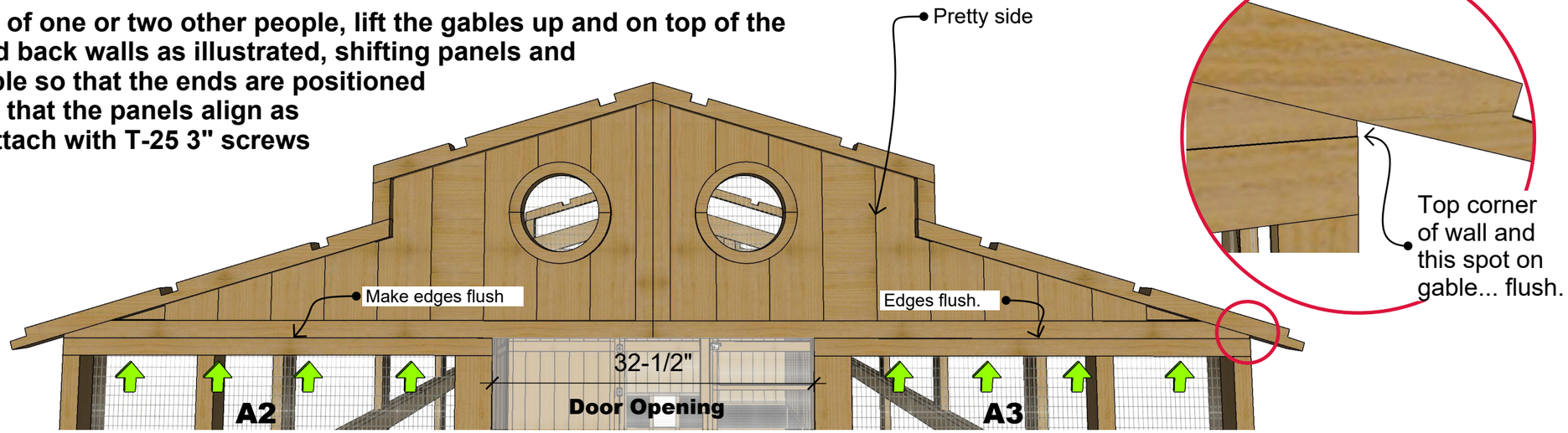


In this step we'll assemble the three roof gables...

1 **With the help of one or two other people, lift the gables up and on top of the front, mid and back walls as illustrated, shifting panels and adjusting gable so that the ends are positioned correctly and that the panels align as illustrated. Attach with T-25 3" screws as indicated.**

Front

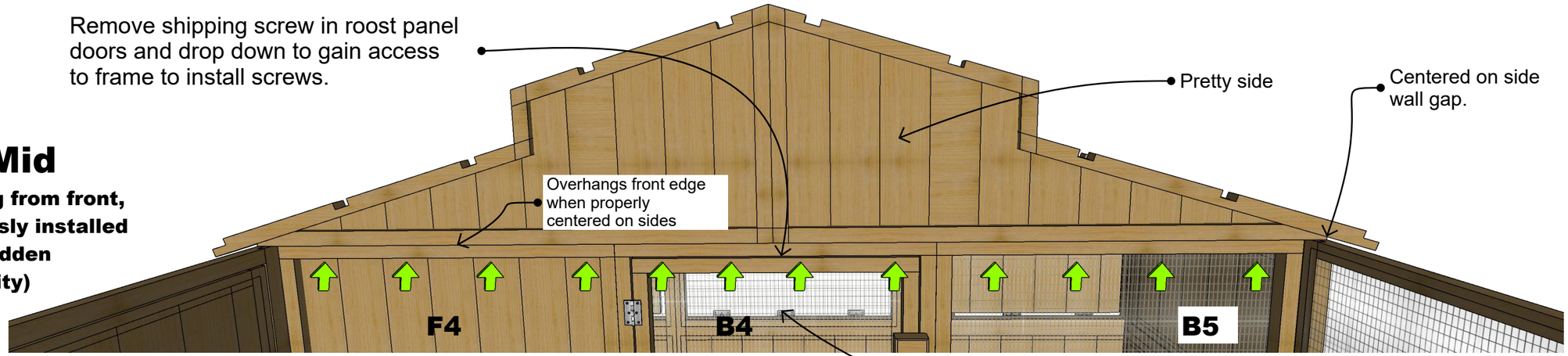
(looking from front)



Remove shipping screw in roost panel doors and drop down to gain access to frame to install screws.

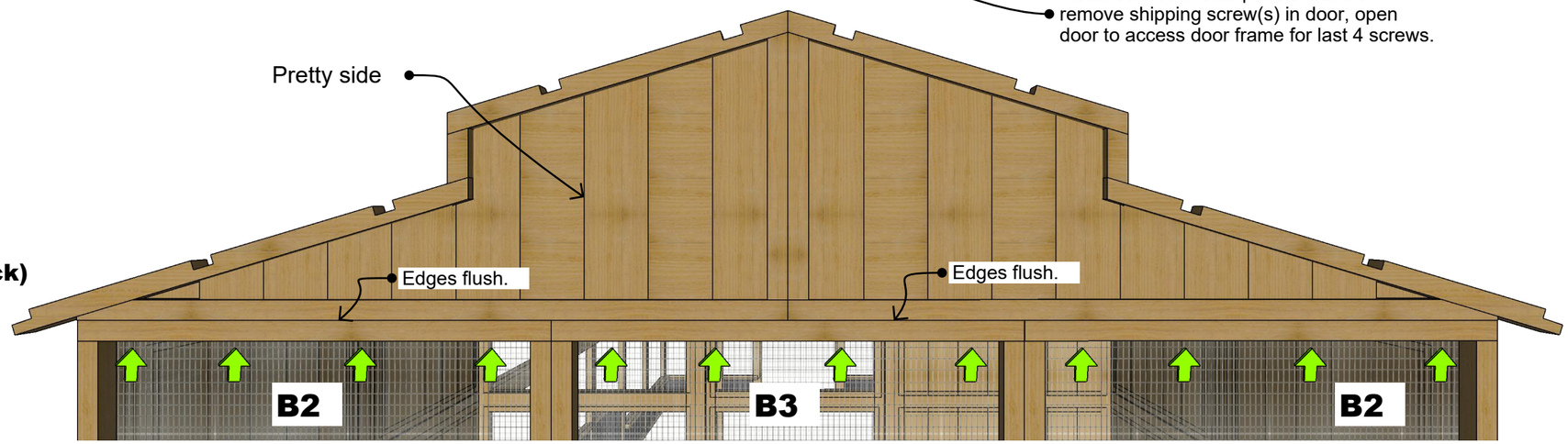
Mid

(looking from front, previously installed truss hidden for clarity)



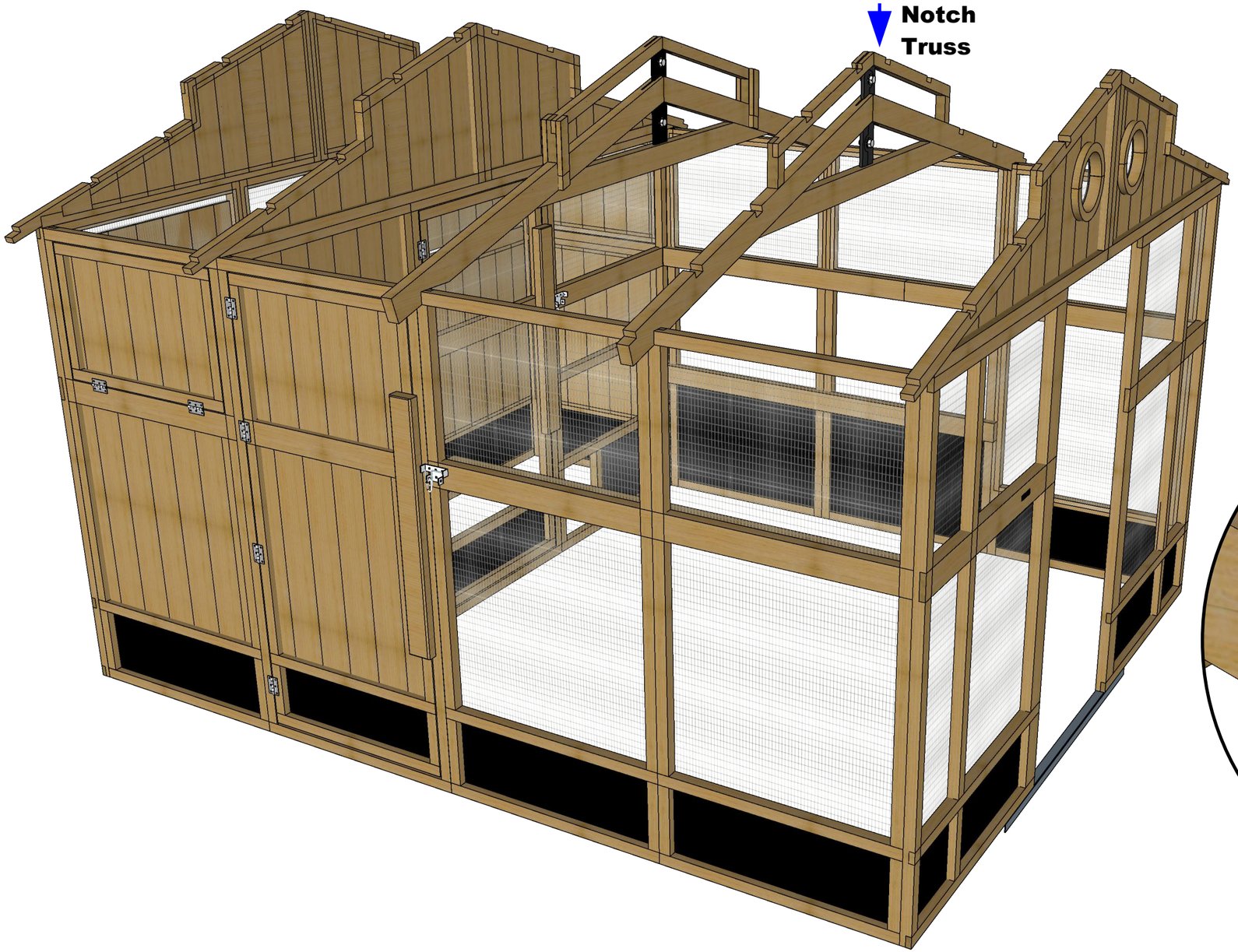
Back

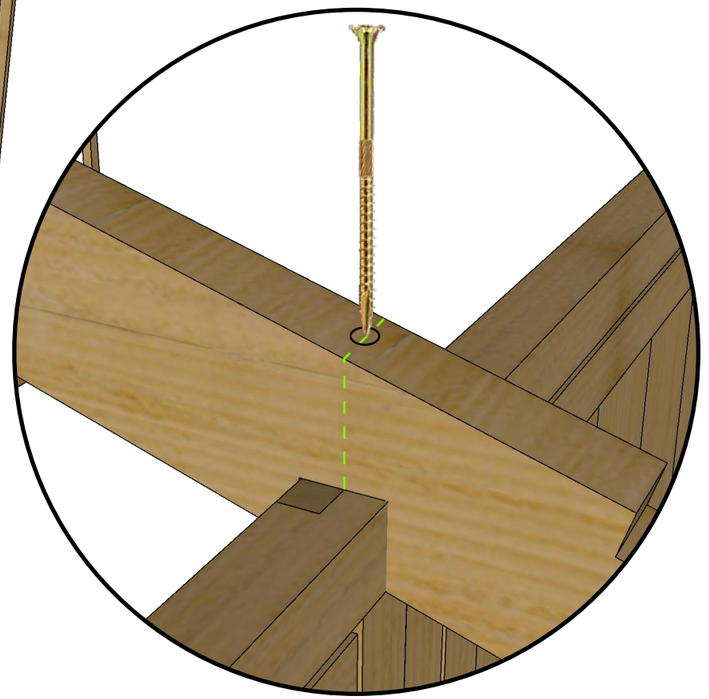
(looking from back)



In this step we'll install the remaining truss...

1 Using the same procedures as in steps 1.5 and 1.6 install the remaining truss in the location indicated by the colored arrow.

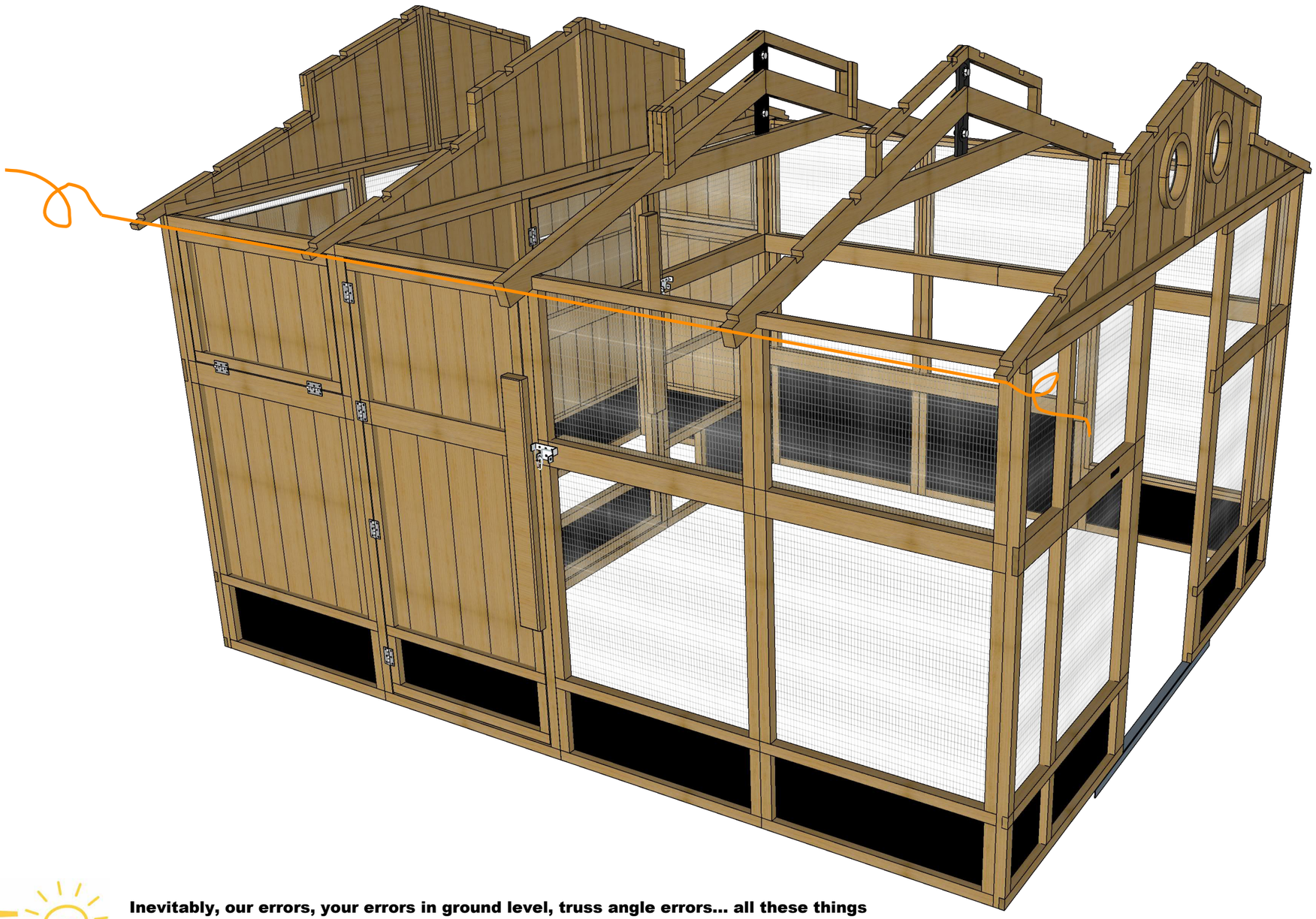




4-1/2" Long GRK T25 Screw

Before going to next steps we want to release some tension from wall tops and align the truss ends...

1 **Using a piece of string pulled between both ends of the front and rear gable tails... tug and push on wall tops to get truss ends to run evenly along string. The straighter you can get this the easier the Purlin Panels in the next steps will install and the straighter your roof panels and ridge cap will look. In theory :-) you only have to do this for one side or the other...**



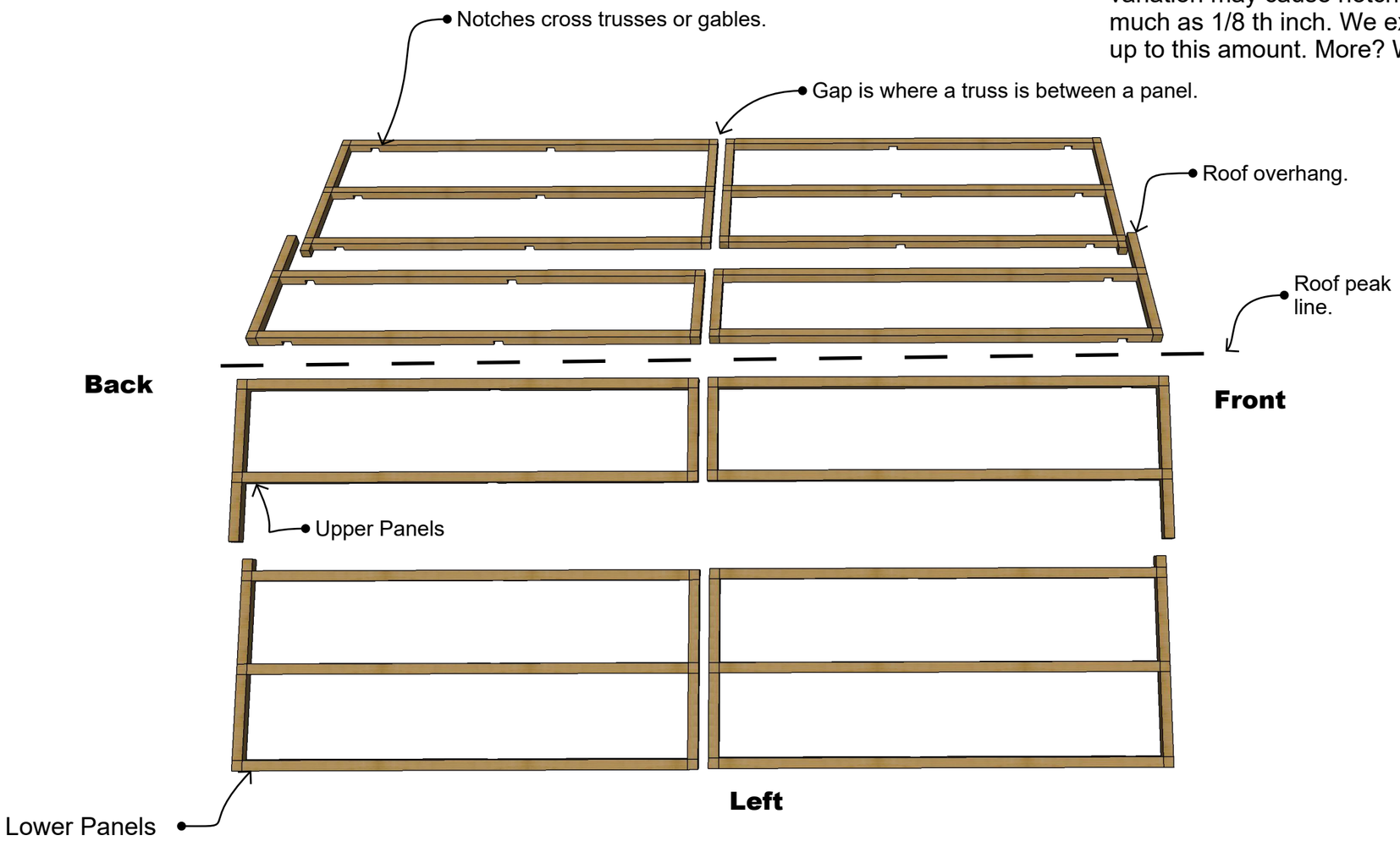
Pro Tips

Inevitably, our errors, your errors in ground level, truss angle errors... all these things combining to not be perfect, can cause one side to be straight and the other side to not be straight. Place a string on both sides and shift wall tops to split the difference between sides making both sides as straight as possible.

Purlin Panels lock into and between roof trusses to form the roof structure...

1. Trusses omitted for illustration purposes.
2. Some notches are not illustrated.
3. Back and front upper and lower panels are unique. Mid panels are the same.
4. Human error, machine tolerances and wood variation may cause notches to be off by as much as 1/8 th inch. We expect in field adjustments up to this amount. More? We goofed.

1 **Using the illustrations below, familiarize yourself with the idea of how we'll talk about Purlin Panels...**



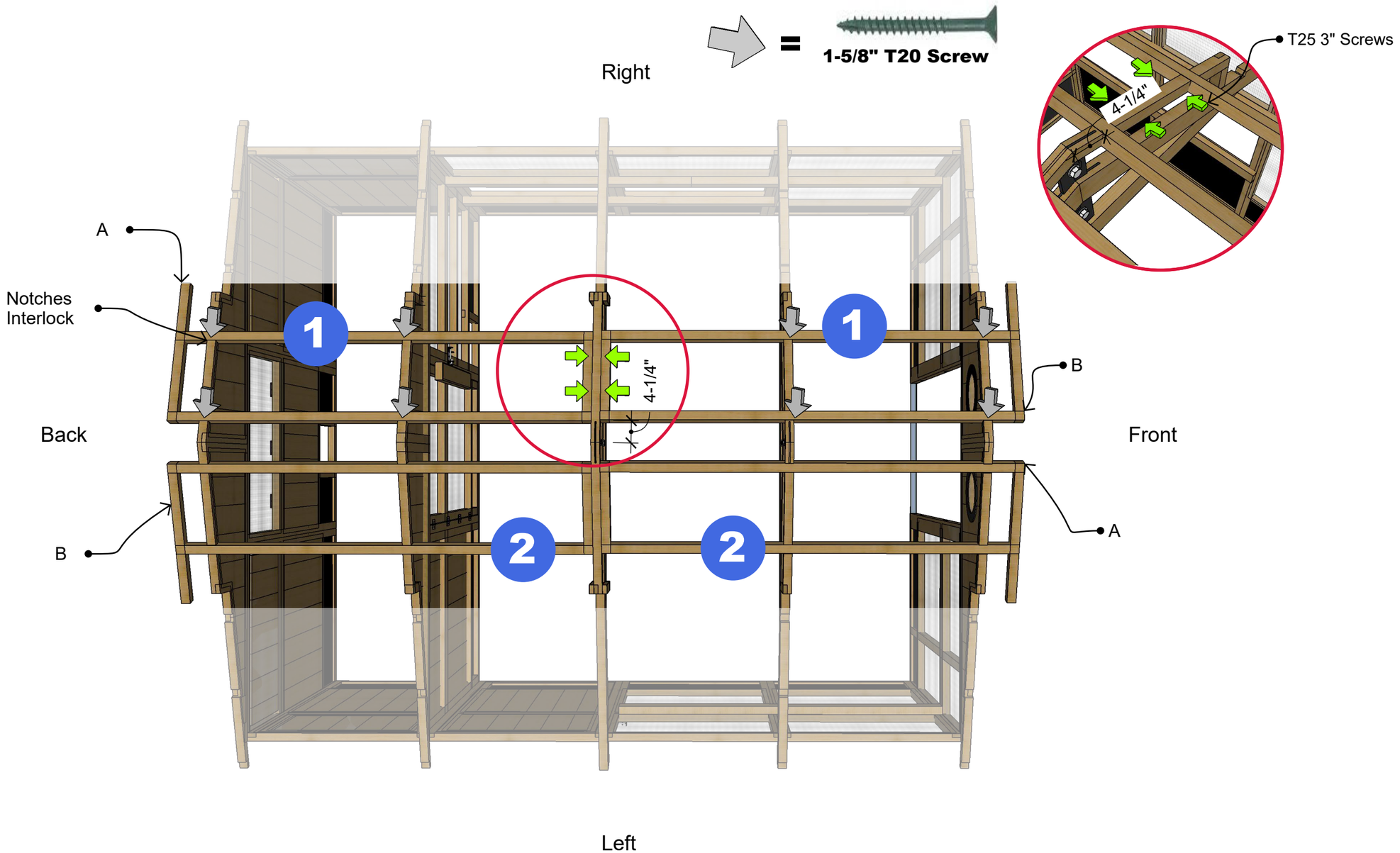
Pro Tips

We supply a small bottle of very strong polyurethane glue that can be used to make roof structure "stiffer". Best practice would be placing a dime to nickel sized dollop of glue on the notched to notch overlaps before putting a T-20 screw in. Gluing and screwing is stronger. Too much glue would drip, too little would still be stronger than just a screw. Use judgement in the field. Wait for any drips to dry completely before cutting them off. Allow some dry time before wiggling structure too much.

Installing the upper purlin panels will set the trusses in place.

1. Begin by identifying front and back left and right panels. Front panel "B" is same as back panel "B" and front panel "A" is same as back panel "A". Install right panels as indicated, interlocking notches and screwing together as illustrated. Optionally use a dollop of glue at notch interlocks.

2. Repeat the above procedure for left panels.



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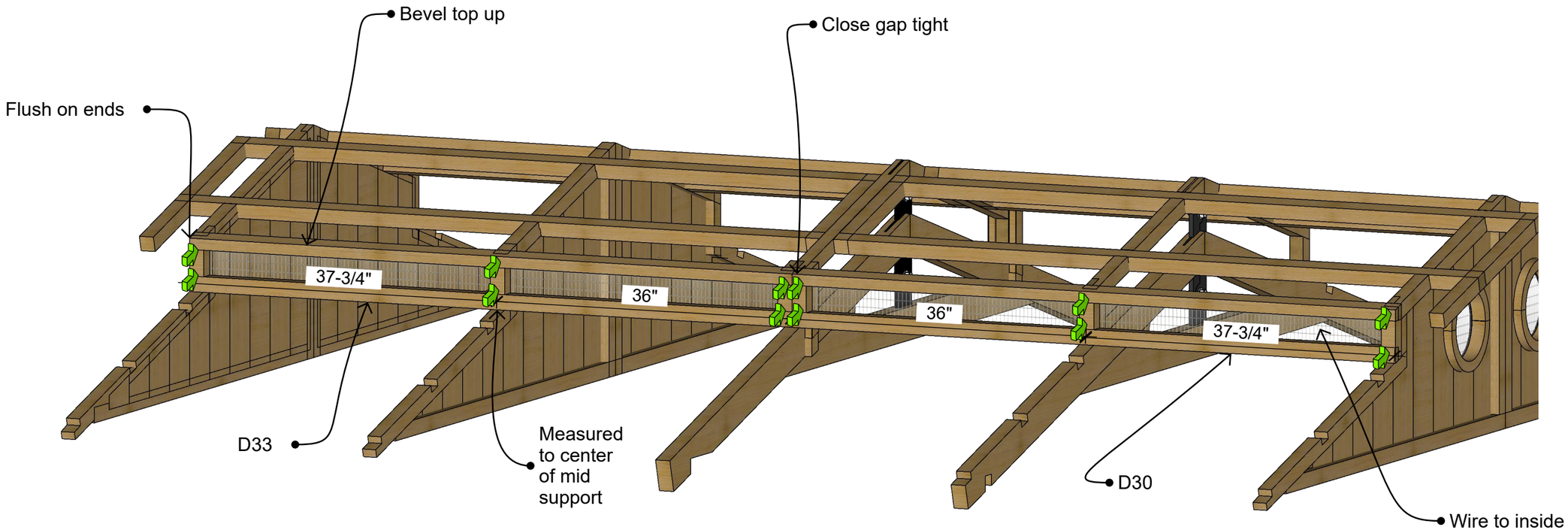
3.1 Upper Purlin Panel Installation

The next step before installing the upper roof, is to install the left and right transom panels...

1 **Transom panels are the skinny wired panels that mount between trusses and gables on the step up from the lower to the upper roof. There are two left and two right panels. Left front and right back are the same. Left back and right front are the same. Measure the panels and identify for placement. Attach each panel with T25 3" screws as indicated.**

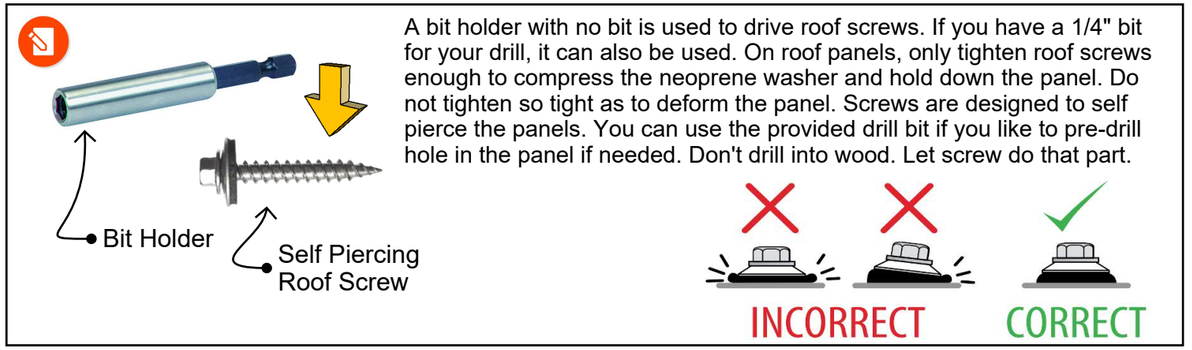
Repeat for the other side.



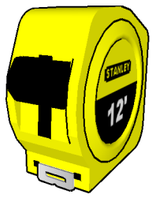
Left back and right front are the same.
Left front and right back are the same.

This is what we will be aiming for in the following steps...

1 **Please study this illustration so you'll know what we're aiming for in the following steps and we can get a few instructional items out of the way.**



A bit holder with no bit is used to drive roof screws. If you have a 1/4" bit for your drill, it can also be used. On roof panels, only tighten roof screws enough to compress the neoprene washer and hold down the panel. Do not tighten so tight as to deform the panel. Screws are designed to self pierce the panels. You can use the provided drill bit if you like to pre-drill hole in the panel if needed. Don't drill into wood. Let screw do that part.



Ridge Cap is in 4' Sections

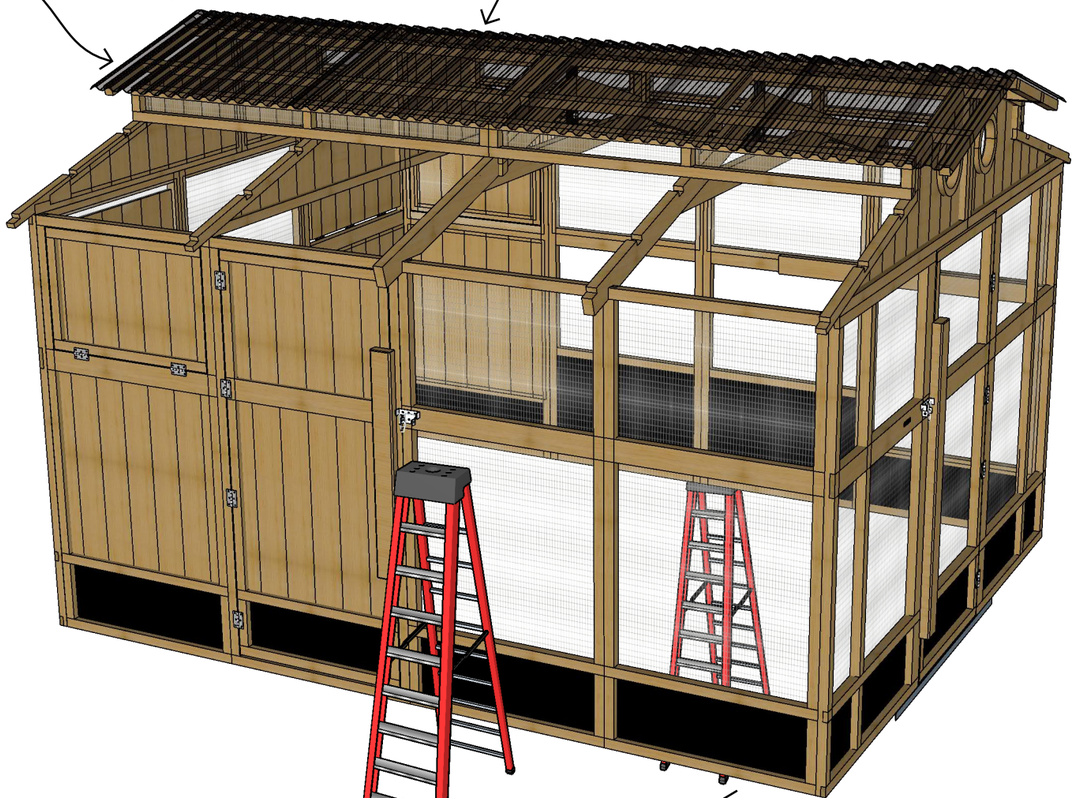
Upper roof panels are 32" long and shorter than 40" lower panels.

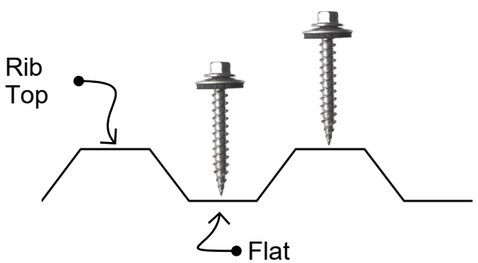
Roof Warranty

PALRAM SUNTUF Corrugated Polycarbonate Panels

Roof panels have a top side that is coated with UV inhibitor and must face up for maximum life expectancy.

This roof is designed to support itself and about 32" of ordinary snow. It is not designed to be walked on by a person.





Where to put a screw on a corrugated panel is a topic of debate. Technically, screws can either be installed on the rib tops or in the flats. Where panels overlap it might make the most sense to place on the rib top. Palram, the manufacturer of the panels suggests they be placed on the rib top in all circumstances.

We leave this to a field decision or to your roofer. There is no "wrong" answer.

You'll stand on a ladder in the lower roof openings to work on upper roof. A 6' ladder should be sufficiently tall to provide adequate reach for an averaged height person.

When working on the lower roof panels, your ladder will be outside the coop.

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3.3 Upper Roof Panel Overview

Using concepts discussed on previous page, install the upper roof panels on the left side of the coop as illustrated.

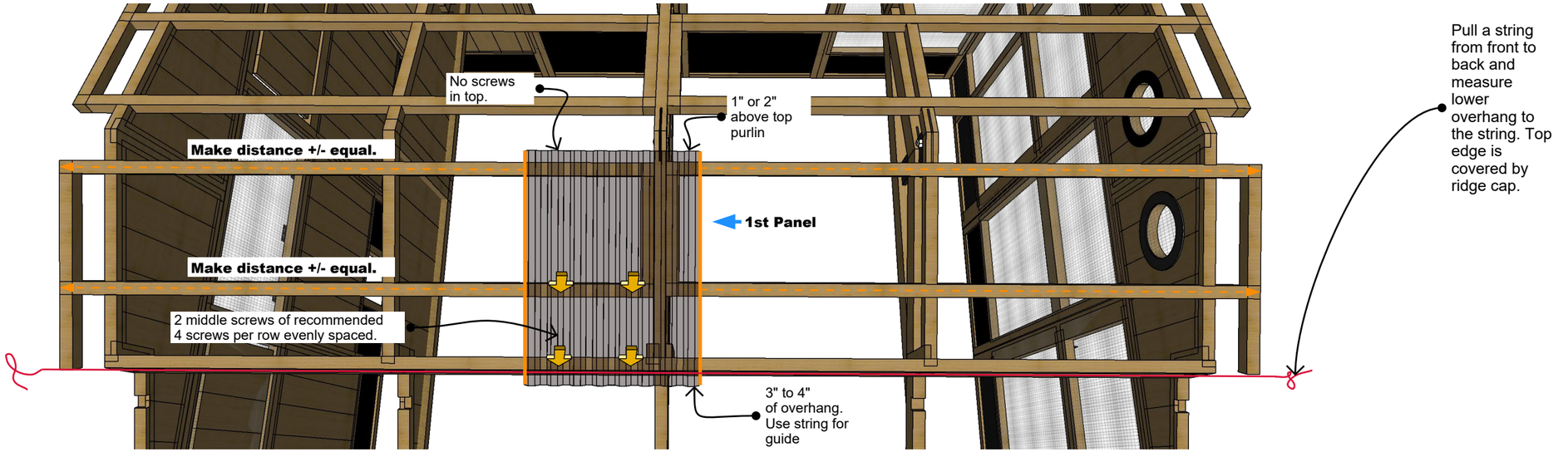
1

Note: *An experienced roofer can roof the coop any way they want. It's a standard roofing job. We're writing instructions assuming a DIY homeowner might be performing the work and needs a method to perform the task. We realize that the method we illustrate is only one way of many to roof the coop and yield to the experience of the installer.*

Place an upper panel (UV protected side up) as illustrated with edge of panel at roughly the center of the coop towards the back and adjust the panel to where the end to end measurements of the panel are as equal as you can make them. For a variety of reasons, it won't likely be perfect. This method will split errors in the squareness of the coop and make the sightline of the roof look the most straight and make the best edges when you get there. Place four roofing screws in the panel approximately where indicated, angled along with roof, where washer hits roof panel flat.

Pro Tips

Keep your screw spacing and lines as consistent and straight as possible for a more professional look once the roof is completed.

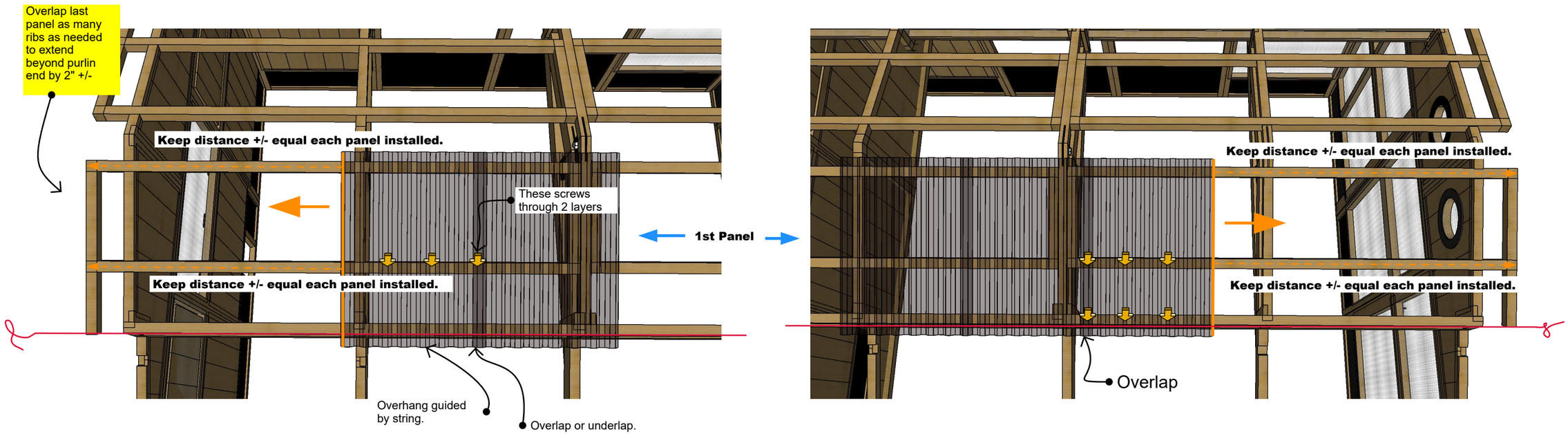


2

Work from middle to back by slipping 1 rib of the panel under (or over) the first panel. Measure each time to the back edge of the purlin and little by little make adjustments as you move to keep +/- equal. Keep bottom edge overhang +/- equal running along your string. As long as the top overhangs the top purlin rail it will be covered by the ridge cap. Repeat this until you're at the back and then slip last panel under as many ribs as needed to overhang purlin end by about 2". If you know how to cut a panel, you can do that instead of overlapping more than 1 rib.

3

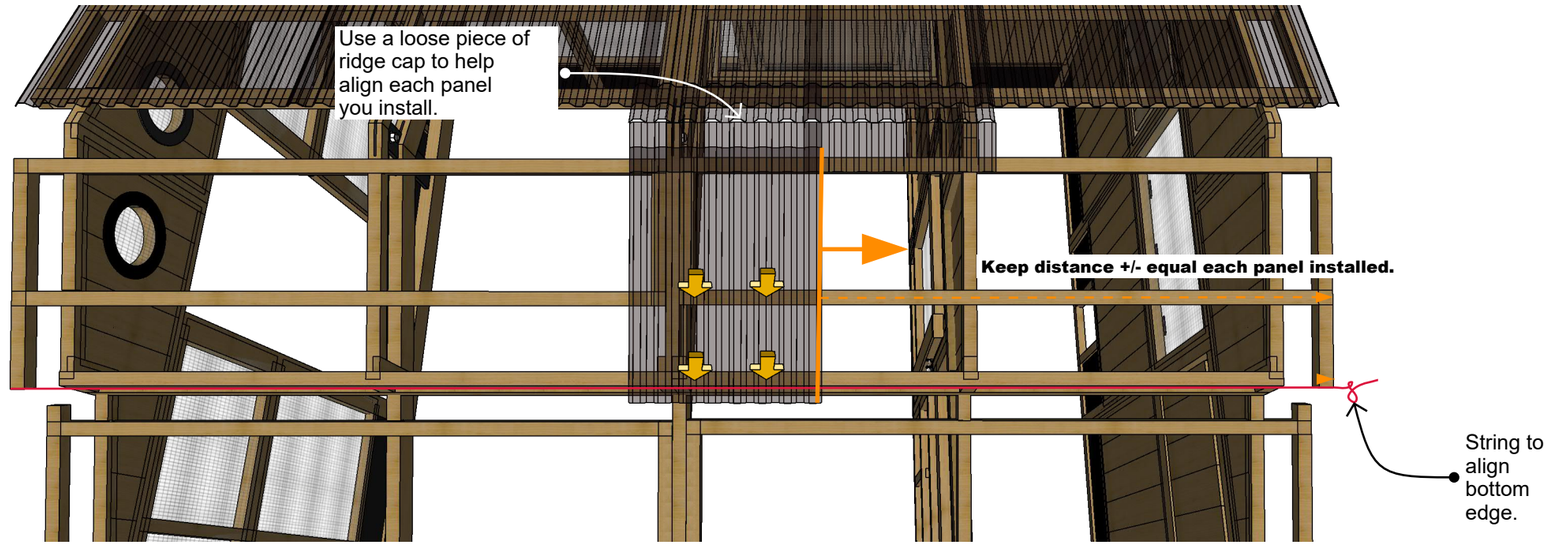
In the same way you worked in step 2, work from middle to front by slipping 1 rib of the panel under (or over) the first panel. Measure each time to the front edge of the purlin and little by little make adjustments as you move to keep +/- equal.



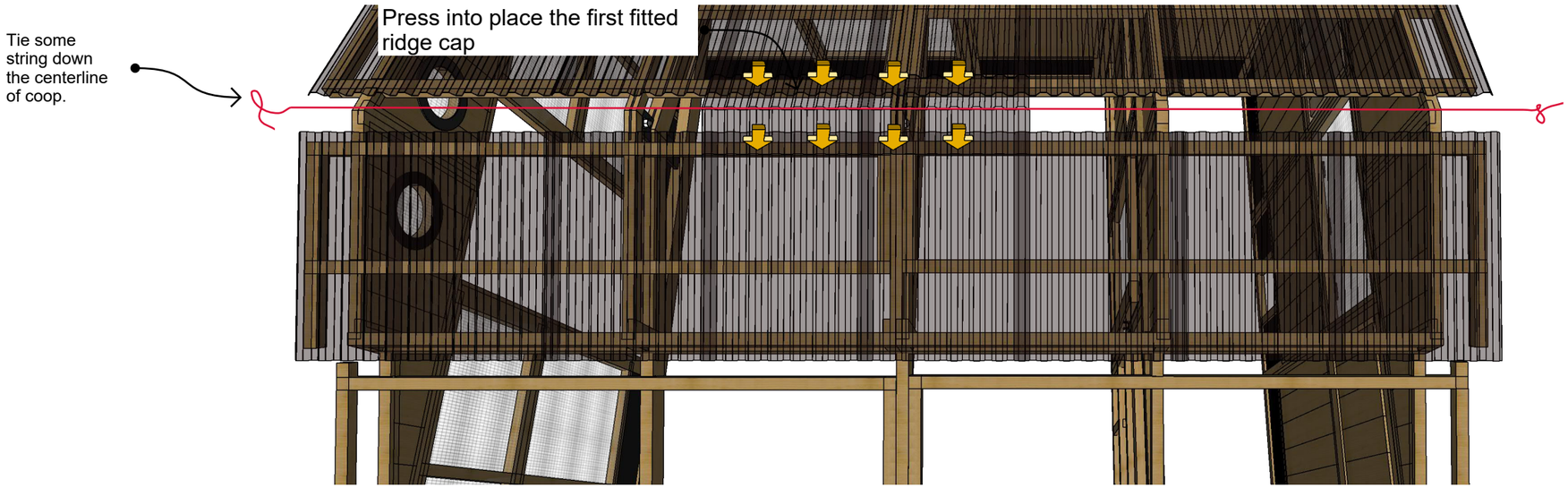
Using work methods performed on left side upper roof, install right side upper roof making sure panels align with ridge cap too...

1 Place an upper panel (UV protected side up) as illustrated on the right side with top edge of panel opposite a left side panel you installed earlier. Have a helper hold in place and press down a piece of fitted ridge cap over the ribs of the panel already installed and the panel that you're installing making sure ribs on both panels and valleys on fitted ridge cap all align nicely. Slide your roof panel as needed for bottom edge to overhang the 3" to 4" (same as you chose on other side) and once everything is aligned properly up and down and left to right set the panel in place by installing 4 roofing screws.

Repeat this procedure for the remaining panels to the back and then install all the panels towards the front shifting and adjusting as needed to align left and right panels.



2 Stretch a string across the centerline of the roof ridge. Again, you will probably need a helper... press into place the first piece of fitted ridge cap (splay out as needed to fit flat) starting in center of the coop. Install screws in a pattern similar to the ones installed on lower panels screwing through the ridge cap, through the upper edge of the roof panel and into the upper purlin. On the ridge you can screw into valleys or tops of ribs as it is two layers. Whatever makes ridge lay most flat. Leave ends not screwed down so you can slip in next ridges.



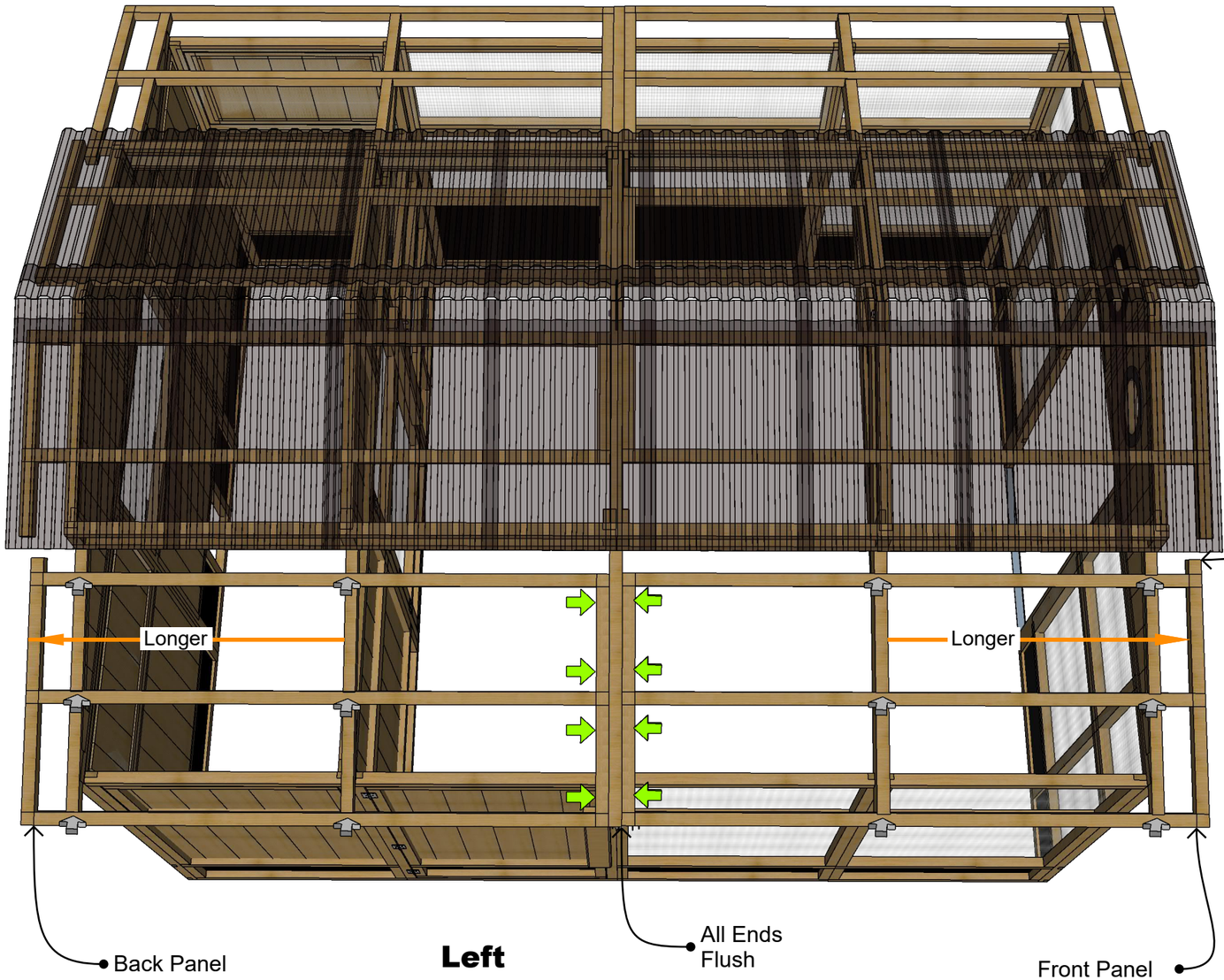
3 Either slip under or lay over ridge panels towards front and back of coop. You can overlap 1 or 2 ribs... slip under or lay over, whichever lays the most flat. Use roof screws in the same pattern as the roof panels below to attach ridge cap. Extra screws can be used to pin more flat if needed. Extend out even with roof panels on each end or 1 rib extended. Remove centerline string from under ridge when done.

Time to install the lower purlin panels so you can install the lower roof panels.

1 Using the illustration... identify the left back and left front panels and install as illustrated. Place the notch in the panels over the notch in the notched trusses and gables. Make sure to make bottom edges flush with tails of gables and trusses. End of panels that butt up to the center truss are held in place by T25 3" screws as indicated. See diagram(s) for screwing instructions.

2 **Install the right side lower purlin panels using the same procedures as explained in step 1.**

Right



Left

= **1-5/8" T20 Screw**

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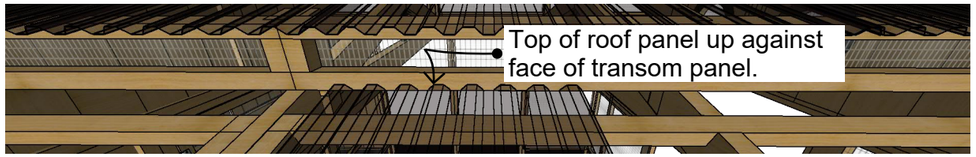
3.6 Lower Purlin Panel Installation

Install the lower roof panels using same techniques explained on upper roof panels.

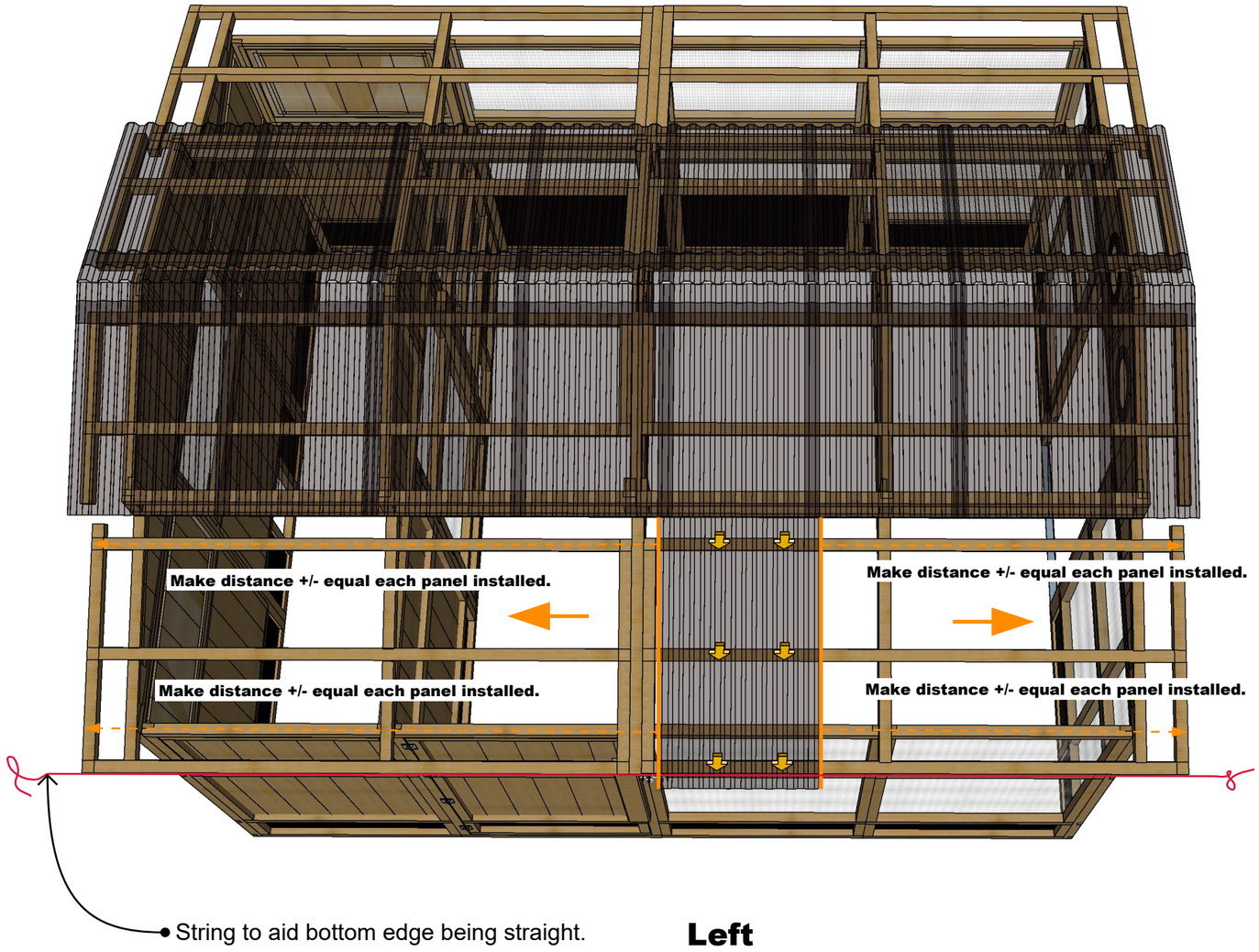
1. **Lower roof panels jam up against the face of the transom panels on the top edge and overhang the bottom purlin rail on the eave edge. There are three rows of screws per panel. Using the same aligning methods in section 3.4 and 3.5, position first panel left to right and set the center screws. After that repeat procedure as before and install all panels to the front and to the back.**

2. **After completing one side, repeat the procedure on the other.**



Right

Back



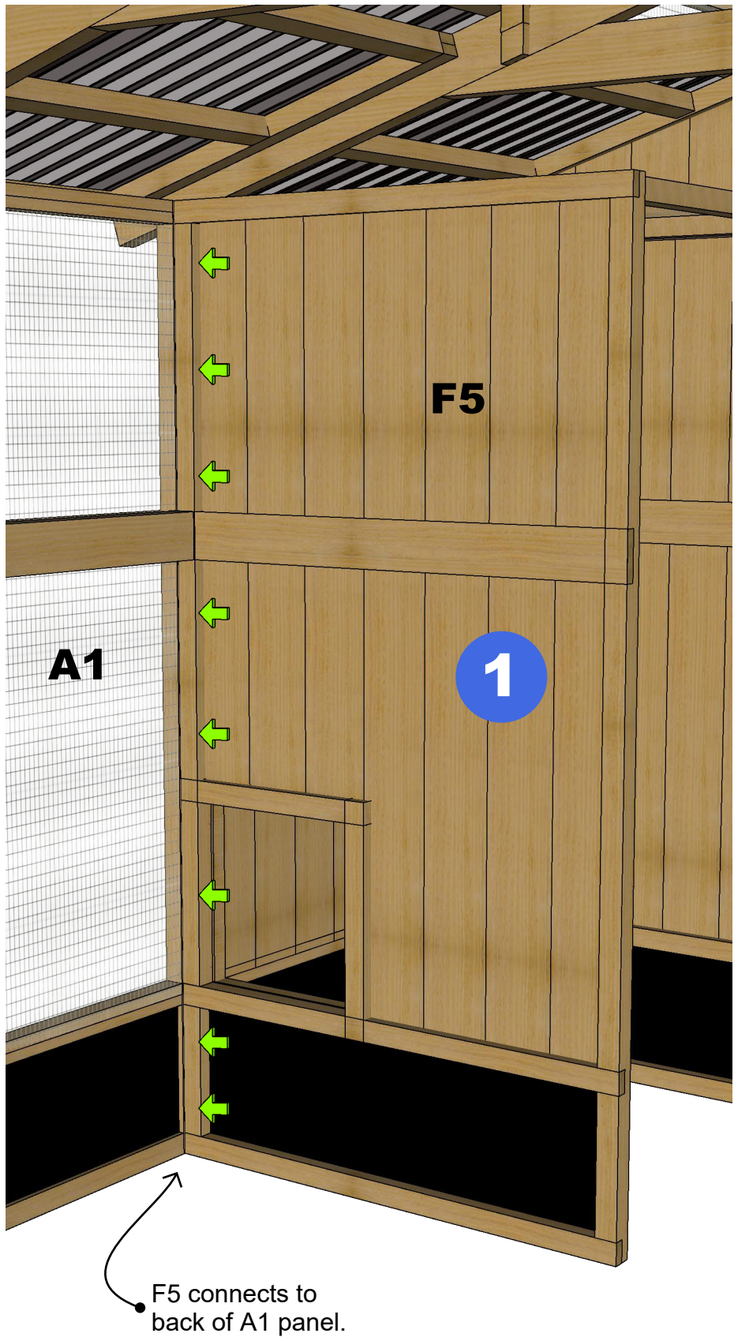
Left

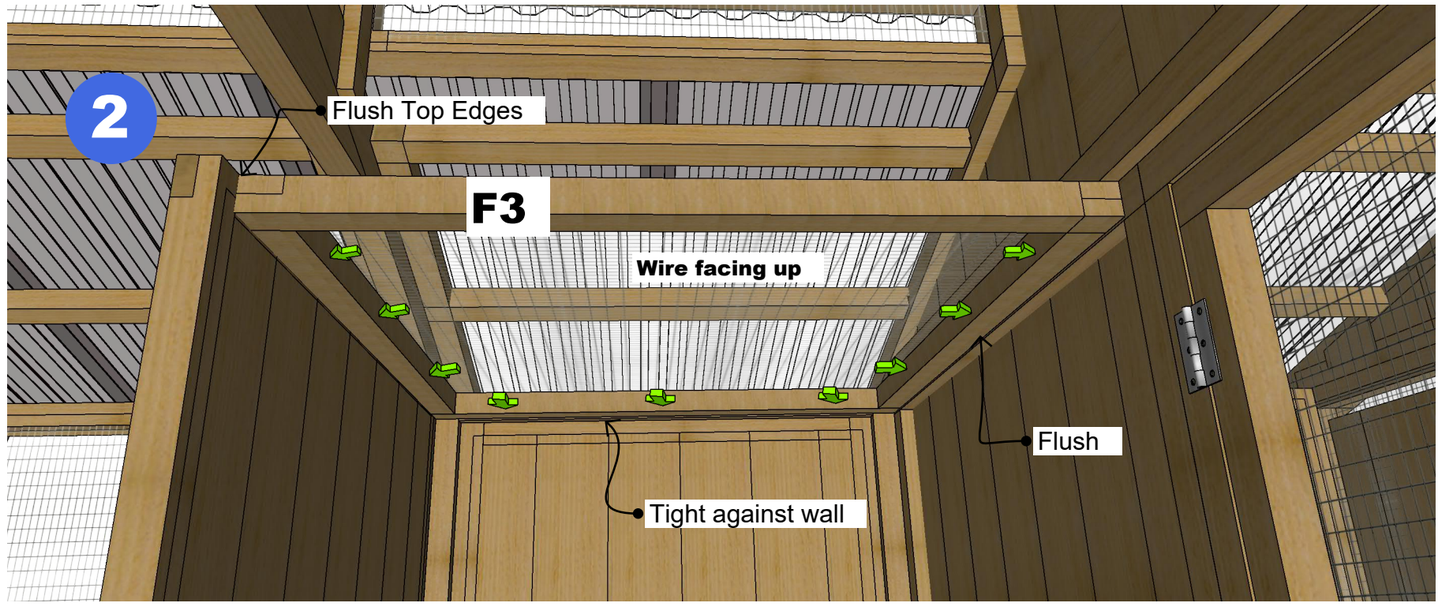
Install interior storage room walls and ceiling.

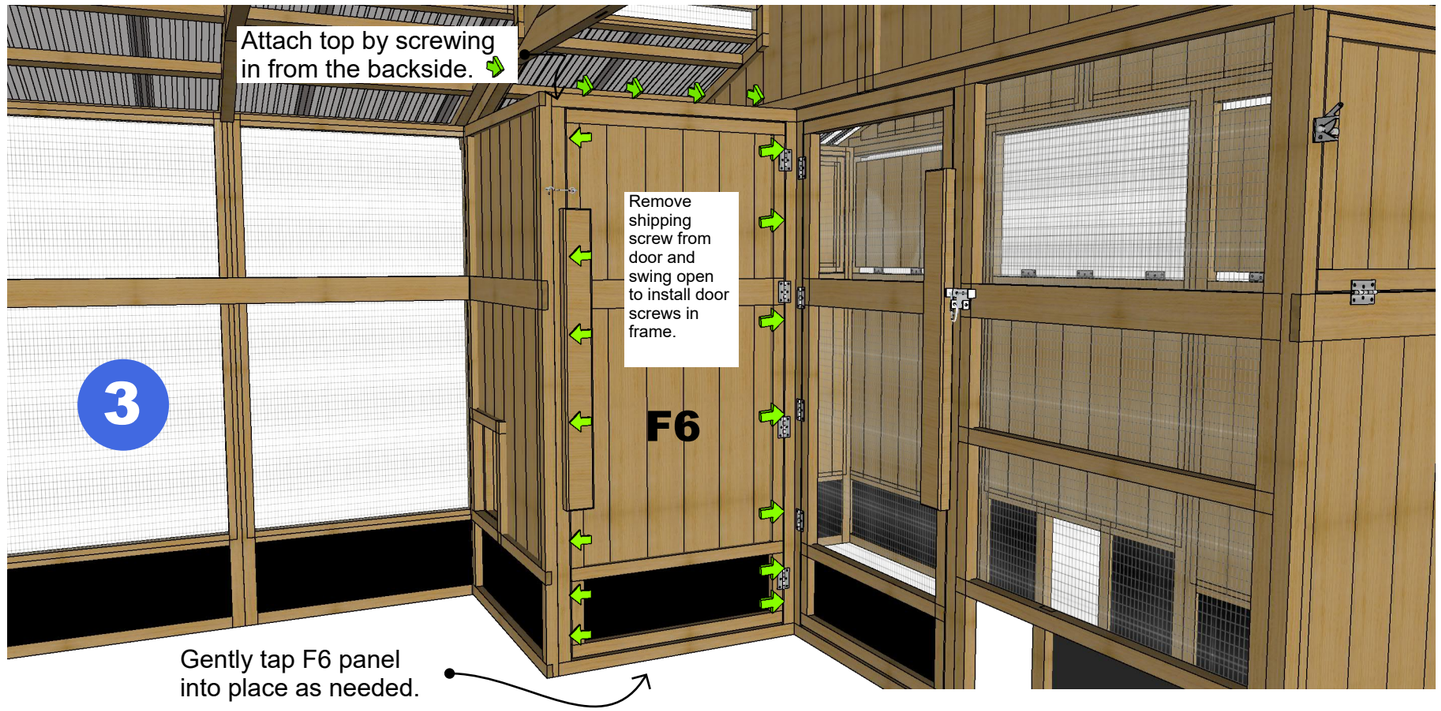
1 Install the F5 panel as illustrated. Take care to position panel as illustrated.

2 Install the F3 shed ceiling panel wire side up in top of shed area. Its to keep chickens out and strengthen walls. Use illustration for panel placement and screw pattern.

3 Install F6 panel as illustrated. You may need to try several methods to get panel in between walls as they might be a little tight. Screw pattern is as illustrated. Open door and screw through door frame.

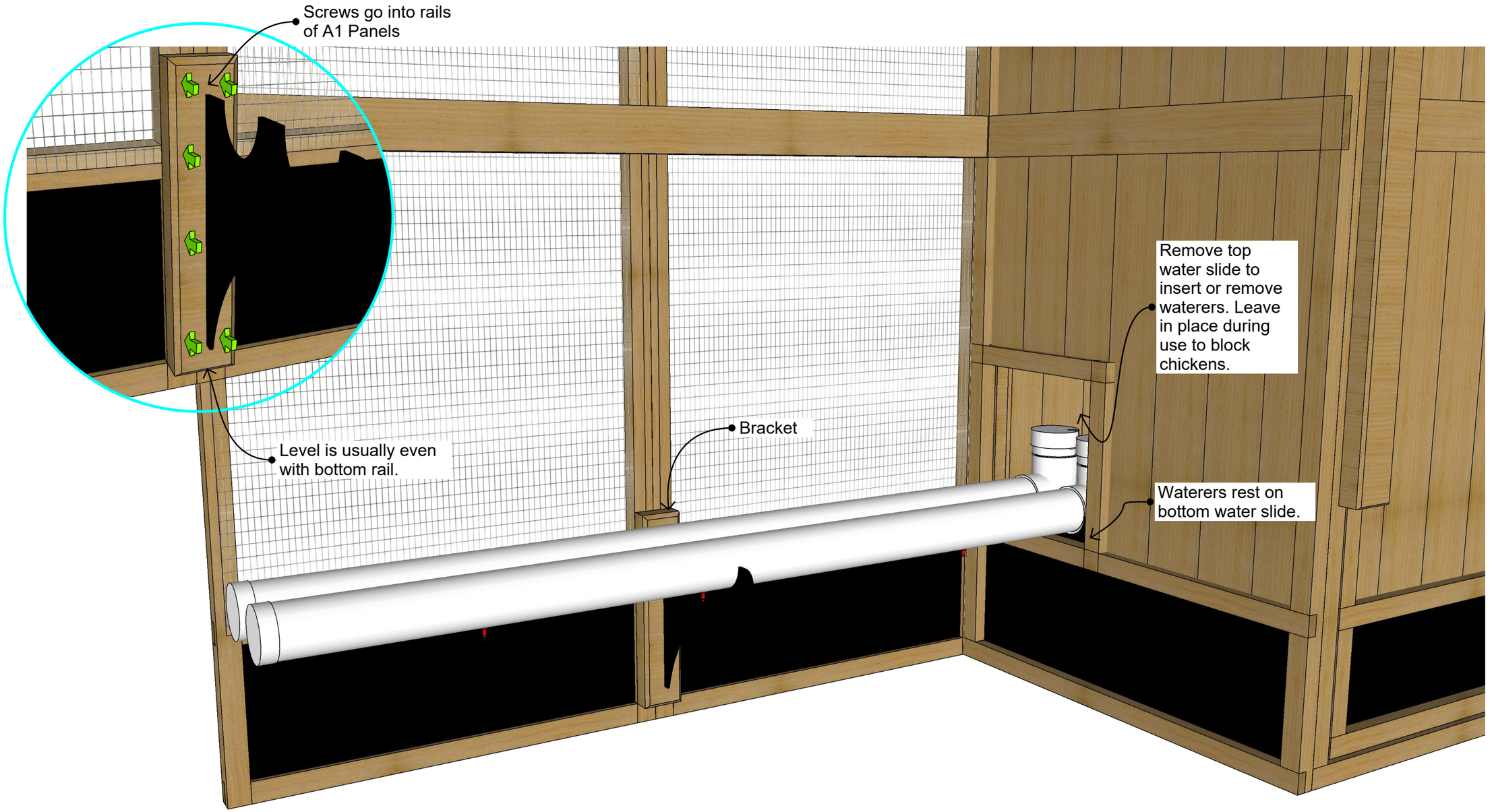






Install the waterer support brackets in the positions indicated for your coop... making sure waterer sits level when empty.

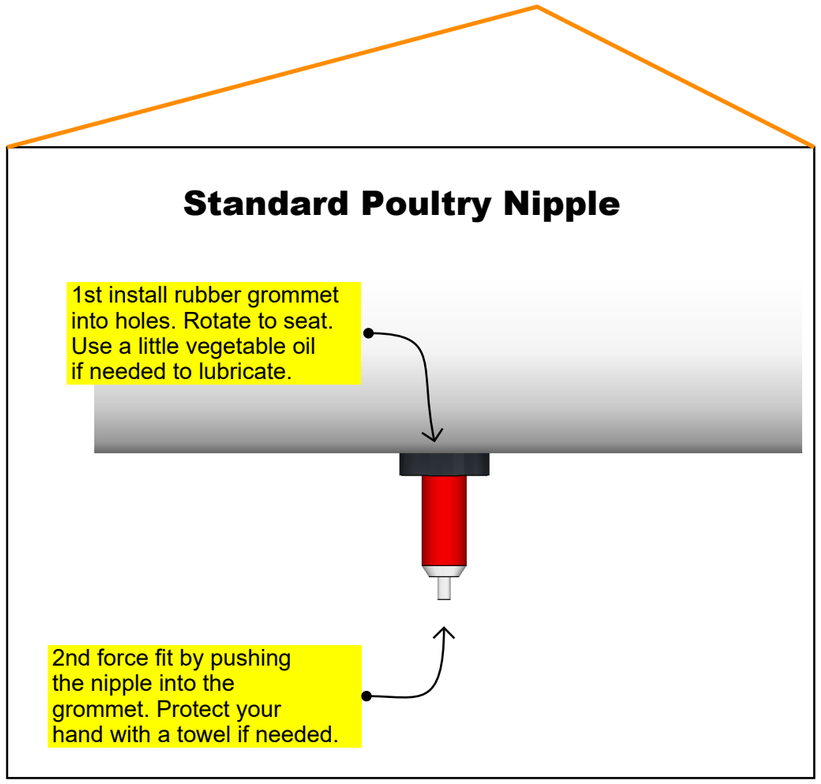
1 Attach waterer support brackets using 8 T25 screws (water is heavy) as shown in the positions as indicated. Remove the top slide in the front wall of the storage shed rest one waterer in place and using the level make sure waterer is level. Replace top water slide.



Poultry nipples are illustrated installed but will actually be installed in the next step.

Install the poultry nipples you ordered with your kit.

1 **Roll waterers over in their brackets and install all poultry nipples as per the illustrations below. Whether you ordered freeze guard or standard nipples, the process is basically the same.**



Optional Freeze-Guard Poultry Nipple

1 Open included water soluble non-toxic lubricant and dispense a small portion onto your finger.

2 Smear a small amount of lubricant onto upper body of the Freeze-Guard Poultry Drinker™.

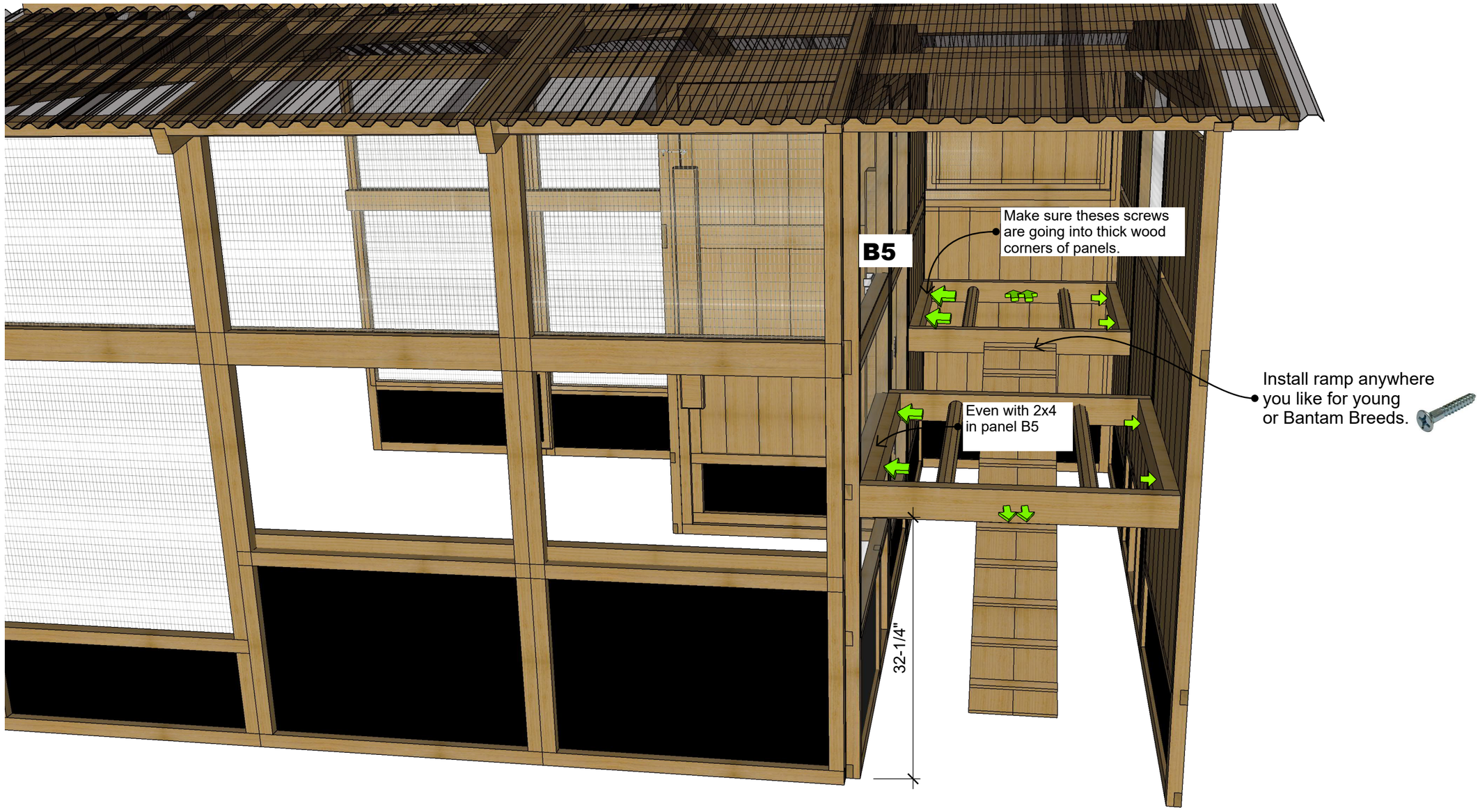
3 Applying even pressure, force Freeze-Guard Poultry Drinker™ into pre-installed black rubber grommet until fully seated.

4 Showing properly installed Freeze-Guard Poultry Drinker™. Remove and reinstall using same method if you are taking your waterer out of coop.

Lets set up the Roost Bunks for your chickens...

1 Roost bunks are one piece units. You can install bunk units at any height you want but we tested the coop with them set at 32-1/4 inches from ground and the ramp length is designed and built for this measurement. This height is easy for an adult non bantam breed chicken to just jump to the roost with no ramp and is a happy medium for weather protection and ventilation if roost wall doors are dropped down. Whatever height you decide, we suggest they be equally high.

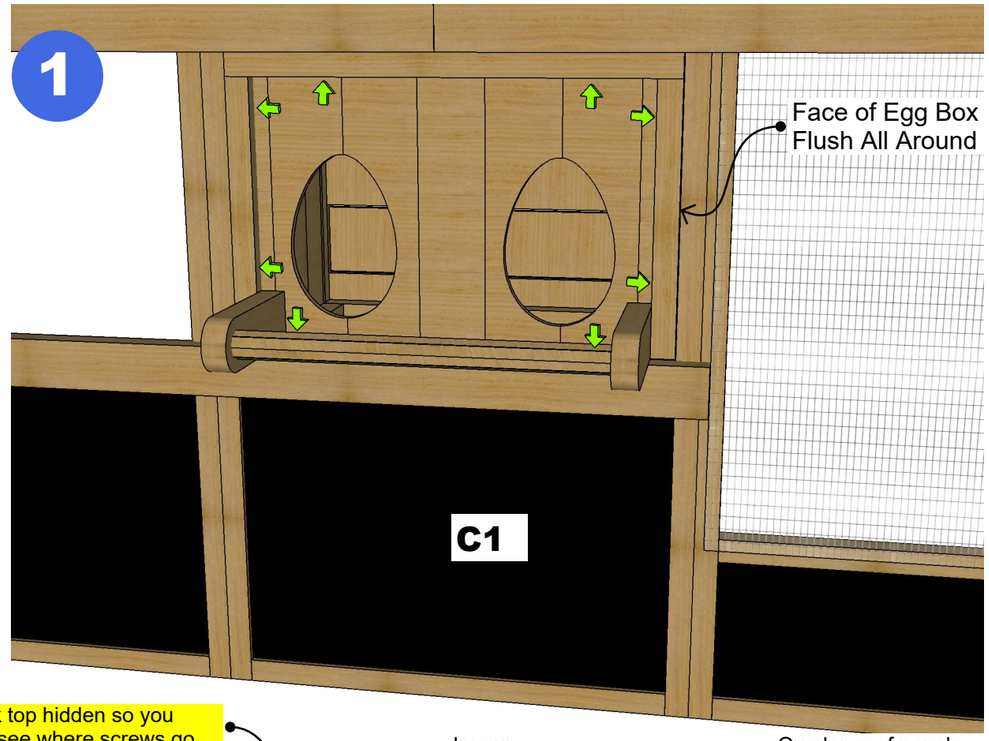
Please pay notice that all screws drive into 2x2 or 2x4 wood. Make level.

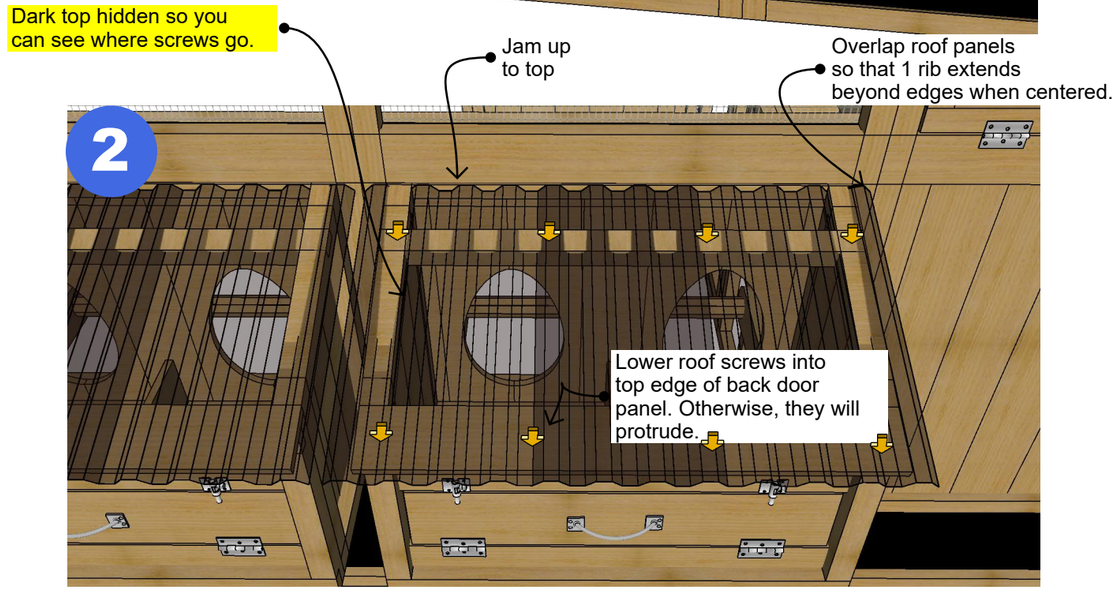


Egg boxes install as pre-fab assemblies into the openings in the C1 panels...

1. Insert egg box units into openings in C1 panels mounting them with 6 T25 3" screws as illustrated. "Shoehorn" them in a little if needed.

2. Install roof panels using roof screws and driving them through dark tops of egg boxes into wood as shown. Dark tops are required so that no light comes in. Chickens will in part instinctively lay eggs in a dark spot. Cozy counts too. Insert provided egg box liners. Liners are designed to be able to clean, and not be so comfy that chickens sleep in egg boxes or get broody. They go in, do their business and make room for the next hen.

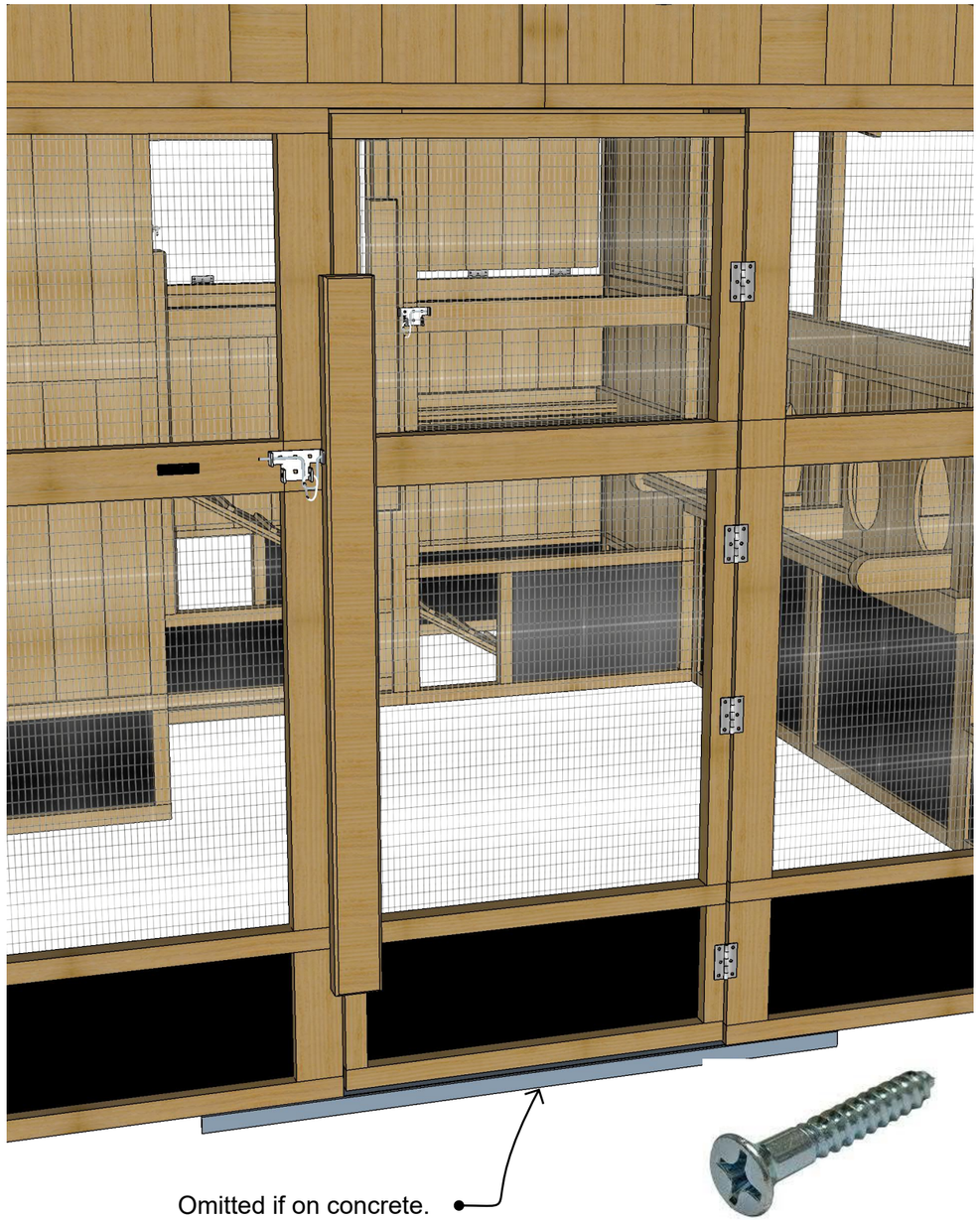


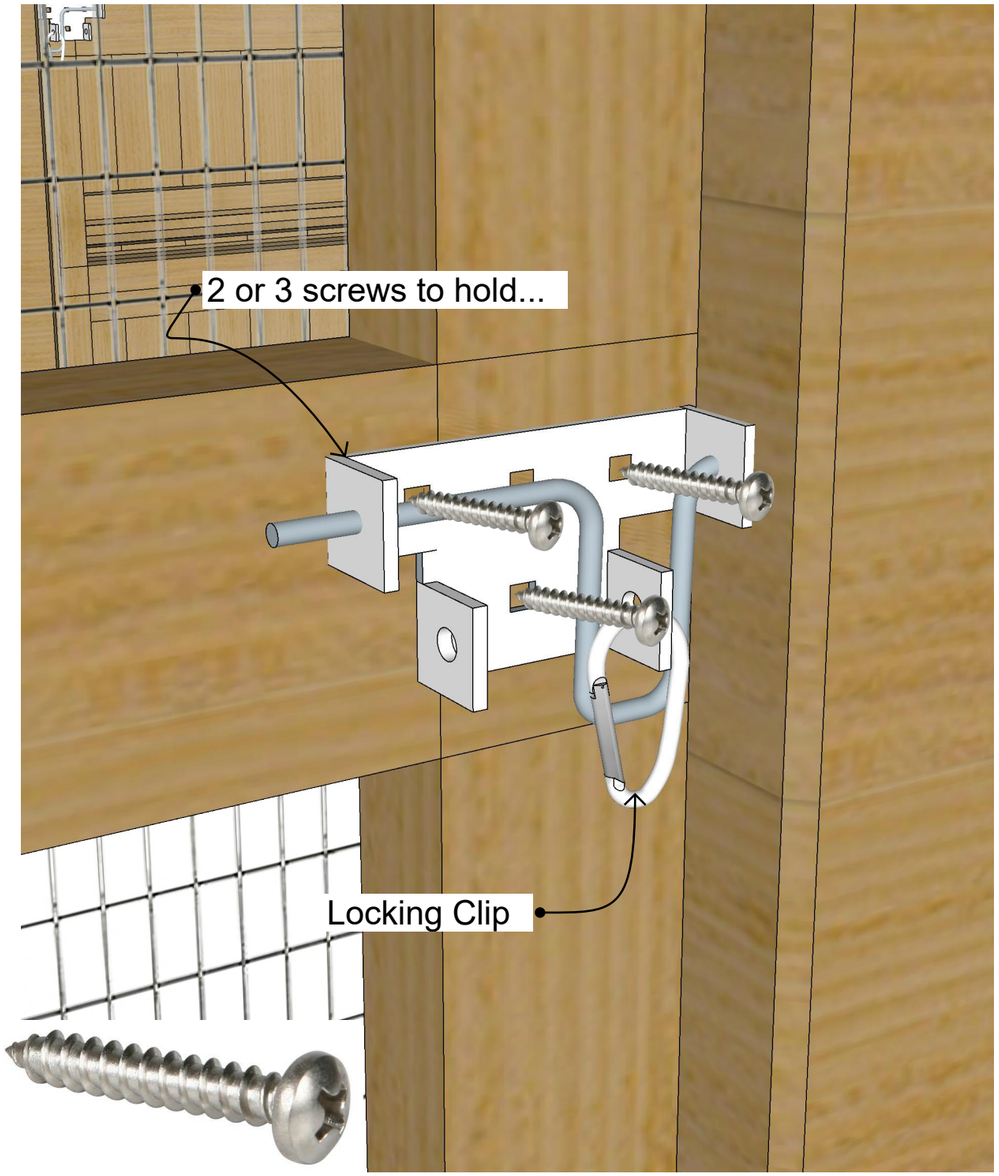


Time to install the front door...

1 Front door hinges are pre-attached to the door and the screw holes for other half of the hinge are pre-drilled in the right door frame. Starting off with the very top hinge and top screw, use provided Phillips head screw and install. Install snug, don't overtighten and strip wood. Switch the bottom screw on the bottom hinge and install and make snug. Switch back and forth from top to bottom installing all screws snugly making sure door stays straight. When confirmed aligned straight, tighten all screws tight, but don't strip out wood by over tightening. Door handle serves as handle, door stop, door stiffener, and catch for gate lock.

Install gate lock with larger pan head Phillips screws as indicated such that it freely goes in and out of hole provided in door handle.

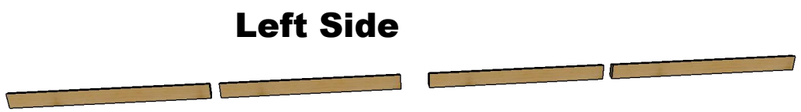




Install Bird Stop...

1 Using a tape measure, identify the various pieces of bird stop and install on top of exterior wall panels using T-25 screws as indicated in the positions between trusses and gables. They fit snug. It may require a tap with a hammer. More than taps... you've probably got the wrong piece or it may require a trim.

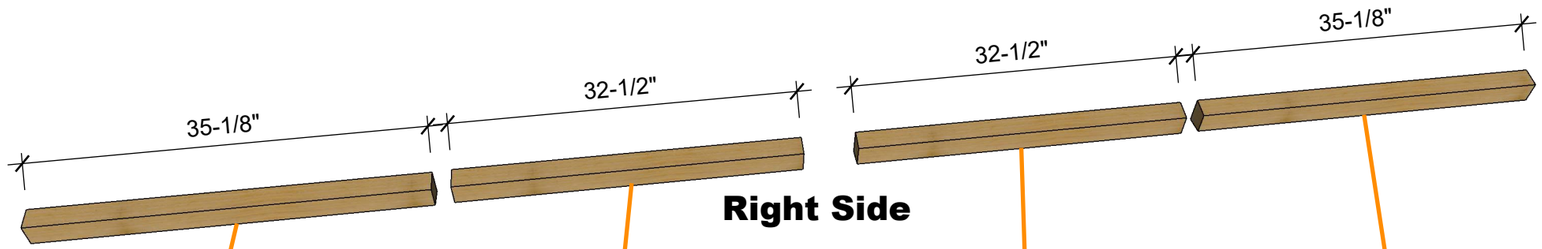
Beveled edge on tops of boards sit under roof line and flat bottoms on top of walls. Left and right sides are mirrors of each other. Screws drive up through the top rails of side panels into the bottoms of the bird stop.



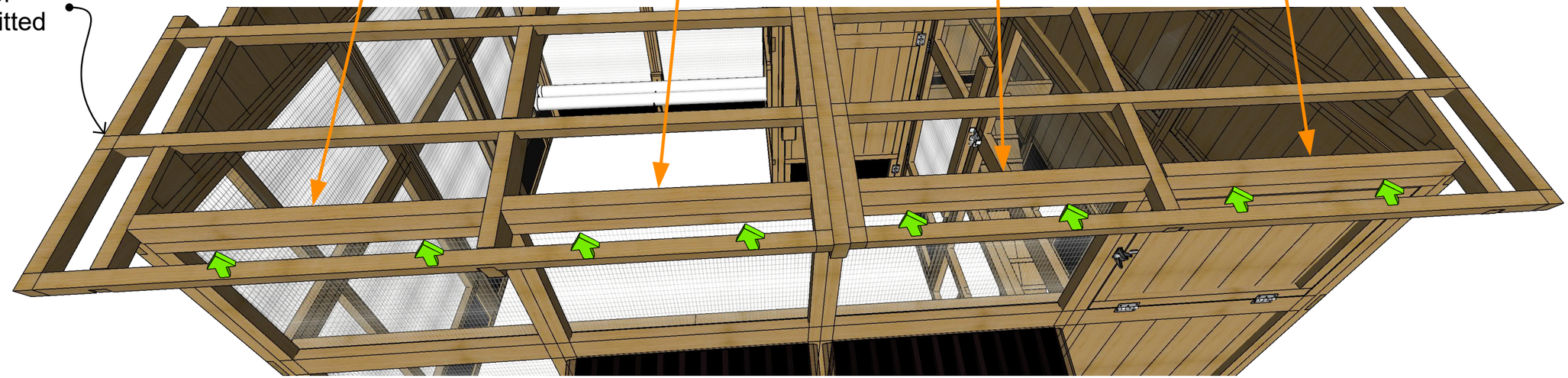
Left Side

Back

Front



Right Side



Your coop comes standard with two high quality automatic doors...

Operating Concept - See provided manufacturers instructions for details, but here is an overview. Two doors are provided, one for the roost back and one for the roost entry. Both doors are outfitted with photo sensor eyes. If the program to the doors are not modified, they will each open automatically at sunrise, and then perform a close at sunset with their "second chance" function. Idea of back door is a turnout door, and front door as a second line of dense to a predator. This arrangement could also allow you to grow out one set of younger birds in the coop, and turn out older birds during the day. Both doors are operated by one battery and a solar panel to keep the battery topped off.

Kit Contents:

(1) 5W Solar Panel - attached wire in loom | bracket | two rare earth magnets

(2) Right Hand Swing Doors - attached wire loom

(1) SLA Battery - included battery box

(25) Wire Clamps - includes clamps and screws

(2) Factory Hardware Envelopes - programming magnet | instructions | screws | fuse

You cannot let the rare earth magnets used to hold the solar panel in place to touch each other. They're powerful and often shatter if allowed to hit each other and can pinch your finger to the point of bleeding. They attach to the solar panel bracket through the roof and allow it to be held in place without drilling any holes in the roof.

Door Outside Coop On Back Wall

1 Install each door in the indicated positions using the included manufacturers provided mounting hardware and for the moment carefully lay the wire on the ground next to each door.

Do not overtighten screws such that a bind would be placed on the doors but make them only tight enough to be firmly held in place.

Door Inside Coop On Mid Wall

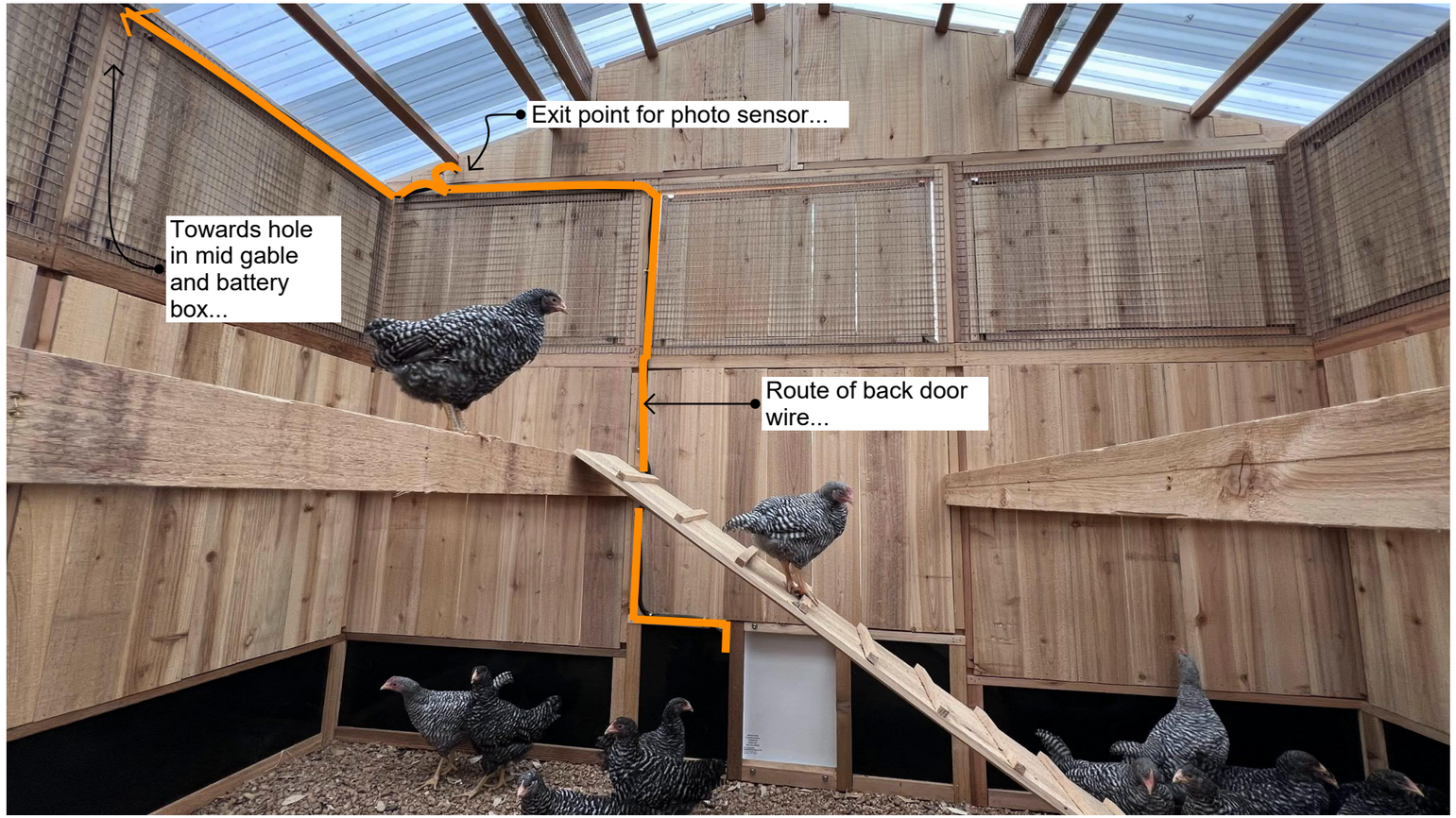
2 Route the wire on the back door first through the hole in the right black panel (illustrated) and then up and along the wall towards the location that the battery box is situated.

At about the 7' mark the photo sensor eye exits the main wire loom. Place it through the hole in the Back Gable as illustrated so that it can get outdoor light.

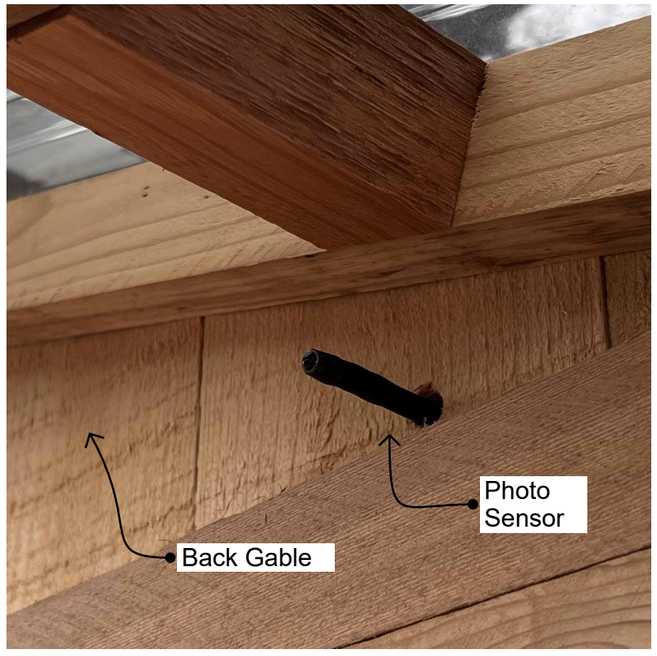
Use a clamp every 24" or so and in corners to hold the wire in its loom firmly.

See collection of illustrations and photos.

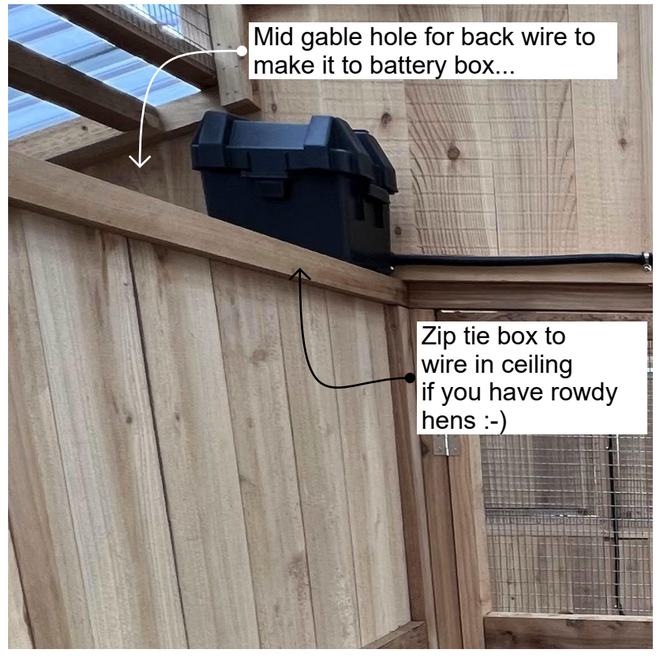
Be a little bit gentle pulling the wire so as not to break it.



Back door photo sensor exit point...



Battery box sits on top of shed ceiling...



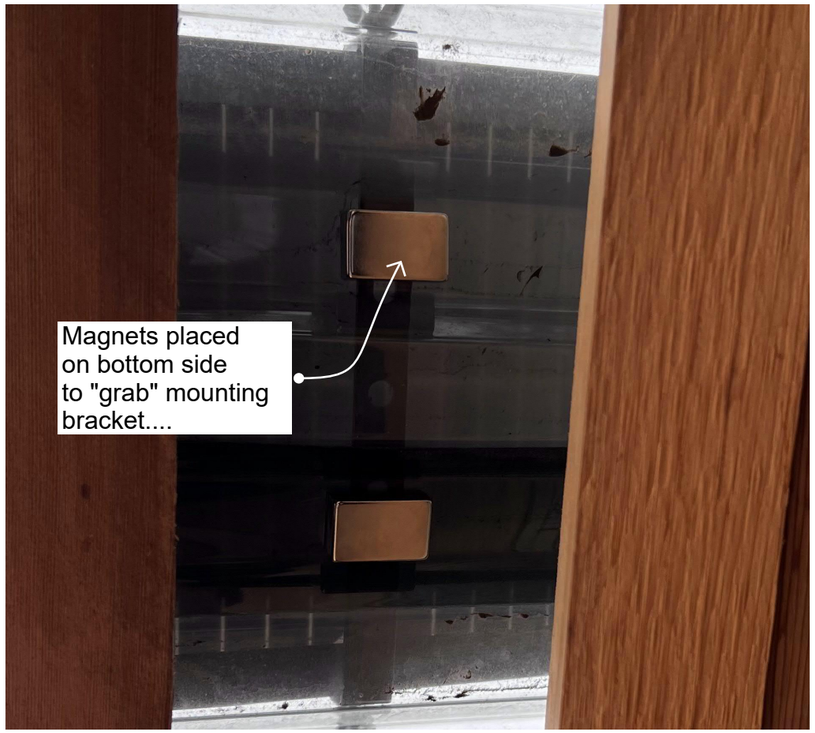
roost&root®
Find your inner farmer.

Assembly Instructions
Heritage Model 12
Chicken Coop™
V1.0 Spring 2024

5.1 Automatic Door Kit | Back Door

3 Route the wire for the mid door as indicated and then up and along the wall towards the location that the battery box is situated. At about the 7' mark the photo sensor eye exits the main wire loom. Place it through the hole in the side of coop as illustrated so that it can get outdoor light. Use a clamp every 24" or so and in corners to hold the wire in its loom firmly. See photos to assist you. Be a little bit gentle pulling the wire so as not to break it.

4 The solar panel is held in place by magnets. Route the wire of the solar panel under a roof rib near the battery box and lay on roof where it faces the sun. From the underside, attach two of the rare earth magnets under the roof where they magnetically hold the solar panel bracket in place. Make sure the bracket is a little bit loose so that it lays down flat on roof ribs and allows the magnets to get a full "grab" on the bracket.



5 Attach Negative Wires - (1) attach the black wire piggy back terminal connector of the solar panel to the negative terminal of the battery. (2) connect the piggy back black wire of one of the doors to negative side of solar panel piggy back. (3) connect remaining negative (black) wire from second door to negative side of battery too.

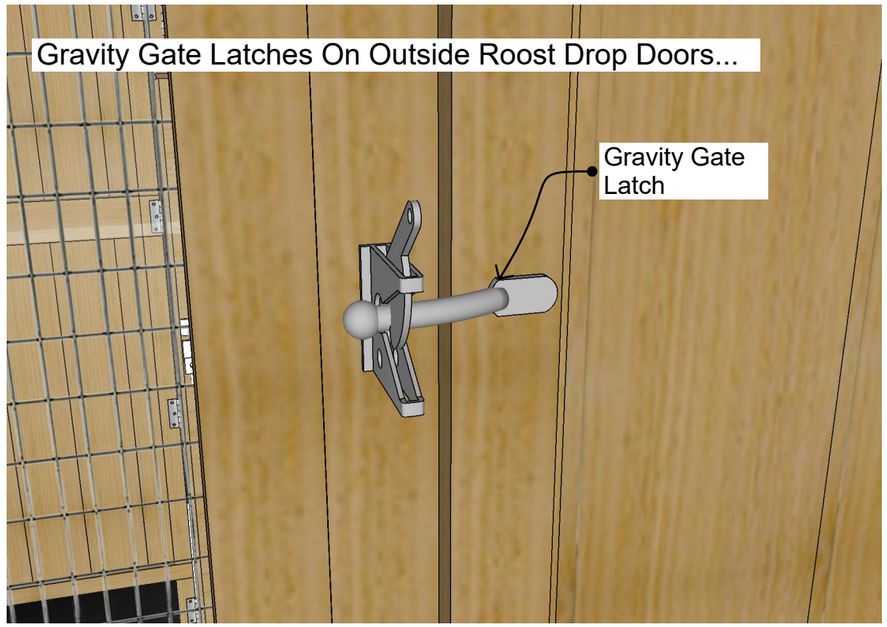
6 Attach Positive Wires - (1) Attach the red fused lead provided to the positive terminal of the battery. (2) attach the red wire piggy back terminal connector of the solar panel to the fused lead terminal. (3) connect the piggy back red wire of one of the doors to positive solar panel piggy back. (3) connect remaining positive (red) wire from second door to positive side of battery too. **Don't let wires of solar panel touch each other once it is placed in the sun as it is producing electricity.** Excess wire can be rolled up and carefully stored inside of battery box.

To operate doors follow the instructions as provided by the manufacturer. You can also go to www.chickendoors.com

Piggy Back Connector

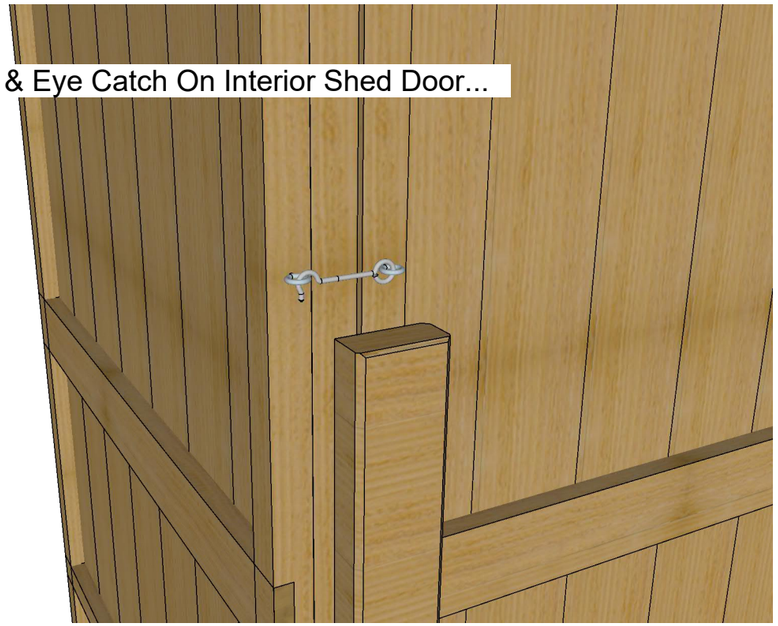
Install the various door latches as required. Align for smooth operation...

Gravity Gate Latches On Outside Roost Drop Doors...

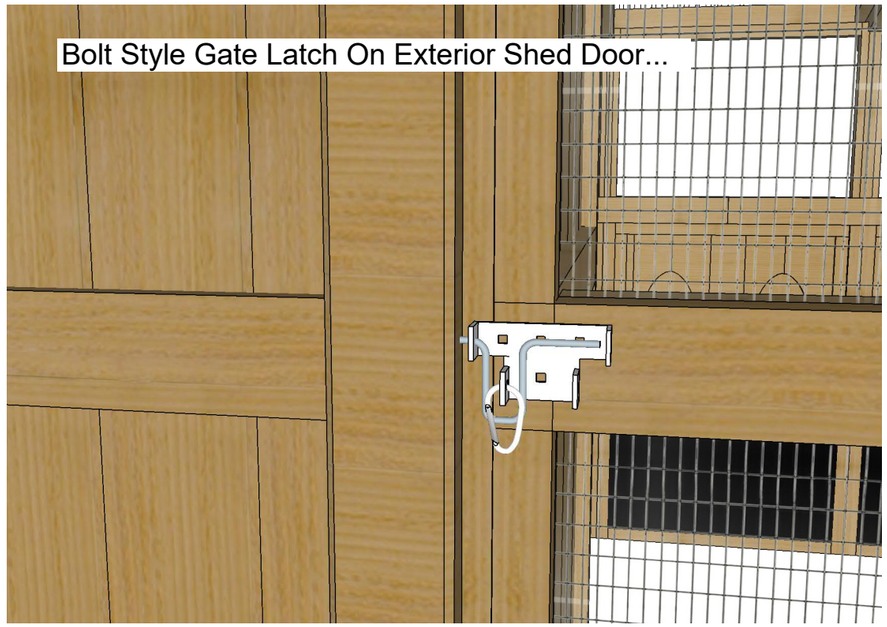


Smaller pan head screws are for gravity gate latches.

Hook & Eye Catch On Interior Shed Door...

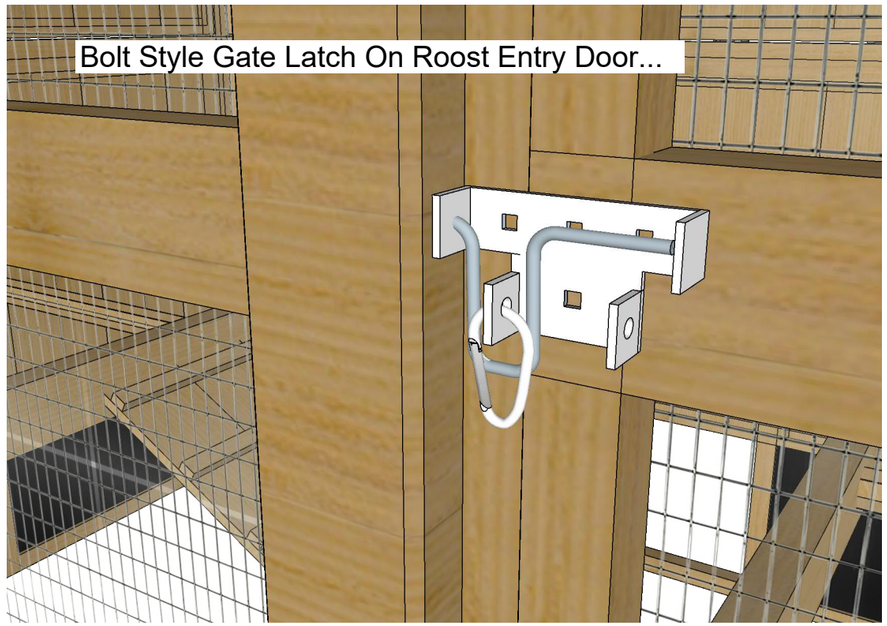


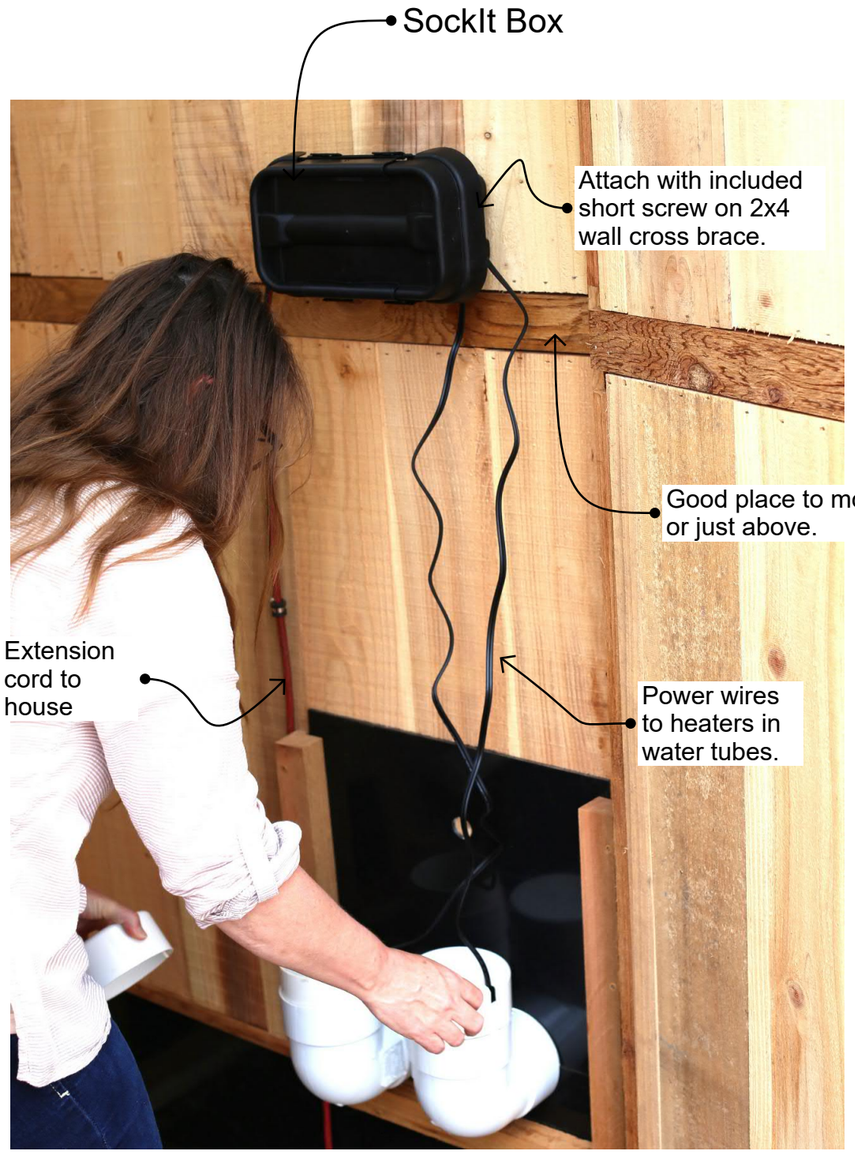
Bolt Style Gate Latch On Exterior Shed Door...

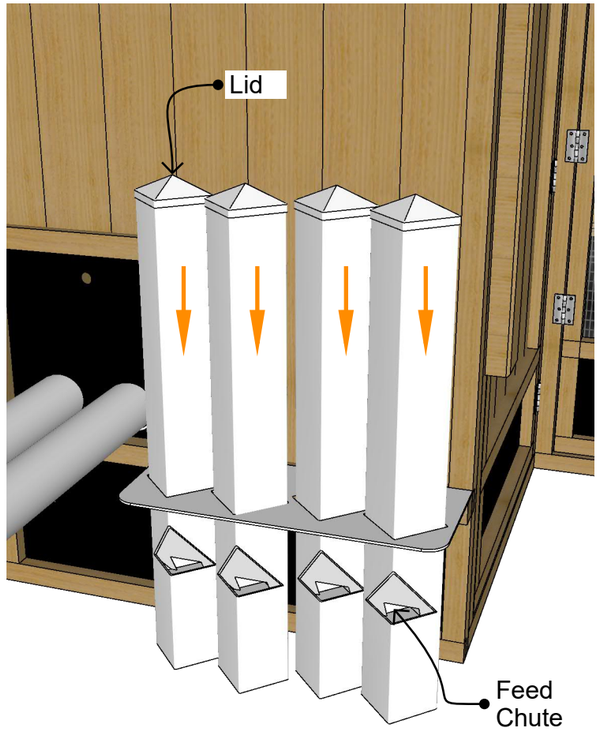


Larger pan head screws are for bolt style gate latches.

Bolt Style Gate Latch On Roost Entry Door...







The included SockIt Box is attached the shed wall above the waterers. It is designed to give a safe out of the way place to connect an extension cord to two NOT PROVIDED immersible water heaters that your waterers will accept. See our website or call to learn about what heaters will be good for your model and your area. If you do not live somewhere where you expect to want to heat the water, you may omit.

Your coop comes with either one Coop Worx bulk feeder or a quad arrangement of our Easy Fill² feeders.

The Coop Worx feeder is a bulk system that holds a week or so of feed but takes up run space. The Easy Fill² feeders hold a 3 or 4 day supply of feed (long weekend) and has the advantage of spilling less and taking up much less run space.

Place the Coop Worx bulk feeder in the run of the coop and follow the manufacturers instructions for use and assembly.

If you have the Easy Fill² feeders attach the feeder support bracket as indicated in the above illustrations and then drop the feeders into the bracket. Fill with either crumbles or pellets for use. If they were to clog from humidity they can be removed and jostled to reestablish feed flow.

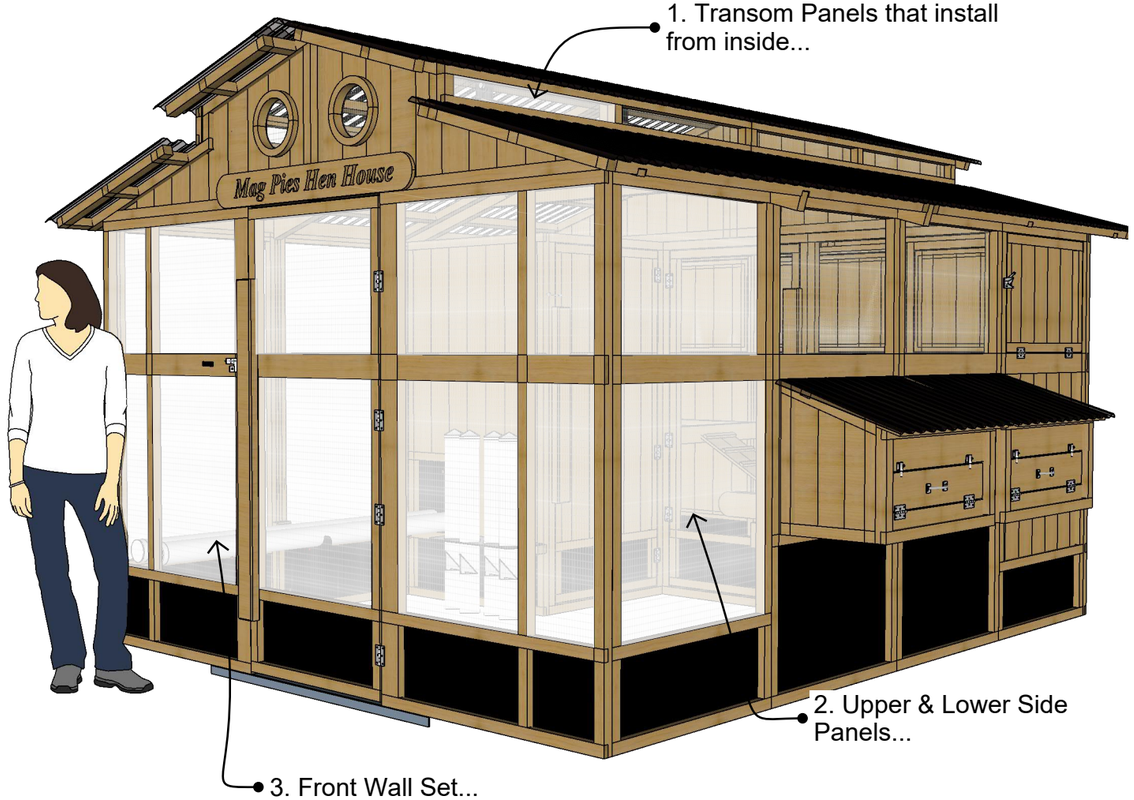
Optional Storm Panels Concept Overview

The primary purpose of storm panels is sub zero wind protection and helping to keep snow accumulation inside your coop to a minimum. They can also be used in regions that recieve monsoon wind driven rains to limit wind driven rain as well. We focus on "cold" in these instructions, but for whatever reason you decide to use the panels, the procedure is the same.

It's key to remember... regional appropriate adult chickens are very cold hardy. Your first move when nights begin to dip below about 20°F in the fall is to control the weather in the roosting compartment at nighttime with the flip up doors on roost panels. Each year your chickens will go through a process to add winter feathers. If you interfere too much with protecting them from the cold they will not add as much protection as they naturally would. Wet Sub-Zero conditions is mostly what you're trying to protect from... and undesirable accumulations of too much snow that creates too much of a mess. Chickens that are mostly dry and who can seek wind protection can easily deal with even sub zero temperatures. Sub -20°F temperatures for fully feathered adult chickens is where the needs begin to protect from frostbite. Every year we talk to customers whose chickens make it through even several nights of -30°F without dying. If you expect weeks of sub -20°F temperatures that don't warm up during the days you would want to take some measures to provide supplemental heat. ONLY USE HEATERS AS A LAST RESORT AND ONLY HEATERS THAT ARE DESIGNED FOR CHICKEN COOPS.

* If you live somewhere with a long cold season you may also want to research the deep litter method of creating warmth in the winter. The black HDPE lower side panels on your coop are perfect for this method.

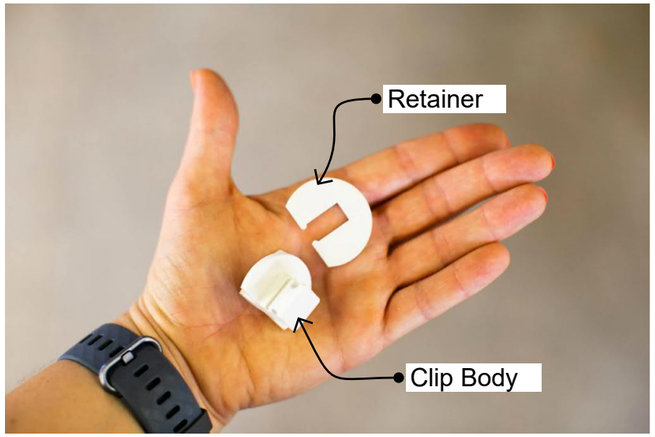
Your coop requires a large number of panels to be applied to enclose it. The goal is to put them on once per year, and take them off in Spring. They fit loosely so that there is still adequate air flow but knock out the vast majority of wind and snow. There are 4 types of panels provided.

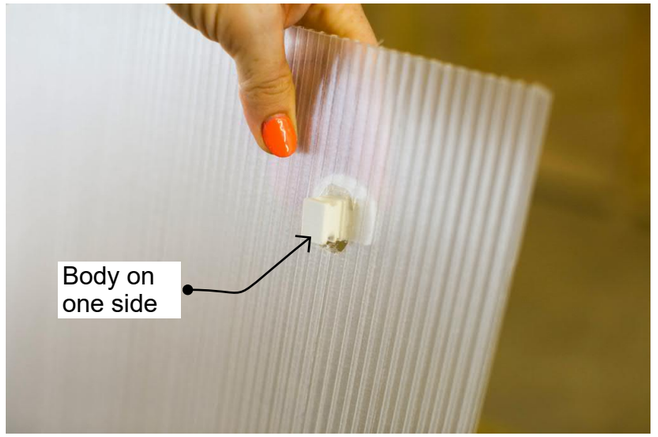


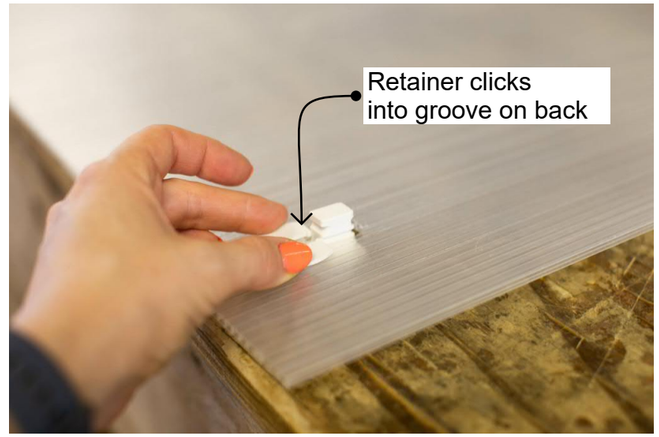
Depending on your model, the front and mid walls are the same but the number of transom, upper and lower panels will vary.

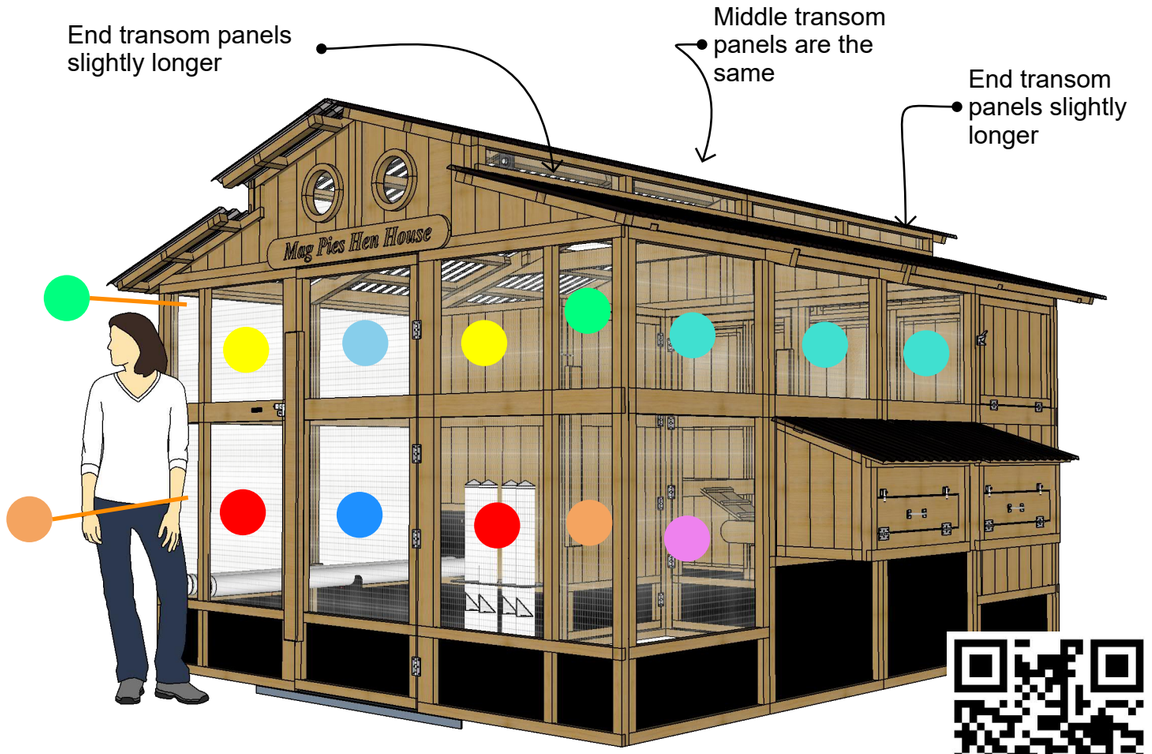
Install twist lock clips onto storm panels.

1 Storm panels are held in place by a two part 3D printed clip that once installed stays on all panels. The first thing you need to do is install all of the clips onto all of the panels. Again, depending on the model, there could be quite a few.









Color coded diagram indicates those panels that are the same and that are unique.

Install Video

All 5 panels on the mid wall are unique.
* Note that panels allow for about 3/16 gap all around for manufacturing tolerances and ventilation.