BOOTSTRAP FARMER

# UNIVERSAL END WALL AND DOOR KIT

Add A Door to Your High Tunnel or Caterpillar Tunnel

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Thank you for choosing Bootstrap Farmer for your farm's equipment needs.

Our Universal Endwall and Door Kit is manufactured with 100% American Made steel and aluminum for maximum strength and durability.

Our team strives to provide quality products that are built to last.

From all of us at Bootstrap Farmer, we thank you for putting your trust in us.
-BSF

Contact Us
(888)-406-1982
contact@bootstrapfarmer.com

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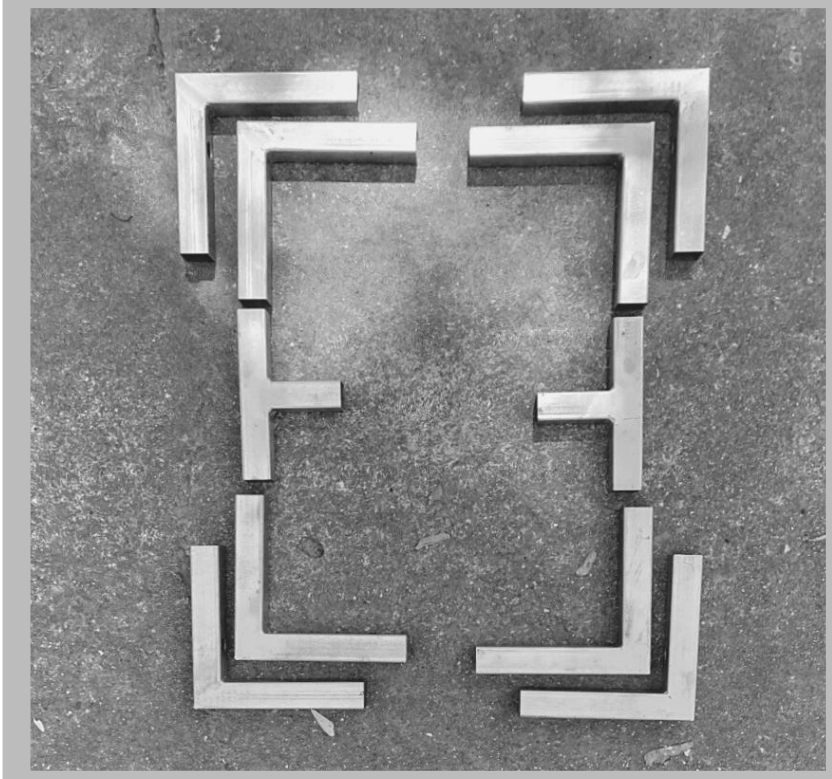


# TOOLS LIST

## RECOMMENDED:

- Door shims
- Drill
- Ground post driver
- Level
- Line Level
- Clamp
- Marker
- Metal-cutting saw, grinder, or hacksaw (if you are installing on a 12' wide or smaller structure)
- Step ladder
- Clamp
- String or mason line
- Tape measure
- 5# sledge hammer
- 7/16" wrench, socket/ratchet, adjustable wrench
- 7/16" deep dish socket
- 7/8" metal-cutting drill bit
- 5/32nd drill bit

## INCLUDED:

- 5/8" Nut driver
- 1/4" Nut driver
- 1/4" Drill bit

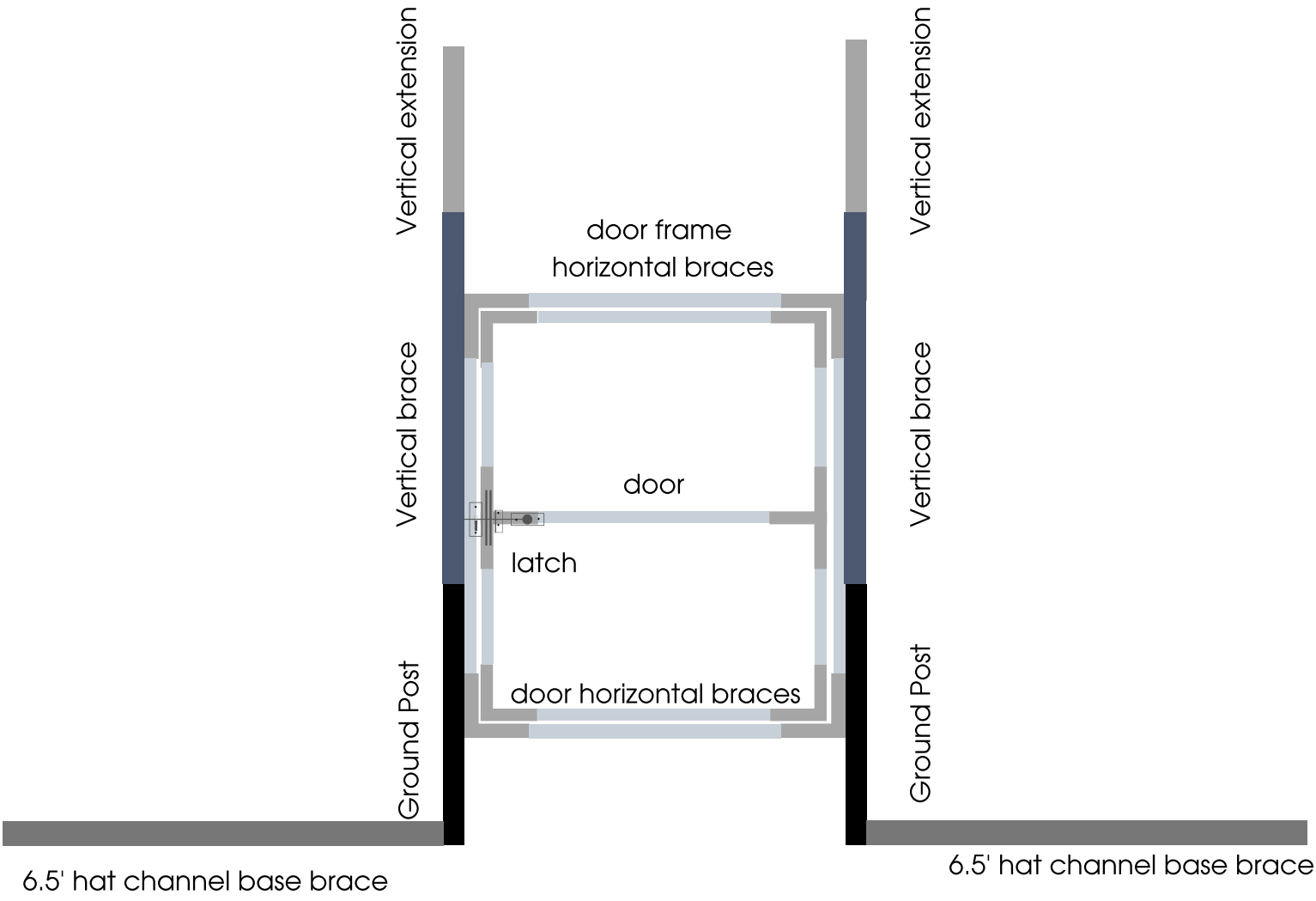
BEFORE BEGINNING INSTALLATION, PLEASE CAREFULLY READ THROUGH ALL INSTRUCTIONS

Unpack shipment and check against parts list to ensure that all materials have been included.

If any discrepancies are noted, please notify us immediately at (888)-406-1982 so we can get parts to you as soon as possible .

For Your Safety: Take all necessary safety precautions with power tools and building equipment. Personal protective gear such as: gloves, eye protection, ear plugs, and closed toe shoes are recommended.

# PARTS LIST




1x Door Latch

4x Hinges

2x Strap


1x Door Mounting Kit


1x End Wall Hardware Kit

Please note: You will have extra self tap screws and 1/4" bolts in the endwall hardware kit.
We use the same kit for our all metal hoop houses

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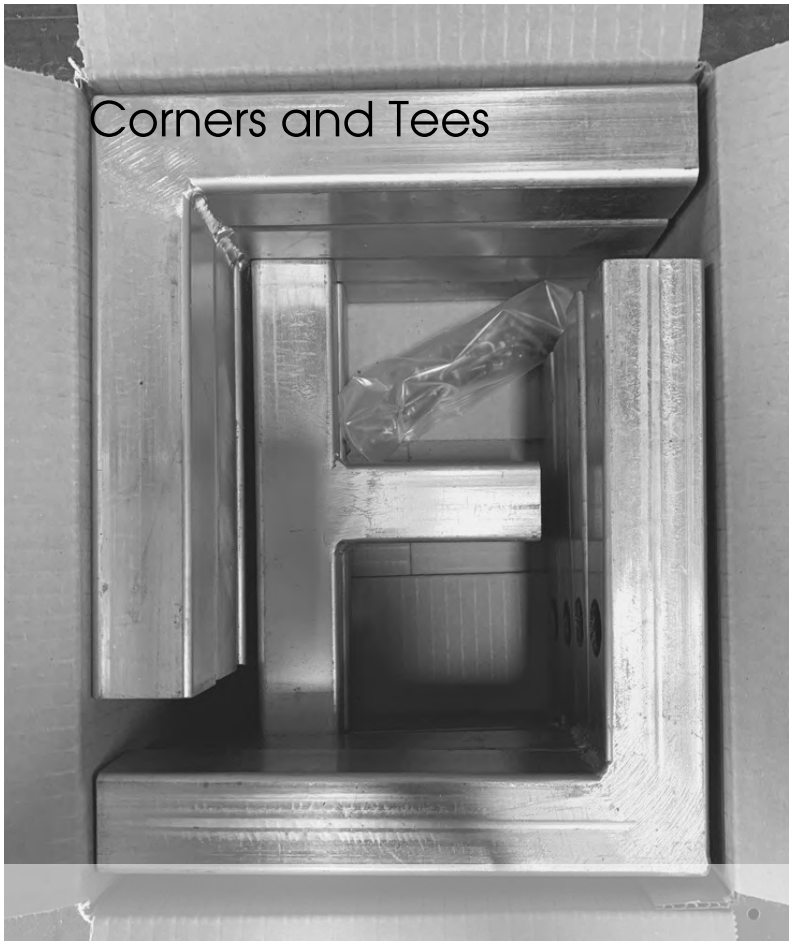
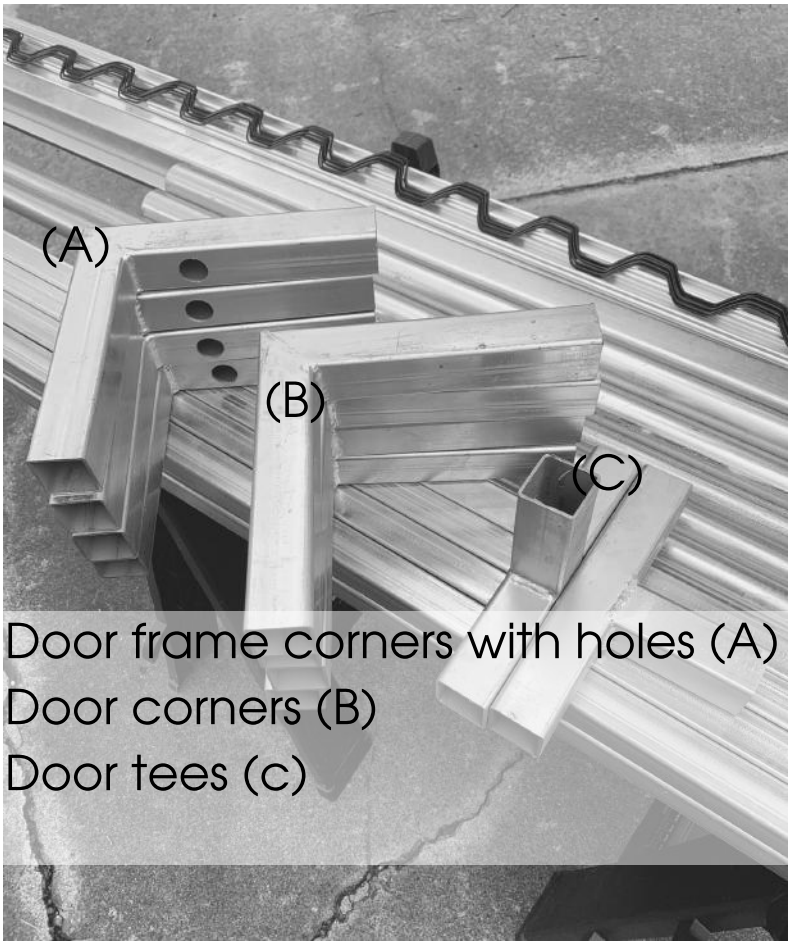
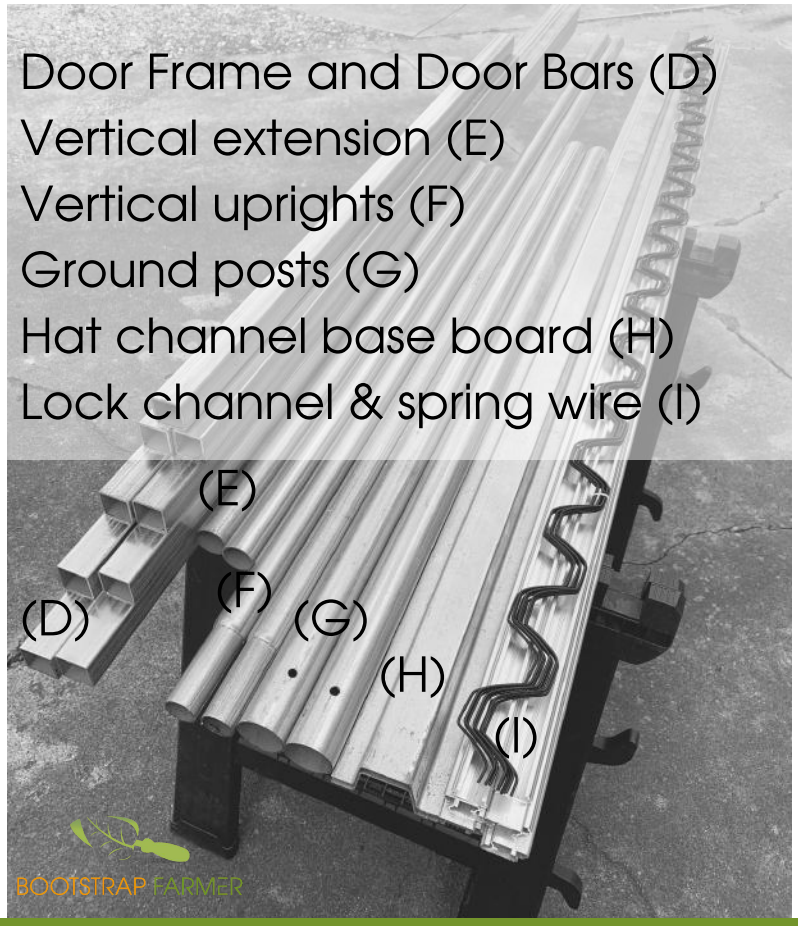
# PARTS LIST


Corners and Tees


(A)
(B)
(C)
Door frame corners with holes (A)
Door corners (B)
Door tees (c)


Door Frame and Door Bars (D)
Vertical extension (E)
Vertical uprights (F)
Ground posts (G)
Hat channel base board (H)
Lock channel & spring wire (I)
(E)
(F)
(D)
(G)
(H)
(I)
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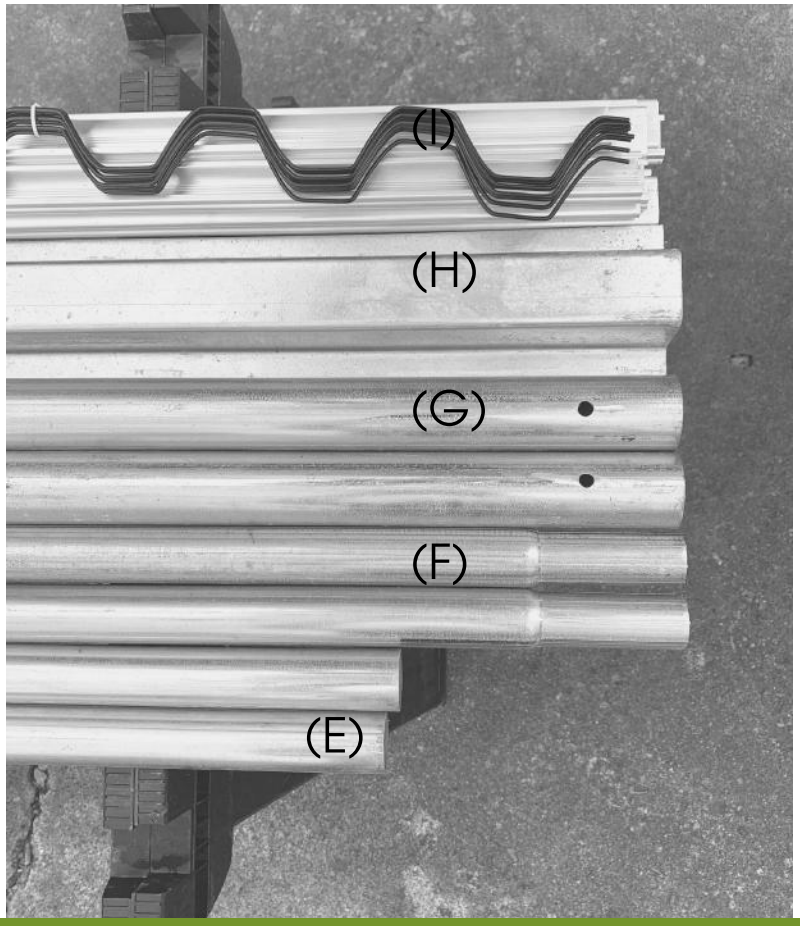
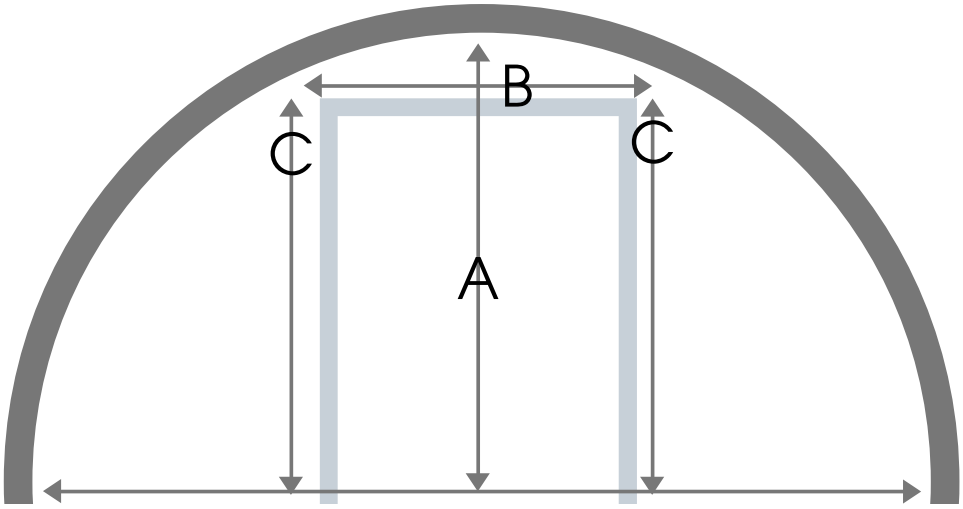

(I)
(H)
(G)
(F)
(E)

# MEASURING

Step 1:  Measure for door size




After finding the center of your arch (A), determine how wide you want your door frame & door.

(B) The door frame can go as wide as 48" (plus 3" for vertical braces and ground posts)

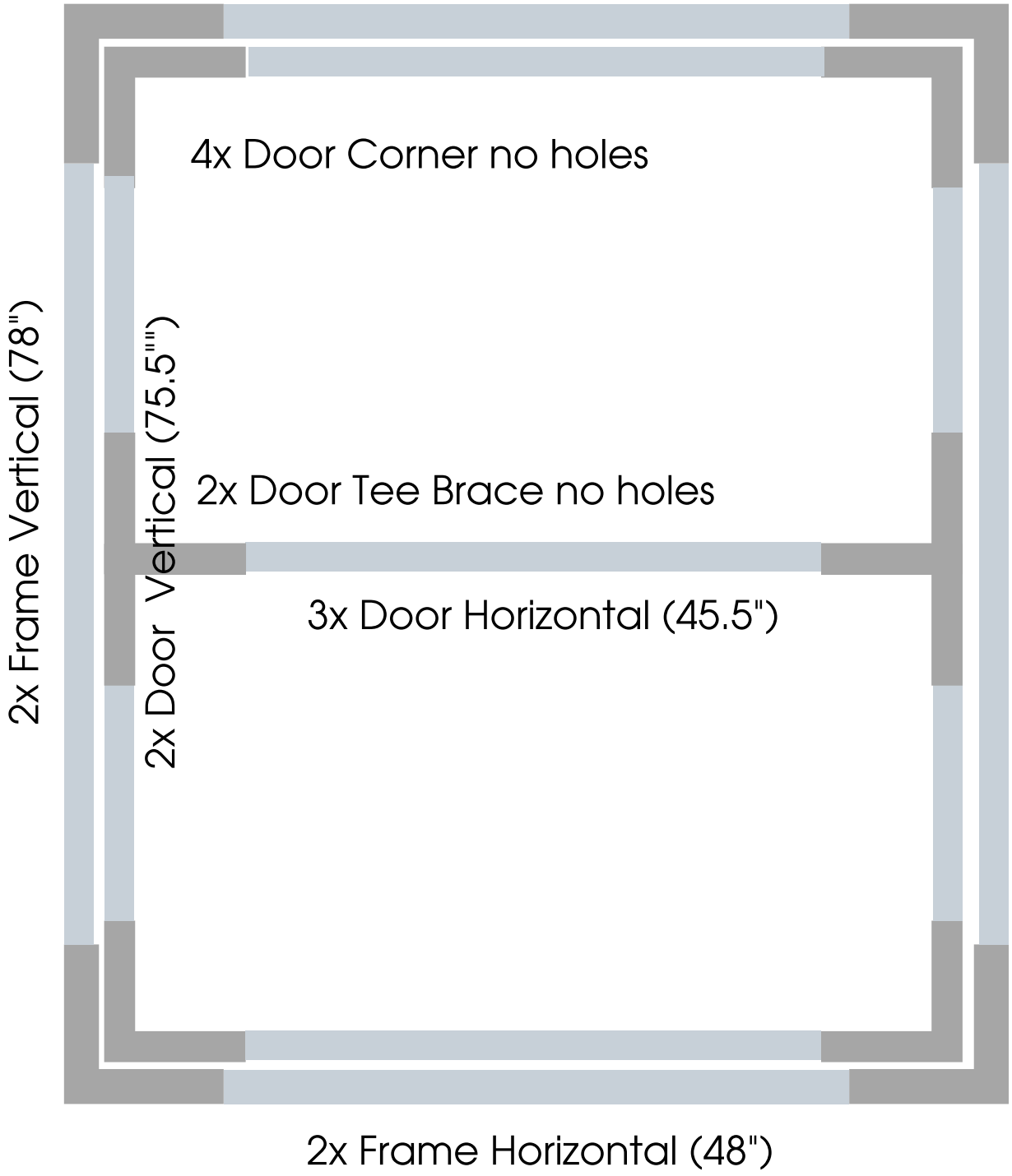
If you are going this wide, make sure you have enough room on your top corners where they intersect with the hoops. (C)

For smaller structures, you may need to the shorten width or height. You can cut either the vertical or horizontal bars.

The door frame is 6' 6" foot tall and 4'3" wide. After cutting door frame to fit, you will need to adjust the two door verticals and 3 door horizontal bars to fit within the door.

# ASSEMBLY

4x Frame Corner w holes



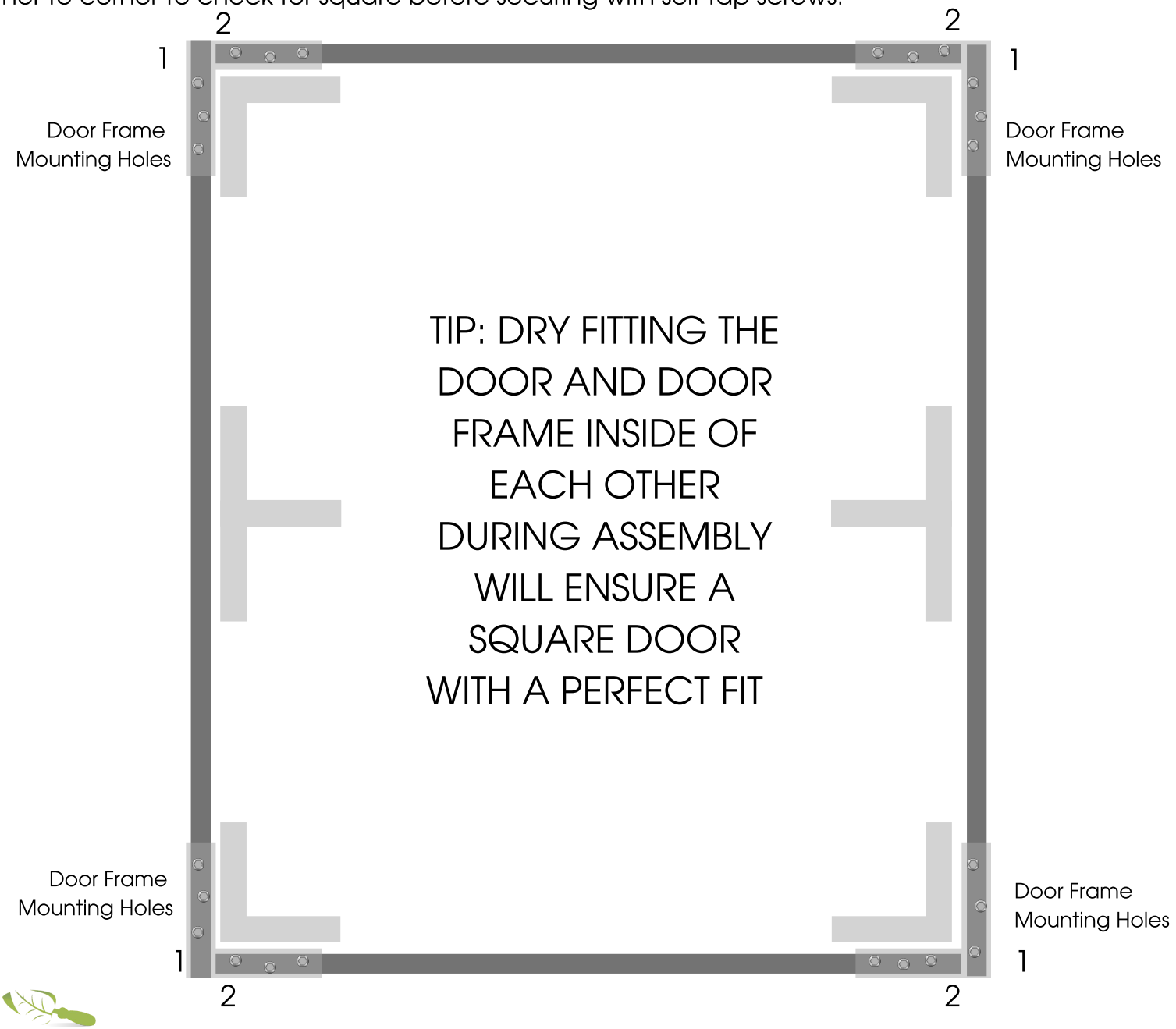
# ASSEMBLY

## STEP 1 ASSEMBLE OR CUT FOR DOOR FRAME SIZE

Horizontal and vertical bars fit inside door frame corners. Note the order and placement.
Door frame corners have the mounting holes that will face out and to the side.

## STEP 2 ASSEMBLE DOOR FRAME

As you place the bars inside the frame, use the provided #8 self-tap screws to secure the corners to the bars. Stagger the alignment of the screws. The bolt heads will need to be on the back side of the door frame and door. Use 3 self-tap screws.
Start with door frame vertical bars. Place bars all the way inside corner ends. (1)
Next, place the door frame horizontal bars into the door frame corners and push in all the way up against where the vertical bars are secured. (2) This will give you an overall width of 51" Measure corner to corner to check for square before securing with self tap screws.

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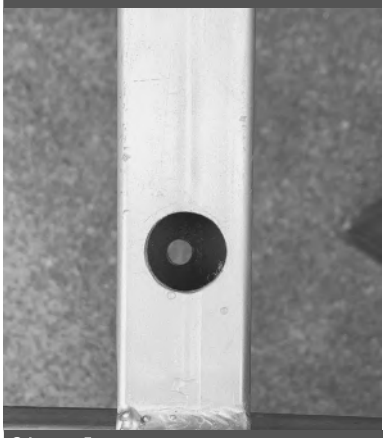
# ASSEMBLY

Door Frame Corner uninstalled mounting hole on sides of door



Step1:
Use 1/4" drill bit, drill from outside to frame to inside making a 1/4" pilot hole centered with larger hole.

Shown with 1/4"x2" HEX bolt going from inside door frame.

Door Frame Corner with vertical bar installed

Shown with 1/4" centered pilot hole

Shown with 1/4"x2" HEX bolt going from inside door frame with deep dish socket. Secures the outter wall to the vertical uprights.

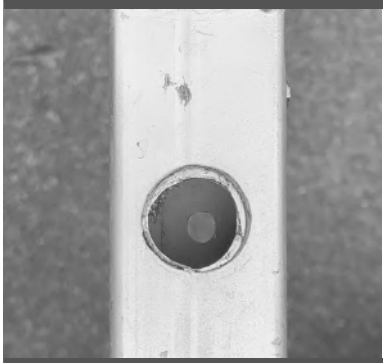
Door Frame Corner back side view with #8 self-tap screws. Showing wide opening

FROM THE INSIDE ON THE FRAME ONLY!!! With the 7/8" drill bit, expand the hole. Do not drill the outside wall.

Shown with 1/4"x2" HEX bolt going from inside door frame with bolt touching inner wall.

Door Frame Corner Showing outside 1/4" opening

Shown with 1/4" centered pilot hole on outer sidewall and 7/8" on inner wall.



Shown with door frame attached to vertical upright.

# ASSEMBLY

## STEP 3 ASSEMBLE DOOR

Horizontal and vertical bars fit inside door corners. Note the order and placement. The placement will be the same as the door frame with the exception of the horizontal middle bar.

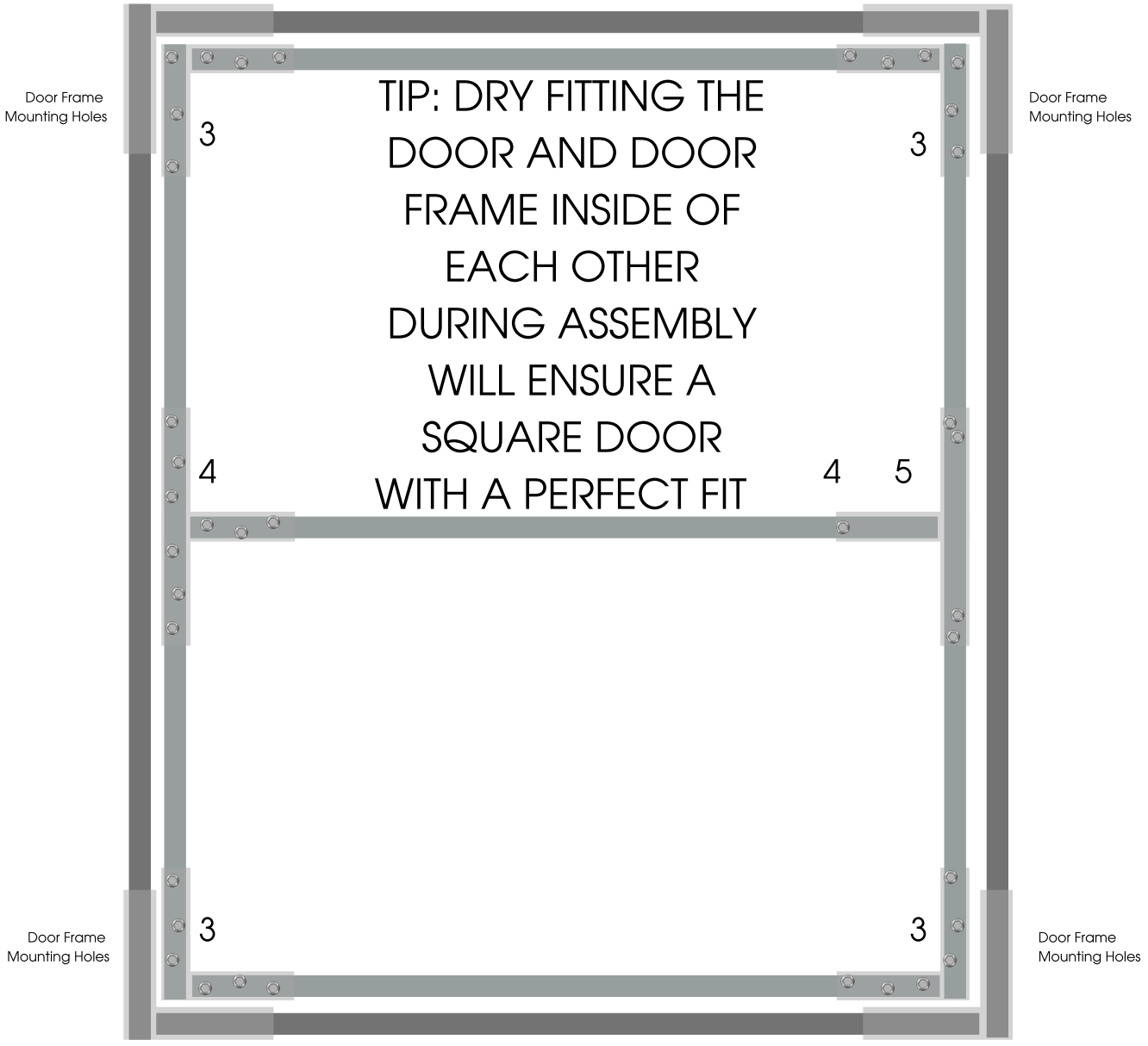
Start with door vertical bars.

First, place a door tee onto the vertical bar. Next, place bars all the way inside corner ends. (3)

Find the middle of the door and slide the tee into place and secure along vertical bar with the same #8 self-tap screws. (4)

Place the door horizontal bars into the door corners and push in all the way up against where the vertical bars are secured. It is best to work one side and then slide the other vertical bar into the 3 bars.

Note: Decide what side you want your door to open (swing) from. Make sure to move self tap screws clear of door latch mounting as seen on the hardware step (p. 14) See example on right hand of graphic below. (5)




NOTE: There will be 3/8"-1/4" gap all around door and frame to allow for heat expansion.

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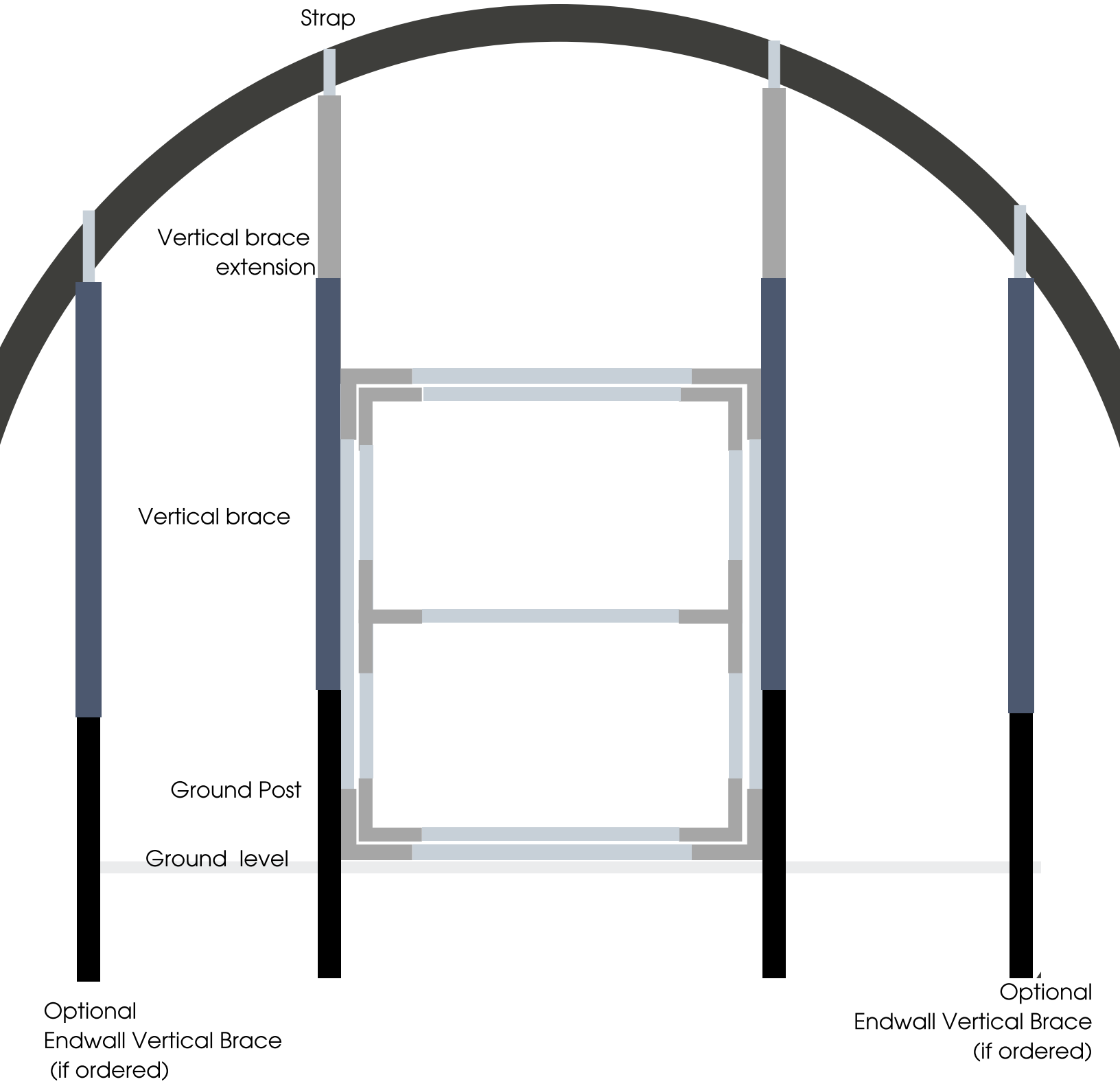
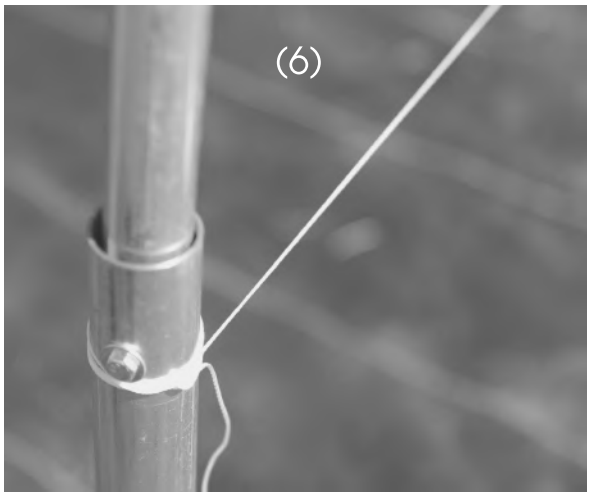
# ASSEMBLY

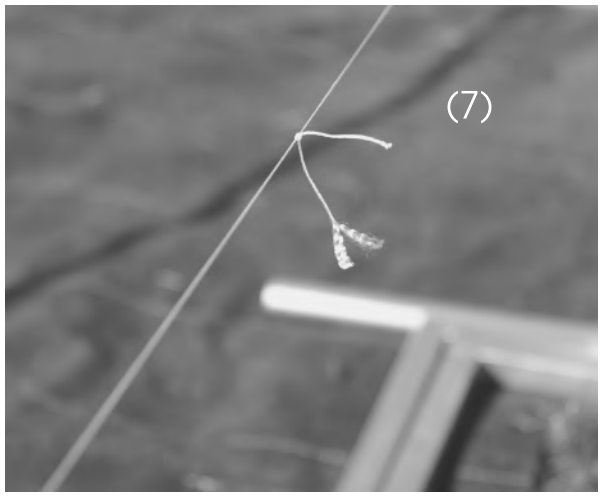
## STEP 4 ASSEMBLE DOOR SUPPORTS

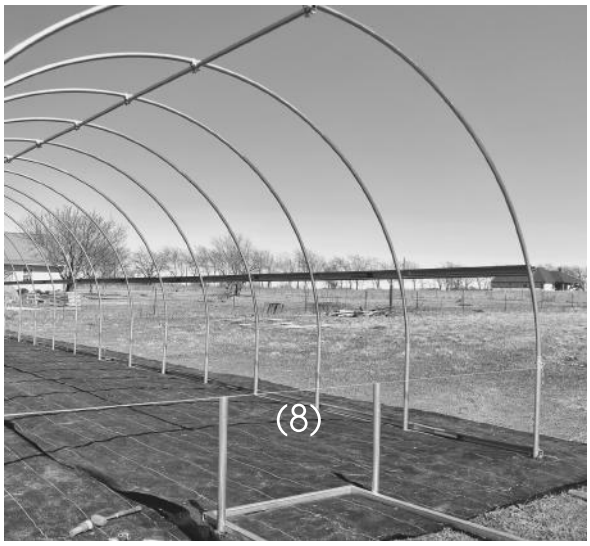


# ASSEMBLY

Place the assembled door frame on the ground with the bottom even with the hoop and the self-tap screws facing up. (backside of door frame)
Check  the hoop for plumb to ensure that it is perfectly vertical before installing the end wall.
Run a string line in front of the hoop (6).
Level the string and mark the center of the hoop. (7)





Using the door frame as a guide, place the ground posts to the side of the frame and against the string (8).

Use a level to plumb the ground post as you drive the post with the ground post driver and sledge hammer into the ground 2' (9).

NOTE: Orient the pre-drilled hole to the side of the door.  (parallel with end wall)
You should not be able to see the hole if standing in front of the structure.

# ASSEMBLY

Insert a vertical extension onto the swage of a vertical upright.  Secure with a #8 self-tap screw. You will do this twice for each side of the door frame.

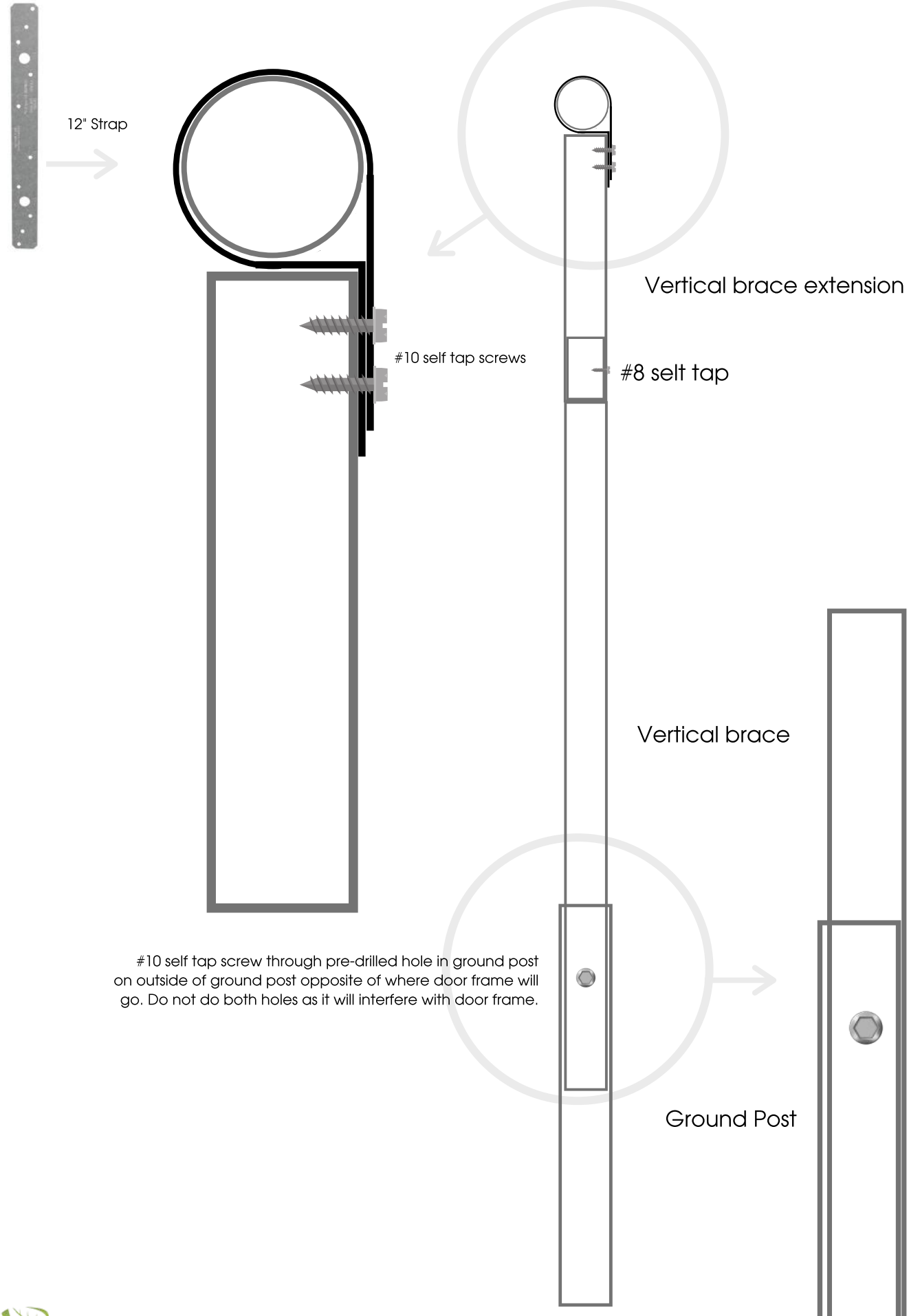
Insert the vertical pole into the ground post.

While on a step ladder, wrap the 12" straps around your hoop for new construction. For existing retrofitting of caterpillar tunnels you can slip the strap between the lock channel and hoop.  In some instances you may have to loosen the lock channel, but in most cases removal of the lock channel/plastic is not necessary.

While checking for plumb, raise the pole up in the ground post until the top of the vertical extension touches the bottom of the hoop.

Form the strap around the hoop until both ends of the strap are oriented along the back of the vertical pole.

Use a 5/8 in. nut driver in the drill a #10 self-tap screw (the larger included self-tap screws with the washer) on the inside of the hoop along the back of the vertical pole.




#10 self tap screw through pre-drilled hole in ground post on outside of ground post opposite of where door frame will go. Do not do both holes as it will interfere with door frame.

# ASSEMBLY

## STEP 5 MOUNT THE DOOR FRAME & DOOR

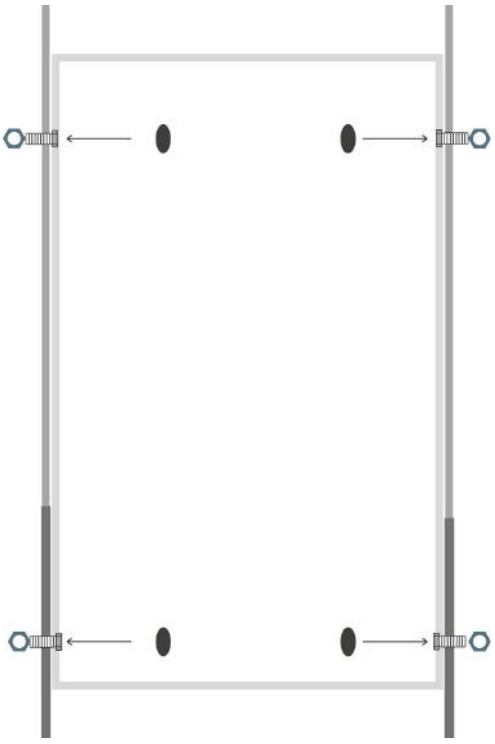
You can now stand up your door frame inside of the vertical braces. Remember, the #8 self-tap screw heads will face the inside of the hoop house. Check for plumb and make any adjustments needed. Once you do that, place a final #10 self-tap into the back of the hoop and strap.

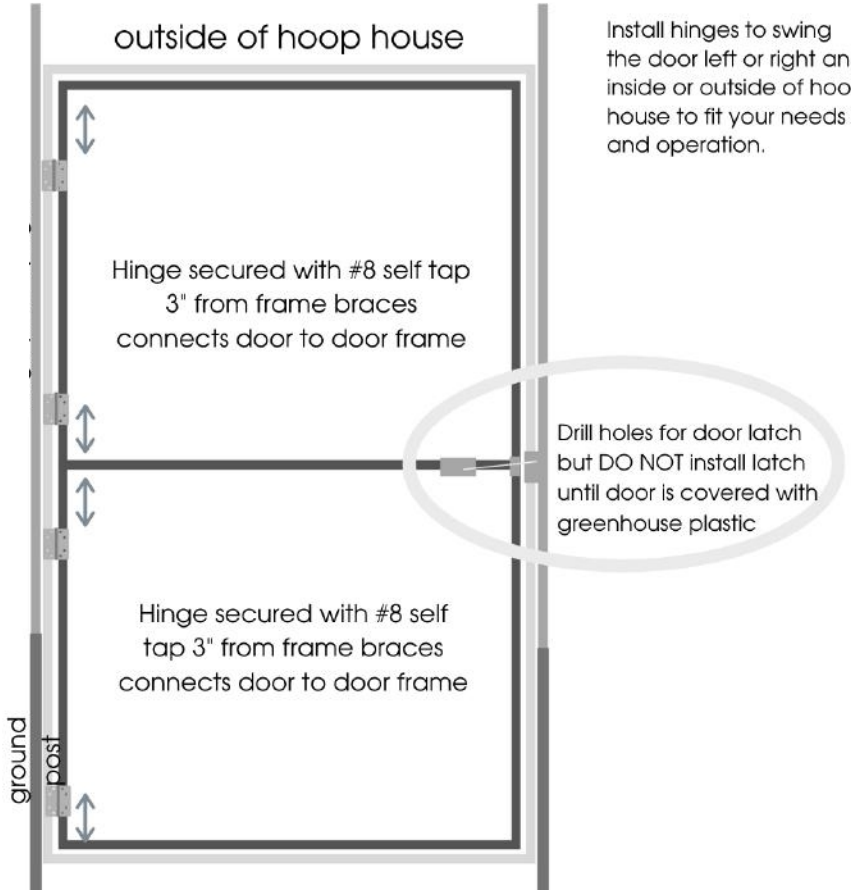
Using the holes you made in the bars & corners from step 3 (pg. 7), drill a 1/4 hole in alignment with door frame holes through the vertical braces.

Remember to come from the inside of the frame through the 1/4" hole you just made in the vertical brace when securing the door frame to vertical brace with the 1/4"x2" hex bolts, washers, lock washer, and nut.

Next, stand up the door while keeping the bolt heads on the inside of the structure. Use two door shims along the bottom to allow space to prevent drag when operating the door. Place the 4 hinges on the left or right on the outside of the door and secure with the #8 self-tap screws. Use 6 self-tap screws per hinge (3 per hinge leaf). You will find it helpful to pre-drill the hinges with a 5/32nd drill bit.

Drill the mounting holes for the door latch but do not install until plastic or door covering is installed. See next page for mounting hole placement.



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# Hole mount reference for door latch install

Fit the latch and mark mounting plate locations with a marker for future lock channel installation.

## Door latch install

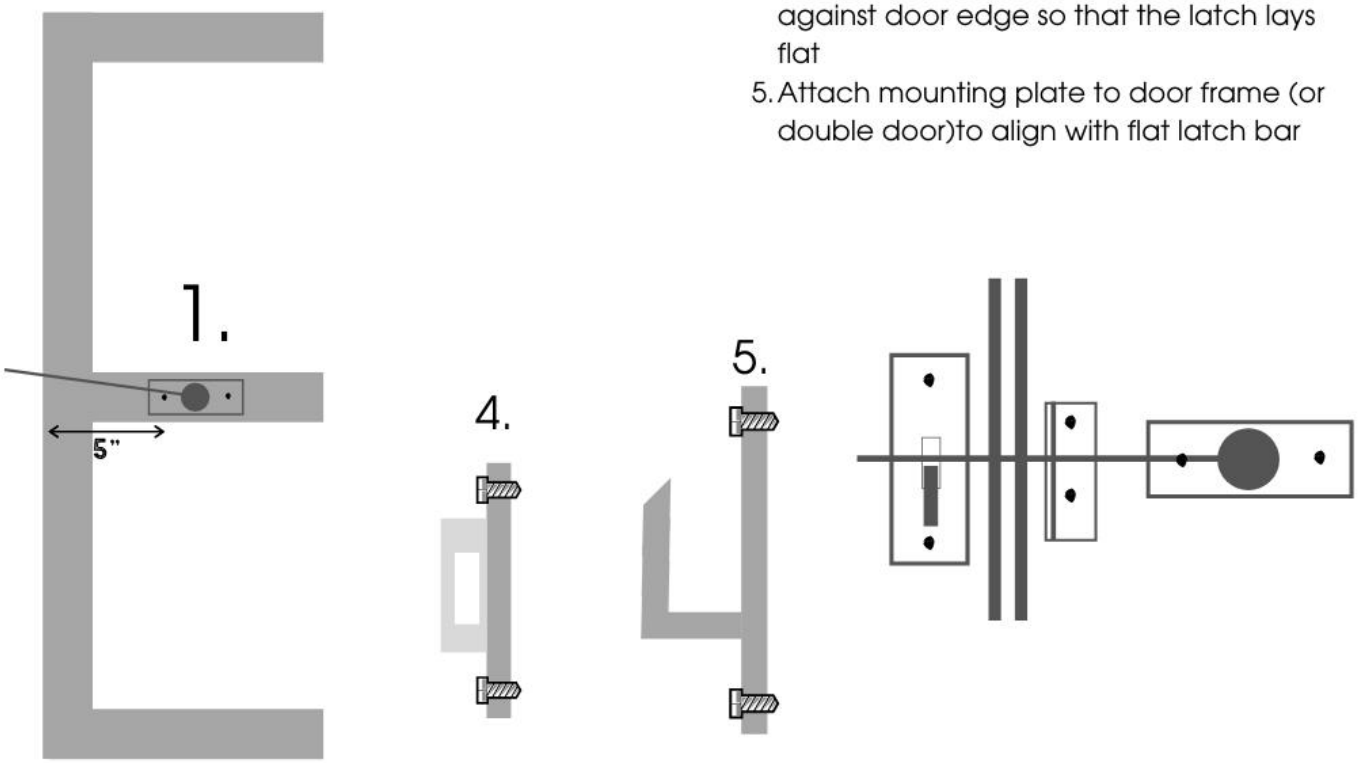
This step is done AFTER plastic is on

Tools

1/4 drill bit
7/8 drill bit
10MM sockets or adjustable wrench (will need two)
1/4" driver for #8 self tap

Steps

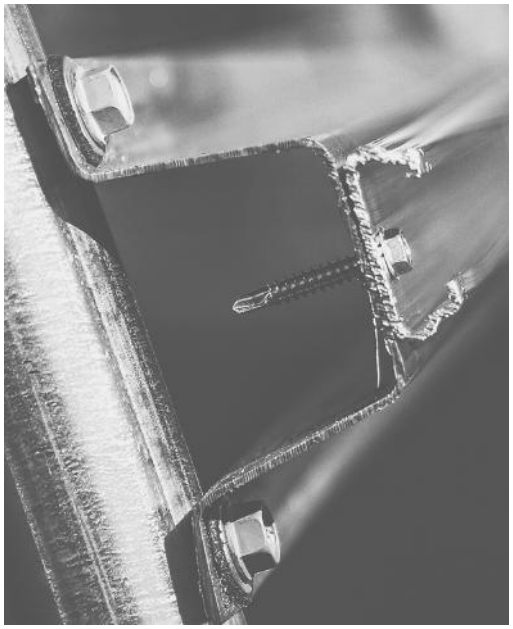
1. Drill a 7/8 hole 5" from door edge and right in the middle of door frame center brace
2. Thread latch through hole and align plate horizontally mark holes
3. secure with provided 1/4"x3"bolts, nuts, and back plate. Use 10MM socket/wrenches
4. Mount door latch with #8 self tap screws against door edge so that the latch lays flat
5. Attach mounting plate to door frame (or double door)to align with flat latch bar



# STEP 6 MOUNT HAT CHANNEL BASE BRACES

For structures up to 16' wide, the included two base braces will span from vertical door uprights to the hoop. Simply install with #10 self-tap screws along the base ears.

For wider hoop houses, order additional hat braces and splices needed to span the width of your structure. Secure seams with the splices on the back side of the hat channel. Overlap the lock channel, layering as seen in the pictures below. For this process you will use #8 self-tap screws.

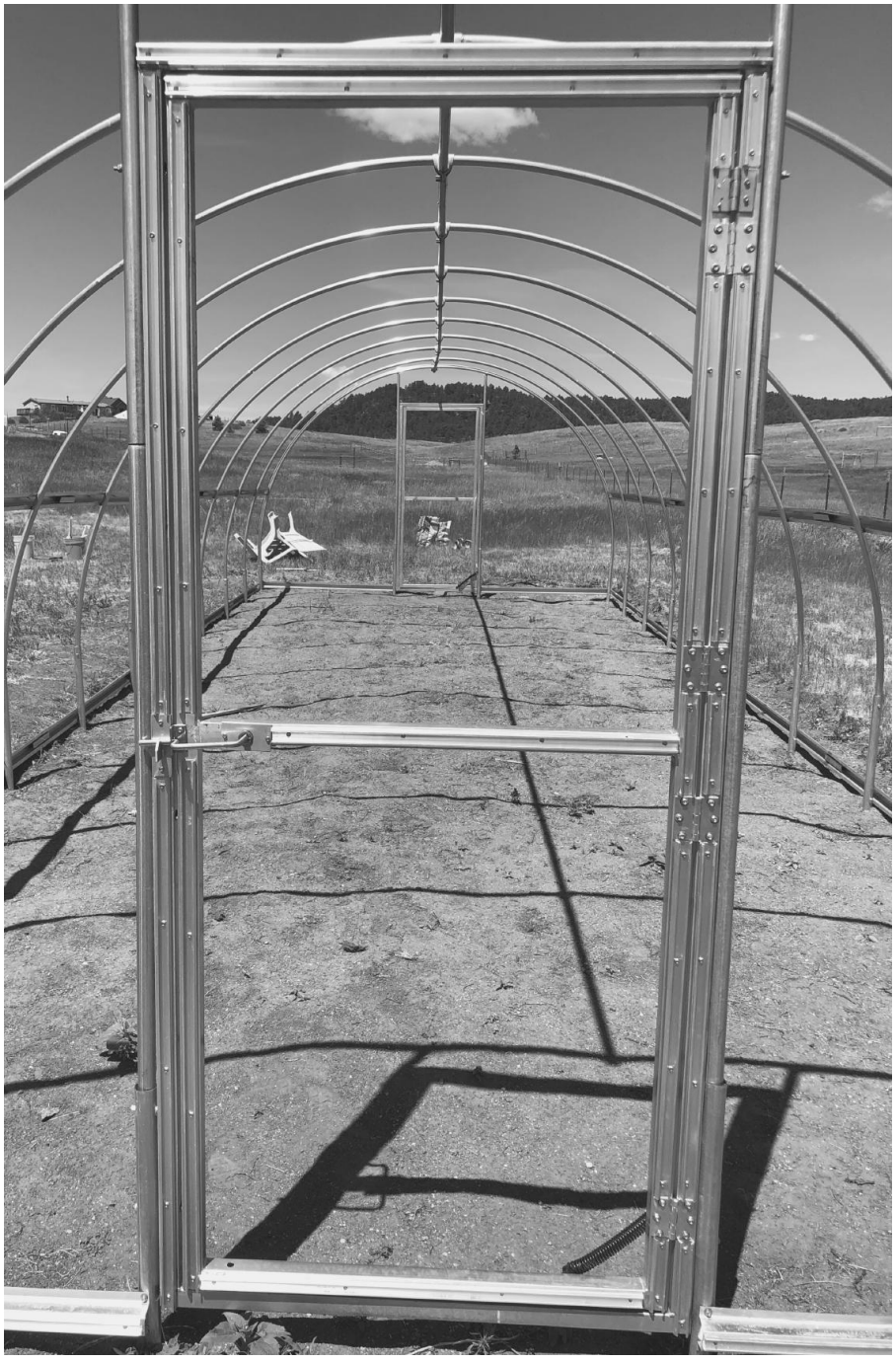


# ASSEMBLY

## STEP 7 MOUNT LOCK CHANNEL ON DOOR & DOOR FRAME

Cut the aluminum lock channel and secure it to the door frame and door on the outside face of the square tubing. You will start on the corners and span the corners, tees, and bars with single pieces cut to fit as shown below.

Use #8 self-tap screws. Start 2" from each end and place additional screws approximately every 16"-18" along the middle of the lock channel.



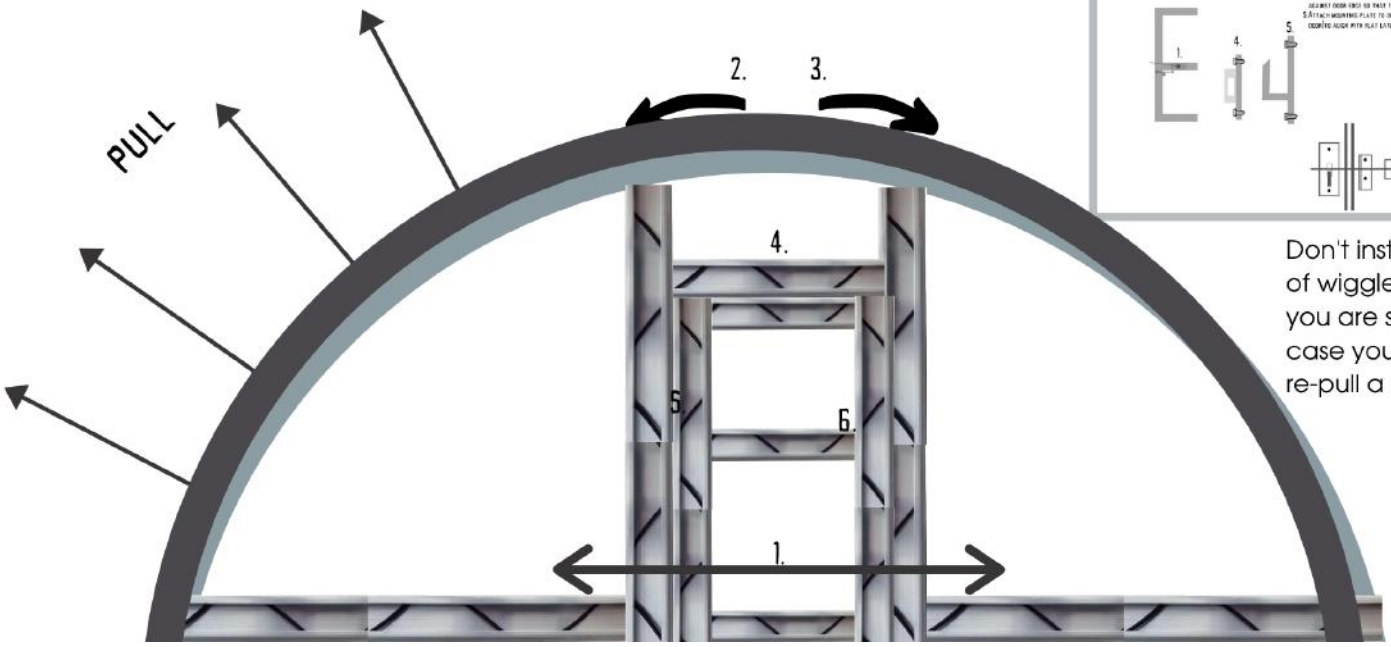
# ASSEMBLY

## STEP 8 INSTALL END WALL PLASTIC

### End Wall Covering

Once the top/ long sides are covered, cut the excess plastic off of the hoop at the lock channel

1. While making sure the "inside" label is facing in install wiggle wire along your base while keeping the plastic stretched left & right
2. Next, stretch the plastic up and work from the top of the hoop to one side. you will keep pressure by pulling up and out. You will install this spring into the same lock channel that you secured the top plastic into.
3. Now repeat for the other side
4. Install plastic on upright and door frame and door channel.
5. Carefully cut the seam between door and door frame to allow access.
6. Follow instructions for door latch and install over plastic


Don't install last foot of wiggle wire until you are satisfied in case you need to re-pull a piece

## STEP 9 INSTALL DOOR LATCH

### This step is done AFTER plastic is on

Tools

1/4 drill bit
7/8 drill bit
7/16 sockets or adjustable wrench (will need two)
1/4" driver for #8 self tap

Steps

1. Drill a 7/8 hole 5" from door edge and right in the middle of door frame center brace
2. Thread latch through hole and align plate horizontally mark holes
3. secure with provided 1/4"x3"bolts, nuts, and back plate. Use 7/16 socket/wrenches
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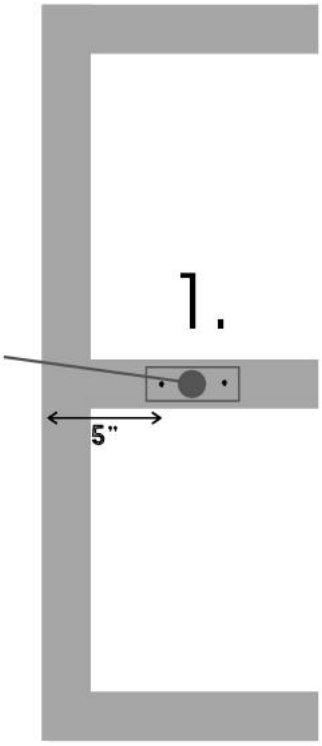




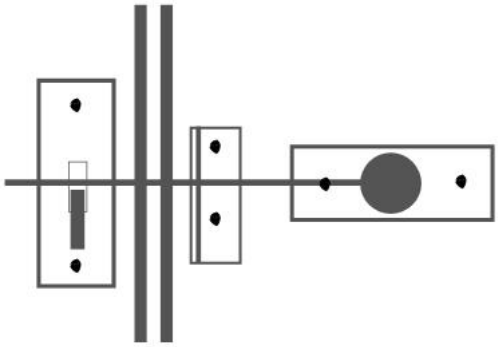

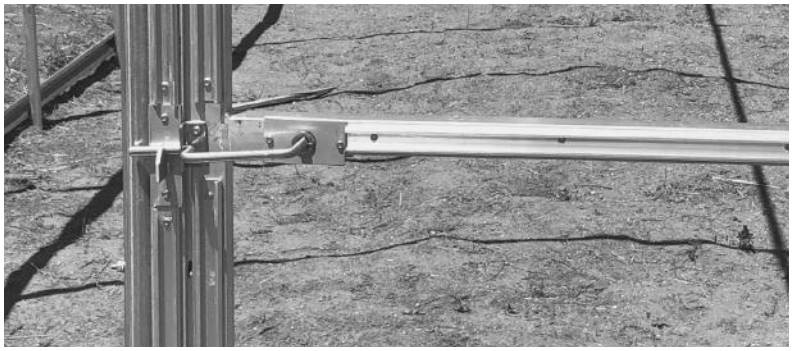

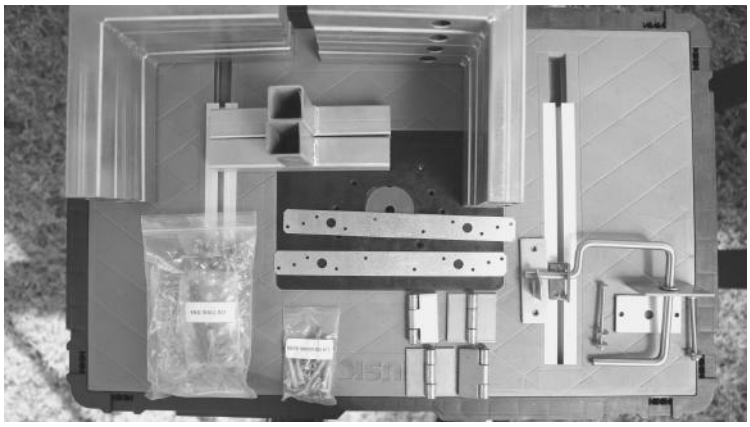






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