

EXPANSION MANSION


INSTALLATION INSTRUCTIONS



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POLY-TEX
Greenhouse & Display Systems

SAFETY GUIDELINES

Read before assembling the structure

WARNING

This structure is intended to be self-supporting, provided it is constructed with all frames, hardware, sheathing, sheeting, bracing, cables, and membrane in place, and secured to the foundation as shown in the manual. Stability during construction, from winds and loads imposed during erection, is the sole responsibility of the installer. Observe safety codes required by your jurisdiction, and relevant safety practices for working at heights. Avoid the risk of electrical shock from overhead lines or electrical storms. Poly-Tex recommends contracting a licensed electrician to perform electrical work. Eye protection is recommended under all circumstances and hearing protection is recommended when cutting components with power tools.

Foundations

These instructions include minimum guidance for foundations based on the International Building Code. These minimums are suitable for some areas of the country but not all. Obtain a building permit if required in the local jurisdiction. Engineered and Certified foundation plans may be required by a building official before issuing a permit. Even if not required, seeking guidance from a qualified structural or civil engineer for the foundation design may improve the life of the structure.

DANGER

No part of this structure is engineered to function as an anchorage point for a fall arrest system. Use a safety net or work from a safe work platform (i.e. scaffolding). Select a calm day for work. Wind can be sufficient enough to knock materials or workers off a work platform or ladder, resulting in a potentially deadly fall.

Overview of assembly procedure

While each structure and site is unique, and may require special considerations, these instructions are for a tilt-up method (where frames are assembled on the ground and tilted onto ground stakes or anchor rods using ropes or lifts). If installer is not confident to erect the structure, Poly-Tex suggests hiring a general contractor, carpenter, or similar licensed business familiar with construction, to assemble and erect the structure.

DANGER

Do not overload structure. Consult with a Poly-Tex representative prior to adding any amount of weight over the specified capacity of this structure. Basket purlins, shelving or any objects of significant weight shall not be hung, attached, or secured to roof or truss members in a manner that will overload the structure.

WARNING

Do not walk on polycarbonate sheets. If structure is to be covered with polycarbonate sheets, always use scaffolding for the erection process to avoid damage to sheeting and to ensure safety. Polycarbonate sheeting has UV coating protected with vinyl film on the exterior surface. Install sheets with the film intact and toward the exterior. Remove film once the sheet has been fastened in place.

PLEASE READ THE INSTALLATION INSTRUCTIONS CAREFULLY BEFORE BEGINNING TO ASSEMBLE THE STRUCTURE.

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

Congratulations!!!

You have just purchased an **Expansion Mansion**.
We know you will enjoy this greenhouse
for a long time to come.

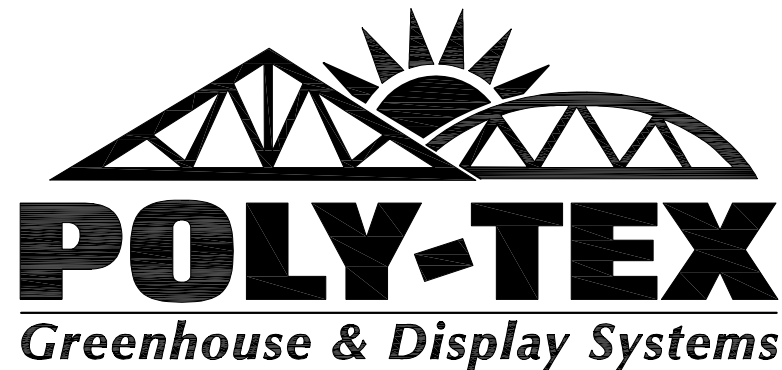
Before you proceed, please read the
instruction manual very carefully.

If you have any questions
please call:

1-800-852-3443

or

1-651-463-7009



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Expansion Mansion Index

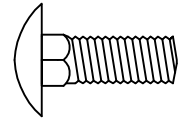
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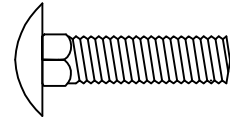
HARDWARE IDENTIFICATION

(SHOWN ACTUAL SIZE)

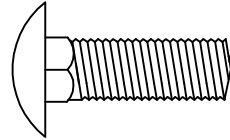
1/4" x 3/4"
CARRIAGE BOLT



1/4" x 1"
CARRIAGE BOLT



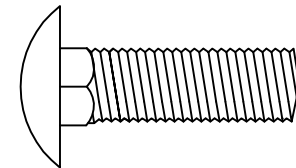
5/16" x 1"
CARRIAGE BOLT



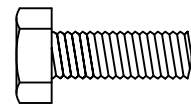
5/16" x 1 1/4"
CARRIAGE BOLT



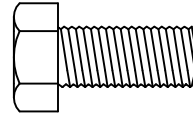
3/8" x 1 1/2"
CARRIAGE BOLT



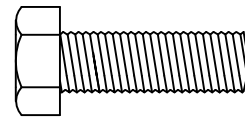
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HEX HEAD BOLT



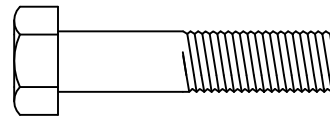
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HEX HEAD BOLT



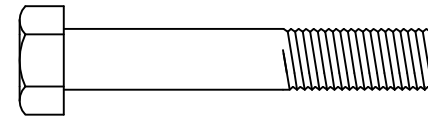
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HEX HEAD BOLT



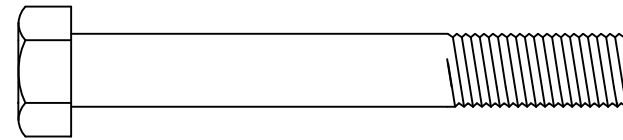
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HEX HEAD BOLT



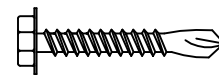
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HEX HEAD BOLT



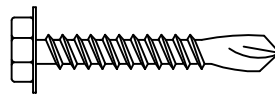
3/8" x 3"
HEX HEAD BOLT



#12-14 x 1"
SELF DRILLING
SCREW



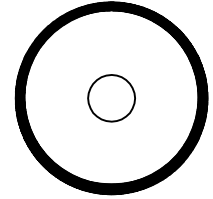
#12-14 x 1 1/2"
SELF DRILLING
SCREW



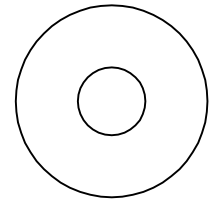
1/4"-14 x 1"
SELF DRILLING
SCREW



NEOPRENE
WASHER



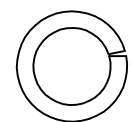
USS FLAT
WASHER



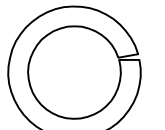
1/4" LOCK
WASHER



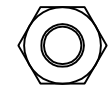
5/16" LOCK
WASHER



3/8" LOCK
WASHER

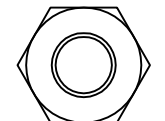
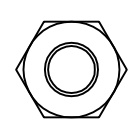


1/4" NUT



3/8" NUT

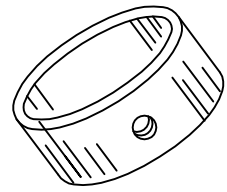
5/16" NUT



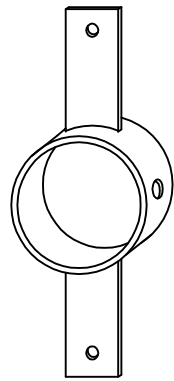
FITTING IDENTIFICATION

EXPANSION MANSION

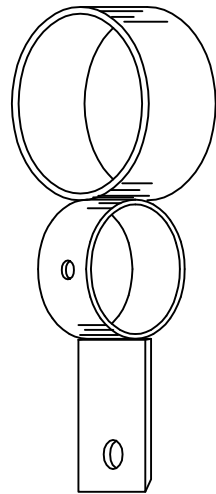
IMPORTANT NOTE: ALL DRILLED AND TAPPED HOLES IN THESE FITTINGS REQUIRE A 5/16" x 3/4" HEX HEAD BOLT.



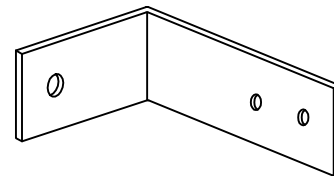
"A" FITTING
FT2001



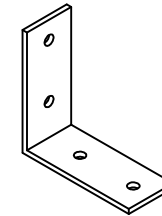
TRUSS SOCKET
FT2040



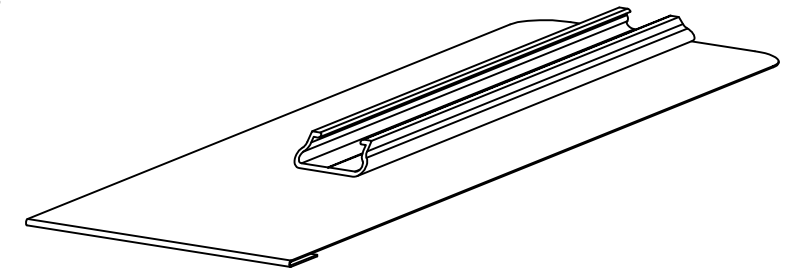
TRUSS "I" FITTING
FT2072



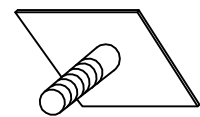
R.F. CORNER
MOUNT
FT2000



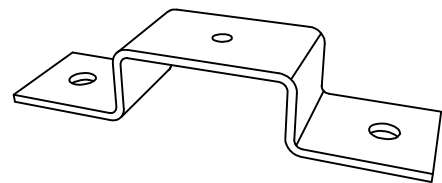
"L" BRACKET
FT1990



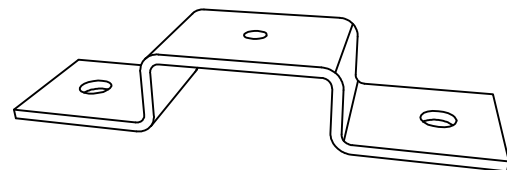
PV END ANCHOR
FT6039



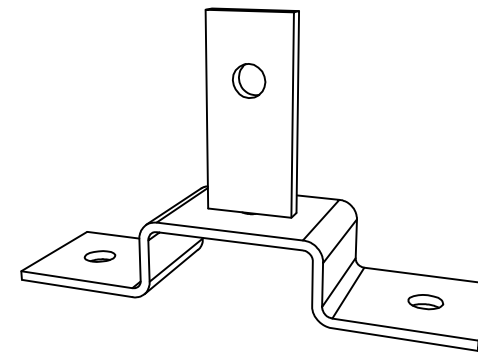
STOP TAB
FT2570



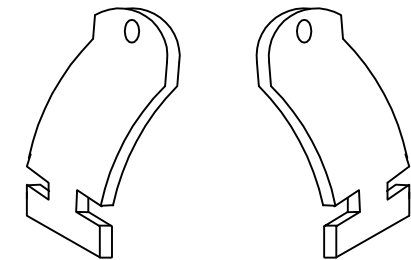
2" SQ END CLAMP
FT1993



1-3/4" SQ END CLAMP
FT1991



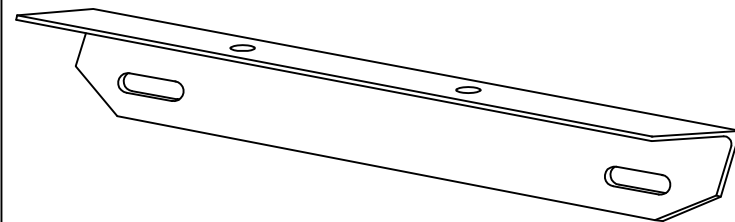
1-3/4" SQ END CLAMP
W/TAB
FT1992



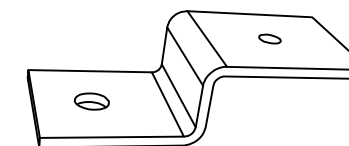
UNI-CLAMP
FT2108

WARNING:
ALL COMPONENTS ATTACHED TO LONG SPEED HOOKS MUST BE MOUNTED ON THE OUTSIDE OF THE TABS. NEVER INSTALL COMPONENTS BETWEEN TABS.

(2) LONG SPEED HOOKS
FT2079



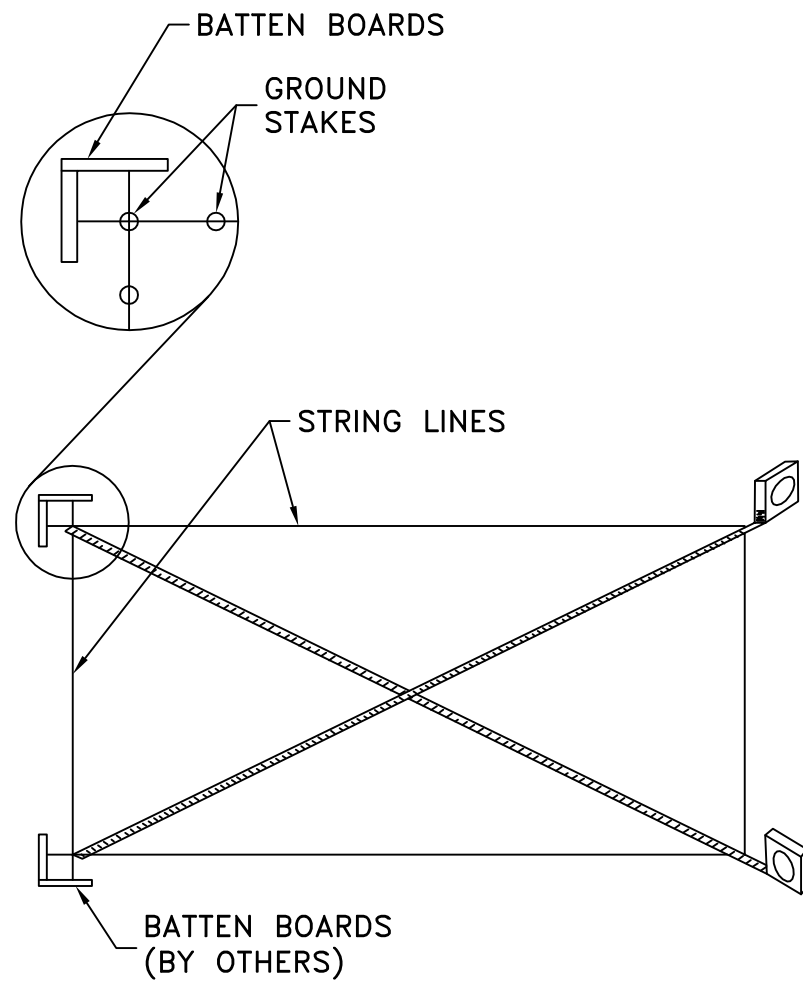
GUTTER SUPPORT ANGLE
FT2037



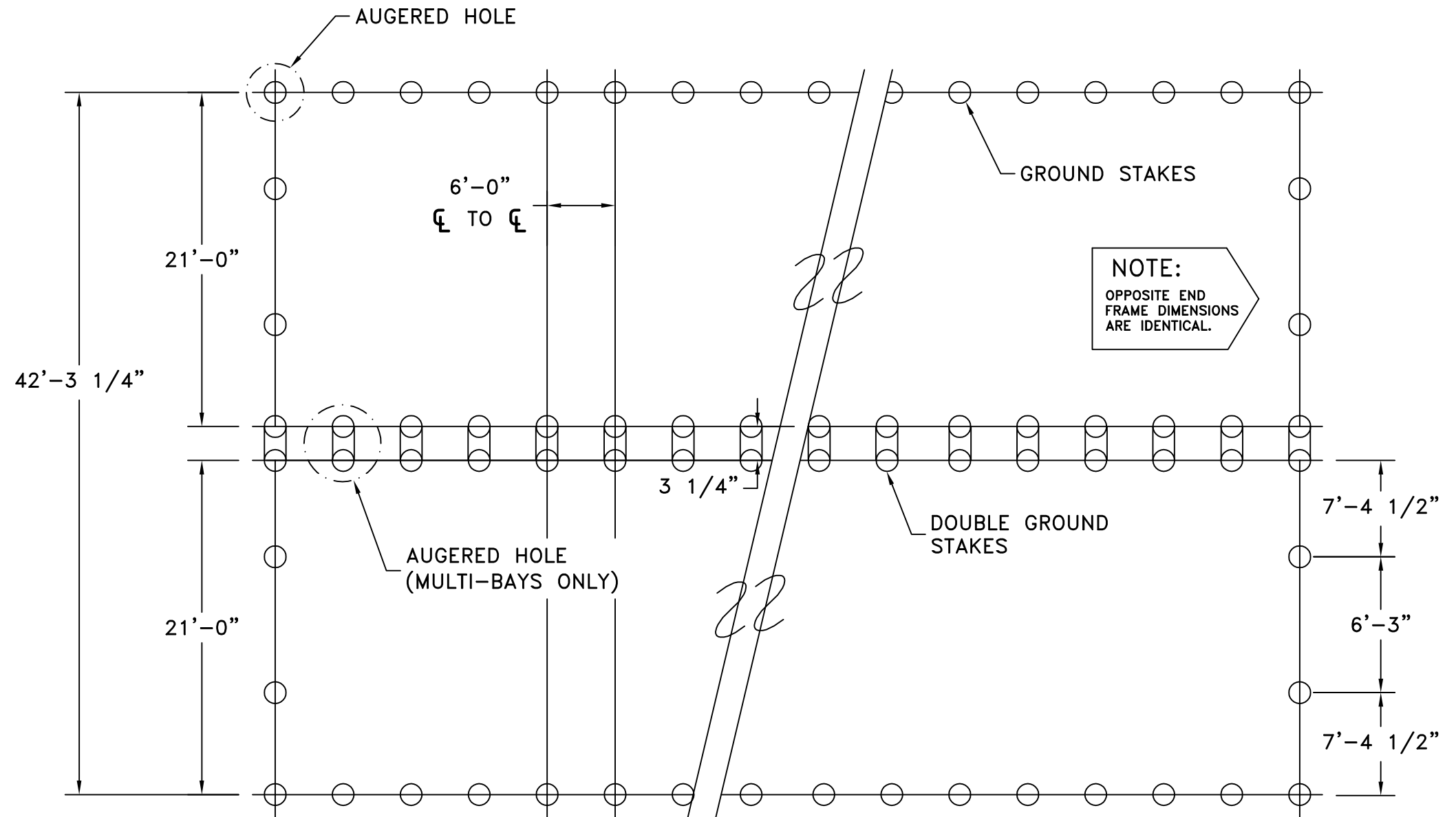
1-3/4" SQ
JAMB CLAMP
FT1995

SITE LAYOUT

EXPANSION MANSION



To square up the structure, use the cross measurement method. Measure diagonally. Measurements should be the same. Once this is complete, check all four sides of the layout to see that they are the measurements are correct. If the greenhouse is larger then 96' you may want to divide it into two or more sections.

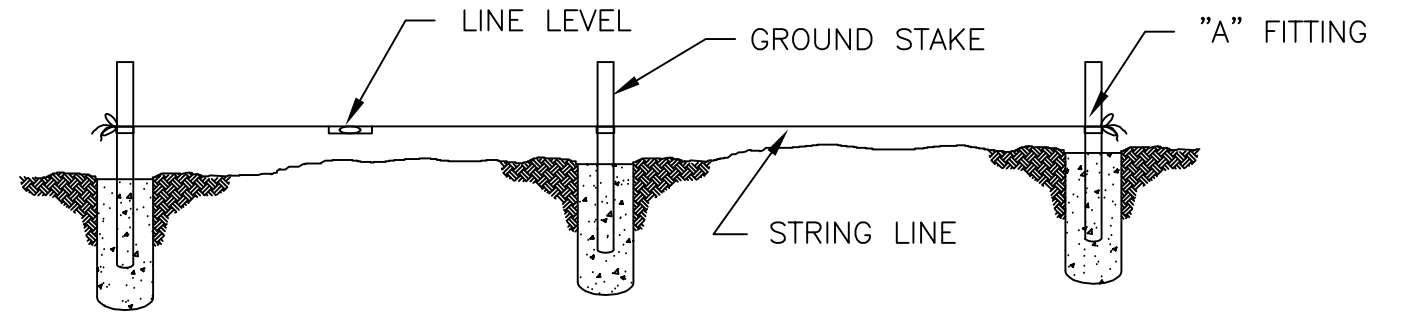
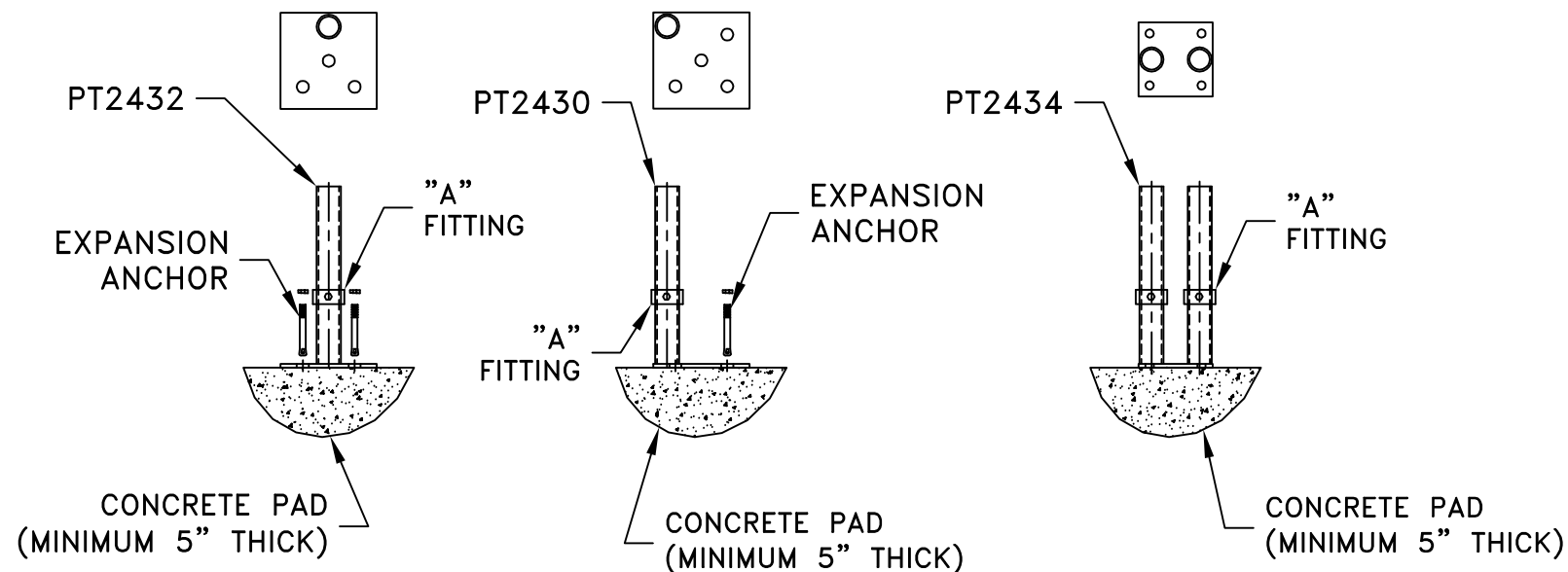
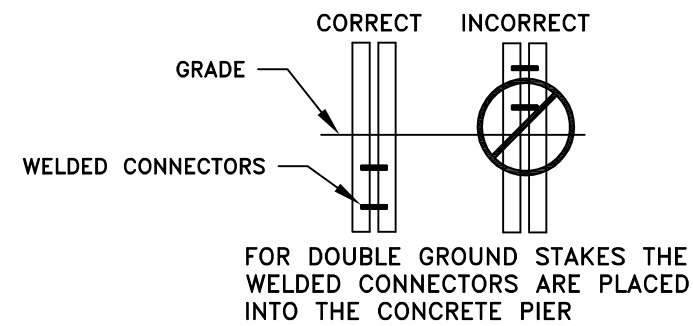
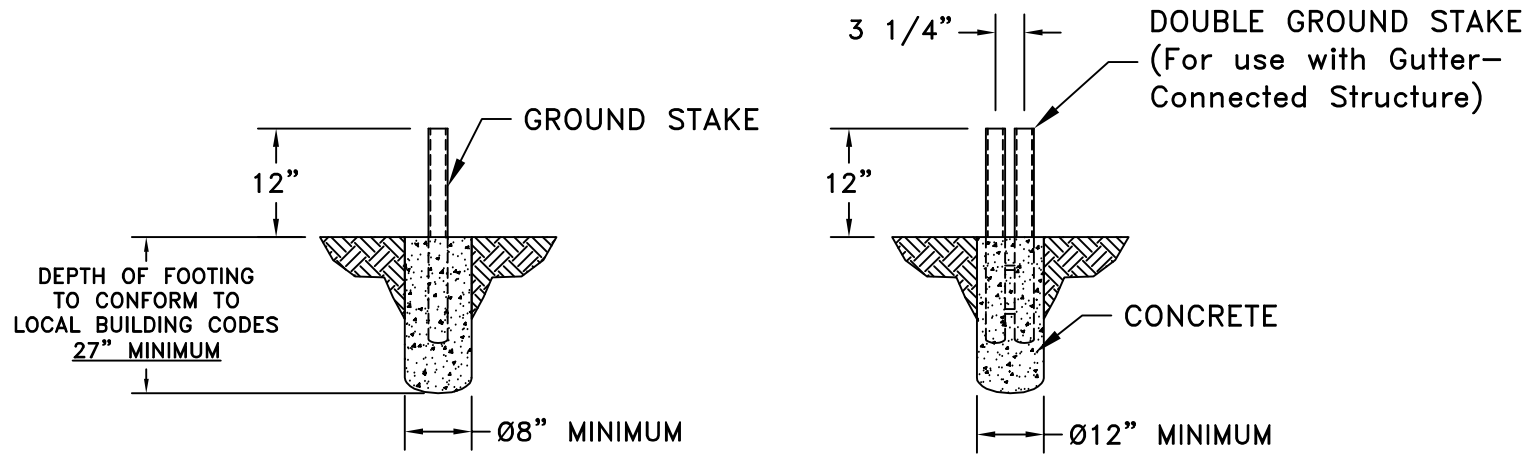


NOTE: ALL MEASUREMENTS CENTER TO CENTER OF GROUND STAKES

NOTE: END FRAME DIMENSIONS MAY CHANGE. PLEASE REFER TO YOUR GROUND STAKE LAYOUT SHEET.

NOTE: AS ACCURACY IN THIS PART OF THE WORK IS VERY IMPORTANT, MAKE SURE THAT THIS PAGE IS THOROUGHLY UNDERSTOOD BEFORE PROCEEDING.

GROUND STAKE INSTALLATION

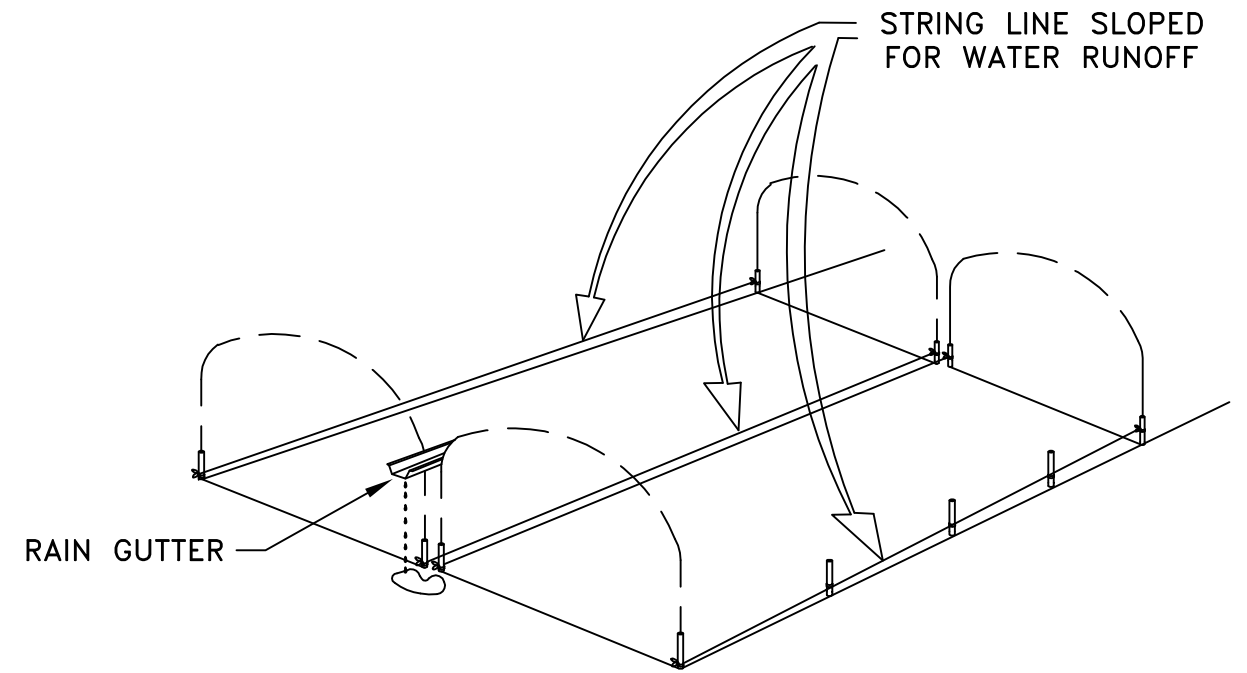


The "A" fitting slides over the ground stakes and will determine the height of the frames. When working with a single span, all the "A" fittings should be set level.

To determine "A" fitting height on a single span, tie a string line to the first and last ground stakes, level the string line with a line level, or a transit.

NOTE: FOR MAXIMUM STABILITY, IT IS IMPORTANT TO SET THE FITTINGS AS LOW AS POSSIBLE. FOR LONGER STRUCTURES, SIGHT ALONG STRING AND SUPPORT IT EVERY 50' AT AN ELEVATION THAT APPEARS VISUALLY STRAIGHT.

"A" Fittings may now be set along the line using 5/16" x 3/4" hex head bolts. Install fittings so the heads of the bolts face the inside of the greenhouse.

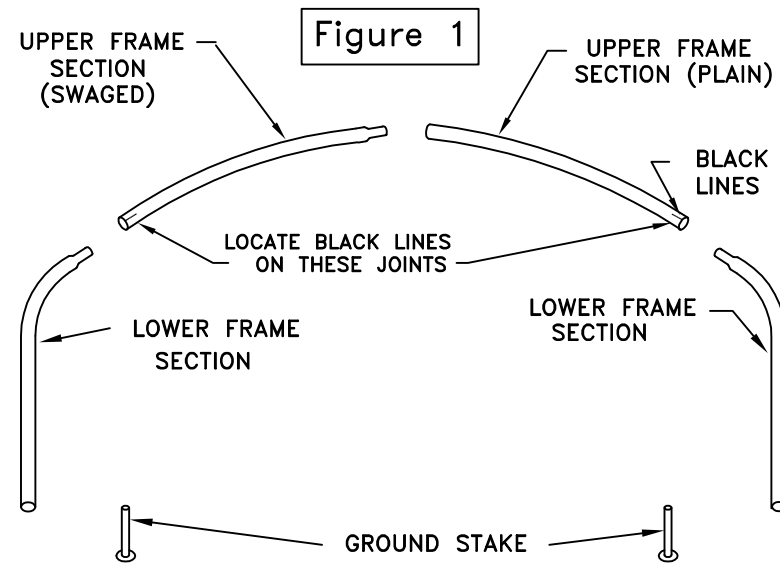


The Gutter Connected EXPANSION MANSION should be sloped 1" every 16'-0". (1/16" PER FOOT)
 Example: A 96'-0" greenhouse will have a 6" drop (96'÷16'=6").

Drop one end of the string the desired height in the direction the rain gutter is intended to slope.
 The "A" fittings may now be set using 5/16" x 3/4" hex head bolts.

FITTING LOCATION

NOTE: FRAME SECTIONS MUST BE JOINED AND FASTENED ON A FLAT SURFACE.



Lay out all frame parts near the ground stakes they will stand on (Figure 1). Slide Truss "I" Fitting on upper frames and connect frame sections (Figures 2 & 3).

NOTE: Assembled frame on the ground will be wider than the ground stake dimension. It will be necessary to push frame ends together to slide over ground stakes.

IMPORTANT: Fitting bolts should face the inside of the structure. This will prevent the Poly-Vent or poly cover from being punctured.

NOTE: The Truss "I" fitting should be placed right next to the joint over the plain swaged frame section.

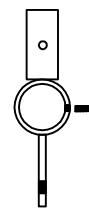


Figure 2

FRAME SECTION CONNECTION

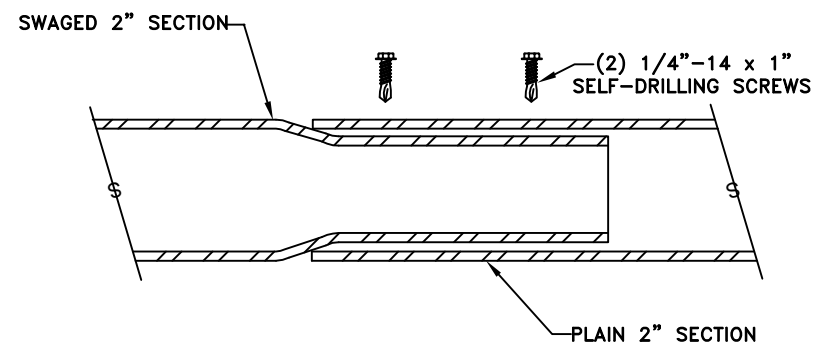
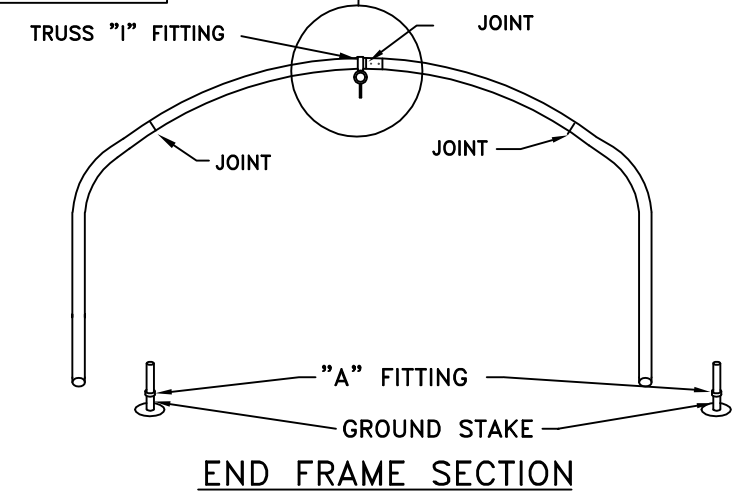
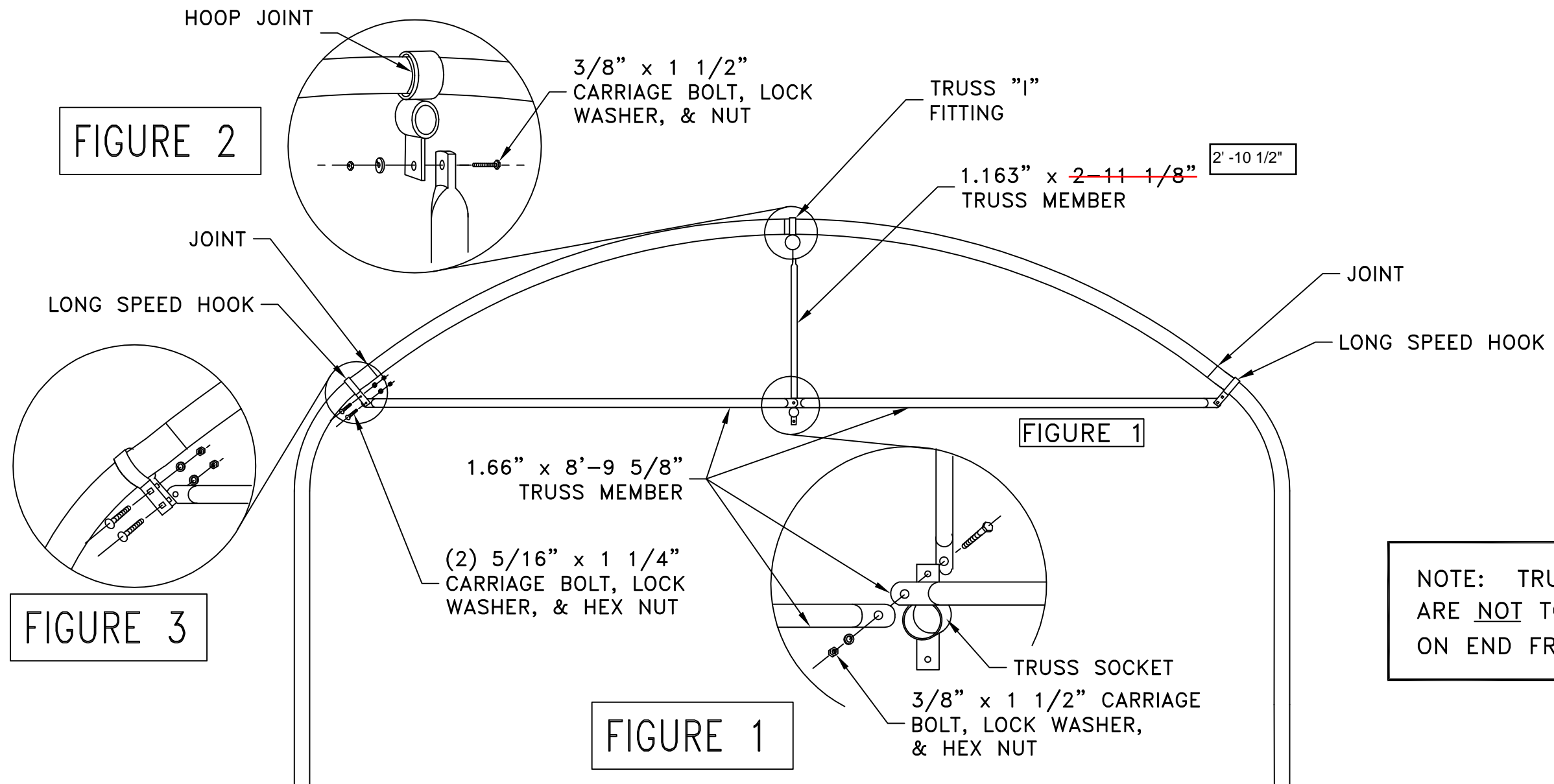


Figure 3



NOTE: BEFORE STANDING EACH FRAME SECTION READ PAGE SEVEN.



NOTE: TRUSS MEMBERS ARE NOT TO BE INSTALLED ON END FRAME SECTIONS.

ALL INTERMEDIATE HOOP SECTIONS

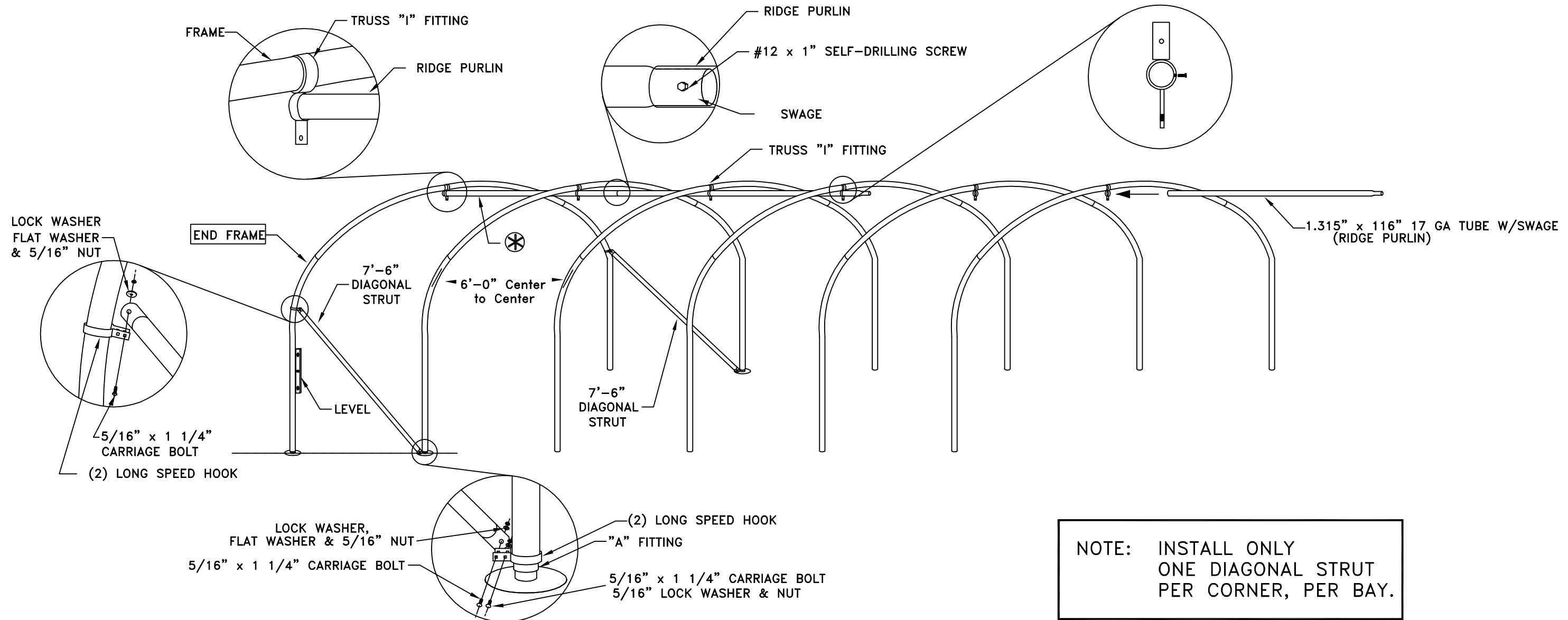
While the frame is still on the ground, attach the LONG SPEED HOOKS using (1) 5/16" x 1 1/4" carriage bolt, lock washer and nut. Next, attach truss members to the TRUSS "I" FITTING and the LONG SPEED HOOKS as in Figures 2 & 3. Then, measure the distance between the lower joint and the LONG SPEED HOOK. This distance should be the same on both sides. Tighten all truss bolts. Frame may be wider than 21' at the base before erected.

Next, bolt the TRUSS SOCKET and the three truss members together using the sequence illustrated in Figure 1 with the 3/8" X 1 1/2" carriage bolts provided.

Keep in mind that, when standing the frame on the ground stakes, the ridge purlin will be inserted through the TRUSS "I" FITTINGS. Make sure to position the TRUSS "I" FITTINGS so that the ridge purlin has a straight path to the end of the structure.

RIDGE PURLIN & DIAGONAL STRUT ASSEMBLY

EXPANSION MANSION



NOTE: INSTALL ONLY ONE DIAGONAL STRUT PER CORNER, PER BAY.

After the frames and truss members have been assembled, the frame assembly can be raised. Raise two frames and then install the diagonal struts (see above drawing for location). Install (4) LONG SPEED HOOKS loosely, using the 5/16" x 1 1/4" carriage bolts, lock washers, and hex nuts. Attach diagonal struts loosely using the 5/16" x 1 1/4" carriage bolts, flat washers, lock washers, and hex nuts, being sure to install bolt heads to the outside of the greenhouse. Using a level, make sure the first hoop is plumb. Tighten all 5/16" bolts. Ensure all following hoop sections are plumb upon erection.

Install the first section of ridge purlin. **IMPORTANT:** A 1.315" x 116" section of purlin should be installed immediately after raising two frame sections and installing diagonal struts. ⊗ Thread the purlin as the drawing indicates, feeding the purlin through the Truss "I" fittings. Frame spacing should be measured and set at this time. Mark the location of the hex bolt attachment to the end of the ridge purlin. Remove purlin and drill a $\varnothing 3/8$ " hole through the face of the purlin. Reinstall purlin and attach by installing the 5/16" x 3/4" hex head bolt on the Truss "I" fitting to secure the ridge purlin to the end frame. Secure each additional fitting by tightening the 5/16" hex bolt to the purlin.

Raise one or two additional frames, and install the next ridge purlin. The final 1.315" x 116" ridge purlin will go beyond the Truss "I" fitting. The purlin will have to be cut flush with the outside of the end Truss "I" fitting. ⊗ Repeat the installation of the end connection according to the instructions for the first purlin.

IMPORTANT!! Be sure to install (1) #12 x 1" self-drilling screw at every ridge purlin joint as shown.

Repeat the installation of the end connection according to the instructions for the first purlin.

GUTTER INSTALLATION (OPTIONAL)

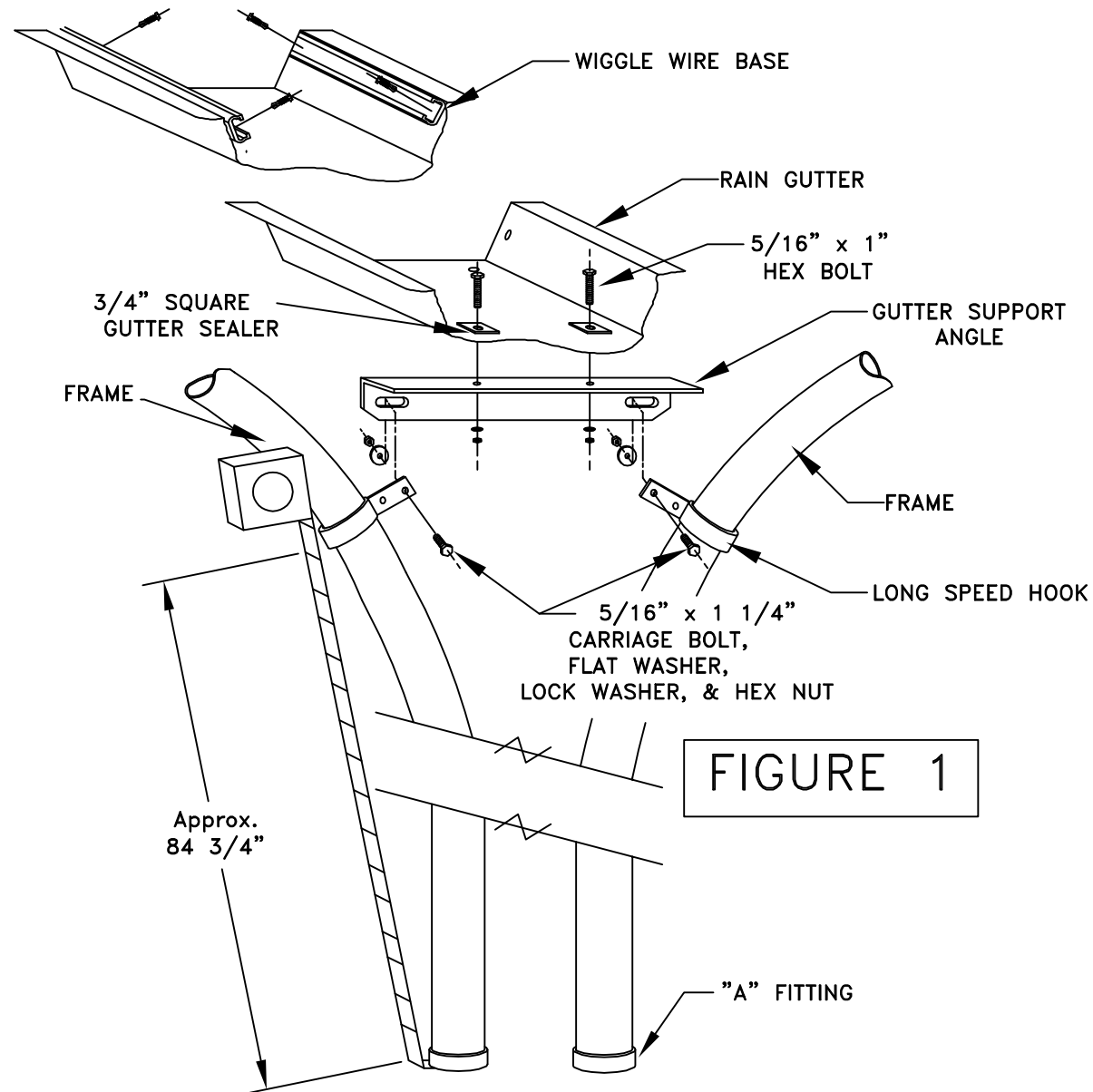


FIGURE 1

⚠ DANGER!
Observe safety codes required in your jurisdiction, as well as relevant OSHA regulations for working at heights.

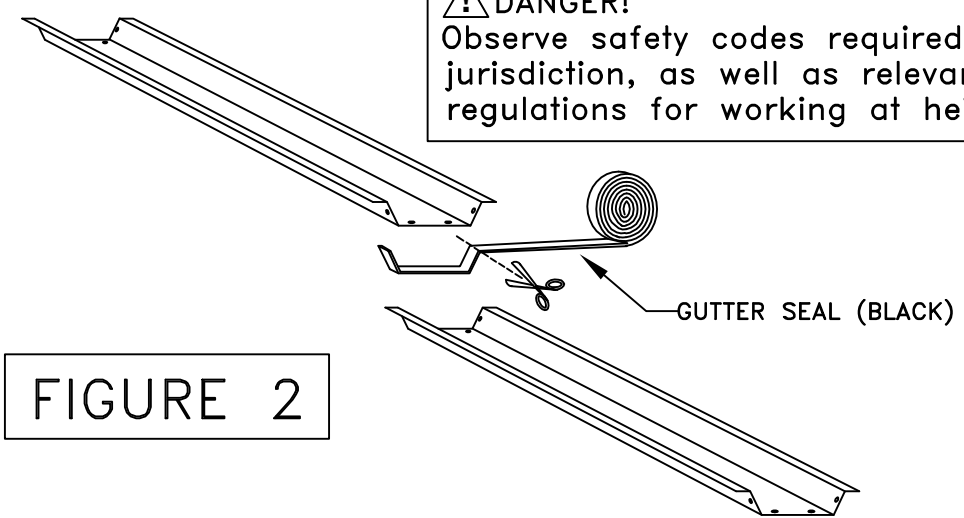


FIGURE 2

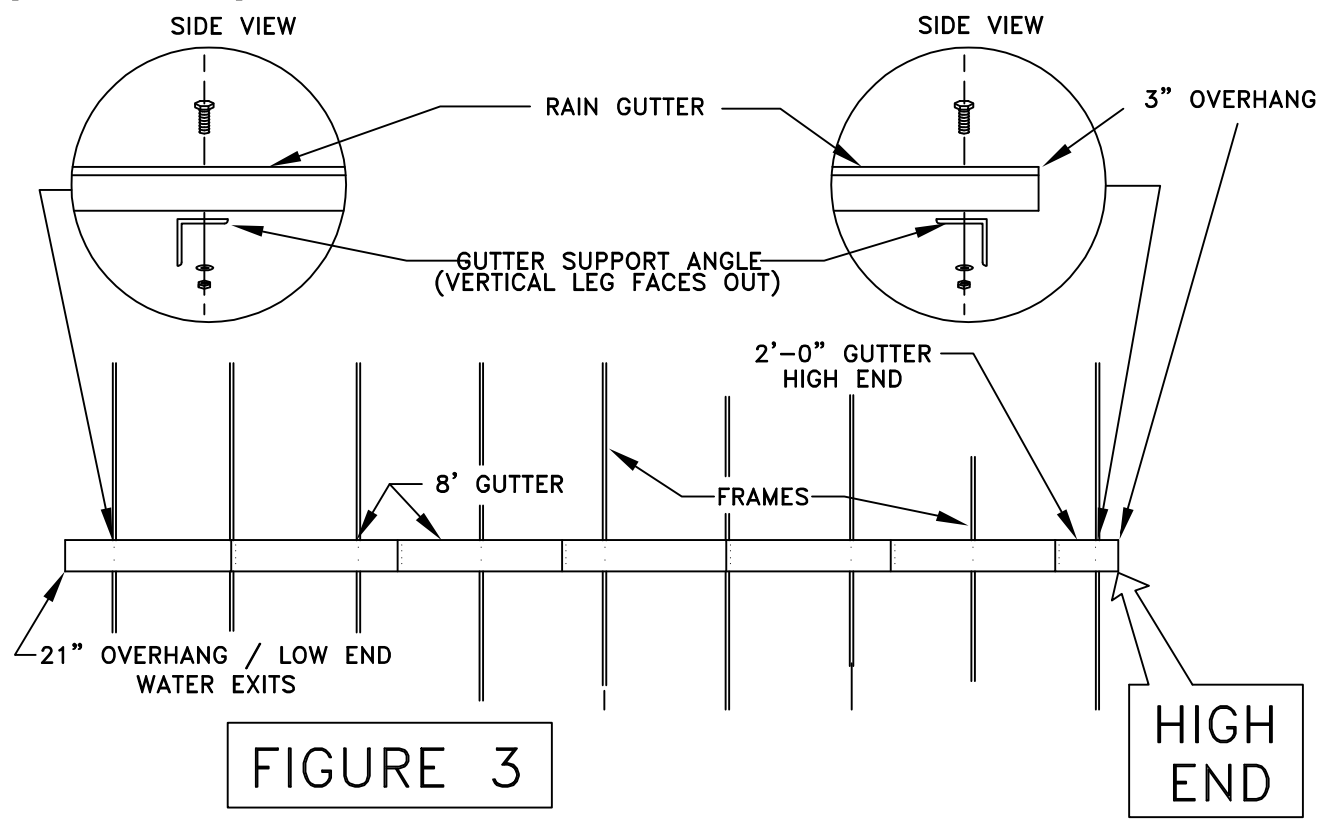


FIGURE 3

IN FIGURE 1

Measure 84 3/4" from the bottom of the "A" Fitting and mark on the inside radius of the frame section. Mount (2) long speed hooks at this point with the tabs facing away from the greenhouse using 5/16" x 1 1/4" carriage bolts, lock washers, and nuts. Leave them loose enough to move if necessary. Repeat this procedure on all the frames adjacent to the additional bay. Mount the gutter support angle onto the installed long speed hooks using the bolt holes at the end of the long speed hooks.

IN FIGURE 2

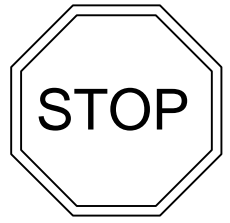
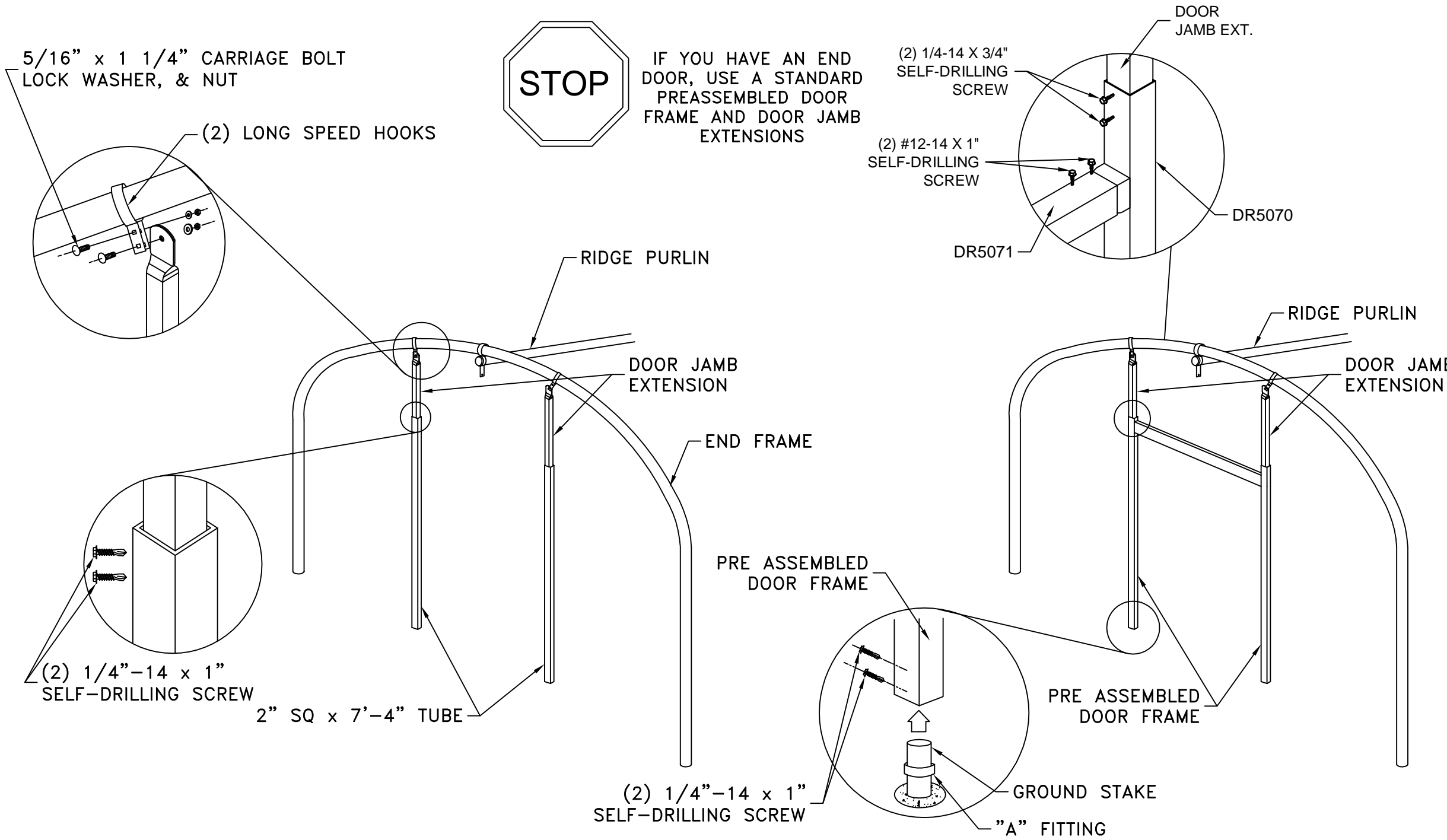
Gutter support angles should be level side to side. Once all gutter support angles are installed you can begin bolting the rain gutters together. Cut a 14" strip of gutter sealer and place in the bottom of gutter to be sealed. Bolt together using (4) 1/4" x 1" carriage bolts (install with heads up.) Repeat this procedure the full length of the greenhouse. Excess gutter (or overhang) should be positioned where water exits the gutter.

Notice the high end in **FIGURE 3**. All gutters are 8'-1" except the high end gutter. Tighten all nuts and bolts at this time.

All gutters may now be centered on the gutter support angles and field drilled for fastening using the 5/16" x 1" hex bolts.

END FRAME & END DOOR ASSEMBLY

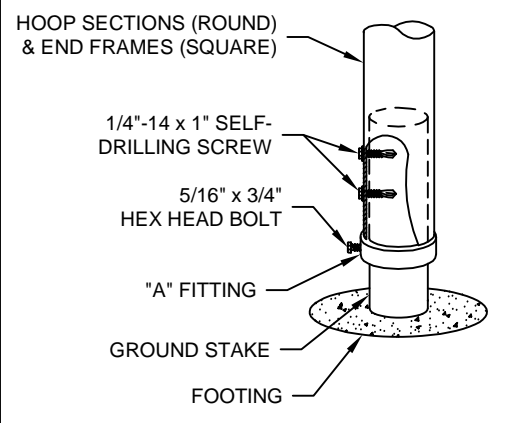
EXPANSION MANSION



IF YOU HAVE AN END DOOR, USE A STANDARD PREASSEMBLED DOOR FRAME AND DOOR JAMB EXTENSIONS

IMPORTANT:
DO NOT BYPASS
THIS PROCEDURE!

After the greenhouse frame is completely assembled, install one 1/4"-14 x 1" self-drilling screw through the wall of ALL hoop sections and end frames and into the ground stake for a secure lock.



NOTE:
BE CAREFUL NOT TO PUT THE SELF-DRILLING SCREW SO LOW THAT IT GETS IN THE WAY OF ROLL FORM.

END FRAME WITH NO DOOR

Slide the Door Jamb Extensions into the 2" SQ x 7'-4" tubes.

Place the pipes with the extensions over the ground stakes using the "A" fittings as a stop.

Install long speed hooks over the frame section as shown and secure to the frame section with (2) 5/16" x 1 1/4" carriage bolts, lock washers, and nuts.

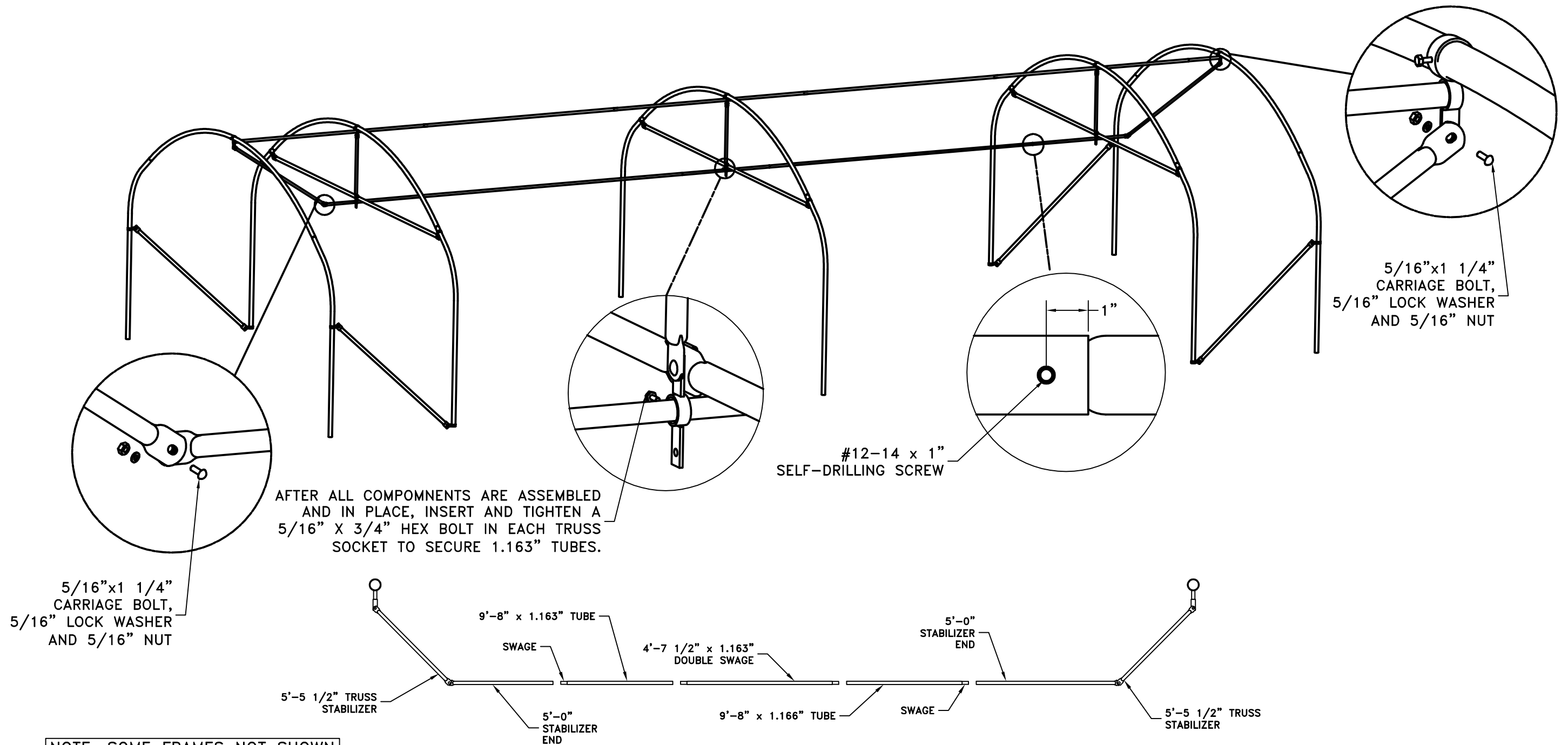
Drill (2) 1/4"-14 x 1" self-drilling screws into the joints of the 2" SQ x 7'-4" tubes and the Door Jamb Extensions. Drill (2) 1/4"-14 x 1" self-drilling screws into the 2" SQ x 7'-4" tubes and ground stakes.

END FRAME WITH DOOR

Assemble door end frame on the ground by inserting the Door Jamb Extensions into the preassembled door frame and proceed using the same instructions as described to install end frame tubes.

TRUSS STABILIZER ASSEMBLY

EXPANSION MANSION



NOTE: SOME FRAMES NOT SHOWN

With swage facing the nearest end, install a 9'-8" x 1.163" tube through the TRUSS SOCKETS on the third and fourth frames. Slide the 5'-0" STABILIZER END into the ring of the TRUSS SOCKET on the second frame. Attach the 5'-5 1/2" TRUSS STABILIZER (both ends flat) to the flattened 5'-0" STABILIZER END. Carefully pivot the 5'-5 1/2" TRUSS STABILIZER to the TRUSS "1" FITTING on the end frame and attach with 5/16" x 1 1/4" carriage bolt, lock washer and nut. Secure the 9' 8" x 1.163 tubes to the 5'-5-1/2" TRUSS STABILIZER with one #12-14 x 1" self-drilling screw.

Install another 9'-8" x 1.163" tube through the next available TRUSS SOCKET and insert the swage end into the previously installed tube. Continue in this manner until reaching the center of the structure. Install the 4'-7 1/2" x 1" tube with the DOUBLE SWAGE. Resume installing the 9'-8" x 1.163" tubes with one end swaged. Cut the last 9'-8" tube to fit before installing the other 5'-0" STABILIZER END. Secure remaining 5'-5-1/2" TRUSS STABILIZER. After the truss stabilizer system is installed, install one #12-14 x 1" self-drilling screw at each stabilizer joint. Insert and tighten a 5/16" x 3/4" hex bolt in each truss socket to secure the 1.163" tube.

ROLL FORM LAYOUT

POSITIONING OF SIDE ROLL FORM

FIGURE 1

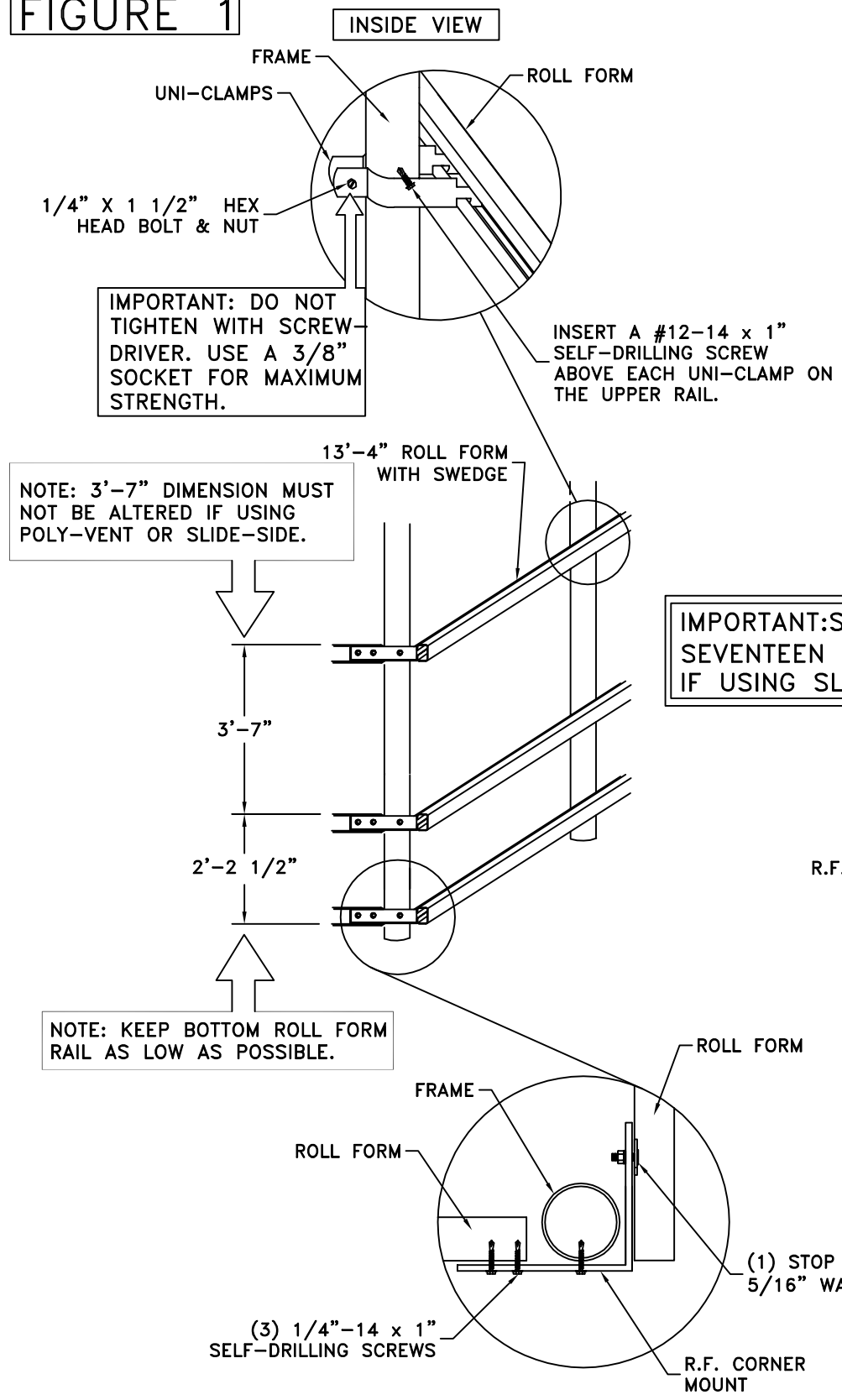
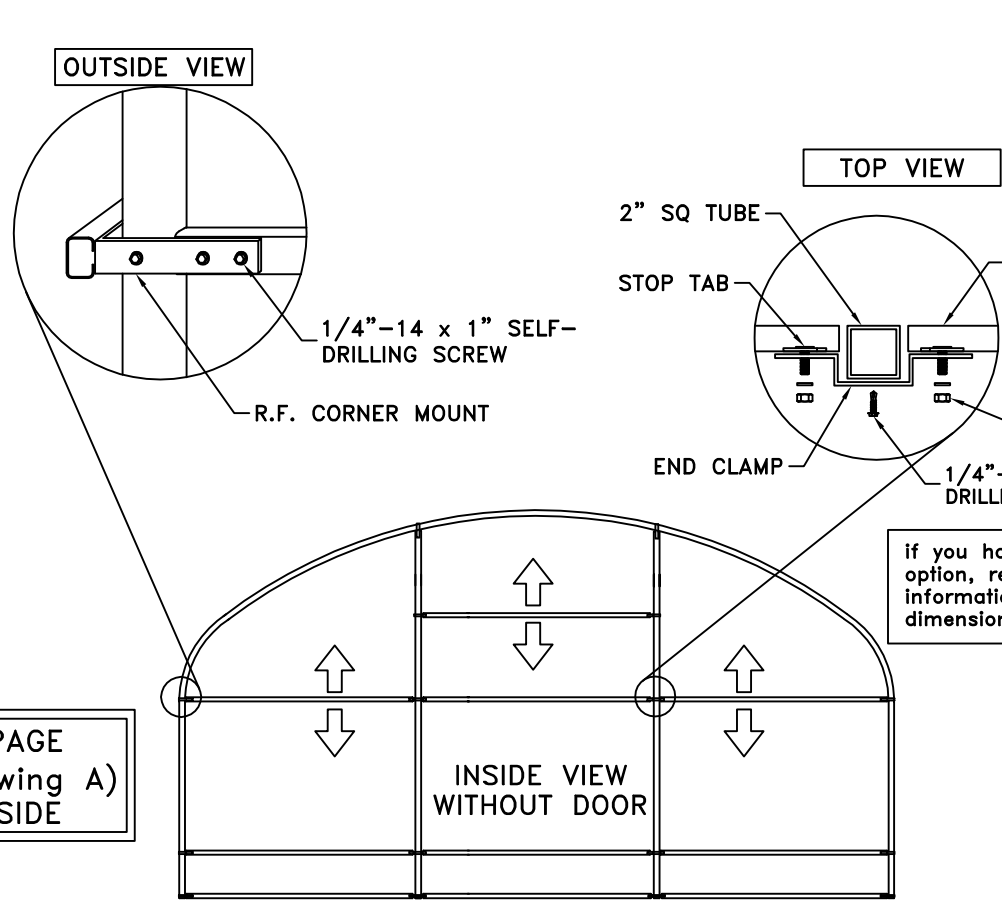


FIGURE 2



EXPANSION MANSION

FIGURE 3

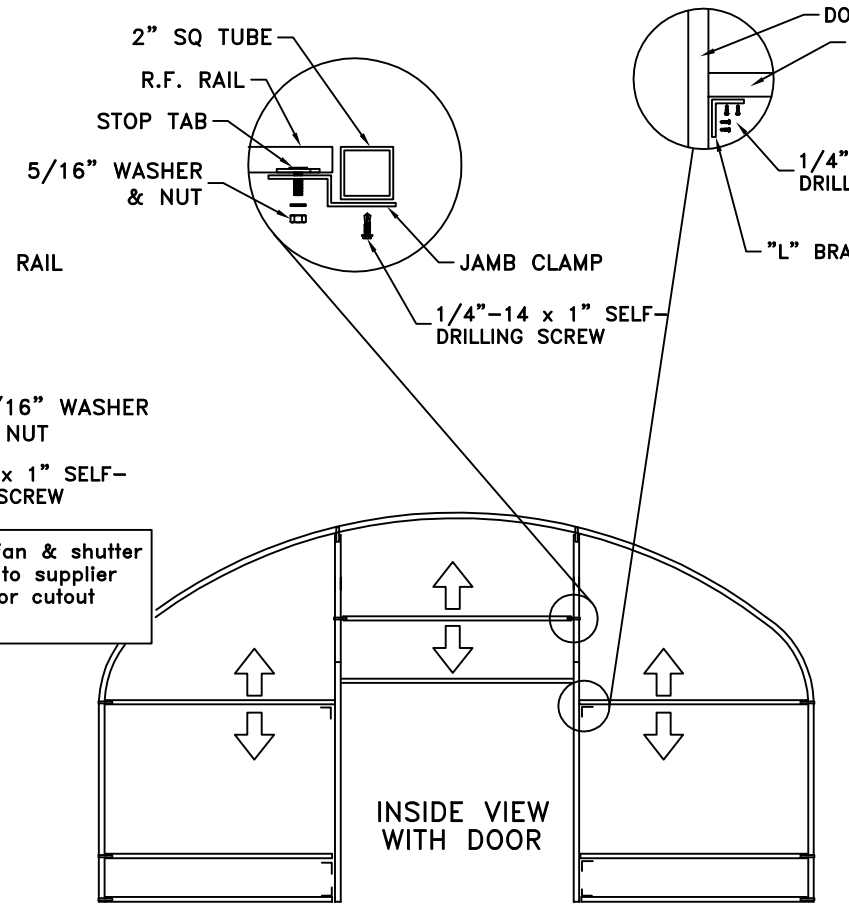
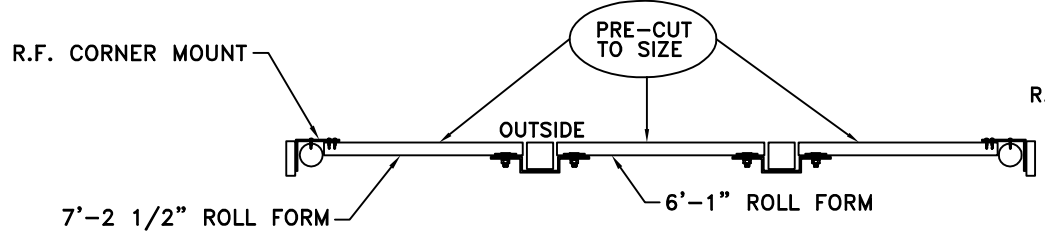
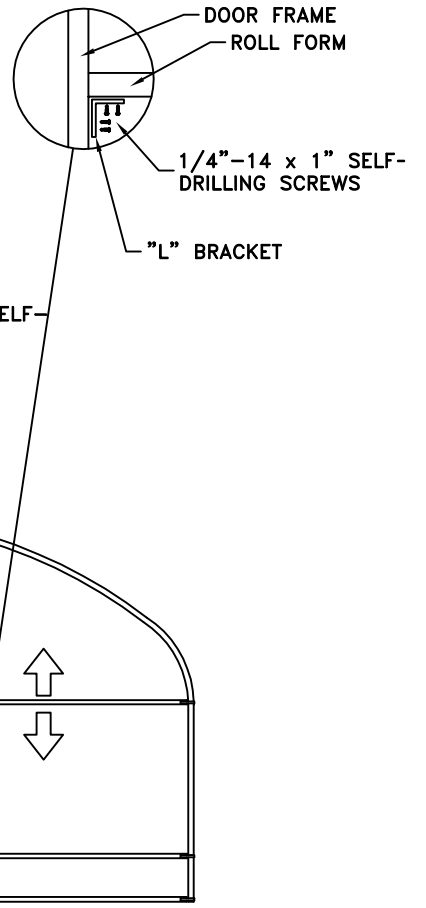
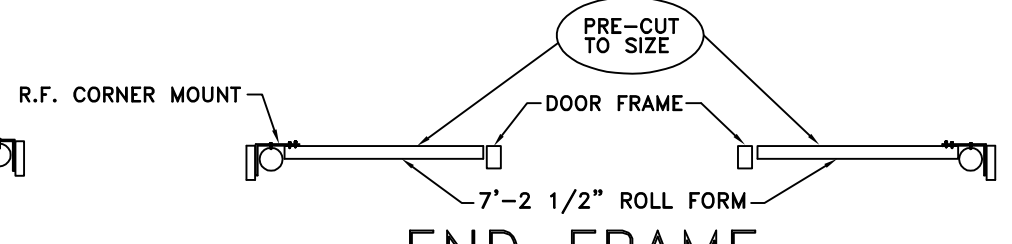


FIGURE 4



END FRAME NO DOOR



END FRAME WITH DOOR

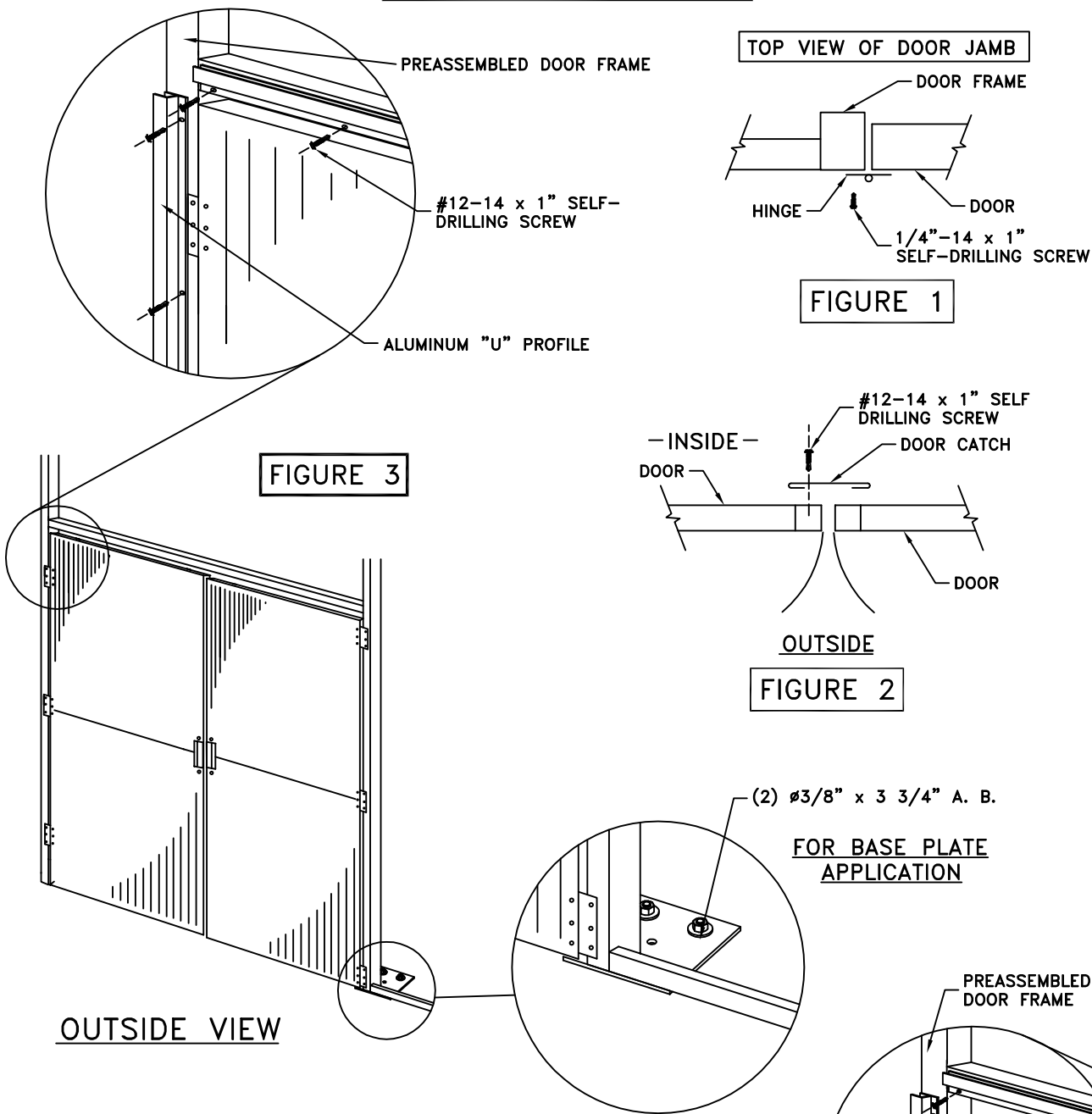
Attach 13'-4" roll form side rails using uni-clamps as described in (FIGURE 1). if the 13'-4" rail goes beyond the end of the greenhouse, cut off the excess and discard. If slide side is used, there will be an extra rail centered between the 3'-7" dimension as shown on page 17 (Drawing A). Install end frame roll form as illustrated (FIGURES 2, 3, & 4).

NOTE: OPEN SIDE OF ROLL FORM FACES THE INTERIOR OF THE HOUSE.

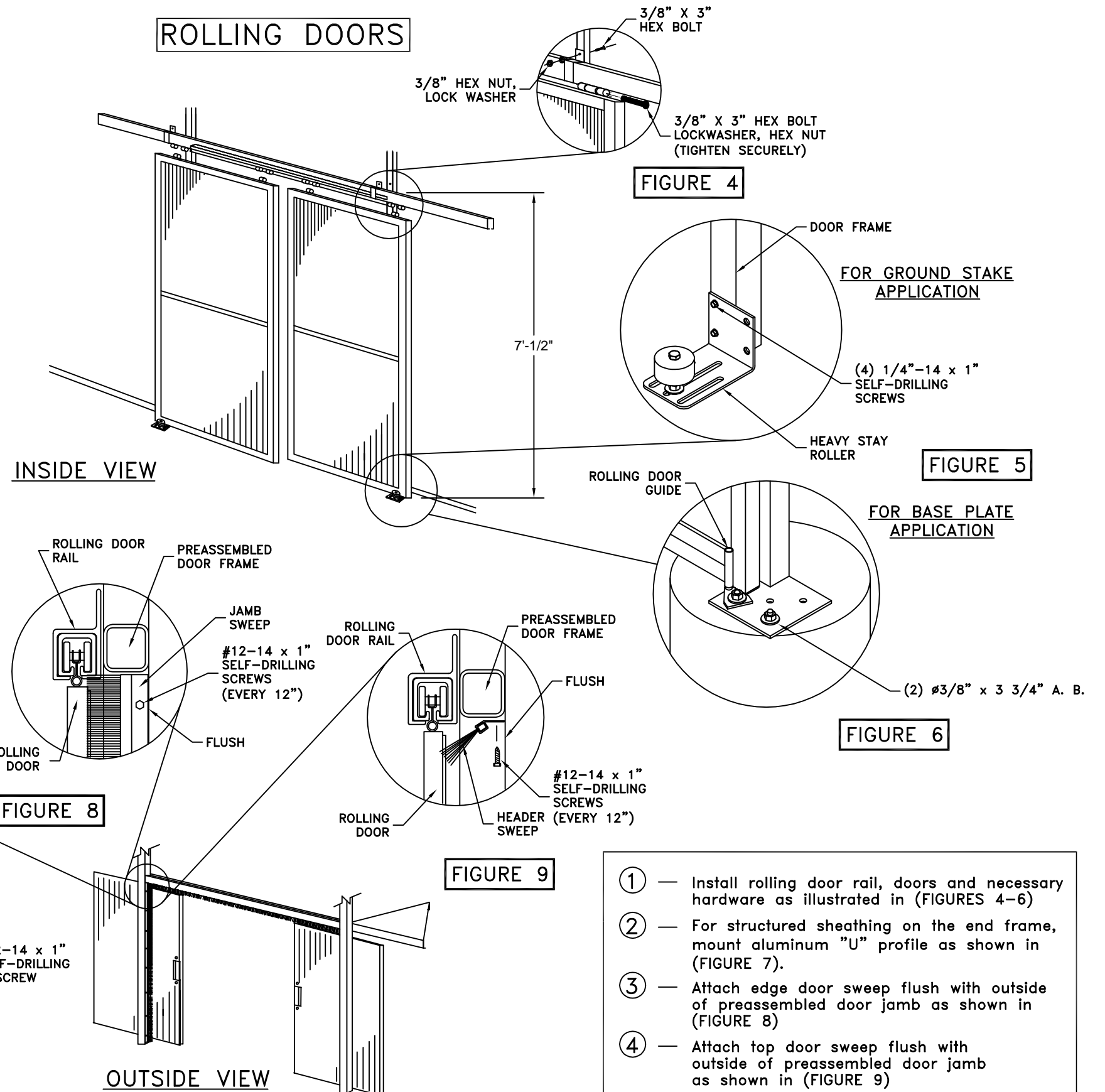
END FRAME DOOR ASSEMBLY

EXPANSION MANSION

SWINGING DOORS



ROLLING DOORS



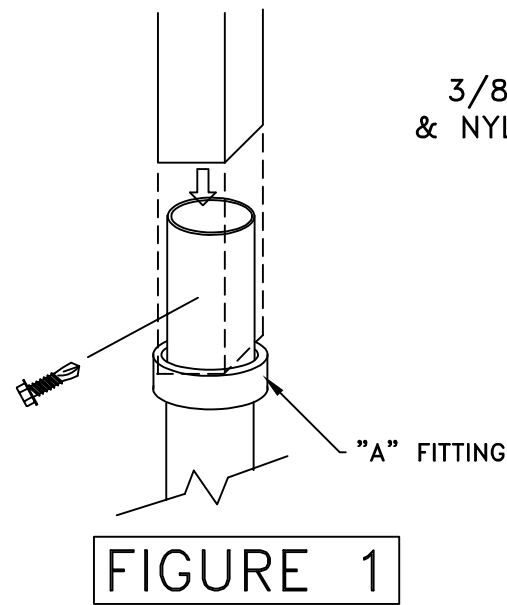
- ① — Position door and install self-drilling screws to secure hinges (FIGURE 1). Be sure to leave a minimum of 1/4" clearance between the header and the door. Do this on both doors.
 NOTE: Line the DOOR JAMB with a strip of foam weatherstripping.
- ② — Referring to (FIGURE 2), install the door catch on one of the two doors using (4) #12-14 x 1" self-drilling screws. This will close any gaps between the doors.
- ③ — For structured sheathing on the end frame, mount aluminum "U" profile as shown in (FIGURE 3).

- ① — Install rolling door rail, doors and necessary hardware as illustrated in (FIGURES 4-6)
- ② — For structured sheathing on the end frame, mount aluminum "U" profile as shown in (FIGURE 7).
- ③ — Attach edge door sweep flush with outside of preassembled door jamb as shown in (FIGURE 8)
- ④ — Attach top door sweep flush with outside of preassembled door jamb as shown in (FIGURE 9)

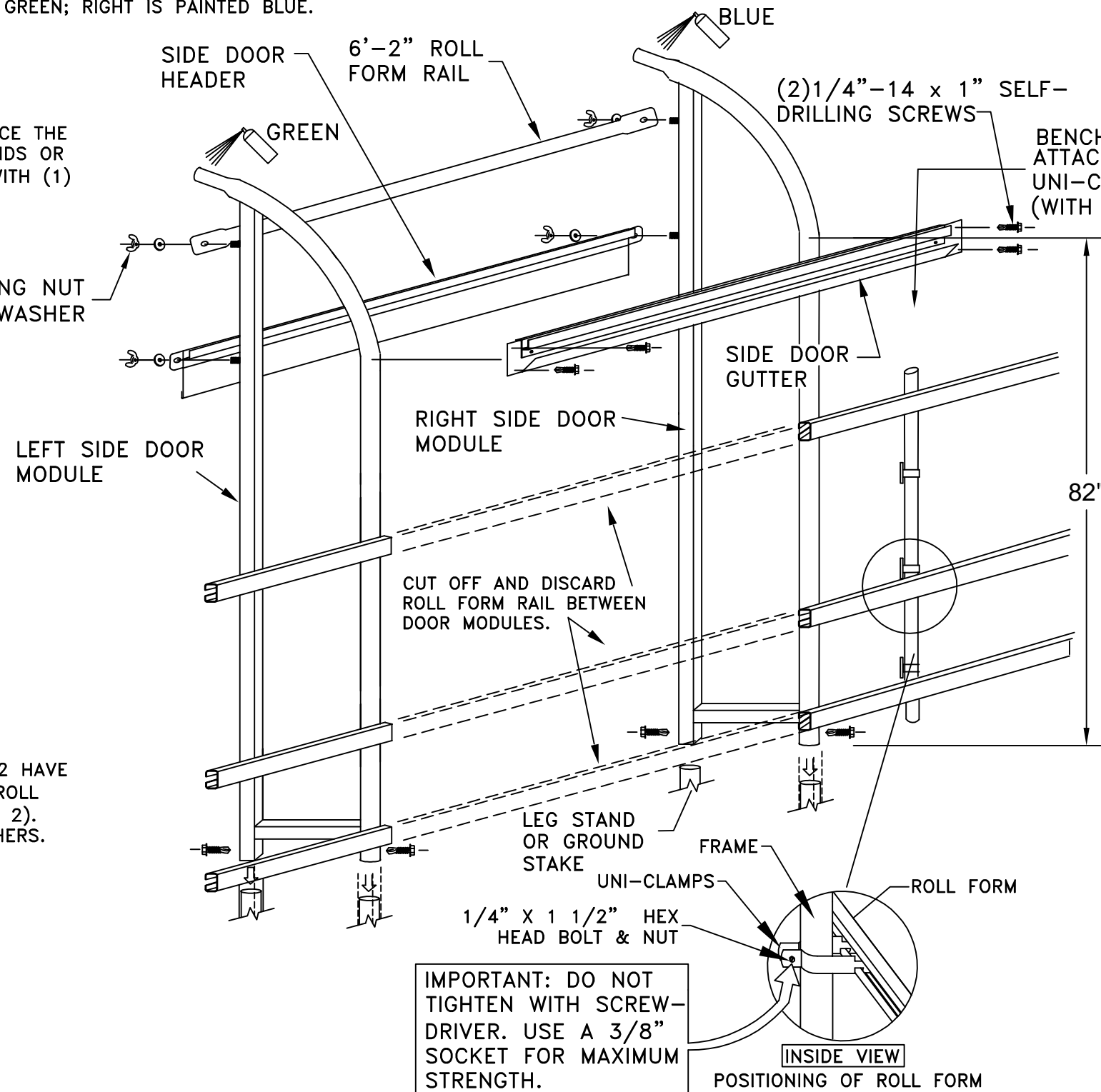
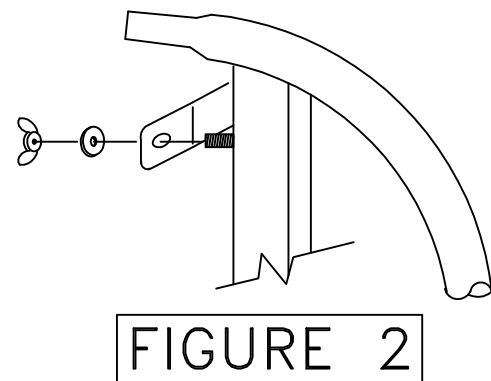
SIDE DOOR FRAMING (OPTIONAL)

- 1 INSTALL CORRECT SIDE DOOR MODULE IN PLACE OF LOWER FRAME SECTION BEFORE RAISING FRAME.
NOTE: LEFT DOOR SECTION IS PAINTED GREEN; RIGHT IS PAINTED BLUE.

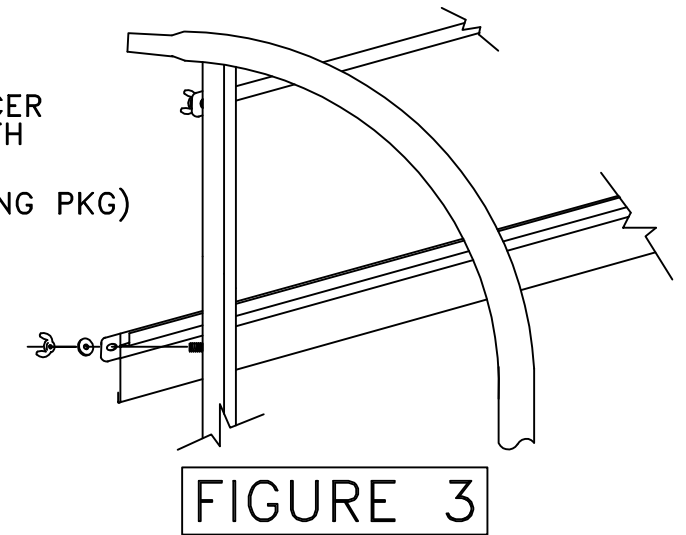
- 2 WHEN RAISING THE FRAME SECTION, PLACE THE SIDE DOOR MODULE ONTO THE LEG STANDS OR GROUND STAKES (FIGURE 1). FASTEN WITH (1) 1/4"-14 x 1" SELF-DRILLING SCREW.



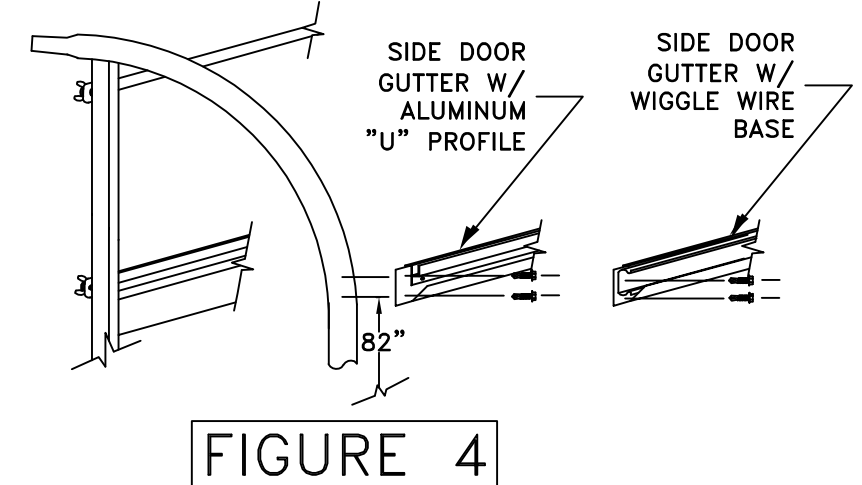
- 3 AFTER ALL THE STEPS THROUGH PAGE 12 HAVE BEEN COMPLETED, INSTALL THE 6'-2" ROLL FORM RAIL ONTO THE TOP STUD (FIGURE 2). FASTEN WITH WING NUTS & NYLON WASHERS.



- 4 INSTALL THE SIDE DOOR HEADER AS SHOWN (FIGURE 3). FASTEN WITH WING NUTS & NYLON WASHERS.



- 5 INSTALL THE SIDE DOOR GUTTER (FIGURE 4). FASTEN WITH (2) 1/4"-14 x 1" SELF-DRILLING SCREWS.

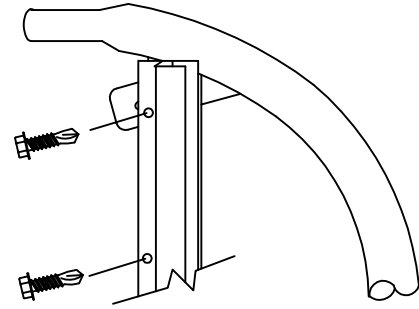


NOTE: WHEN ANY PART OF THE OVAL INSERT IS TOO NEAR A POST TO ATTACH UNI-CLAMPS, CUT A PORTION (8"-12" FROM THE PLAIN END OF THE ROLL FORM AND PROCEED WITH THE INSTALLATION.

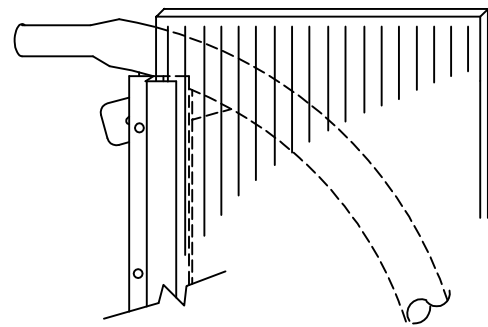
SIDE DOOR SHEETING

EXPANSION MANSION

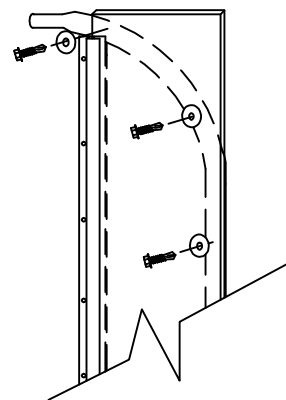
- 1 INSTALL ALUMINUM "U" PROFILE ONTO SIDE DOOR MODULE AS SHOWN. FASTEN WITH #12-14 x 1" SELF-DRILLING SCREWS EVERY 12" ± 1".



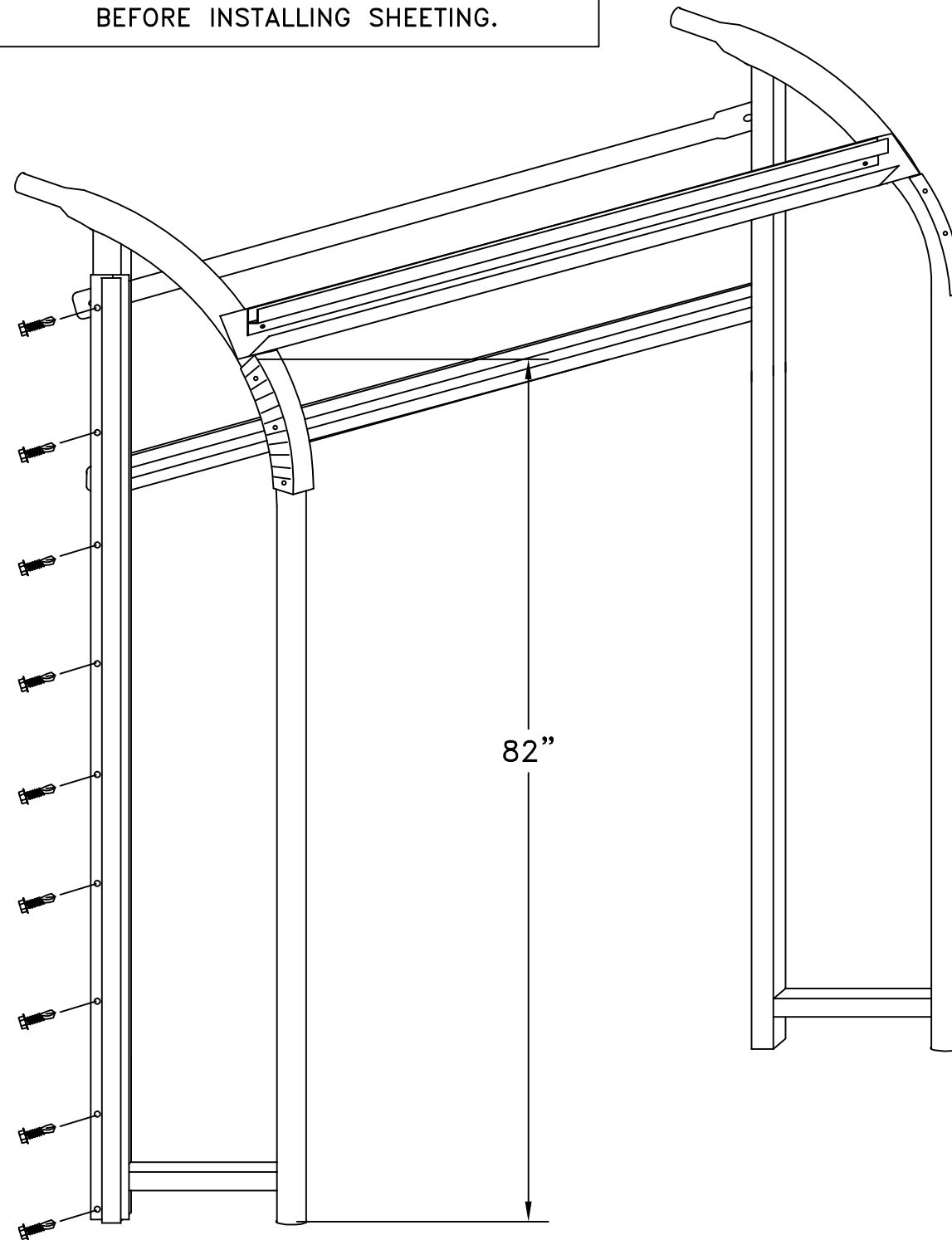
- 2 PLACE STRUCTURED SHEETING INTO "U" PROFILE AS SHOWN.



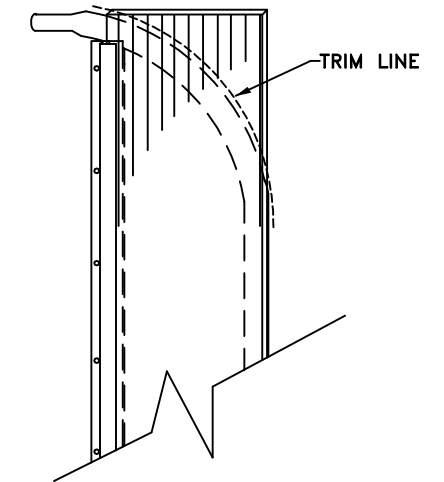
- 3 ATTACH STRUCTURED SHEETING WITH #12-14 x 1 1/2" SELF-DRILLING SCREWS & NEOPRENE WASHERS EVERY 16" ± 1".



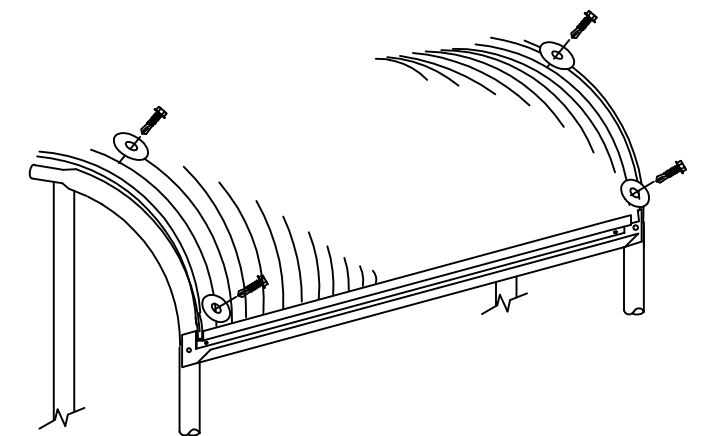
NOTE: SEE PAGES TWENTY & TWENTY-ONE BEFORE INSTALLING SHEETING.



- 4 ONCE SHEETING IS IN PLACE TRIM ALONG MODULE WITH A JIGSAW, SAWSALL OR SIMILAR TOOL SO SHEETING IS FLUSH WITH TOP OF MODULE.



- 5 INSTALL THE PEAK SHEETING INTO THE "U" PROFILE AND FASTEN WITH #12-14 x 1 1/2" SELF-DRILLING SCREWS & NEOPRENE WASHERS EVERY 12" ± 1".



SIDE DOOR INSTALLATION (OPTIONAL)

NOTE: SEE PAGES TWENTY-ONE & TWENTY-TWO BEFORE INSTALLING SHEETING.

- 1 INSTALL DOORS WITH HINGES USING (3) 1/4"-14 x 1" SELF-DRILLING SCREWS (FIGURE 1).

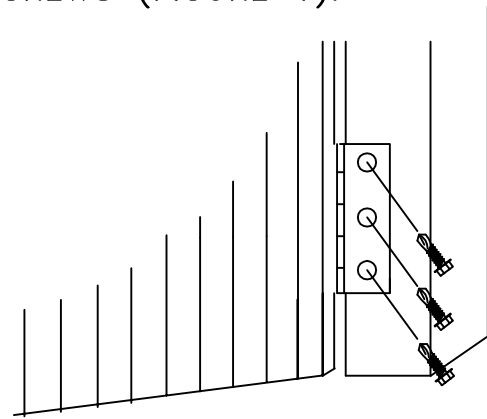
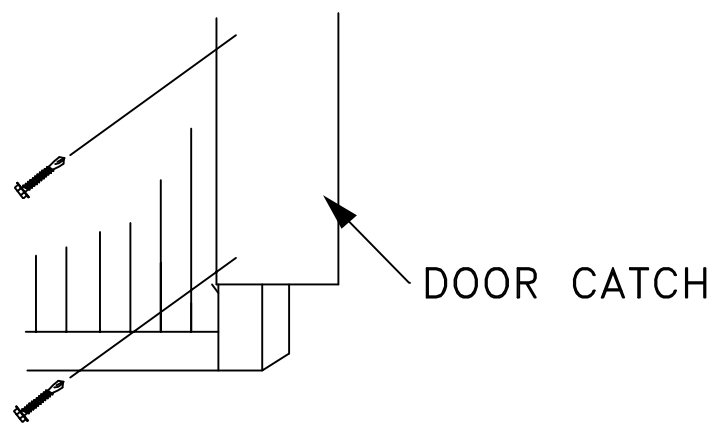


FIGURE 1

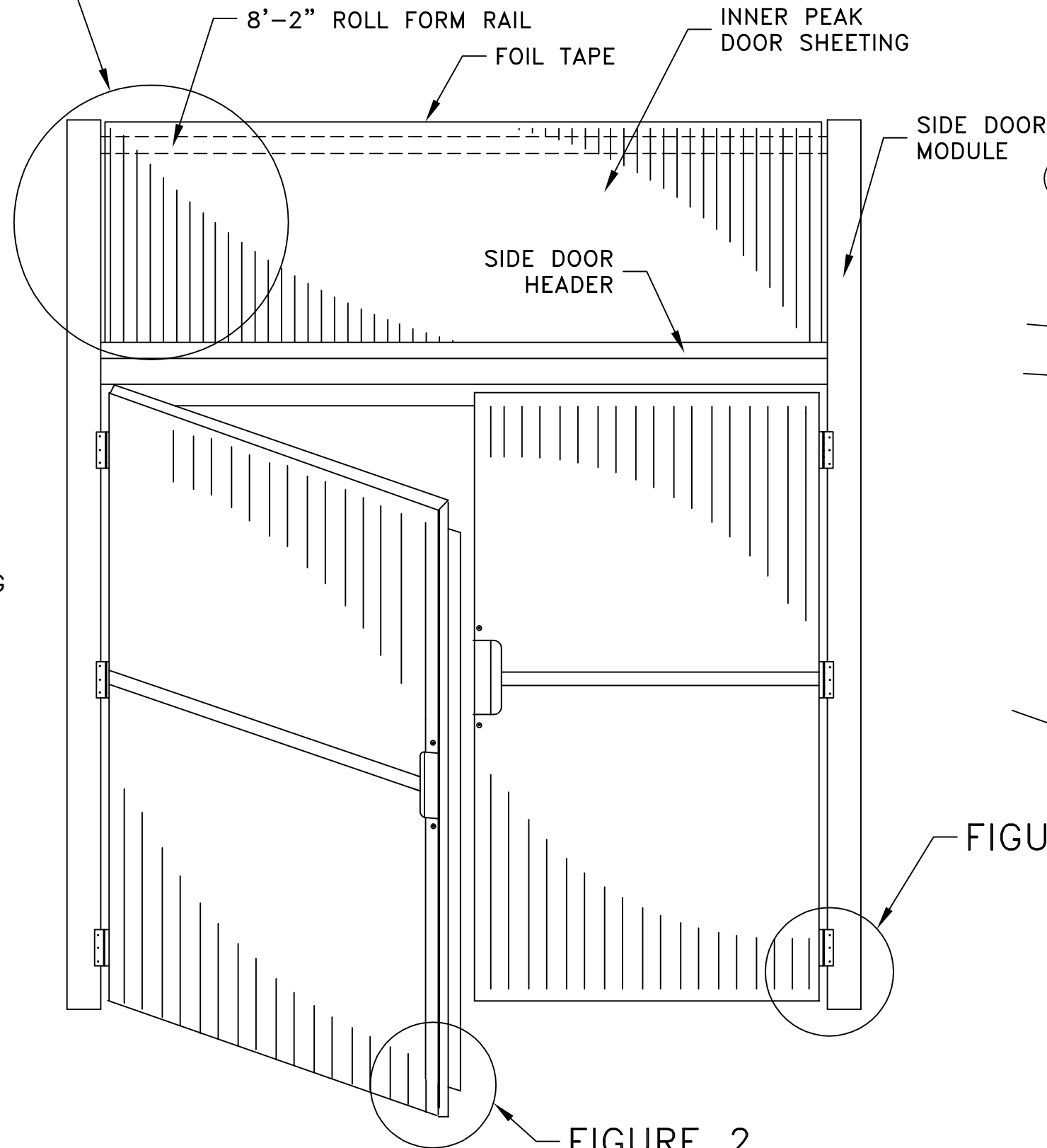
- 2 ATTACH THE DOOR CATCH TO THE INSIDE OF EITHER DOOR USING (4) #12-14 x 1" SELF-DRILLING SCREWS (FIGURE 2).



(INSIDE VIEW OF DOOR)

FIGURE 2

FIGURE 3



- 3 SLIDE SHEETING INTO "U" PROFILE ON SIDE DOOR HEADER AND ATTACH TO 8'-2" ROLL FORM RAIL USING (7) #12-14 x 1 1/2" SELF-DRILLING SCREWS AND NEOPRENE WASHERS.

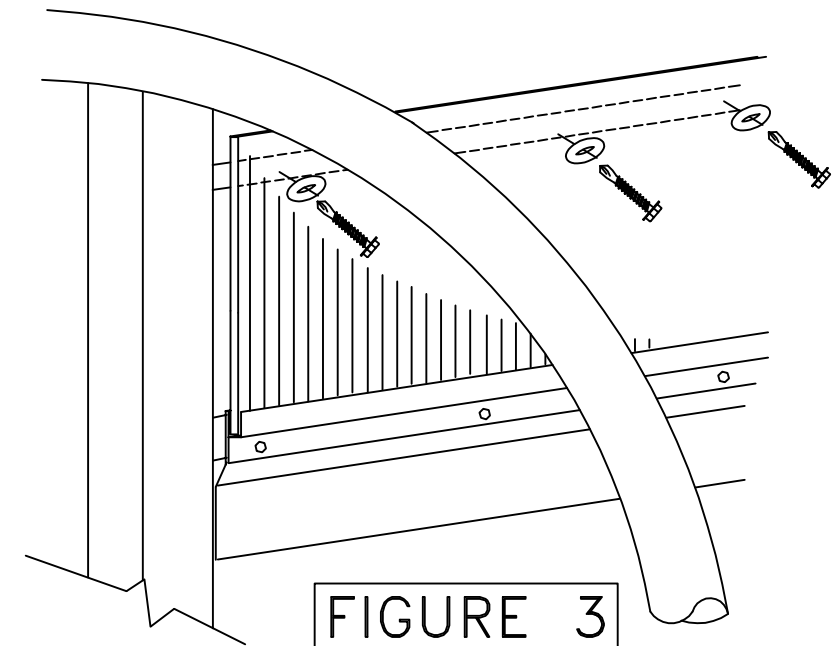


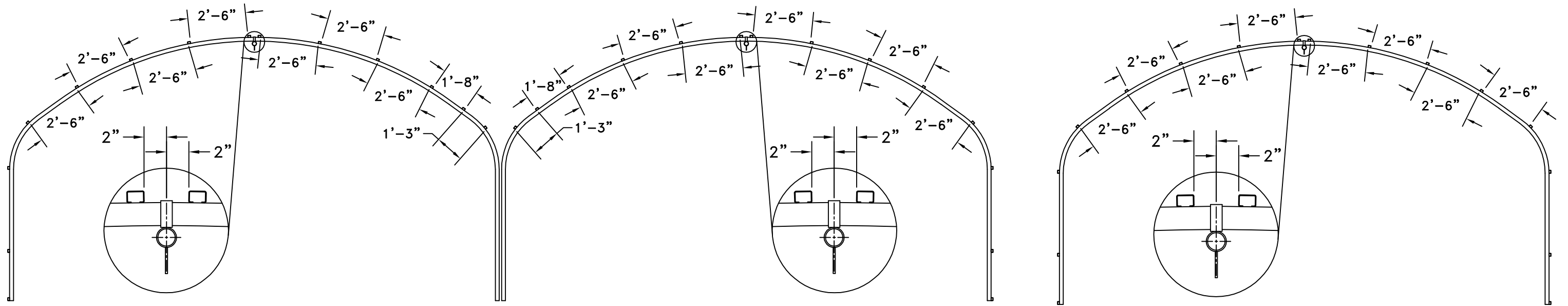
FIGURE 3

FIGURE 1

FIGURE 2

ROLL FORM LAYOUT FOR ROOF SHEETING (OPTIONAL)

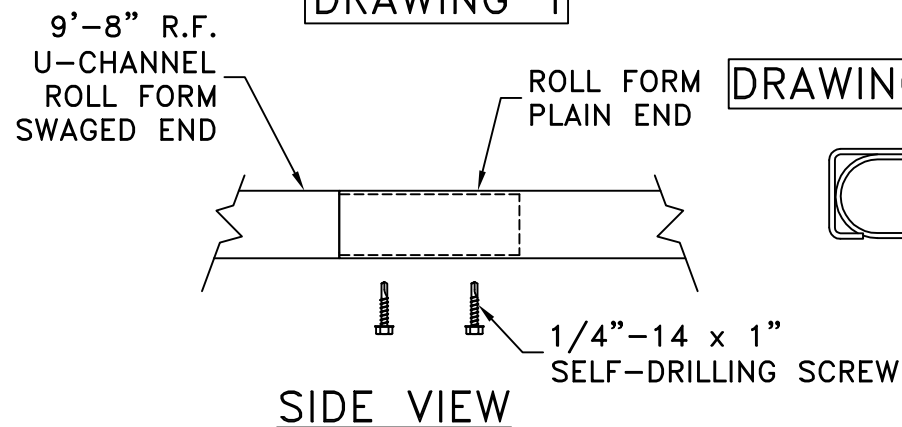
EXPANSION MANSION



GUTTER CONNECT

ONE BAY

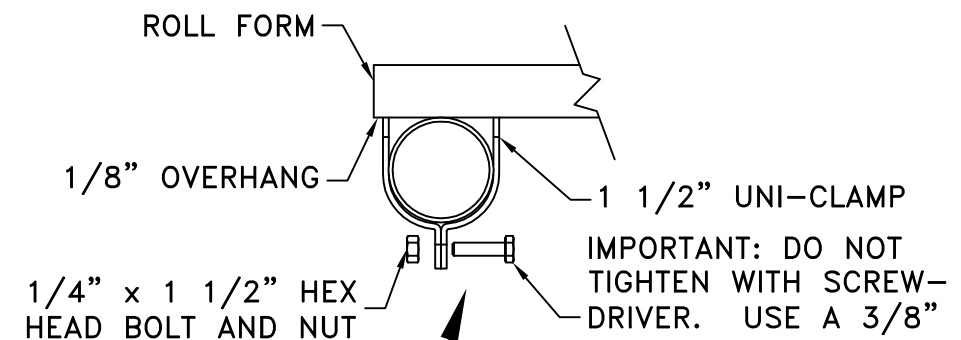
DRAWING 1



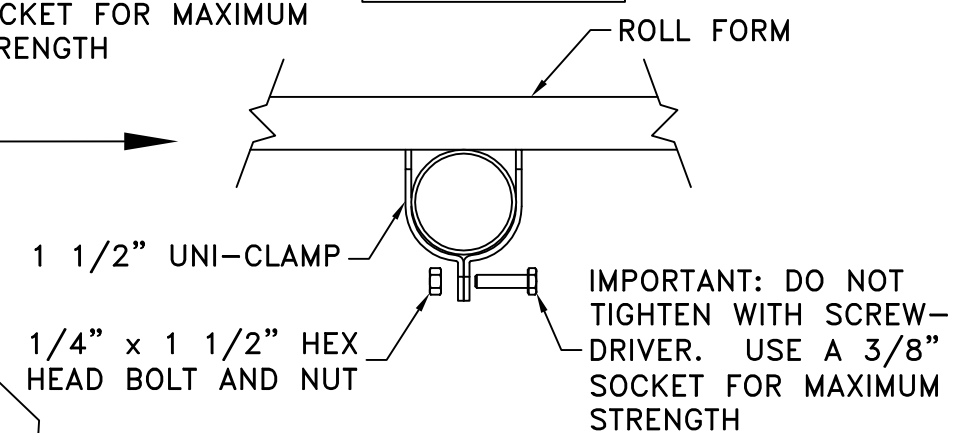
DRAWING 1-A

1/4"-14 x 1" SELF-DRILLING SCREW

DRAWING 2

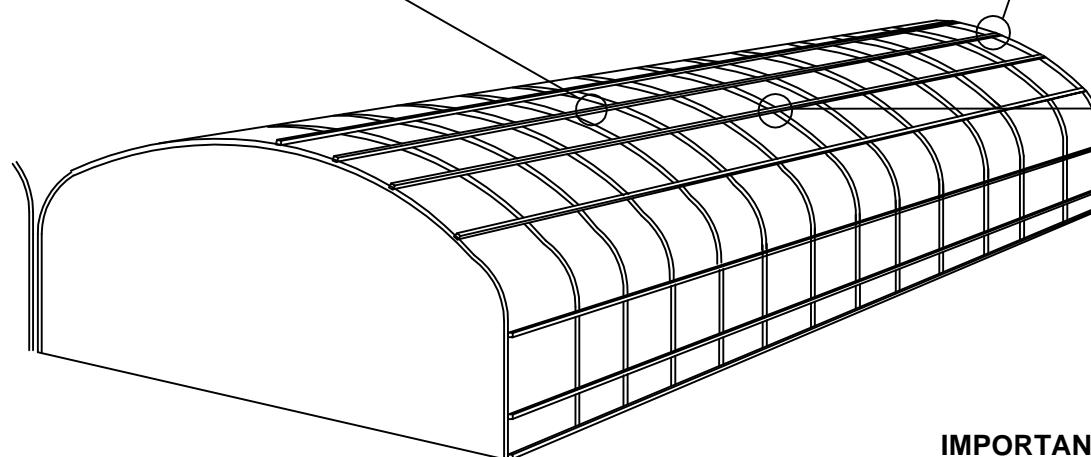


DRAWING 3



The roll form rails are 9'-8" end to end. The rails will be connected by inserting the swaged end into the plain end. Install (2) 1/4"-14 x 1" self drilling screws into side of roll form (SEE DRAWING 1). The rails are attached to the greenhouse frame with 1 1/2" uni-clamps (SEE DRAWINGS 2 & 3). If the swaged end happens to fall on a joint, cut some of the plain end off to keep the joint away from the uni-clamp location.

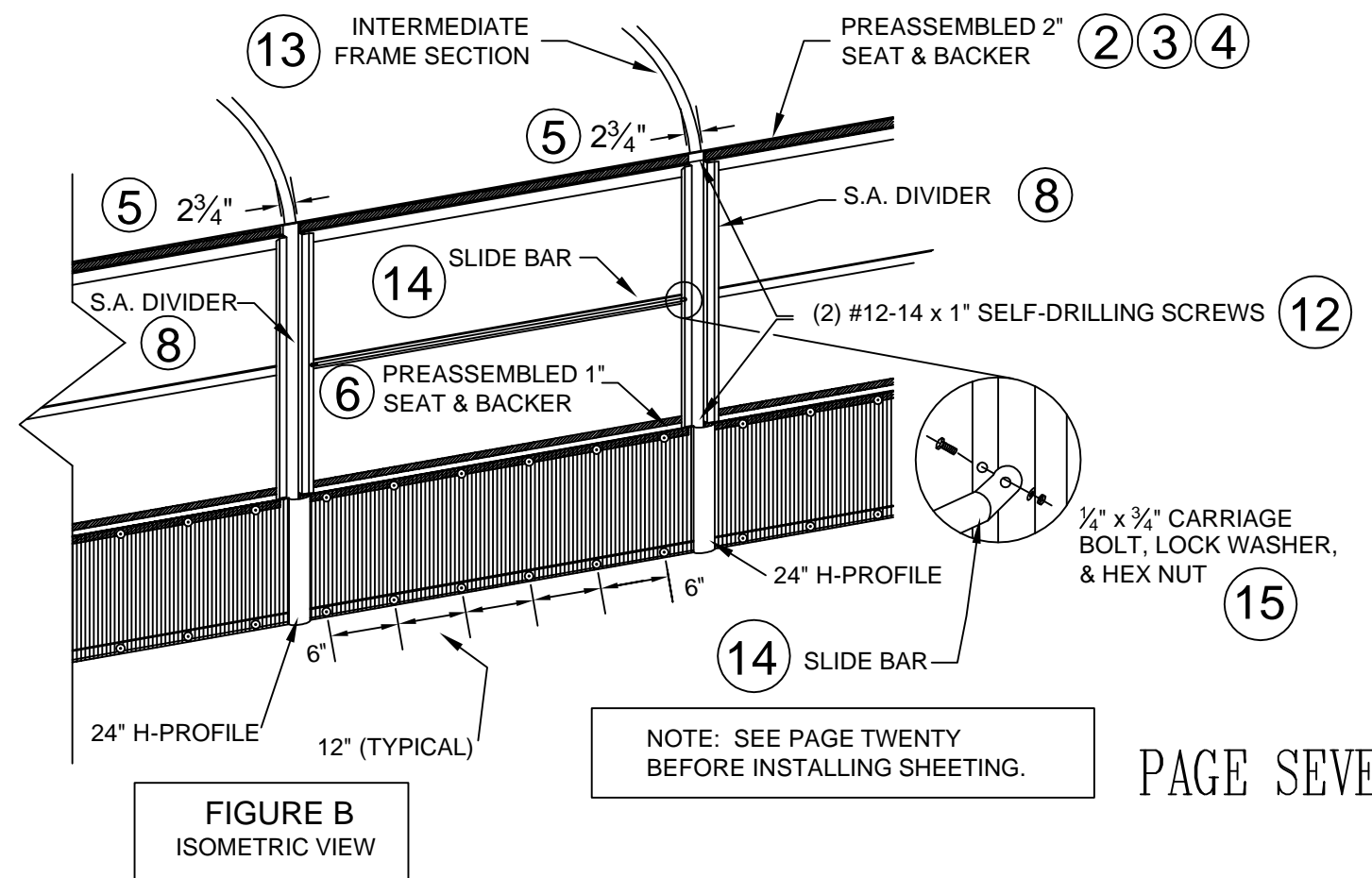
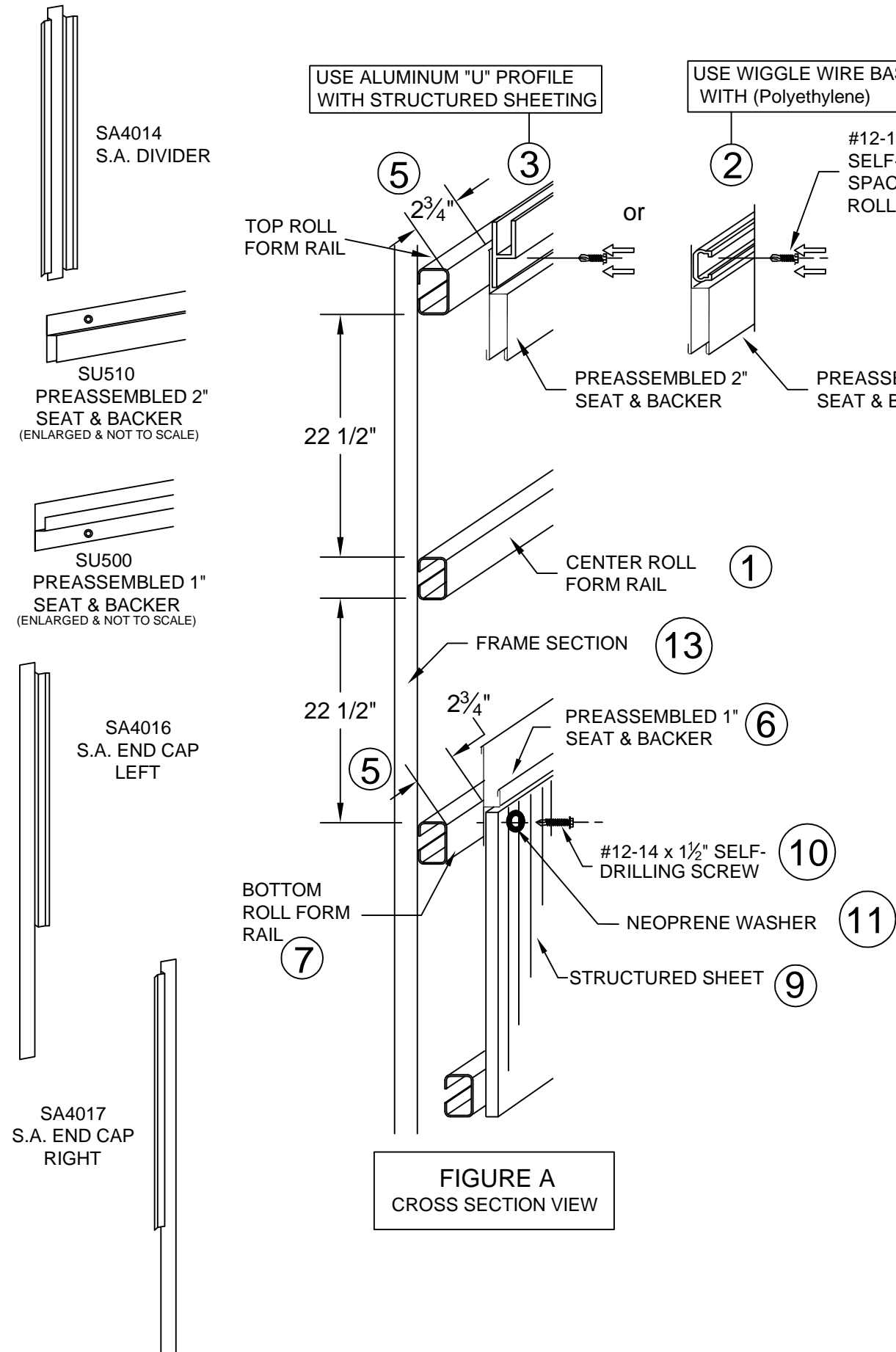
NOTE: When any part of the oval insert is too near a post to attach uni-clamps, cut a portion (8" - 12") from the plain end of the roll form and proceed with the installation.



IMPORTANT NOTE:

If the rail extends beyond the end hoop of the structure, cut the rail flush with the outside edge of the end hoop. Use the cut-off piece to begin the next row.

SLIDE-SIDE INSTALLATION (OPTIONAL)



① If not previously installed on page 11, install the center Roll Form Rail 22 1/2" above the second row of roll form using uni-clamps on each greenhouse frame section the full length of the greenhouse.

Assemble in one 6 ft section increments using the following procedure. See figures A & B with wiggle wire for polyethylene roof ② or aluminum "U" profile for structures sheet roof. ③

Measure in from the end of the top roll form rail 2-3/4" ⑤ and place the preassembled 2" Seat & Backer on the top rail. Attach 2" Seat & Backer with either wiggle wire base ② or Aluminum "U" profile ③ using #12-14 x 1" self-drilling screws in 12" increments. ④ Leave 2-3/4" ⑤ between each Seat & Backer to attach S.A. Dividers ⑧ later.

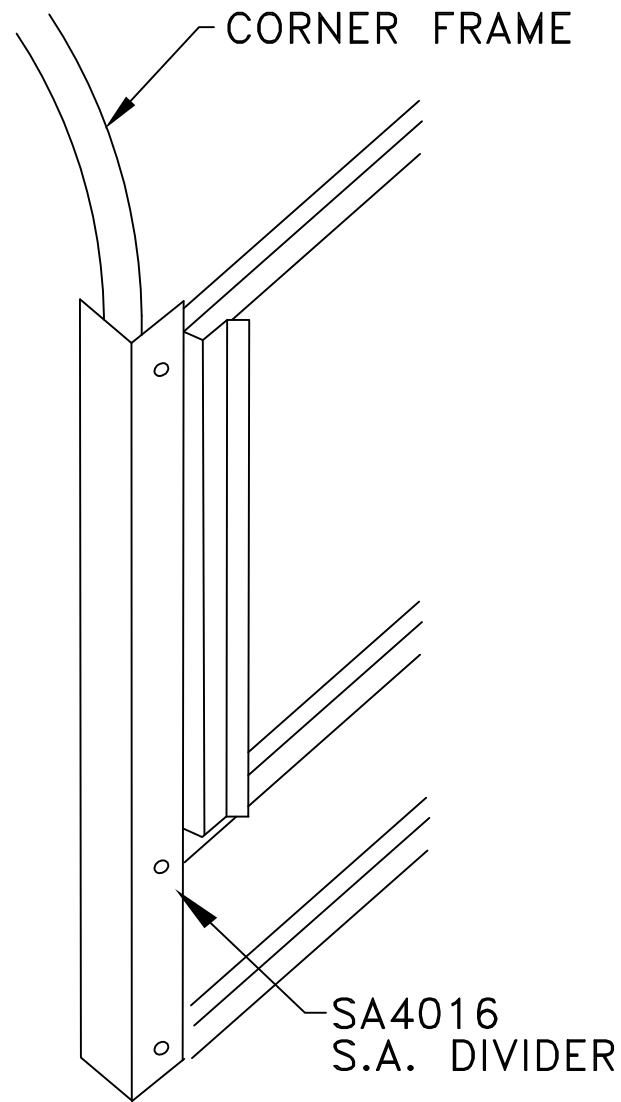
Measure in from the end of the bottom roll form rail 2-3/4" ⑤ and place the preassembled 1" Seat & Backer ⑥ on the bottom rail ⑦ putting a 2-3/4" space ⑤ for a S.A. Divider ⑧ (to be attached later) between each Seat & Backer. Place structured sheet ⑨ in front of the 1" Seat & Backer. ⑥ Attach them with #12-14 x 1-1/2" self-drilling screws ⑩ and neoprene washers ⑪ using 12" spacing. See screw pattern below (Figure B).

Install the S.A. Dividers ⑧ with (2) #12-14 x 1" self-drilling screws ⑫ on the intermediate frame sections ⑬ only. The preassembled Seat & Backer ②③⑥ are installed behind the divider. ⑧

Install slide panels (see Page 18) and attach the Slide-Bar ⑭ with 1/4" x 3/4" carriage bolts, lock washers and nuts ⑮ through the pre-drilled holes in the S.A. divider ⑧. Be sure the head of the bolt faces the inside of the greenhouse.

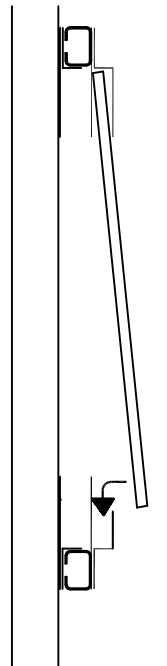
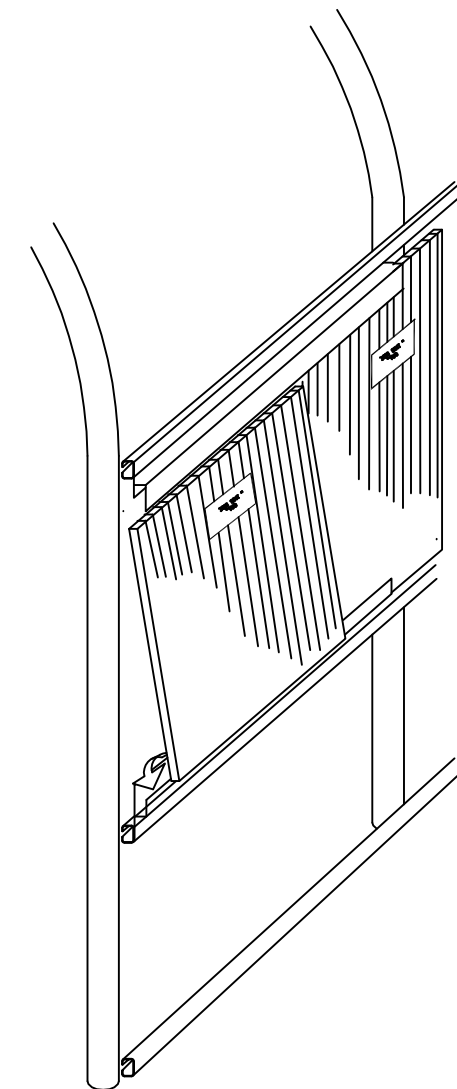
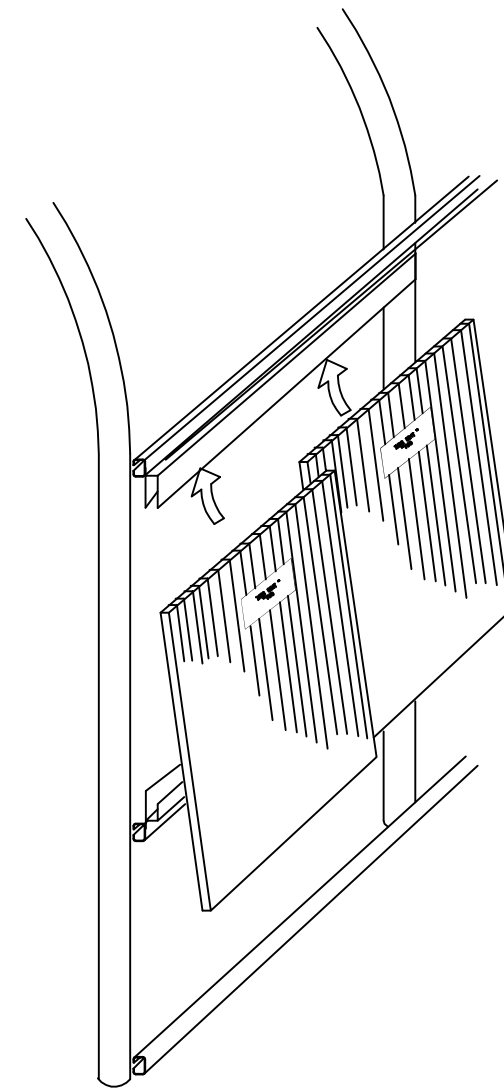
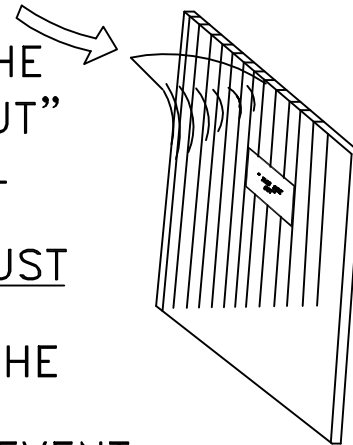
NOTE: SEE PAGE TWENTY BEFORE INSTALLING SHEETING.

SLIDE-PANEL INSTALLATION (OPTIONAL)



BEFORE YOU INSTALL SLIDE-SIDE PANELS, REMOVE PROTECTIVE COVERING. THIS PLASTIC COVERING WILL BE LOCATED ON BOTH SIDES OF THE PANEL.

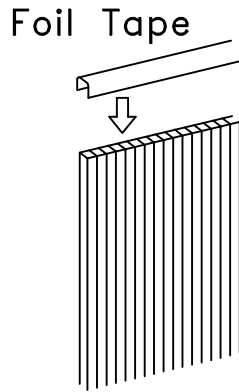
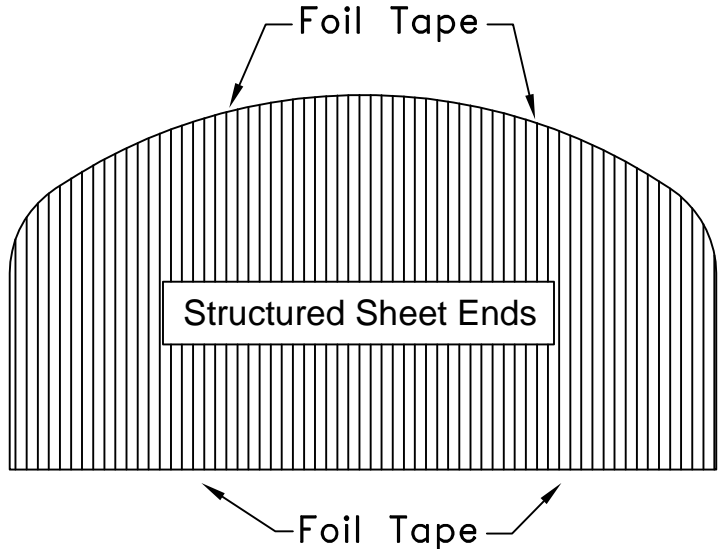
ALSO NOTE THE "THIS SIDE OUT" LABEL ON ALL PANELS. THE LABEL MUST FACE TO THE OUTSIDE OF THE STRUCTURE IN ORDER TO PREVENT SUN DETERIORATION.



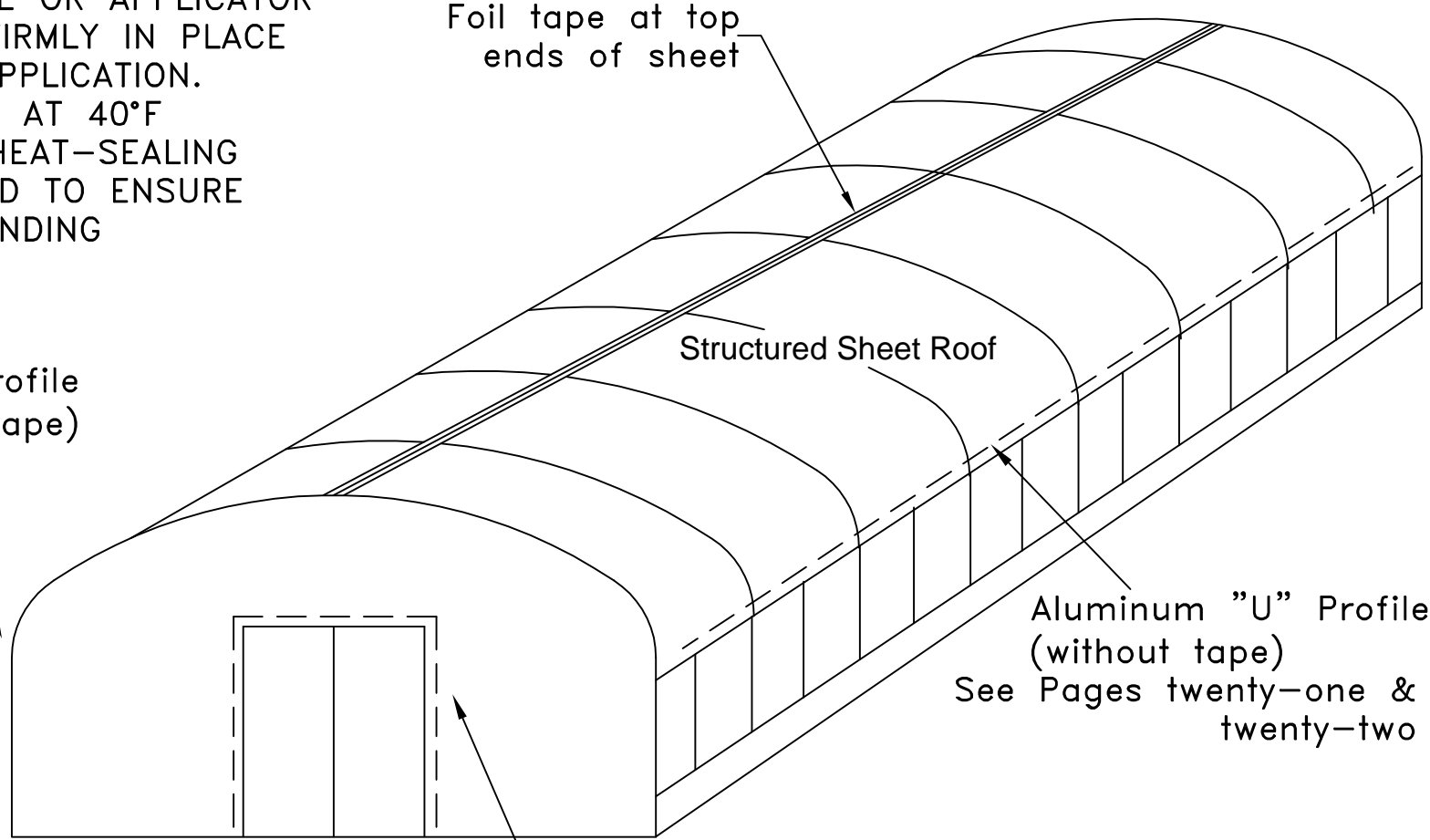
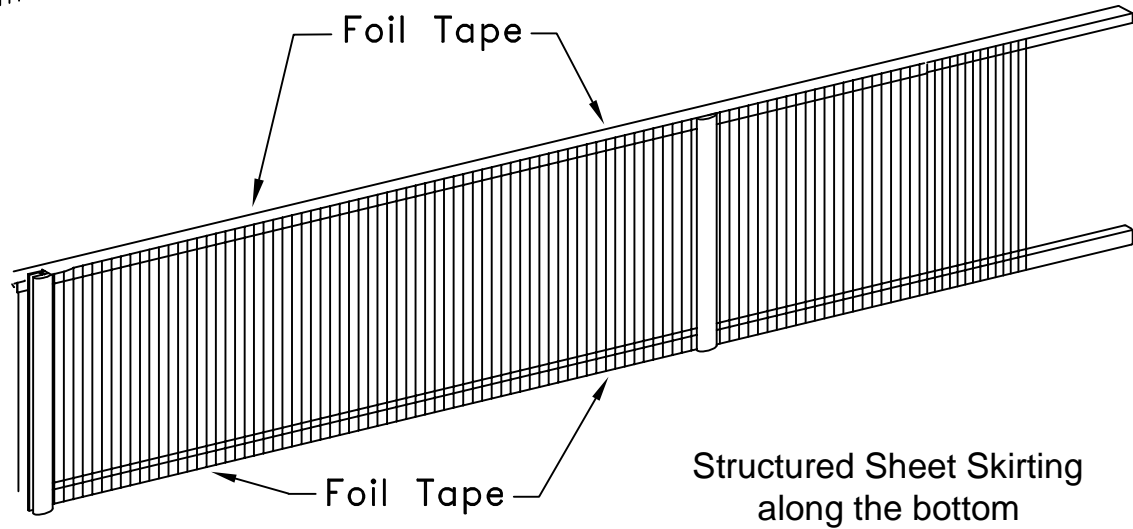
After all the preassembled seats & backers are installed, you can attach the end caps as shown using #12-14 x 1" self-drilling screws with neoprene washers.

TAPE & ALUMINUM PROFILE LOCATION (FOR STRUCTURED SHEETING APPLICATIONS)

FOR BEST RESULTS WHEN APPLYING FOIL TAPE, APPLY TO CLEAN, DRY SURFACE. USE FINGER PRESSURE OR APPLICATOR TOOL TO RUB TAPE FIRMLY IN PLACE IMMEDIATELY AFTER APPLICATION. WHEN APPLYING TAPE AT 40°F OR BELOW, USE OF HEAT-SEALING IRON IS RECOMMENDED TO ENSURE PROPER ADHESIVE BONDING

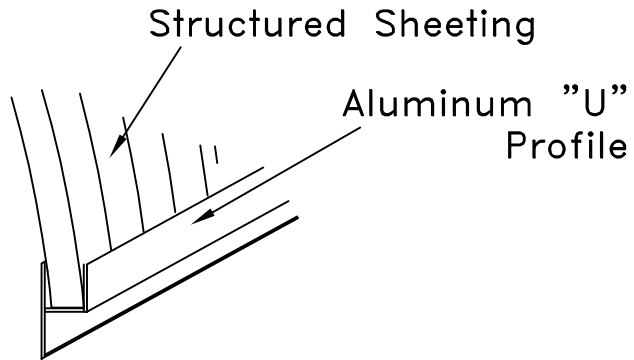


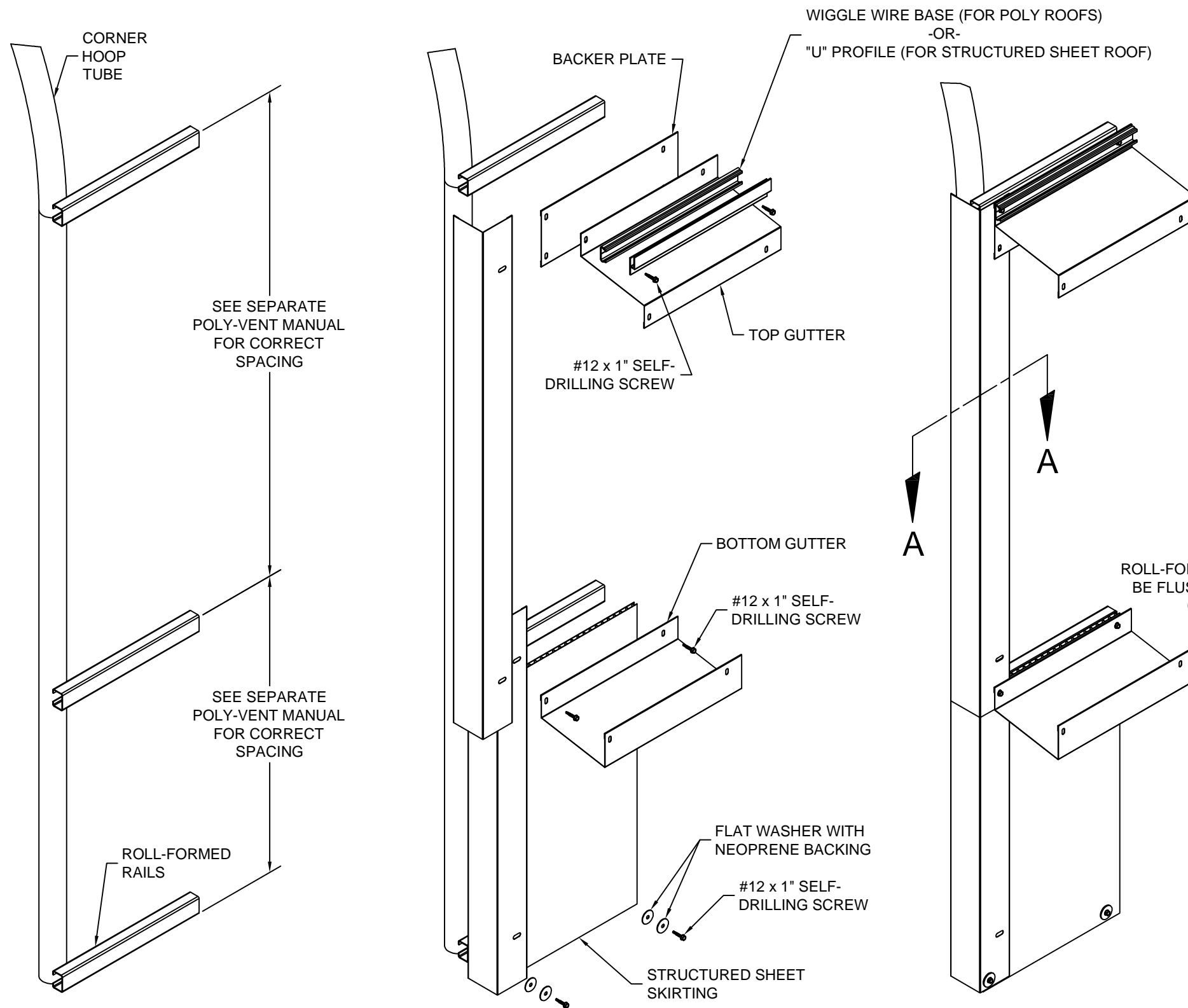
Note: Install all foil tape before installing sheets to greenhouse DO NOT APPLY FOIL TAPE UNTIL ALL SHEETS ARE TRIMMED.



Aluminum "U" Profile (without tape)

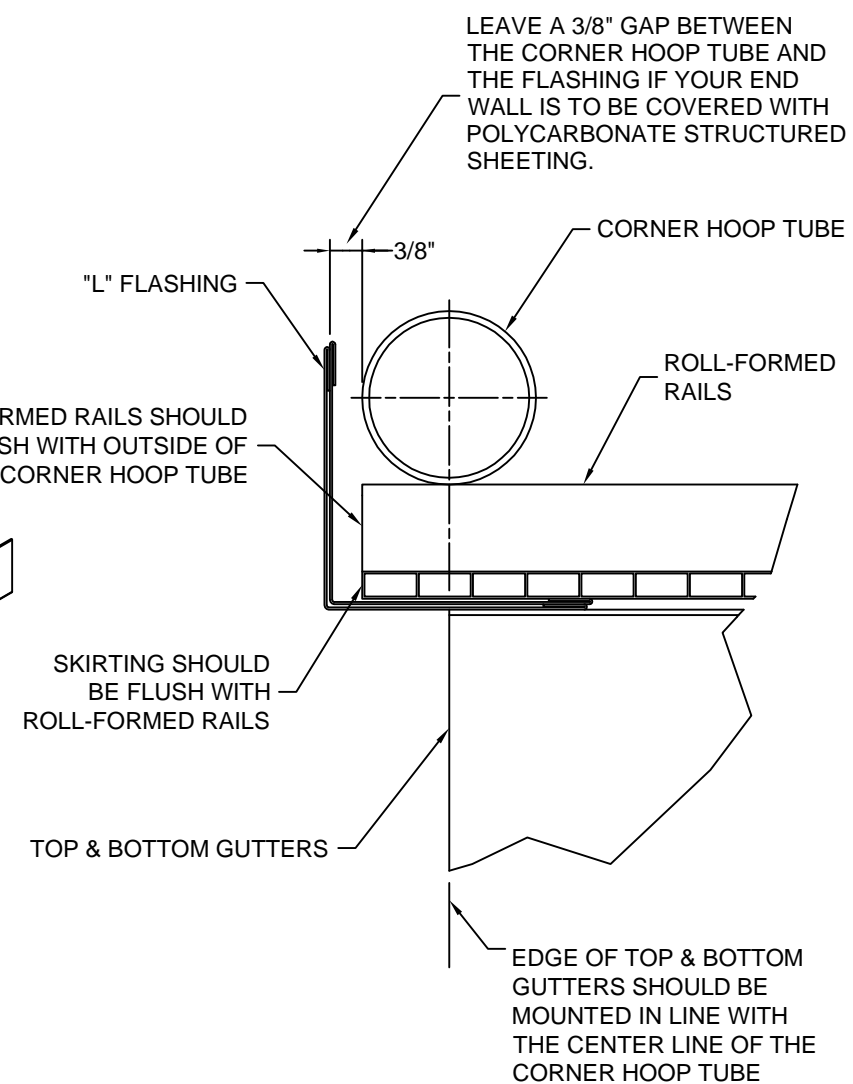
Aluminum "U" Profile (without tape) See Pages twenty-one & twenty-two





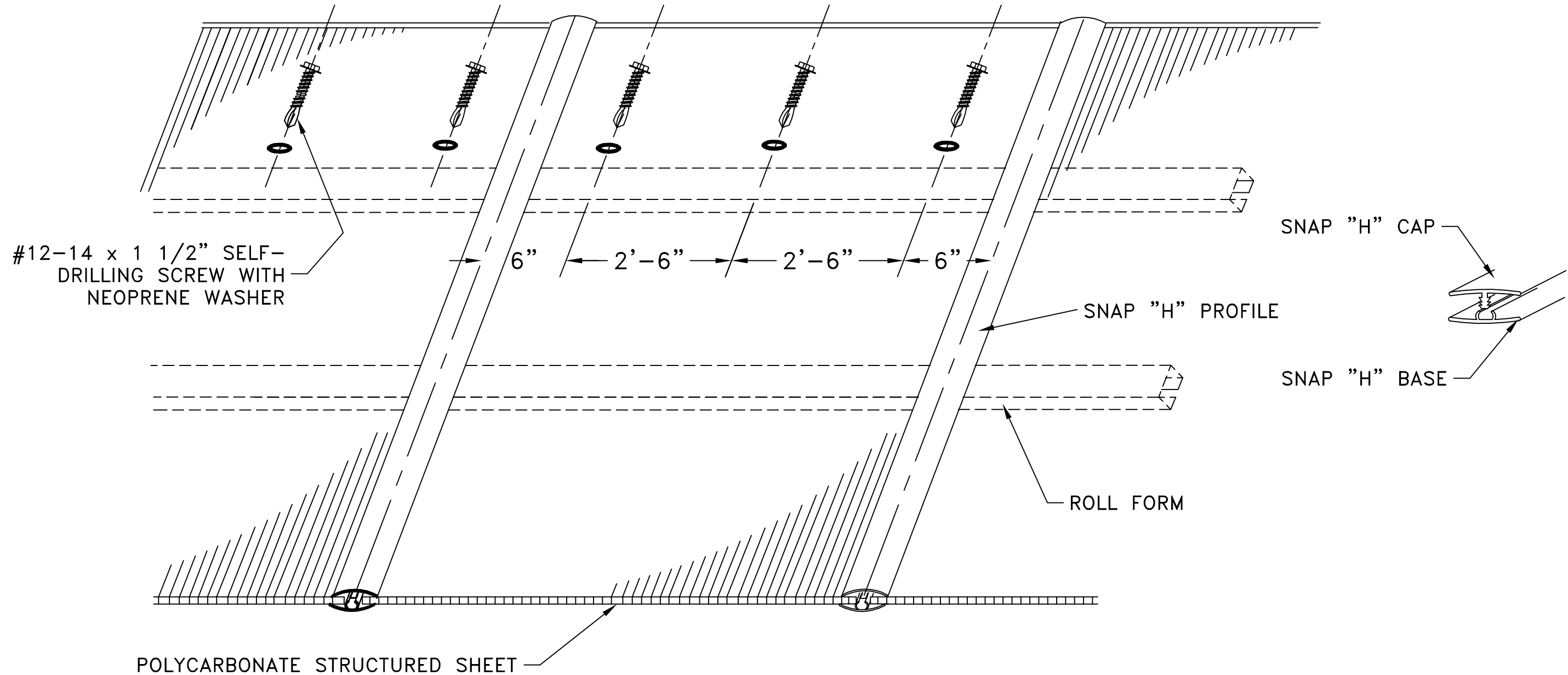
TO BEGIN POLY-VENT INSTALLATION, ENSURE THE ROLL-FORMED RAIL DIMENSIONS ARE CORRECT. FOLLOW THE INSTRUCTIONS OF THE 8-1/2" x 11" POLY-VENT INSTRUCTION MANUAL. THE MANUAL VISUALLY DEPICTS 2x4 WOOD MOUNTING RAILS, BUT YOU WILL BE MOUNTING TO THE ROLL-FORMED RAILS PREVIOUSLY INSTALLED.

REMEMBER TO INSTALL THE "L" FLASHING TO ACT AS A CORNER FLASHING COVERING THE STRUCTURED SHEET SKIRT AND FILLER FOR THE ROLLFORM RAILS.



SECTION A-A

NOTE: WHEN INSTALLING STRUCTURED SHEETING REMOVE PROTECTIVE FILM PRIOR TO INSTALLATION, BE SURE THE UV STABILIZING SIDE IS TO THE OUTSIDE OF THE GREENHOUSE.



Use the above screw pattern when installing polycarbonate sheeting. These locations include roof and end wall.
 NOTE: Make sure tape is applied to the top & bottom of specific structured sheeting except side side panels.
 If sheeting needs trimming, DO NOT apply tape until all sheets are trimmed (see Page nineteen).

STRUCTURED SHEET ROOF INSTALLATION (OPTIONAL)

EXPANSION MANSION

NOTE: IF SIDE DOOR IS USED REFER TO PAGE FOURTEEN.

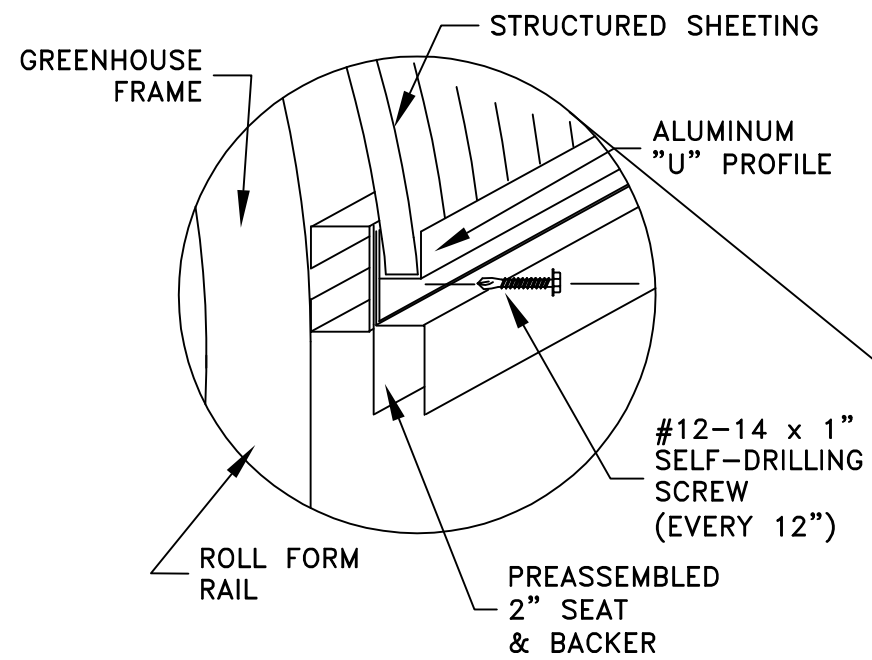


FIGURE 1

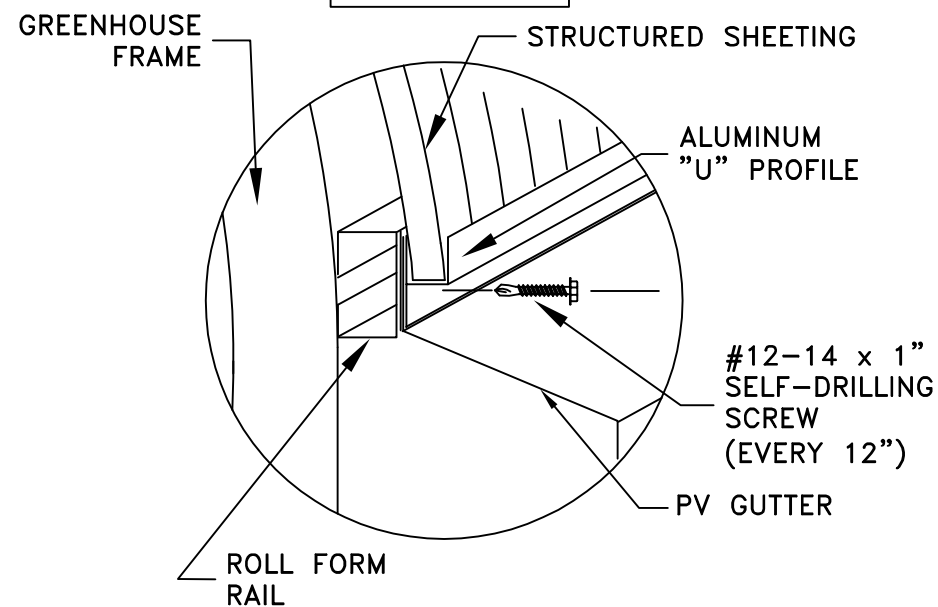


FIGURE 2

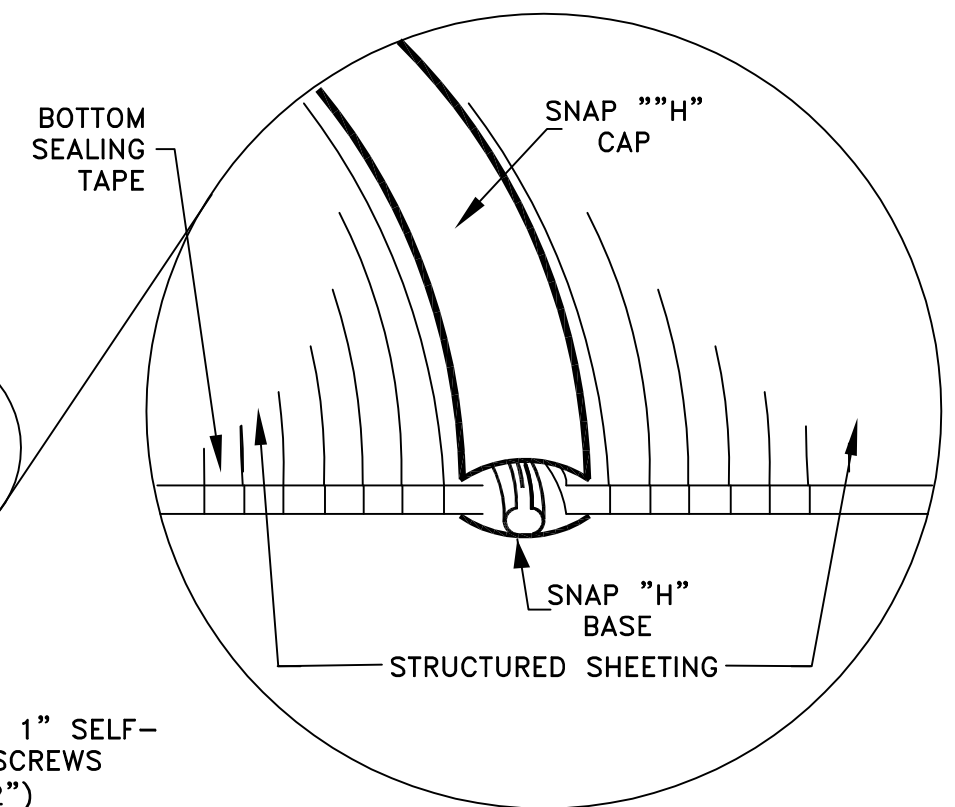
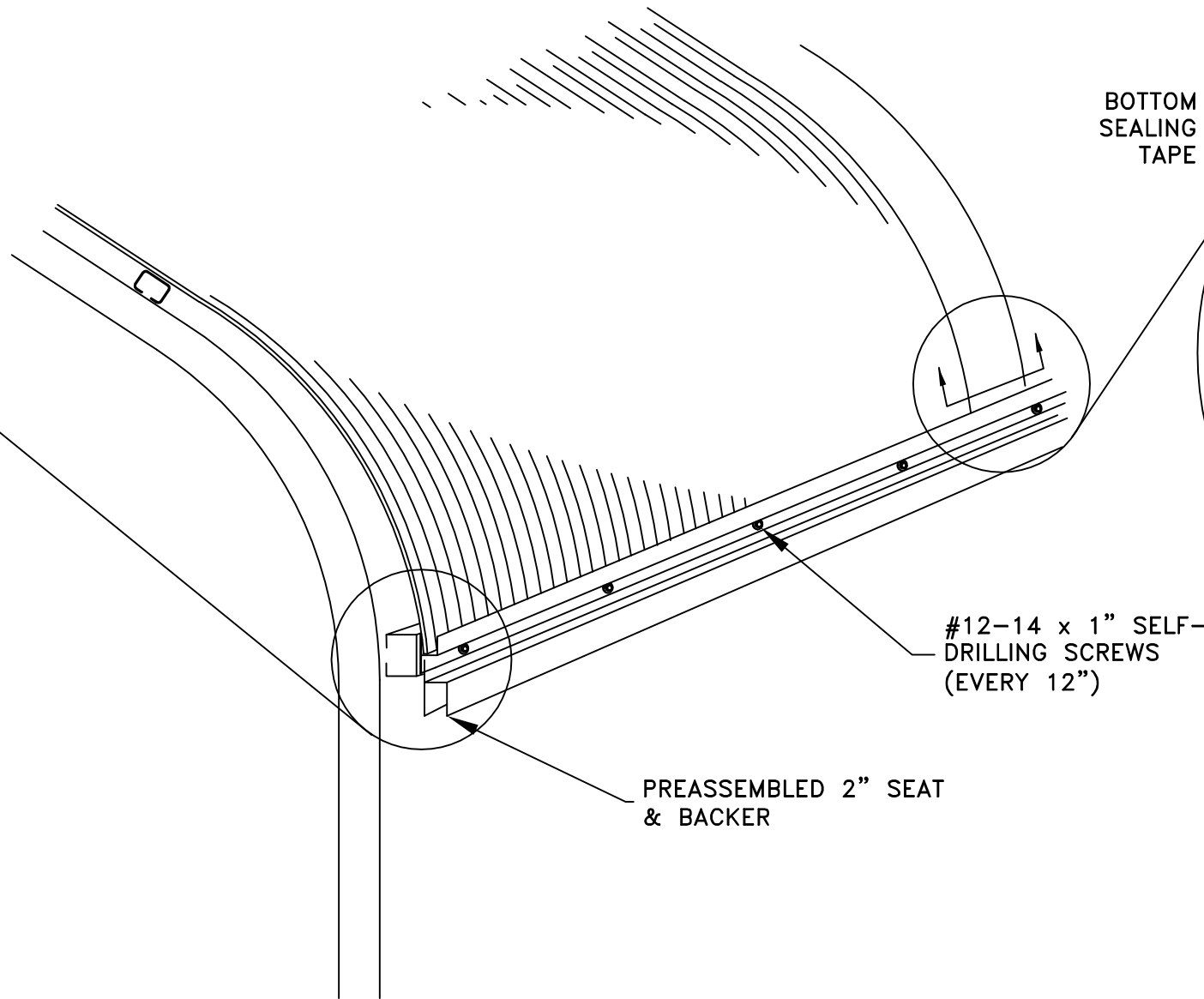
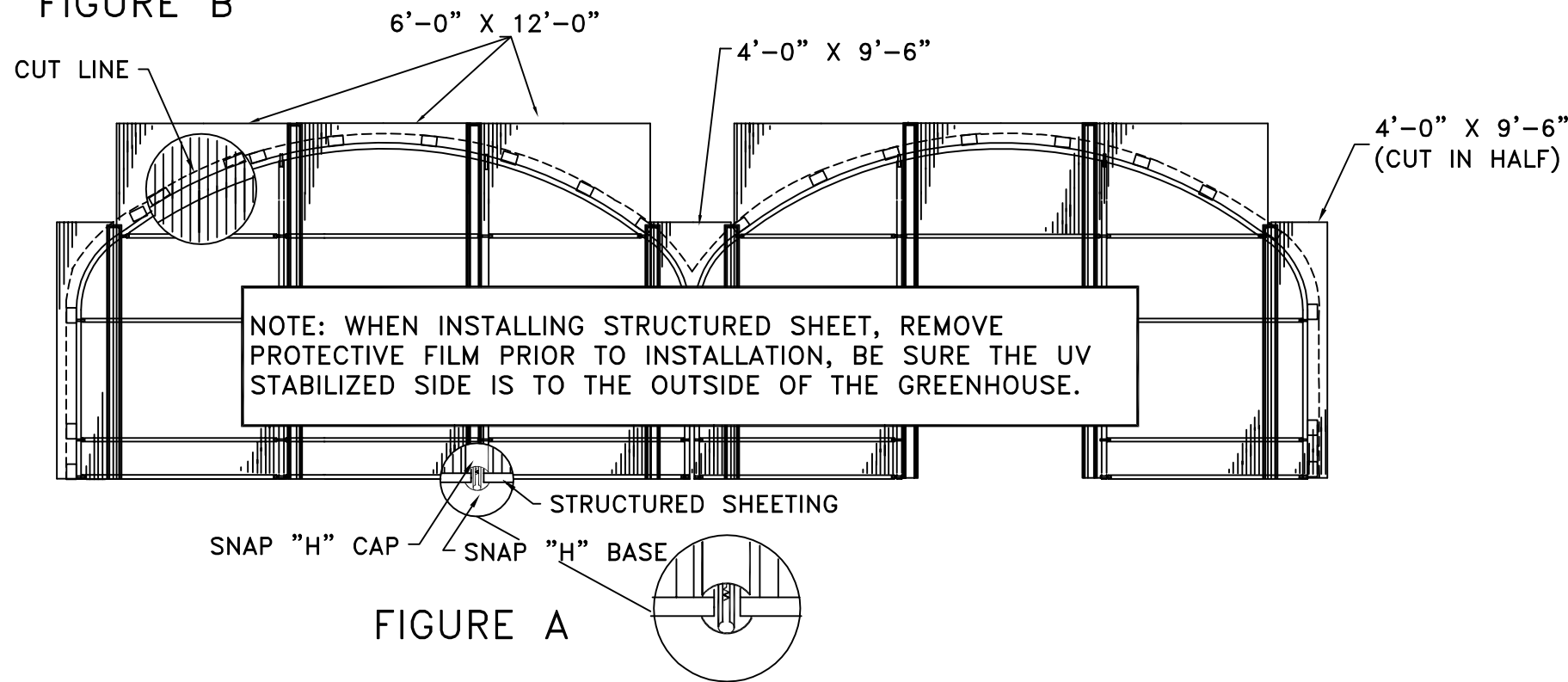


FIGURE 3

Install Aluminum "U" profile along the upper Slide-Side ventilation rail/ Poly-Vent Upper Gutter and fasten with #12-14 x 1" self-drilling screws every 12" (Figures 1 & 2). Slide roof sheeting into "U" profile. Trim and bend sheet down to secure to roll form roof rails. The Snap "H" base is set in between two sheets and then the Snap "H" cap is installed. (Figure 3) When both sides of roof have been covered, install ridge cap with #12-14 x 1 1/2" self-drilling screws at 24" on center into top of roof rail.

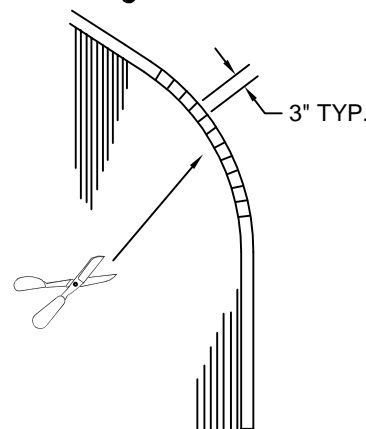
FIGURE B



NOTE: SEE PAGES NINETEEN & TWENTY-ONE BEFORE INSTALLING SHEETING.

Place 6' x 12'-0" structured sheet in the center of greenhouse. You must be sure to center this piece in order to cover the whole greenhouse. Use the screw pattern on page 21 to attach structured sheeting to the greenhouse. Apply foil tape to the bottom of each sheet before installing. Install Snap "H" base, then continue with the next structured sheet. Place the Snap "H" profile cap into the base for a tight seal. Trim the sheeting with a jigsaw or reciprocating saw. Keep the perimeter flush with the outside of the structure. Use compressed air to blow out shavings from the flutes. Seal top and bottom of structured sheets with sealing tape.

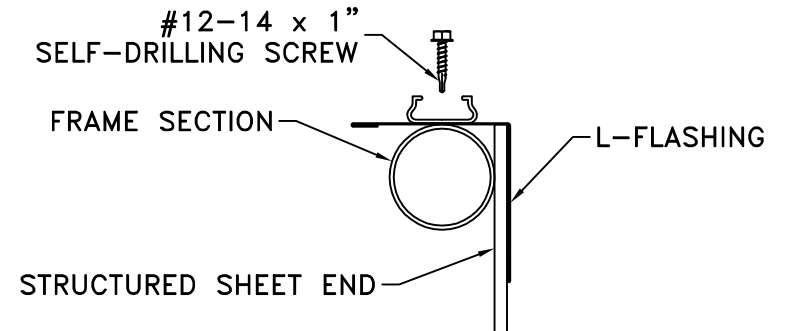
Install L-flashing over the structured sheet to provide a weathertight seal.



Notch the 2" side of the 2" x 3" "L" Flashing every 3" to follow the curve of the frame section.

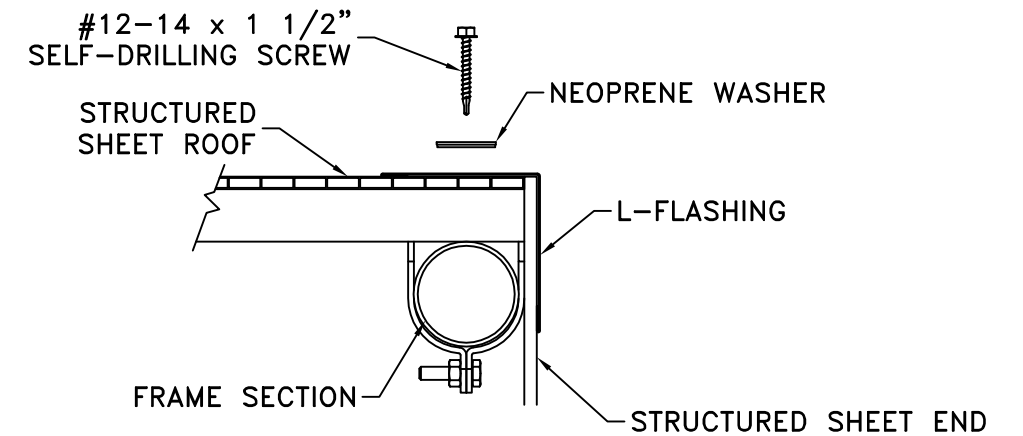
NOTE: Overlap "L" Flashing 1".

INSTALLING "L" FLASHING WITH POLY ROOF

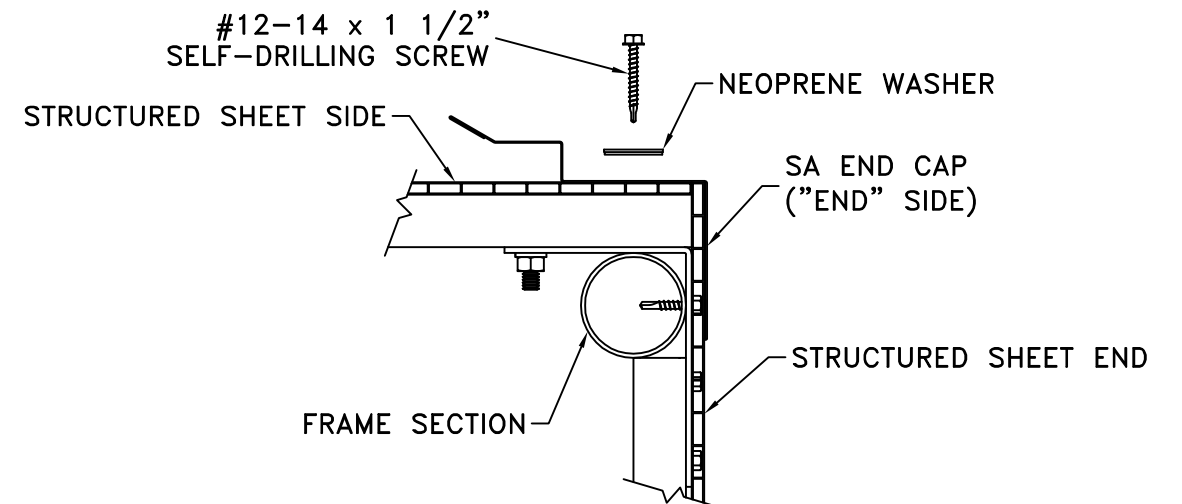


Install L-flashing on the end frame under the poly fastener to provide a weather tight seal.

INSTALLING "L" FLASHING WITH STRUCTURED SHEET ROOF



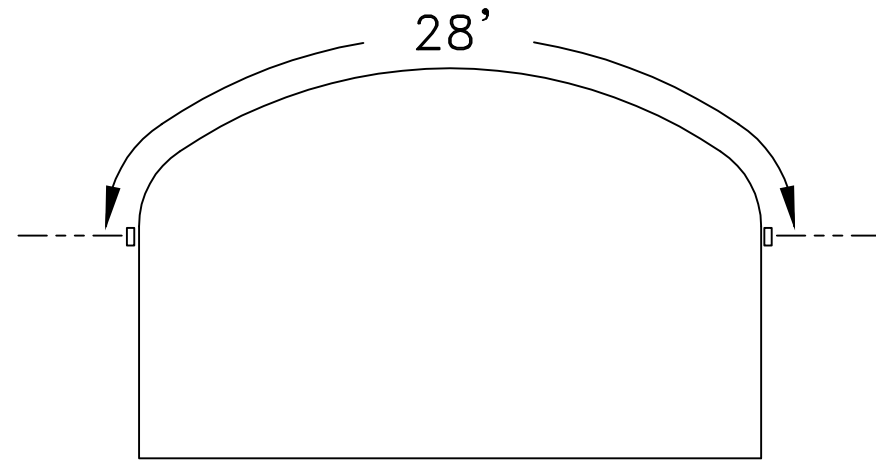
INSTALLING SA END CAP WITH STRUCTURED SHEET ENDS



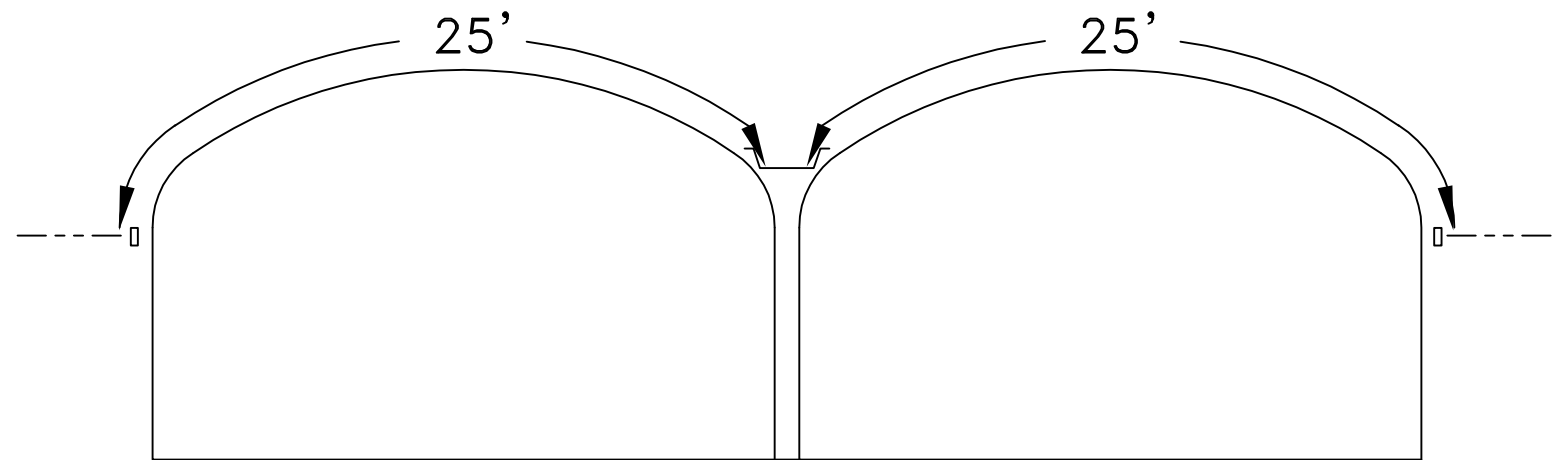
Trim structured sheet to proper dimension and slide between greenhouse frame and "end" side of S.A. End cap before finishing snap "H" profile.

ROOF & END POLY SIZES

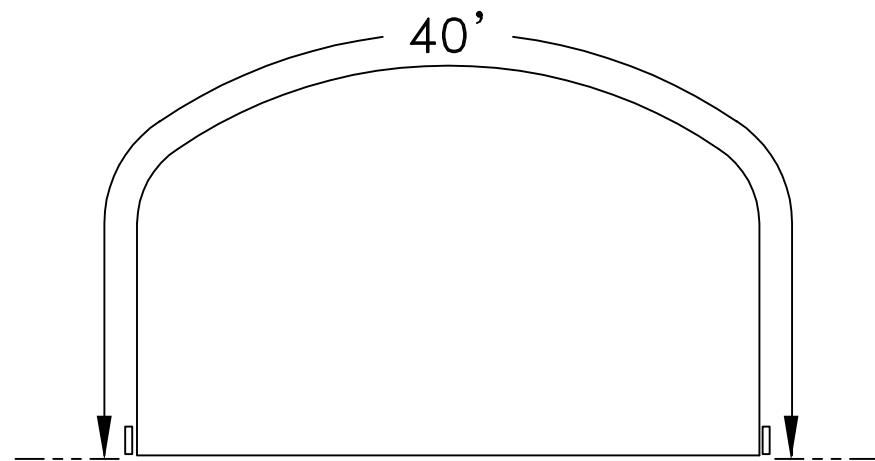
EXPANSION MANSION



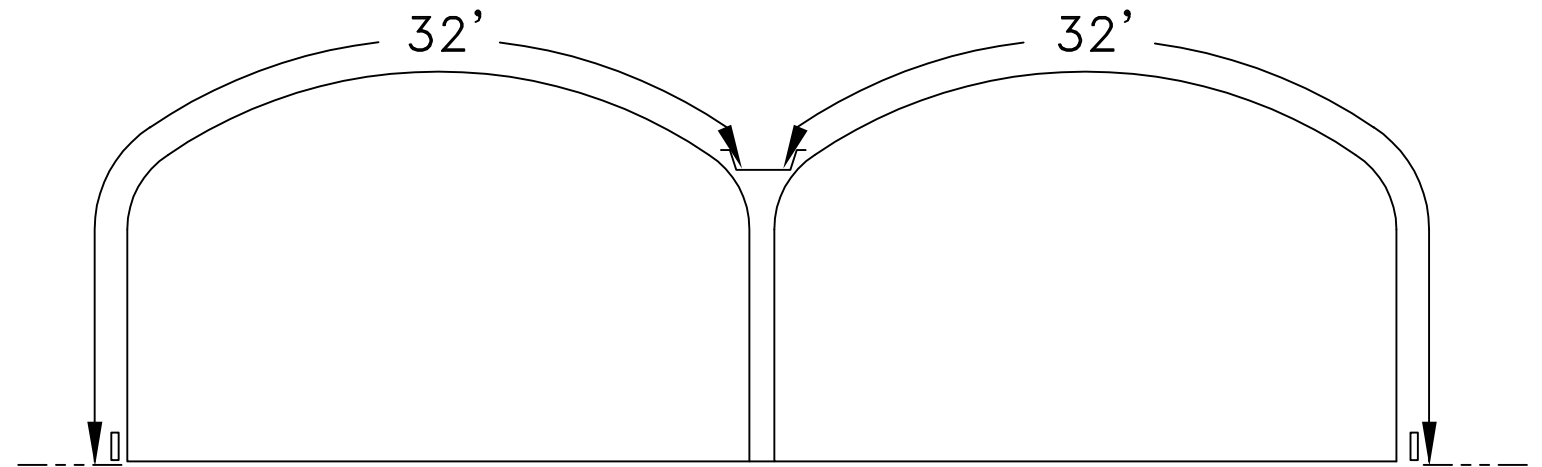
POLY-VENT ON SIDES



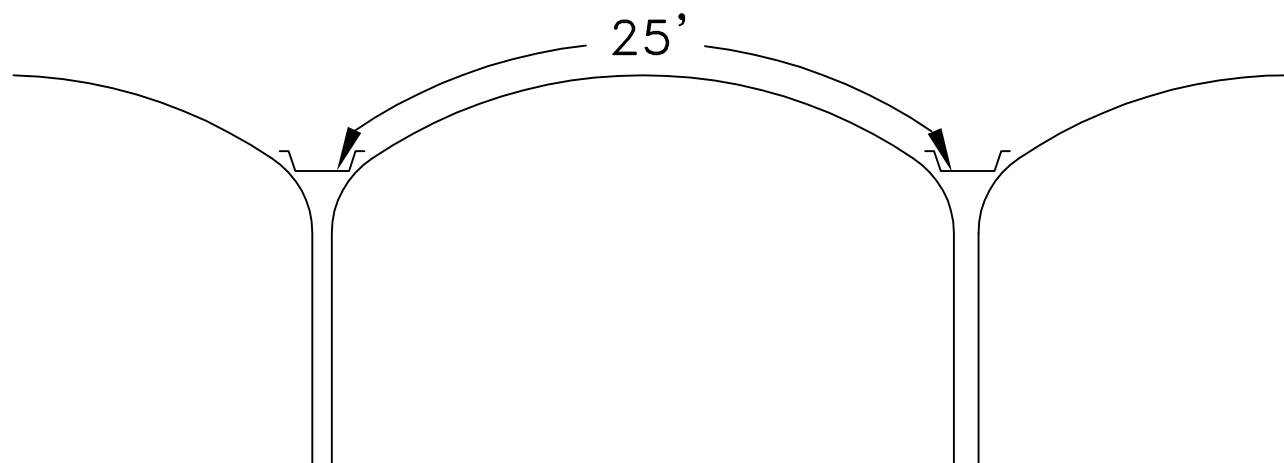
GUTTER CONNECT WITH POLY-VENT ON SIDES



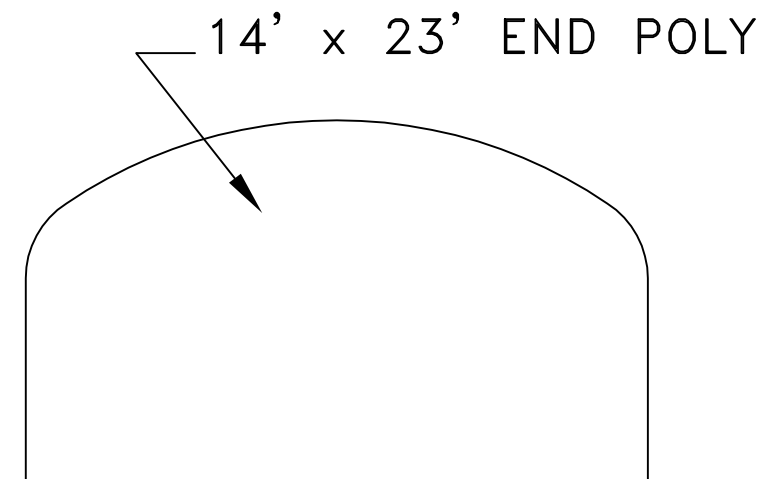
GROUND TO GROUND POLY



GUTTER TO GROUND POLY

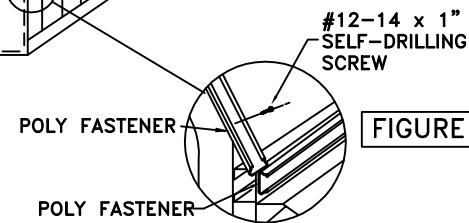
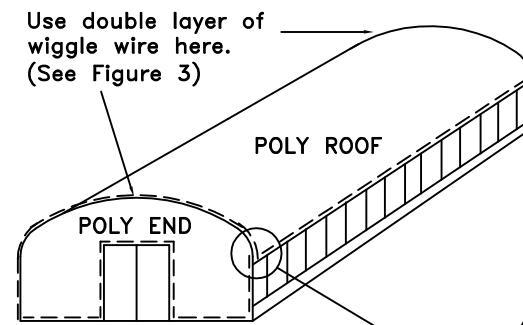
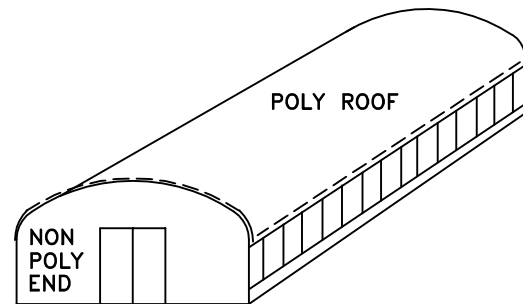
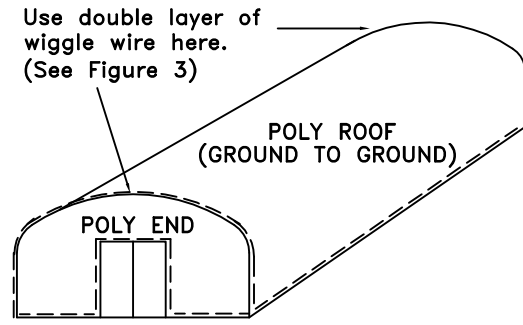


GUTTER TO GUTTER POLY



END FRAME POLY

POLY FASTENER LOCATION (OPTIONAL)



--- POLY FASTENER

When installing poly fasteners on the first and last hoops, be sure to start at the bottom just above the Poly-Vent or Slide-Side.

Secure (1) #12-14 x 1" self-drilling screw and begin bending the base to follow the curve (see FIGURE 1)

NOTE: Place all self-drilling screws at 12"± increments.

FIGURE 1

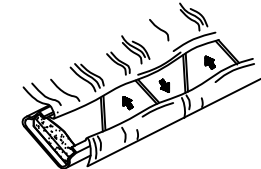
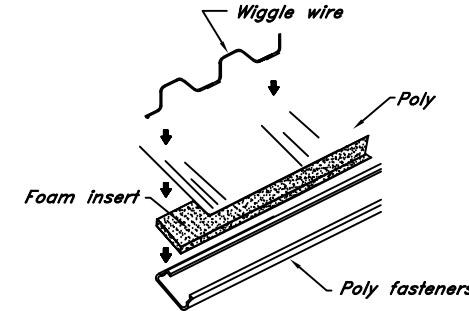
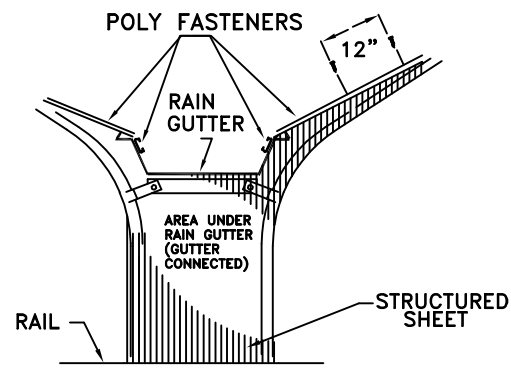
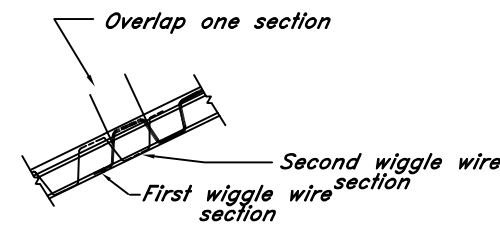
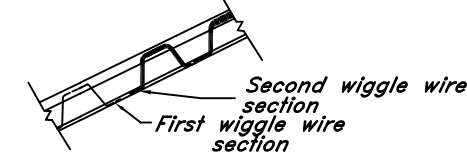


FIGURE 2



RIGHT



WRONG

FIGURE 3

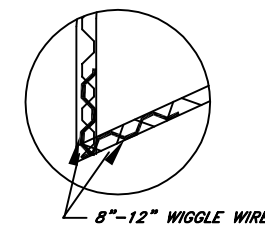


FIGURE 4

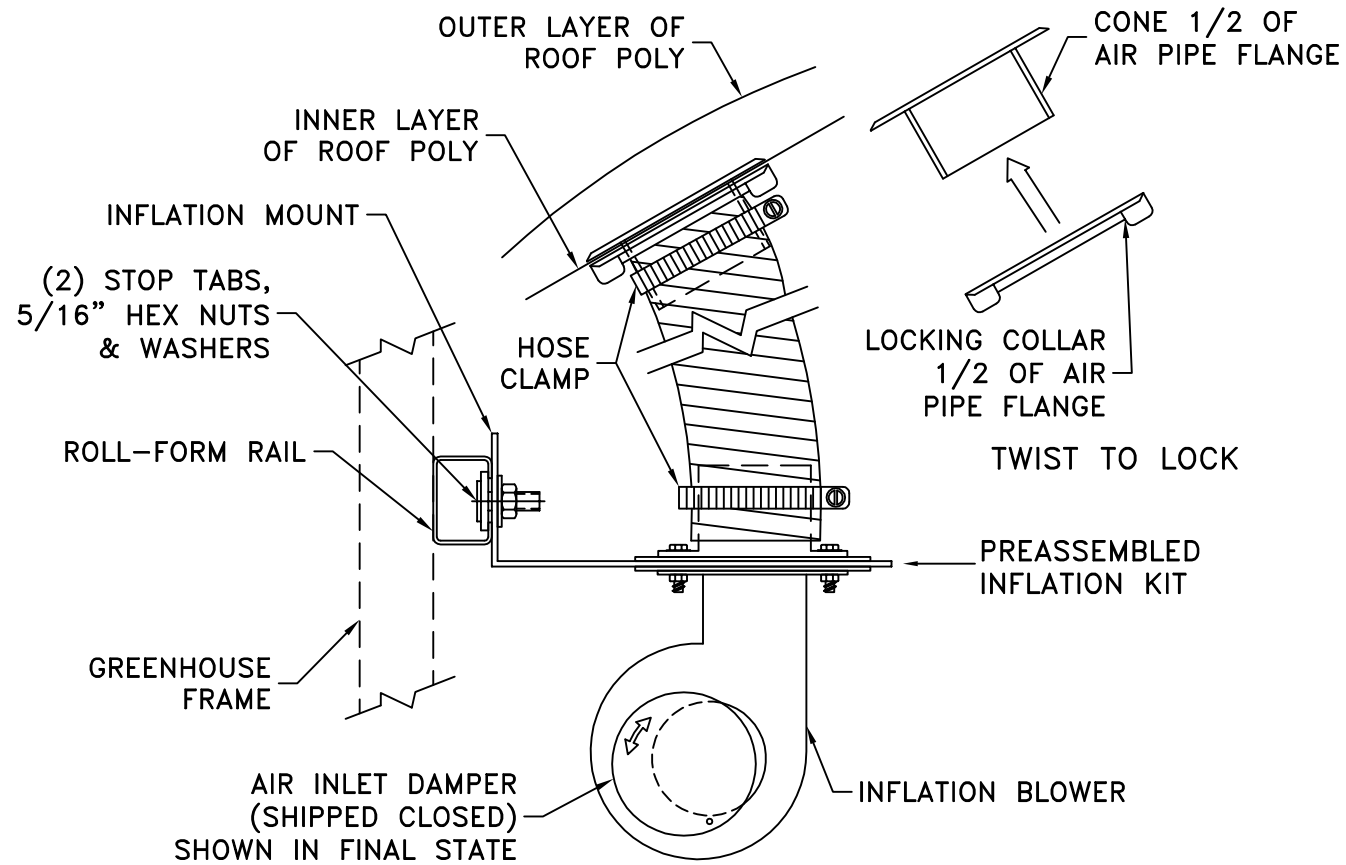
After the poly fastener base is secured to your greenhouse frame, install foam tape. Do not peel off the paper backing. Next, position your poly over the greenhouse frame (make sure to have equal excess film on all sides) and install one layer of wiggle wire. Use an up-and-down motion while seating the wire into the base (see FIGURE 2).

When installing poly roof and/or ends use one layer of wiggle wire except on all corners and when joining end poly and roof poly in the same poly fastener base. Use two layers of wiggle wire in these two situations (see FIGURE 3).

When installing wiggle wire, be sure to overlap your wiggle wire one section (see FIGURE 3).

After all wiggle wire is installed, cut remaining wires into 8" to 12" pieces and use to reinforce all corners (see FIGURE 4).

INFLATION KIT ASSEMBLY

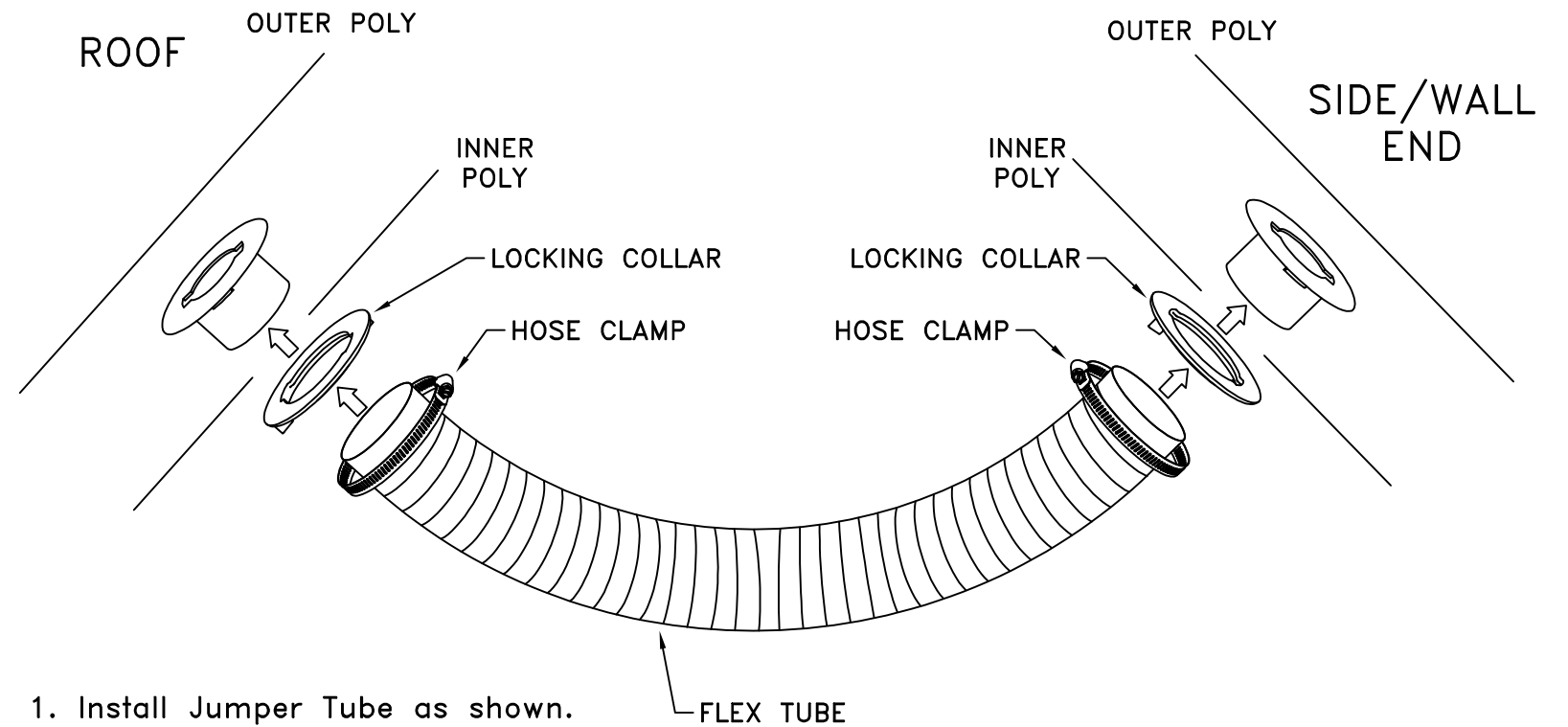


1. Install the inflation mount as shown. Locate anywhere on the side wall.
2. Cut a 3" hole in the inside layer of the double layer roof poly in a location the inflation kit hose will reach. Be careful not to cut through to the second layer poly.
3. Carefully insert the cone air pipe flange part through the 3" hole (by elongating the hole so the 5" flange can slip inside). Slip the air pipe flange locking collar over the cone and tighten to the cone portion by turning the the locking collar clockwise.
4. Slip the 3" inflation flex hose and hose clamp over the cone portion of the air pipe flange and tighten the hose clamp to secure.

The air inlet damper ships closed. Once the motor is mounted and hoses installed to the roof, open the air inlet damper fully. Once the roof is inflated, adjust the damper to allow about a 1/4" gap. Adjust further for desired roof/wall poly tension.

ELECTRICIAN NOTE:
Wire inflation blower for continuous operation.

JUMPER TUBE INSTALLATION



1. Install Jumper Tube as shown.

USE CAUTION WHEN CUTTING POLY.
DO NOT CUT OUTER POLY.

FAN & SHUTTER INSTALLATION (OPTIONAL)

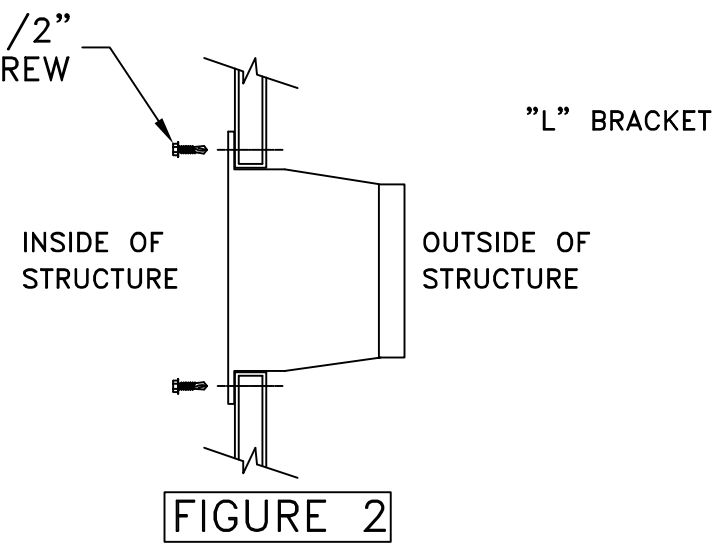
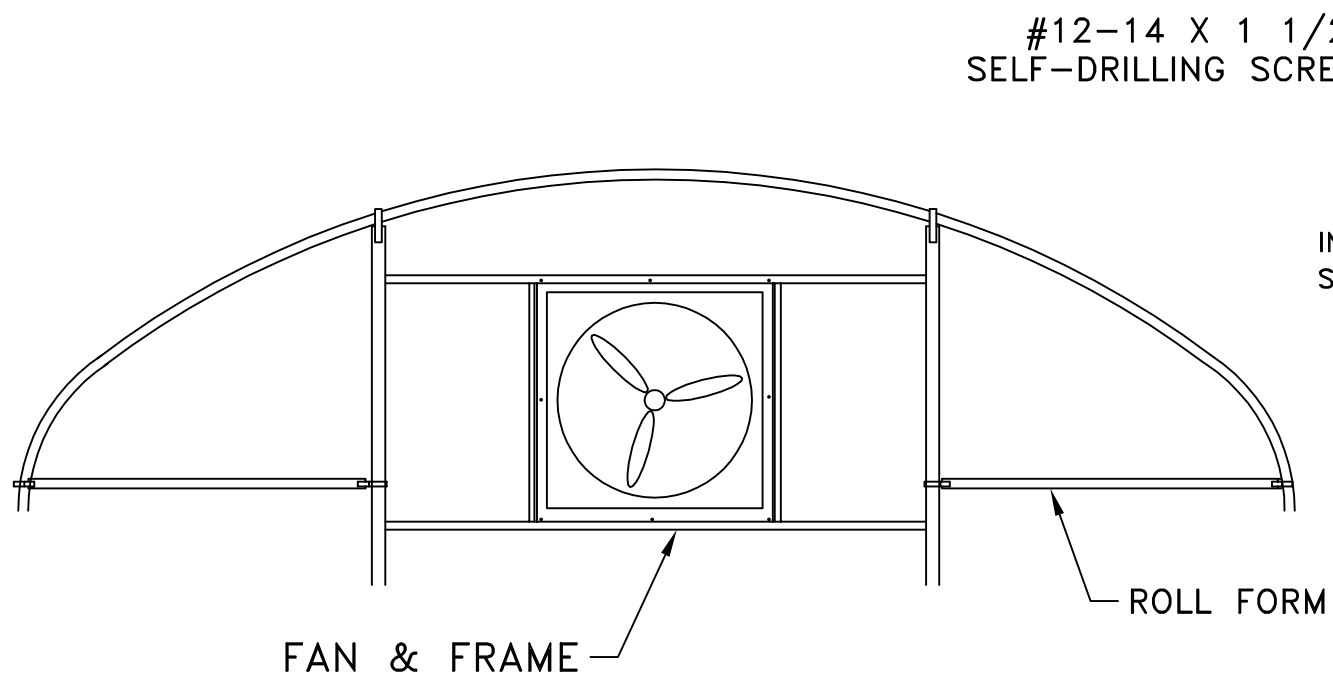


FIGURE 2

Mount Fan & Shutter Frames in their respective locations using "L" Brackets and then mount the fan or shutter into the frame.

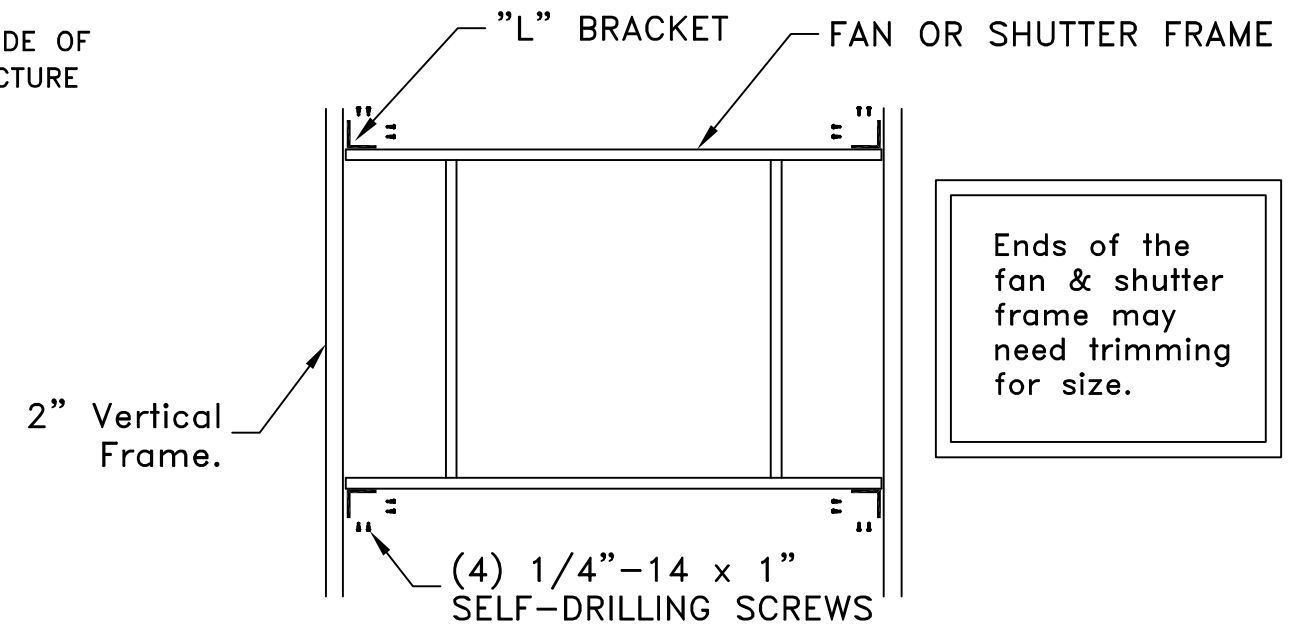


FIGURE 1

Ends of the fan & shutter frame may need trimming for size.

NOTE: it is important to face the fan so airflow is going out of the greenhouse.

Location of fans & shutters may vary depending on the number and size.

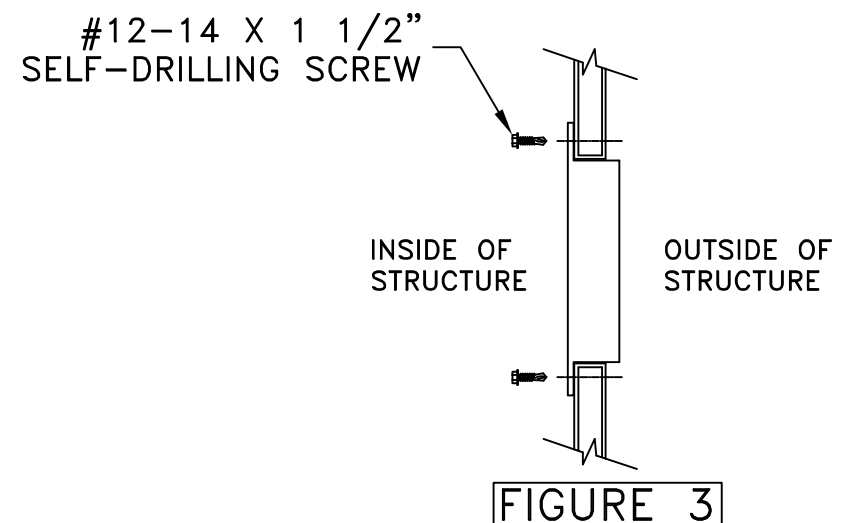
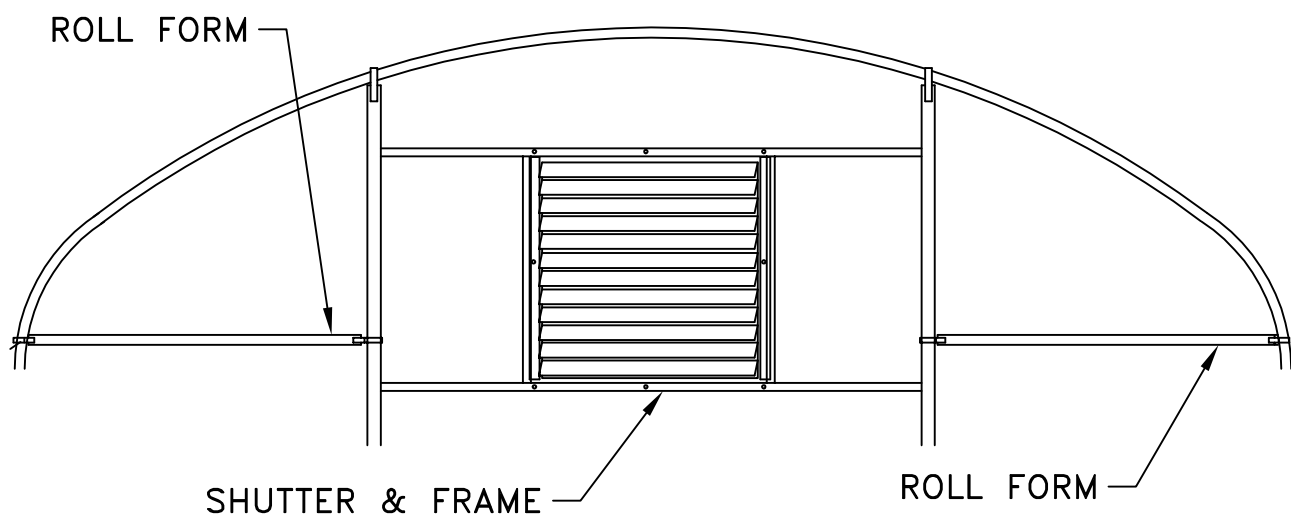


FIGURE 3

The fan and shutter are mounted from the outside of the structure using (8) 1 1/2" self-drilling screws each (see Figures 2 and 3).

POWER POLE & BENCHING INSTALLATION

EXPANSION MANSION

POWER POLE W/ "Z" BENCHING

POWER POLE W/ "V" BRACKETS

