



Moo-Tel™ Calf Nurseries



Photo may show a different but similar model.

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WARNING: Cancer and Reproductive Toxicity - P65Warnings.ca.gov

STK#	DIMENSIONS
PB02710R4	18' W x 20' L
PB02712R4	18' W x 24' L
PB02714R4	18' W x 28' L
PB02716R4	18' W x 36' L
PB02718R4	18' W x 40' L

Revision date: 05.01.23



YOU MUST READ THIS DOCUMENT BEFORE YOU BEGIN TO ASSEMBLE THE SHELTER.

Thank you for purchasing this ClearSpan™ shelter. When properly assembled and maintained, this product will provide years of reliable service. These instructions include helpful hints and important information needed to safely assemble and properly maintain the shelter. Please read these instructions **before** you begin.

If you have any questions during the assembly, contact Customer Service for assistance.

SAFETY PRECAUTIONS

- Wear eye protection.
- Wear head protection.
- Wear gloves when handling metal tubes.
- Use a portable GFCI (Ground Fault Circuit Interrupter) when working with power tools and cords.
- Do not climb on the shelter or framing during or after construction.
- Do not occupy the shelter during high winds, tornadoes, or hurricanes.
- Provide adequate ventilation if the structure is enclosed.
- Do not store hazardous materials in the shelter.
- Provide proper ingress and egress to prevent entrapment.

ANCHORING INSTRUCTIONS

Prior to assembling this shelter, please read the **MUST READ** document included with the shipment.

⚠ WARNING: The anchor assembly is an integral part of the shelter construction. Improper anchoring may cause shelter instability and failure of the structure. Failing to anchor the shelter properly *will void the manufacturer's warranty* and may cause serious injury and damage.

LOCATION

Choosing the proper location is an important step before you begin to assemble the structure.

The following suggestions and precautions will help you determine whether your selected location is the best location.

- Never erect the structure under power lines.
- Identify whether underground cables and pipes are present *before* preparing the site or anchoring the structure.
- Location should be away from structures that could cause snow to drift on or around the building.
- Do not position the shelter where large loads such as snow and ice, large tree branches, or other overhead obstacles could fall.

SITE

After choosing a location, proper preparation of the site is essential. Follow the information below.

- *A level site is required.* The site must be level to properly and safely erect and anchor the structure.
- **Drainage:** Water draining off the structure and from areas surrounding the site should drain away from the site to prevent damage to the site, the structure, and contents of the structure.

⚠ WARNING: The individuals assembling this structure are responsible for designing and furnishing all temporary bracing, shoring and support needed during the assembly process. For safety reasons, those who are not familiar with recognized construction methods and techniques must seek the help of a qualified contractor.

ASSEMBLY PROCEDURE

Following the instructions as presented will help ensure the proper assembly of your shelter. Failing to follow these steps may result in an improperly assembled and anchored shelter and will void all warranty and protection the owner is entitled.

The steps outlining the assembly process are as follows:

1. Verify that all parts are included in the shipment. Notify Customer Service for questions or concerns.
2. Read these instructions, the Must Read document, and all additional documentation included with the shipment **before** you begin assembling the shelter.
3. Gather the tools, bracing, ladders (and lifts), and assistance needed to assemble the shelter.
4. Check the weather **before** you install the roof cover and any panels (if equipped). Do not install covers or panels on a windy or stormy day.
5. Re-evaluate the location and site based on the information and precautions presented in the documentation included with the shipment.
6. Prepare the site (if applicable).
7. Assemble the frame components in the order they are presented in these instructions.
8. Assemble the frame including the struts (if equipped).
9. Consult the MUST READ document and properly anchor the assembled frame.
10. Install, tighten, and secure the main cover and panels (if equipped). This applies to fabric covers that stretch over the frame assembly. Your shelter may include roof panels or side panels or both.
11. Read the Care and Maintenance information at the end of these instructions.
12. Complete and return all warranty information as instructed.

LIST OF WORDS AND PHRASES

Before you begin, it is important to become familiar with the words and phrases used in this instruction manual.

These words and phrases are common to most ClearSpan™ shelters and identify the different parts of the shelter. (Some are used in this document. Others may not apply to this particular shelter.) These terms describe the shipped parts and can also be found on the materials list/spec sheets included with the shipment. To aid in the assembly, read through the following definitions before you begin to assemble your shelter.

- **Conduit:** An assembly of pipes used to secure the main cover and end panels (if equipped). Purlins and some strut assemblies also consist of connected pipes to form a conduit. Each pipe joint of a conduit assembly is secured with a self-tapping Tek screw.
- **Coupler or Fitting:** A part of the frame assembly where legs, purlins and rafter pipes are inserted and secured. In most instances, 3-way and 4-way couplers are used. In some larger applications, couplers are used to secure the joints of the different rafter sections during the assembly of the rafters. Some shelters do not use couplers.
- **Foot or Rafter Foot:** The part attached to and found at the base of the rafter or leg of the shelter. Depending on the shelter, the foot is an optional purchase. Some shelters do not offer an optional foot. Some use 1-way connectors; other use ground posts.
- **Must Read Document:** This document includes building and shelter anchoring instructions, steps for end wall reinforcement, safety precautions, and notices and warnings. The Must Read document is sent with all shelters and buildings. If you did not receive a Must Read document, contact Customer Service to request one.
- **On-Center:** Term used to describe a measurement taken from the vertical center of the rafter or frame member to the vertical center of another.
- **Purlin:** The pipe assembly that runs perpendicular to the rafters or framework that supports the main cover. Purlins are found on the sides and roof areas of the assembled frame, are evenly spaced, and typically run from the front to the back of the shelter.
- **Plain or Straight Pipe:** A term used to describe a pipe that has the same diameter or width throughout its entire length.
- **Strut:** A strut is usually a length of pipe with two flattened ends and is used for diagonal bracing of the shelter frame. A strut is typically secured to the frame work by special brackets and bolts.
- **Swaged End or Swaged Pipe:** The term “swaged” refers to the tapered end of the pipe or tube. Swaged ends of a pipe can be inserted into couplers and the straight ends of other pipes.
- **Tek screw:** A self-tapping fastener used to secure pipe joints and to fasten brackets to rafters.

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REQUIRED TOOLS

The following list identifies the main tools needed to assemble the shelter. Additional tools and supports may be needed depending on the structure, location, and application.

- Tape measure or measuring device
- Variable speed drill and impact driver (cordless with extra batteries works best)
- Wrenches or ratchet and socket set (recommended)
- Two ropes long enough to reach over the shelter (The use of rope depends on the height of the shelter. Other main cover installation methods may not use rope.)
- Hammers, gloves, and eye protection
- Duct tape (supplied by customer)
- Magnetic nut setter (3/8" x 2-9/16")
- Box cutter or utility knife
- Ladders, work platforms, and other machinery for lifting designed to work safely at the height of the shelter

UNPACK AND IDENTIFY PARTS

The following steps will ensure that you have all the necessary parts before you begin to assemble the shelter.

1. Unpack the contents of the shipment and place where you can easily inventory the parts. Refer to the Bill of Materials/Spec Sheets.
2. Verify that all parts listed on the Bill of Materials/Spec Sheets are present. If anything is missing or you have questions, consult the Pictorial Parts Guide and all shelter diagrams for clarification, or contact Customer Service.

NOTE: At this time, you do not need to open the plastic bags containing smaller parts such as fasteners or washers.

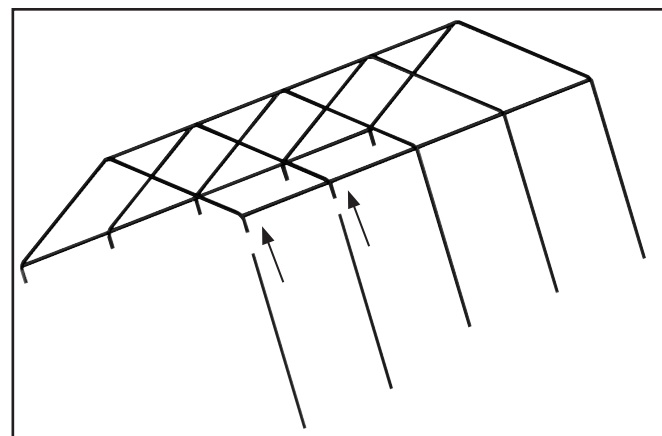
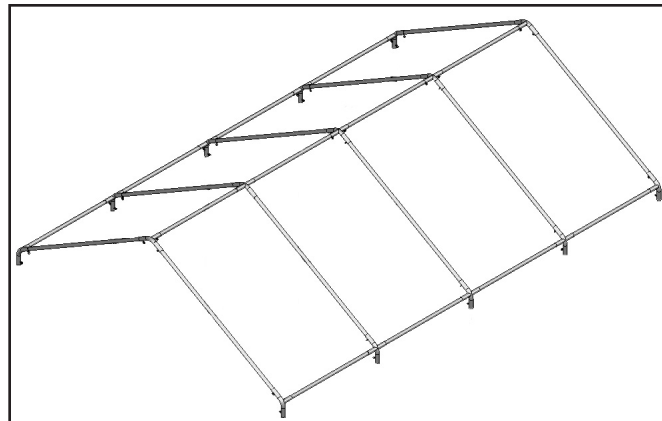
QUICK START GUIDE

For an overview of this shelter and to see the main connection details, consult the diagrams in the Quick Start Guide located at the back of these instructions.

ALTERNATIVE ASSEMBLY INFORMATION

These instructions describe assembling the frame in sections. For short shelters or when plenty of assistance is available, assembling the entire roof section first is an alternative assembly method. (This method is not shown.)

To assembly the entire roof section first, then lift and add legs, read these instructions first and adapt the steps as needed. Consult all diagrams and the Quick Start section of this manual to better understand how the frame is assembled before you begin. Install the main cover as a single unit after the frame is assembled and anchored.

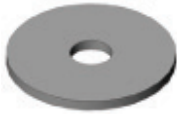


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The following graphics and photos will help you identify the different parts. (Some parts are not shown.)



FA4482B
Tek screw



FAMF01B
Fender Washer



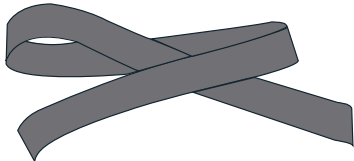
CC6212 & CC6213
Fabric Clips



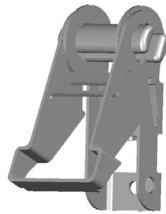
FA2083
Eyebolt



QH1402
Band Clamp



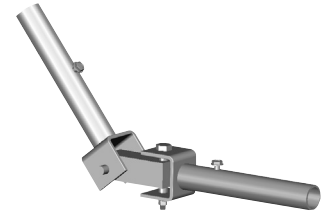
103620b
Plain End Strap



QH1061
Ratchet



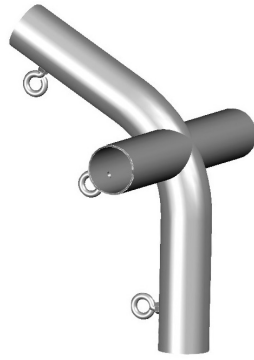
103395
Spin Handle



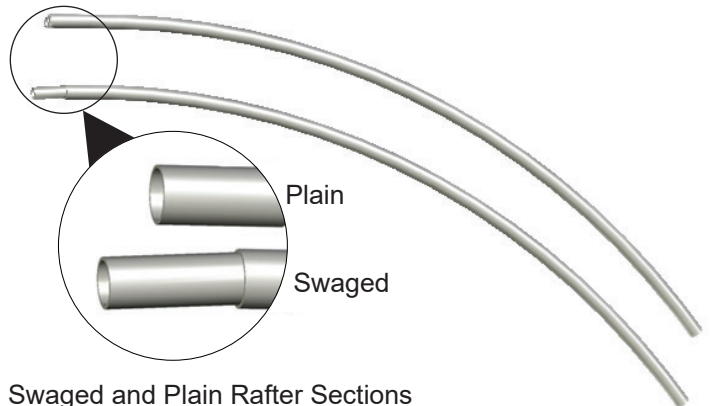
103396
Universal Joint



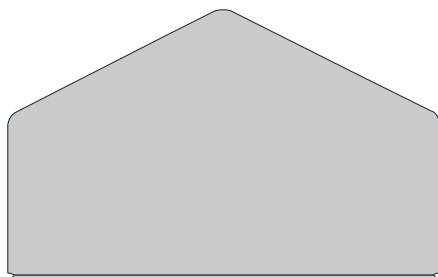
102193
3-Way Coupler



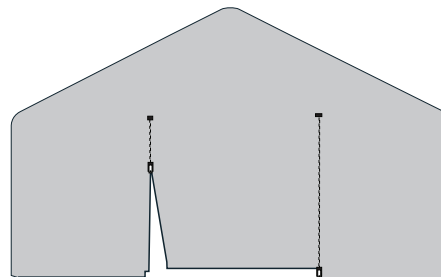
102194
4-Way Coupler



Swaged and Plain Rafter Sections



Plain End Panel



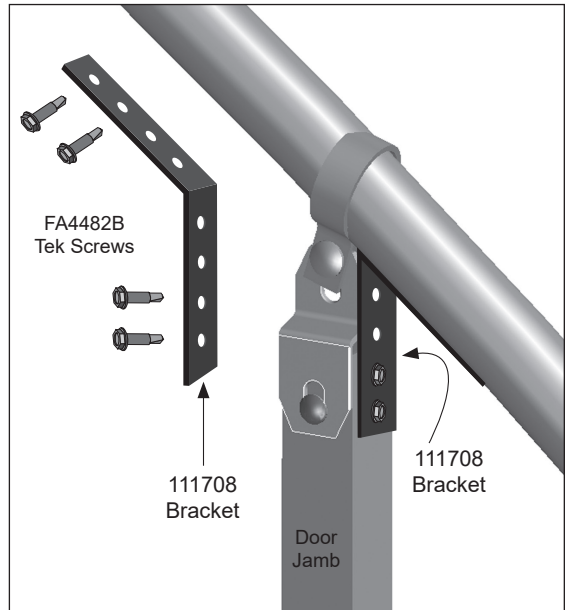
Zippered End Panel*

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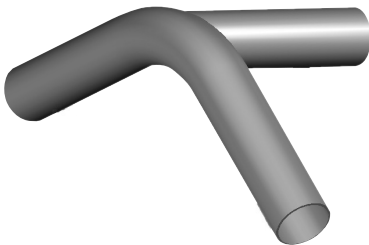
ADDITIONAL PARTS IDENTIFICATION NOTES

In some instances, there can be differences between the parts that are shown and referenced in the instructions and the parts that are shipped with the shelter. These differences *do not* affect the integrity of the shelter, but can change the assembly procedures.

The information that follows identifies possible changes in the assembly procedure found in this instruction document. *Please implement these changes during the assembly of the shelter.*



ATTENTION: Install the 111708 brackets as shown above during the assembly of the end wall frame. See the Door Jamb Addendum in the Quick Start section near the back of this guide.



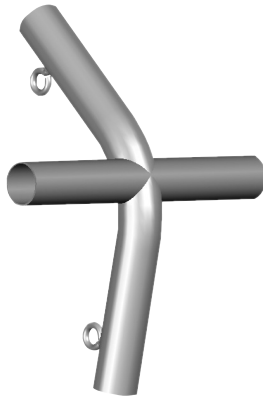
3-Way Coupler (no lock bolt)



3-Way Coupler (includes lock bolt)



4-Way Coupler (no lock bolt)



4-Way Coupler (includes lock bolt)

There can be two types of couplers used during the assembly of the shelter: those that include an installed locking eyebolt and those that do not. See above.

If the couplers included with your shelter do not have an installed lock bolt, use a *self-tapping Tek screw* to secure the different pipes to the couplers during the assembly process. The self-tapping Tek screws are included with the shipment.

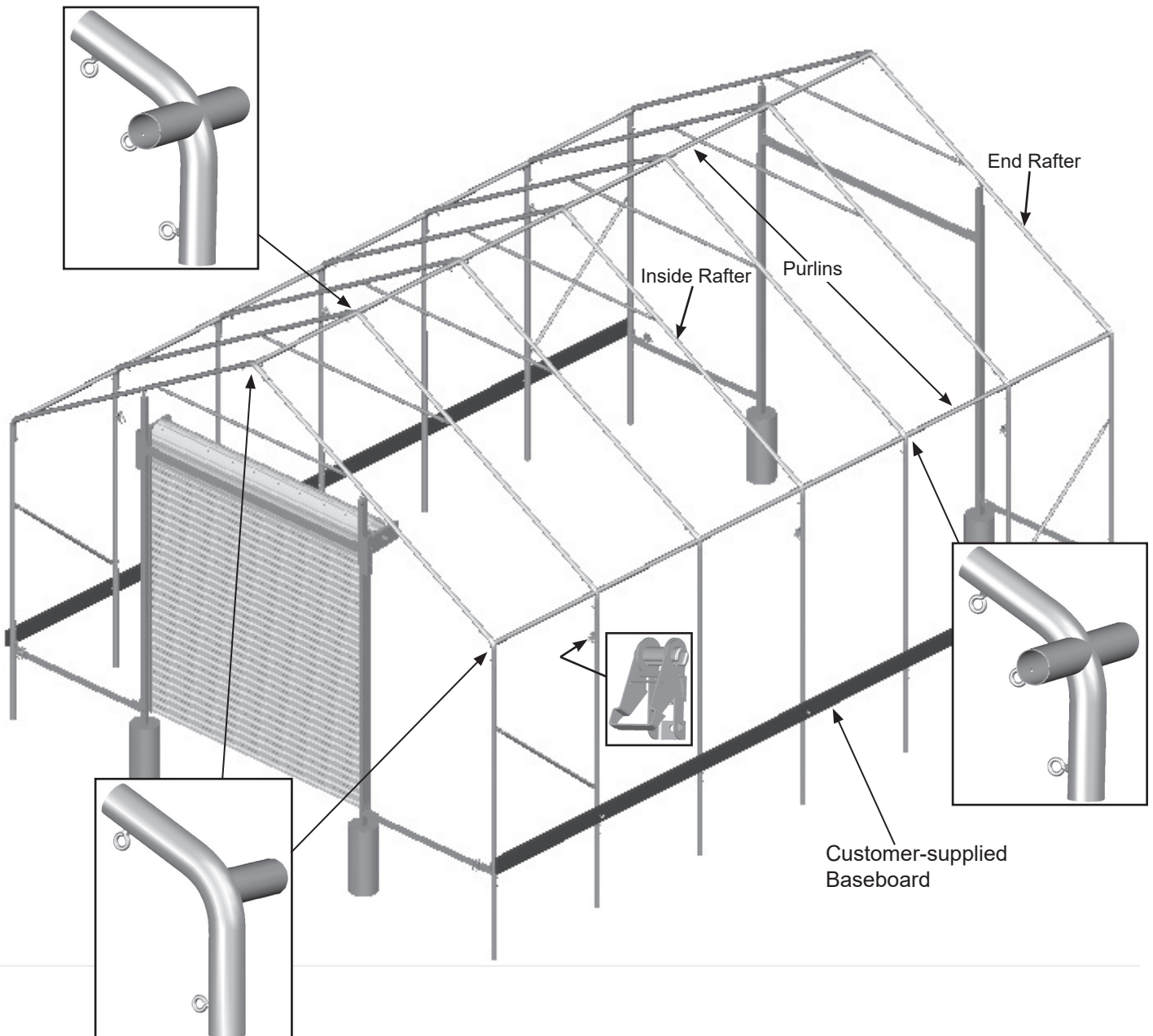
ATTENTION: Tek screws are sent with all shelters of this type. For couplers with locking eyebolts, install the Tek screws at each pipe connection for additional security if desired.

⚠ WARNING: To prevent personal injury and damage to the shelter, *fasten and tighten a Tek screw* at each pipe and coupler joint.

To prevent cover damage, install the Tek screw so that it *does not* touch the main cover or any optional side or end panels once these are installed.



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Actual frame may differ in length than frame shown.

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LAY OUT THE BUILDING SITE

After the site is prepared, lay out the building site.

Taking these steps **before** assembling the shelter saves time and ensures that the structure is positioned as desired.

Ground posts must be driven to the proper depth. Width of the shelter is measured from the center of one ground post to the center of the remaining ground post.

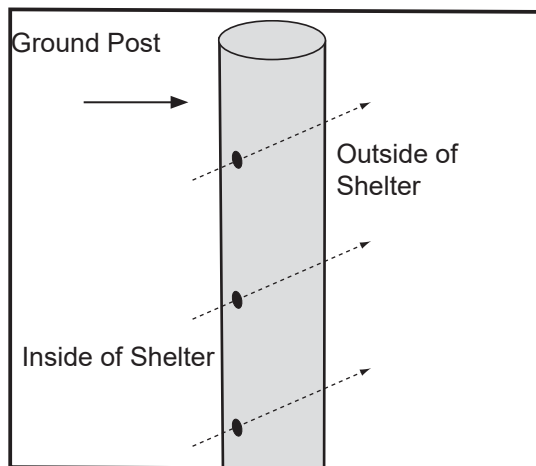
SQUARE THE SITE

Gather the parts:

- Ground posts
- Post driver

1. Identify a corner where a ground post will be positioned and drive the first corner ground post into the ground.

NOTE: Insert the ground post driver into the top of the ground post to protect the post and drive the post into the ground. *The top of the post will be one (1) foot above the finished grade when properly driven.*



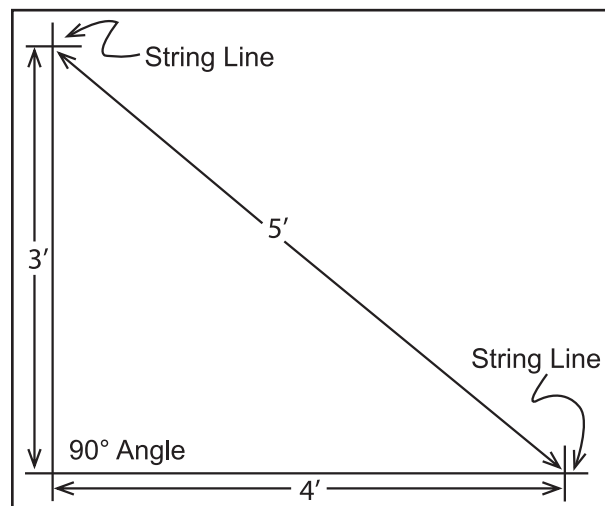
ATTENTION: Position the pre-drilled holes facing to the inside/outside of the shelter so they can be aligned with the bolt holes in the rafter legs.

To align the bolt holes in the ground posts with those in the rafter *after driving the ground posts*, insert a tapered rod or pry bar into a ground post bolt hole and turn the post using the rod or pry bar.

2. After the first corner ground post is in place, string a line the width of the building (18' center-to-center) and drive the second corner ground post into the ground just enough to hold it in place.
3. Use a transit or line level to drive the second corner ground post to the same depth as the first ground post.

4. String a line at least as long as the building 90° from the line between the first and second corner ground posts.

NOTE: A transit can be used to ensure an accurate 90° angle, or the 3-4-5 rule can be used. Refer to diagram. Using multiples of 3-4-5 such as 6-8-10 or 12-16-20 helps to maintain an accurate 90° angle.



5. After squaring the position of the building, measure the length and drive the third corner ground post.
6. Repeat the same step for the last corner ground post.

NOTE: The distance measured diagonally between corner ground posts must be equal for the building to be square.

7. Check all dimensions (and adjust if needed) before driving the remaining posts to the required height.
 8. After all four corner posts are accurately installed, tie a string line between the tops of the corner ground posts on the same side of the shelter. The string is used to identify the tops of all remaining ground posts. The string must remain tight and level.
 9. Use a tape measure to mark the 48" on-center locations of the remaining ground posts.
 10. Drive the remaining ground posts into the ground at the required 48" on-center width and the height identified by the string.
- NOTE:** Verify that the holes in the ground posts are in the proper position and that each post is plumb and driven to the correct depth.
11. Continue with the **Rafter Assembly** steps that follow.

ASSEMBLING THE CALF NURSERY COMPONENTS

NOTE: Assistance is required to assemble the frame.

RAFTER ASSEMBLY

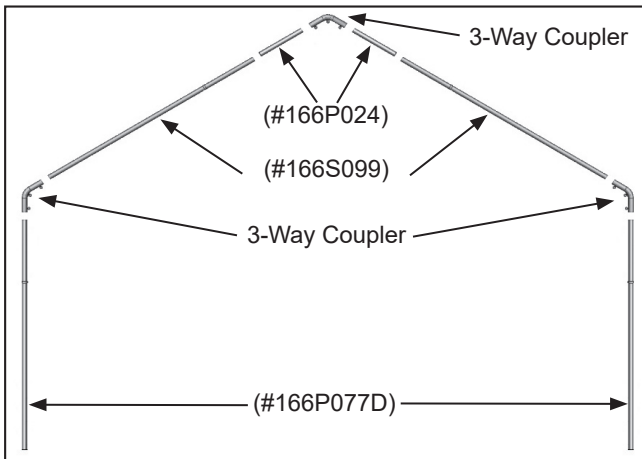
Gather the parts:

- Rafter pipe swaged (#166P0771D)
- Rafter pipe swaged (#166S099)
- Rafter pipe plain (#166P024)
- 7' Strut (QH1308)
- 3-Way couplers (#102193)
- 4-Way couplers (#102194)
- Band clamp (#QH1402)
- Tek screws

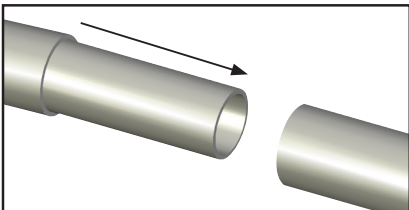
End Rafter Assembly Procedure

Each rafter assembly consists of three (3) couplers and six (6) rafter pipes: two (2) plain pipe sections (#166P077D) (drilled for ground posts), two (2) swaged pipe sections (#166S099) and two (2) plain pipe section (#166P024).

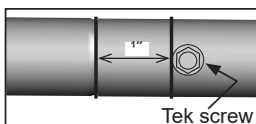
1. Select the pipes and couplers needed to assemble a rafter and arrange these on a flat surface as shown below for assembly.



2. Slide the swaged portion of the 166S099 pipes each into the plain end of the 166P024 pipes as shown.

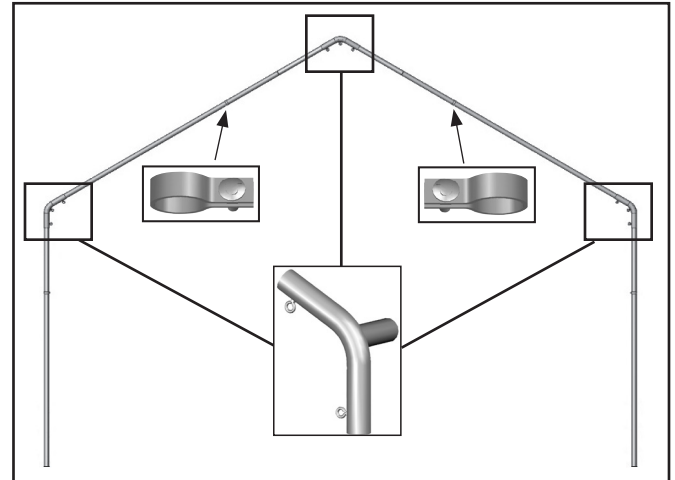


3. With the rafter pipes seated, secure the joints with a self-tapping Tek screw.

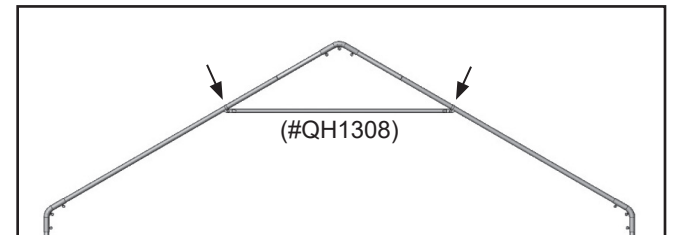


NOTE: Install the screws so they will not touch the cover once it is installed. This is typically on the backside of the rafter, which will be the surface visible from the *inside* of the shelter once the frame is assembled.

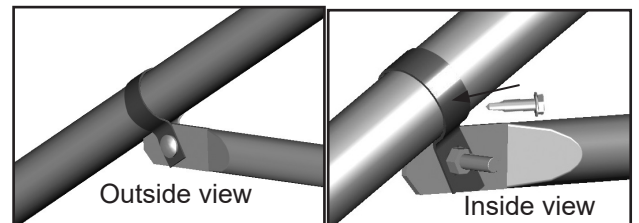
4. Slide a band clamp onto both assembled rafter pipes and assemble the end rafter using 3-Way couplers as shown below.



5. Tighten the lock bolts of the 3-Way couplers. If no lock bolts are included with the couplers, attach each rafter pipe using a Tek screw.
6. Using the band clamps, attach a QH1308 strut across the rafter. Verify that the strut is level and tighten the band clamps.



7. On the inside of the rafter, install a Tek screw through the band clamps and into the rafter pipe to prevent the clamps from sliding.



8. Repeat for the other end rafter.

INTERIOR RAFTER ASSEMBLY

The interior rafter assemblies will be the same as the end rafters, except 4-Way couplers will be used instead of 3-Way couplers. Assemble interior rafters now.

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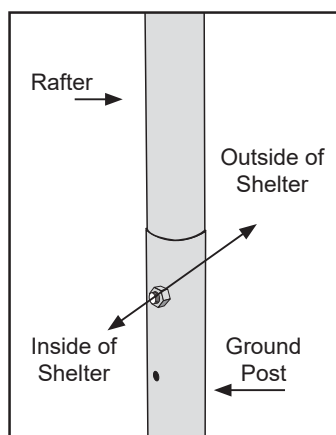
FRAME ASSEMBLY

Gather the parts:

- All rafter assemblies
- Pipe 1.66" x 46" plain purlin (#166P046)
- Band Clamp (#QH1402)
- 5/16" x 2-1/2" machine bolts and 5/16" nuts
- Lifts, ladders, and assistants as needed

Frame Assembly Procedure

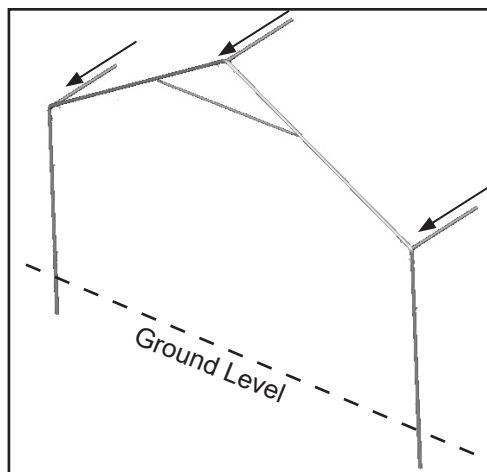
1. Slide a band clamp onto each leg of an *end rafter*. Using the proper lifts and with assistance, carefully stand the first end rafter assembly and place the leg pipes into the first set of ground posts. Verify that the nuts and Tek screws are facing the inside.
2. Align the top hole in the ground post with the hole in the rafter and insert a 5/16" x 2-1/2" machine bolt with the head to the outside of the shelter. Install the nut.



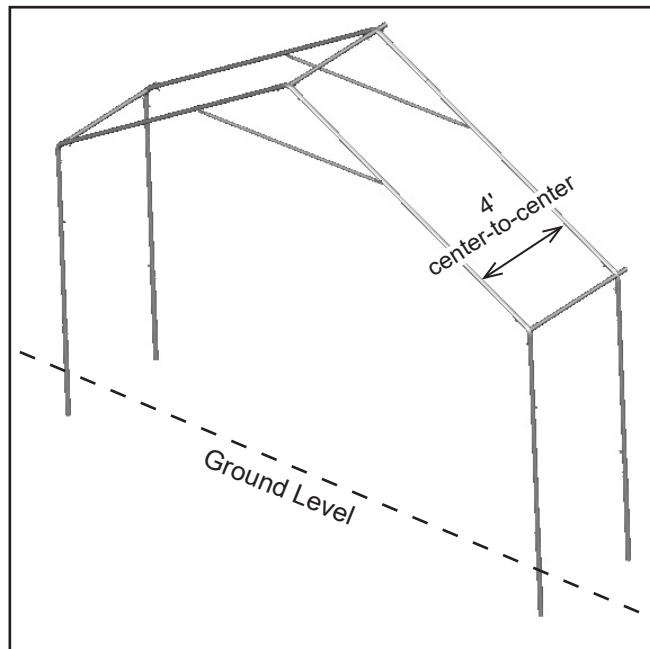
IMPORTANT: Brace the first rafter in position as needed to keep it from moving. Bracing is removed *after* additional rafters are installed and secured to the other rafters.

ATTENTION: You may need to loosen the rafter leg to align the drilled holes with the holes in the ground posts. Retighten the lock bolts after the legs are secure.

3. Attach a 46" purlin pipe (#166P046) into each of the 3-Way couplers and tighten the lock bolts.



4. Slide a band clamp onto each leg of the *first interior rafter*. Place the interior rafter assembly into the second set of ground posts and secure the rafters to the ground posts as previously described.



5. Verify that both rafters are plumb and properly spaced (4' on center).
 6. Tighten the lock bolts in the 4-Way couplers on the interior rafter to secure the purlin pipes.
 7. Continue adding rafters and purlin pipes until the frame is assembled.
- IMPORTANT:** Verify that you have slipped a band clamp onto each leg of the *end rafters* and the *first interior rafters* at each end.
8. Once all rafters are set and the purlin pipes are in place and secured, return to each coupler to verify each has been tightened.
 9. Continue with baseboard and side strut installation.

BASEBOARD INSTALLATION (RECOMMENDED)

Gather the parts:

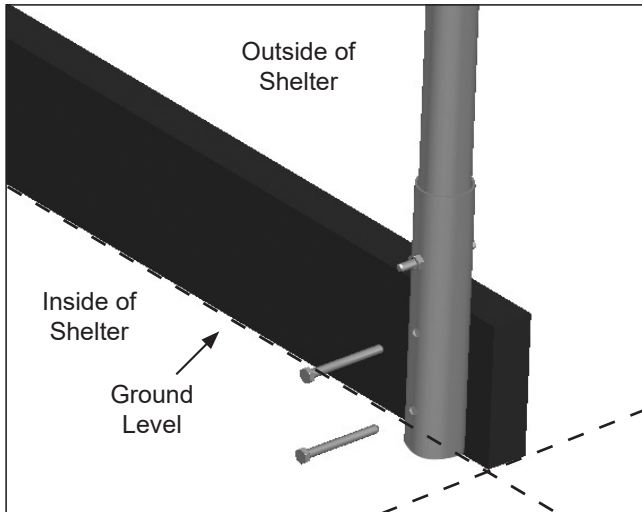
- Treated or recycled plastic lumber (supplied by customer)
- 5/16" x 3" lag bolts (#FAJ117B)

This baseboard is *not included* with the shipment and must be supplied by the customer. Treated or recycled plastic lumber works well for a baseboard.

The baseboard, when installed properly, helps prevent the ground posts from working into the ground. Depending on the building, it also provides a surface to attach struts or other building components.

The following procedure describes one way to install the recommended baseboards. The size and type of the baseboard you choose may require the use of alternative steps. When properly installed, baseboards run the length of the frame.

1. From the inside of the frame, attach the first baseboard to the outside of the ground posts using lag bolts (5/16" x 3") and nuts. Continue adding baseboards to complete the first run.



NOTE: The boards should be at ground level or slightly into grade to prevent the shelter from sinking and to create a seal along the bottom.

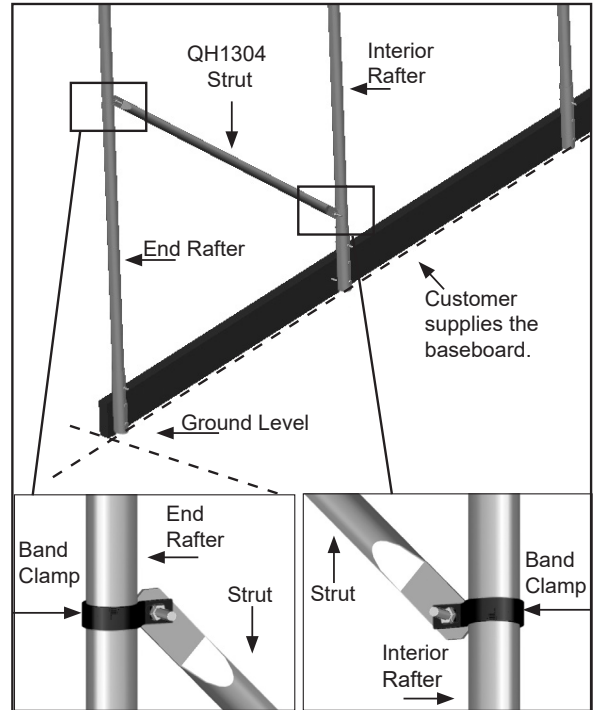
2. Repeat the steps to install baseboard along the remaining side of the frame.
3. Continue by installing the side struts.

SIDE STRUT INSTALLATION

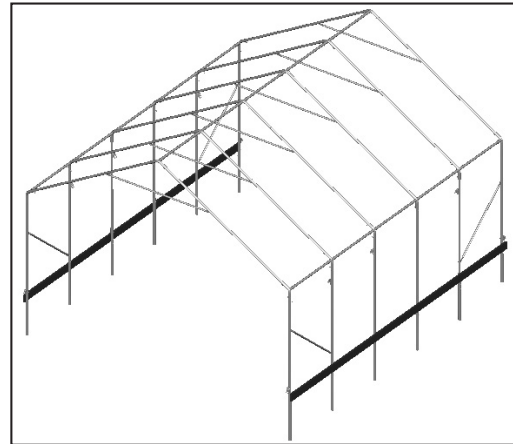
There are four (4) side struts (#QH1304) for the shelter. These struts are positioned across the first rafter space at each end.

Complete the following steps to install the four (4) side struts:

1. Locate one strut and secure to the previously attached band clamps as shown in the following diagram.



2. Repeat the above step to attach the remaining side struts to the shelter.
3. After securing the struts, verify that all clamps are secured with a Tek screw to the rafters.



4. Continue the next procedure to anchor the assembled frame.

ANCHOR THE ASSEMBLED FRAME

At this point, anchor the frame. Consult the MUST READ document for anchoring information and suggestions. Please call customer service at 1-800-245-9881 for additional anchoring information.

CAUTION: The anchor assembly is an integral part of the cold frame construction. Improper anchoring may cause instability and failure of the structure to perform as designed. Failing to anchor the shelter properly will void the manufacturer's warranty and may cause serious injury and damage.

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ASSEMBLING THE END FRAME KIT COMPONENTS

Consult the end wall diagrams in the Quick Start section of these instructions *before* you begin.

ATTENTION: Assistance is required to assemble the end wall. Lifts designed to reach the top of the end rafter are also needed. Consult a qualified construction professional if you are not familiar with the construction of similar frame structures.

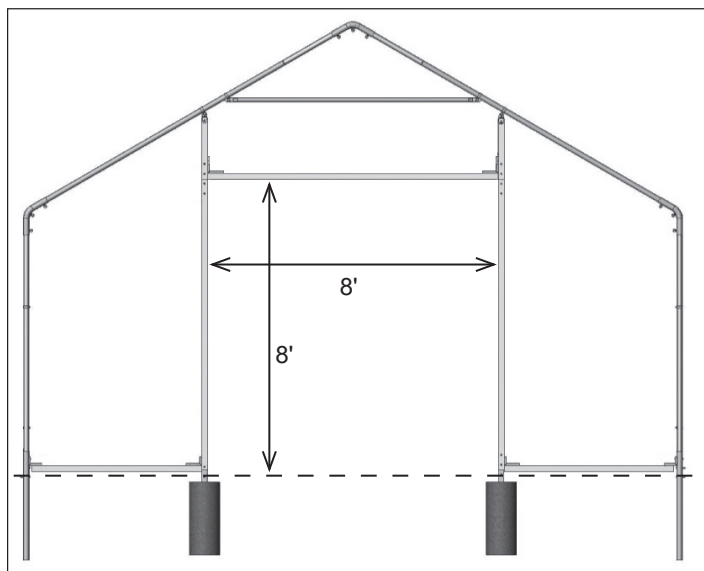
Install the Ground Posts for Door Jambs

The following steps describe one way to set the ground posts for the door jambs.

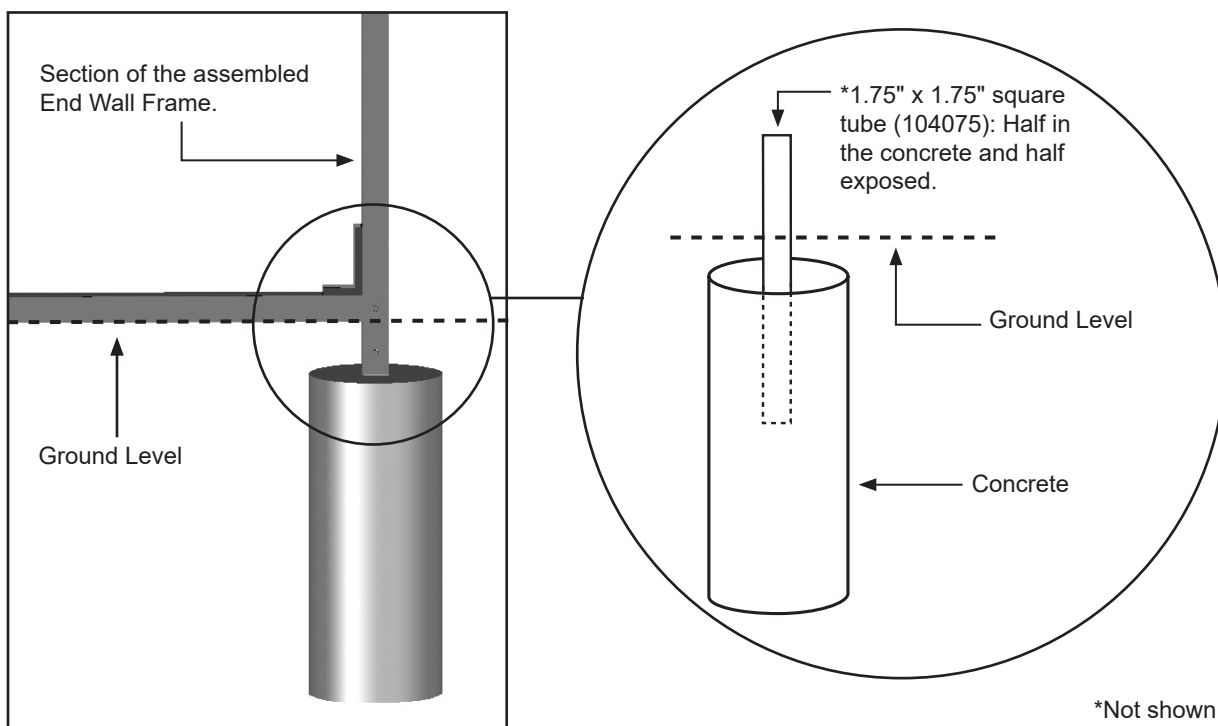
1. At ground level, measure *between the legs of the end rafter* to locate the center of the end wall. Use a plumb line to identify the center of the overhead rafter and mark that location on the ground as well.

NOTE: Marking the center of the end wall allows multiple measurements to be made as needed.

2. Using the dimensions on the End Wall Frame diagrams, locate the positions of the *vertical door frame members* for the door. The width of the door determines the frame dimensions for the door opening. *Consult the documentation sent with the door for the correct spacing of the door frame verticals.*
3. Dig a 12" diameter hole *at the locations found in previous step* to a depth that is below the geographic frost line.
4. Add concrete to the hole. Concrete should remain 1" to 2" below ground level so that it does not interfere with construction and installation of other end wall components.
5. Determine the required width of the door and insert one 1.75" x 1.75" square tube (104075) into the concrete approximately 8". See diagram below. Repeat the step and verify that the tubes are plumb and the correct distance apart.



Dimensions are inside-to-inside.



*Not shown to scale.

Assemble the End Frames

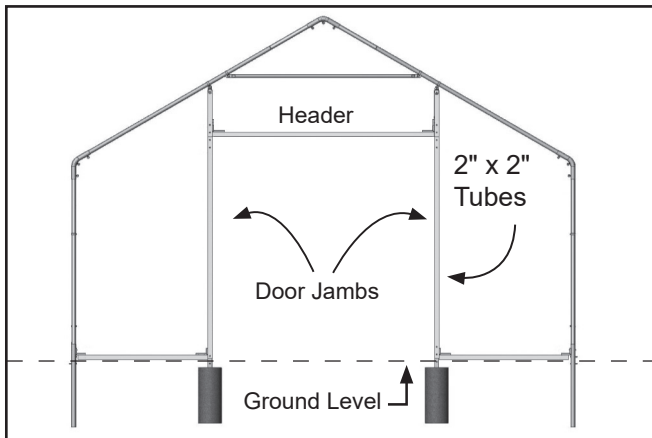
After the ground posts are set, assemble the remainder of the end frame.*

- Angled Bracket (#QH1330)
- Carriage bolts and nuts and Tek screws (#FA4482B)
- QH1404 band clamps and 104074 brackets
- 2" x 2" square tubes (#105328 & #S20P018) and 104075 inserts
- 1.5" x 1.5" x 57" square tubes (#S15P057)

*Refer to the End Wall diagrams for door framing and connecting hardware. *Diagrams shown are specific to an 8' x 8' overhead door.*

Complete the following steps:

1. Using the dimensions on the End Frame diagrams (or for the doors if equipped) and the 2" x 2" square tubing (105328), related hardware, and connectors, assemble the door frame of the end wall.



NOTE: Consult the End Frame diagram to properly position and connect the brackets.

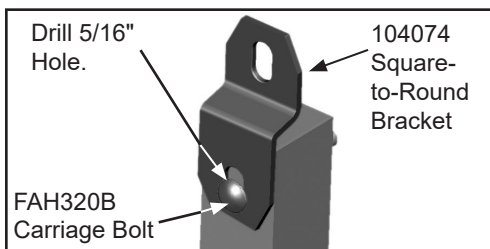
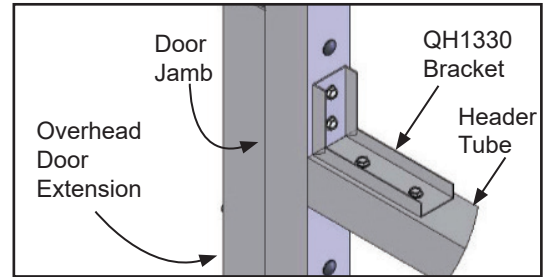


Diagram above shows bracket attached to the top of door jamb.

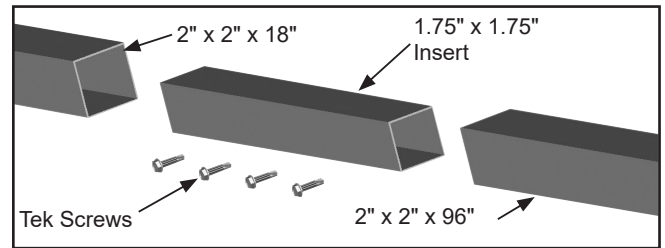
The lower end of each 2" x 2" door jamb slides over each 1.75" x 1.75" ground post set in concrete. Secure the connection by installing Tek screws on the back or inside surface of the verticals.

To avoid damaging the end panel (if equipped) or conflicting with an overhead door installation (if equipped) do not install Tek screws from the outside or within the door opening.

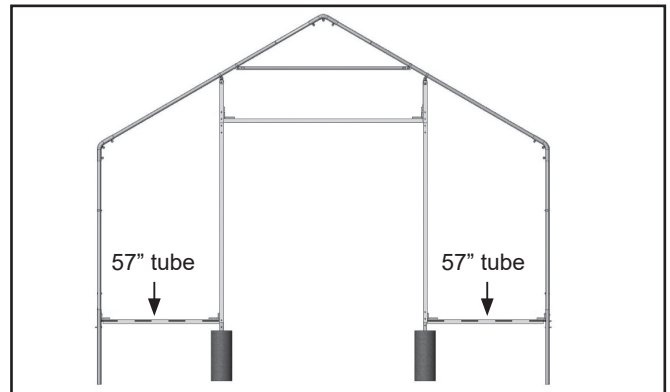
Diagram shows how to secure header to door jambs using Tek screws and a QH1330 bracket at each end.



Splice the joints of the 2" x 2" tubes using a 104075 (1.75" x 1.75") square tube insert and Tek screws.



2. After the 2" x 2" door framing is installed, repeat the steps to assemble the remaining end wall framing.



NOTE: Connect and cut tubes as needed to frame the remainder of the end wall.

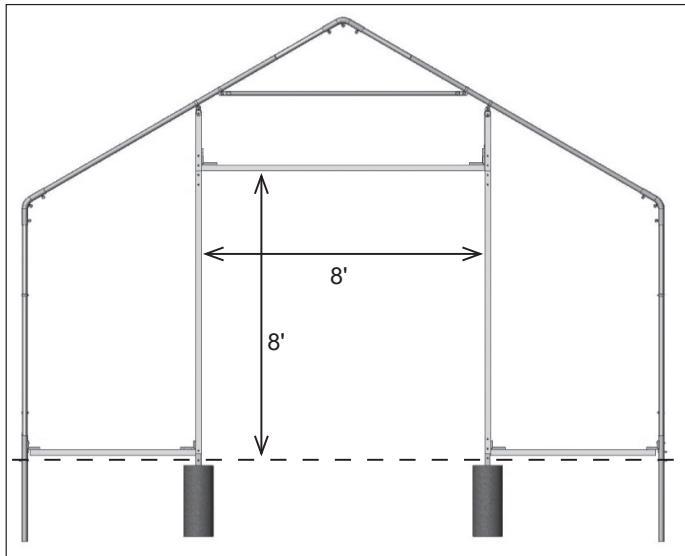
3. Secure each base rail to the end rafter and door jambs using a QH1330 bracket. See End Framing diagrams.
4. Repeat these steps to install end wall framing at the other end.
5. After assembling the end walls, read the special note about the door frame that follows before installing the end panels.

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DOOR FRAME DIAGRAM: SPECIAL NOTE - ROLL-UP OVERHEAD DOOR END ONLY

ATTENTION: For the 8' x 8' overhead door, the upper brackets are mounted wider than the actual door frame. To prepare for the door brackets, use an 18" section of 2" x 2" door frame tubing (#S20P018) and mount it to the outside of each vertical door frame, using the supplied carriage bolts and nuts, in the locations shown in the diagram below. (Frame shown may differ from actual frame.)

Consult the door instructions sent with the door to attach the 2" x 2" x 18" extension tube in the correct position.



Dimensions are inside-to-inside.

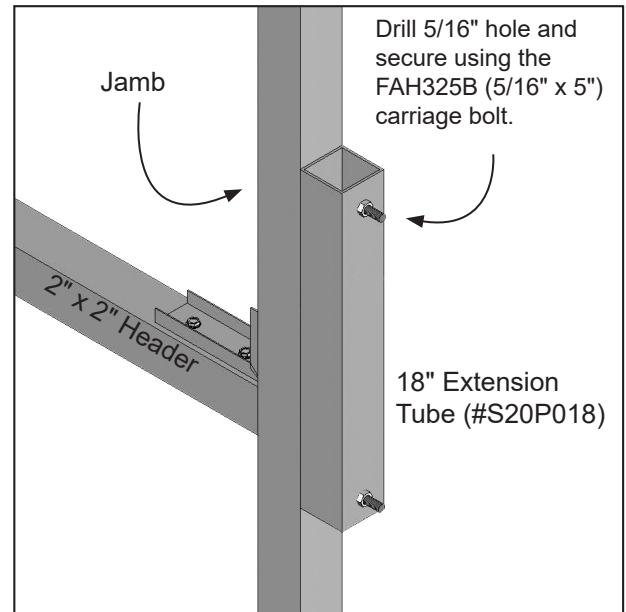


Photo to the right shows an installed roll-up door as seen *from inside the shelter*. Door mounting brackets are attached to the door frame extensions shown above.



Door Frame Extension tube (#S20P018) is bolted to the 2" x 2" door frame using carriage bolts.

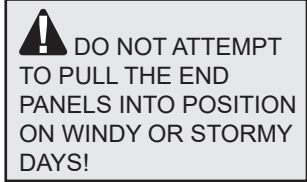
END PANEL INSTALLATION

The following procedure describes installing both end panels.

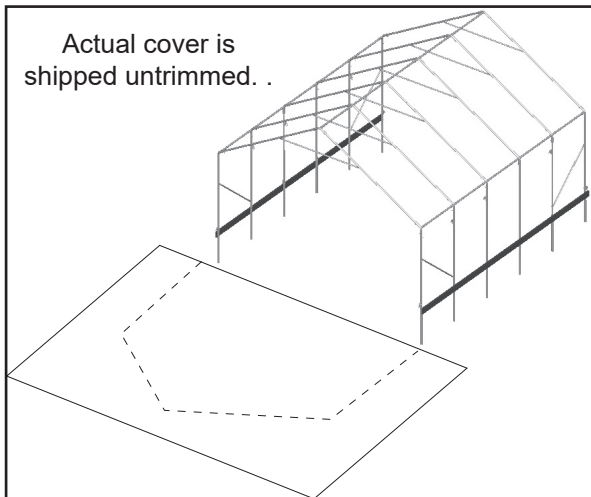
NOTE: The end wall shown in the diagrams that follow may differ in design and size. The steps to install the basic end panel are the same despite these obvious differences.

Required parts include:

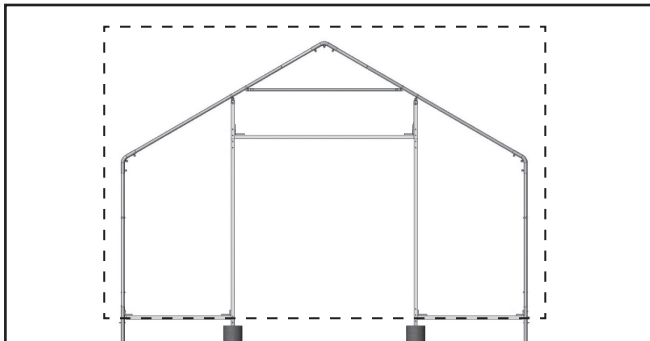
- Plain end panel (#QE02700WZ0)
- Zippered end panel (#QE02700WZ2)
- Fender washers (#FAMF01B)
- Tek screws (#FA4482B)
- CC6213 fabric clips (Use half for each end panel)



1. Spread an end panel out on the ground (pocket side up if applicable) and center the end panel as needed.



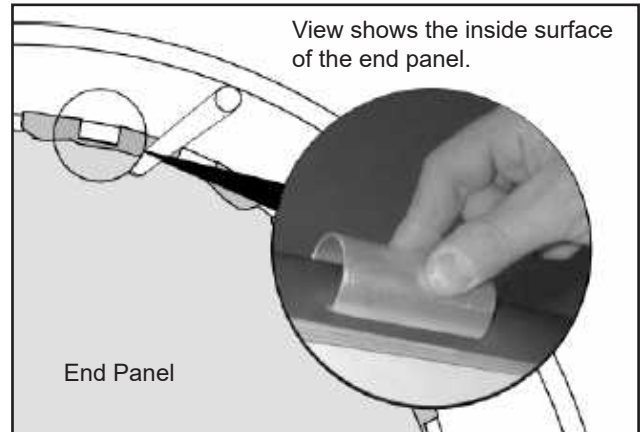
2. With the proper lift (or ladders) positioned inside the frame and with assistance, pull the end panel up and over the top of the end rafter. Square the end panel on the end frame and verify that the bottom edge is in the desired position.



NOTE: This procedure describes attaching the panel bottom to the base rail using Tek screws and washers. The end panel can also be pulled under and secured to the inside surface of the base rail using the same fasteners. *This installation is not shown.*

If a pocket is present along the bottom edge of the panel and if desired, the end wall base rail tubes can be detached, fed into the pocket and reattached to the end wall frame. Trim the cover pocket to get the best fit if needed.

3. With the lower edge of the end panel in the desired position, secure the top end of the panel to the backside of the end rafter using a few fabric clips and Tek screws.

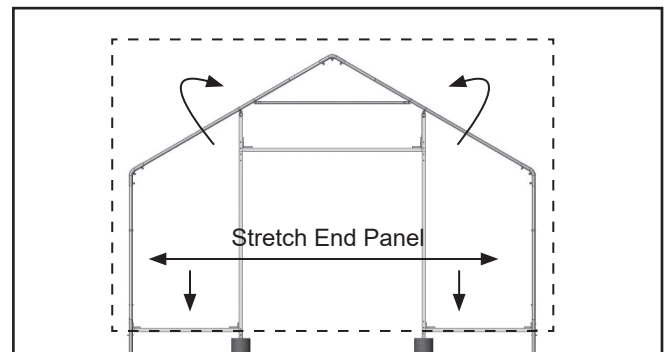


Frame shown above differs from actual frame in design.

NOTE: These fasteners are used to temporarily hold the end panel in place while the lower edge is secured to the base rail.

4. With the top edge temporarily secured to the end rafter, move to the bottom of the panel and stretch and secure the edge to the base rail using Tek screws and washers.

NOTE: For the zippered end panels, zippers should not have excess tension on them. *Do not stretch the panel door too tight.*

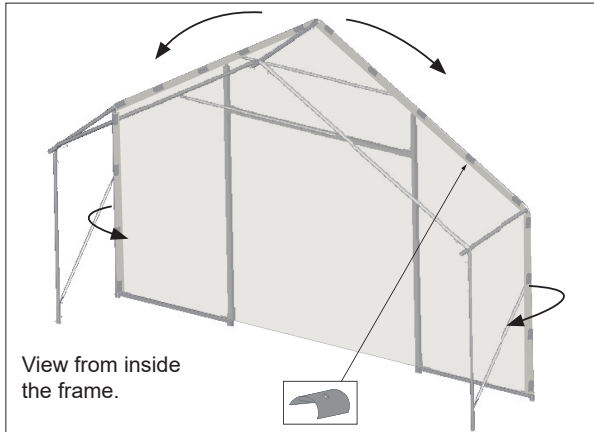


NOTE: Align bottom edge of panel with the base rail and secure with Tek screws and fender washers. Space the fasteners evenly along the base rail at 18" to 24" intervals.

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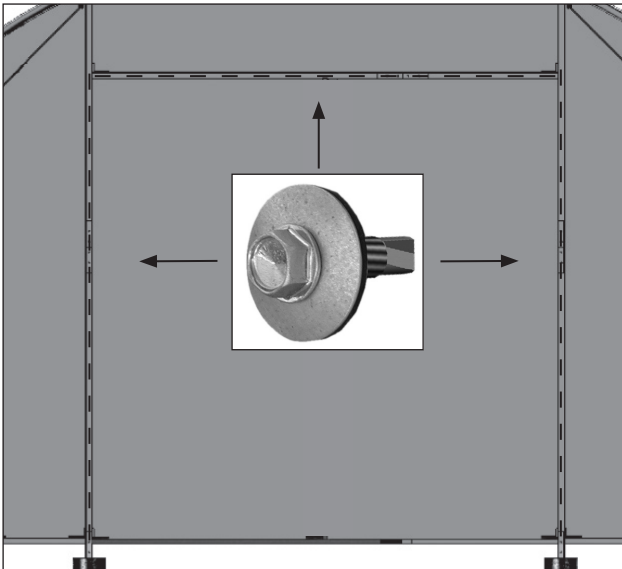
END PANEL INSTALLATION (continued)

5. With the panel secured along the bottom, loosen the temporary clips and stretch the end panel up and over the end rafter. (Additional assistants are needed to keep the panel evenly stretched.)



6. Attach the fabric clips to secure the end panel to the rafter. Evenly space the fabric clips at 24" intervals. *Keep the panel evenly stretched as you work along the rafter and down to the base rail.*
7. If installing the zippered end, test the zippers in the roll-up door. Loosen the fabric clips and adjust the material if needed. Re-install Tek screws in the fabric clips.
8. Move to the door frame for the overhead door and secure the end panel to the jambs and header. Evenly space the screws and washers around the perimeter of the door frame on the outside of the frame.

NOTE: For the zippered end panel, install Tek screws *outside* the zippers. Do not install through roll-up panel.



Installing Tek screws and washers through the end panel and into the frame *before cutting the door opening* helps keep the panel tight. See dashed lines.

9. Repeat the steps as needed to install the remaining end panel if equipped.

10. With end panels attached, trim the excess panel material to within 12" of the mounting surface if desired.

ATTENTION: Allow enough end panel material to remain intact so that the panel can be stretched if needed.

11. Return to the zippered end of the frame and install the roll-up crank assembly.



Space below is reserved for customer notes.

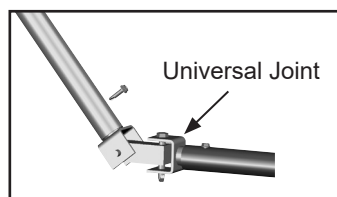
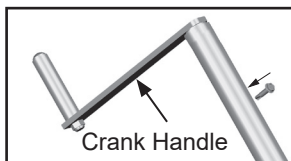
ATTACH ROLL-UP CRANK ASSEMBLY

A hand crank is used to raise and lower the zippered fabric roll-up door of the end panel. Install the roll-up components following the procedures below.

NOTE: Assure the door rolls inward so rain water does not collect inside the door when rolled up.

Required parts:

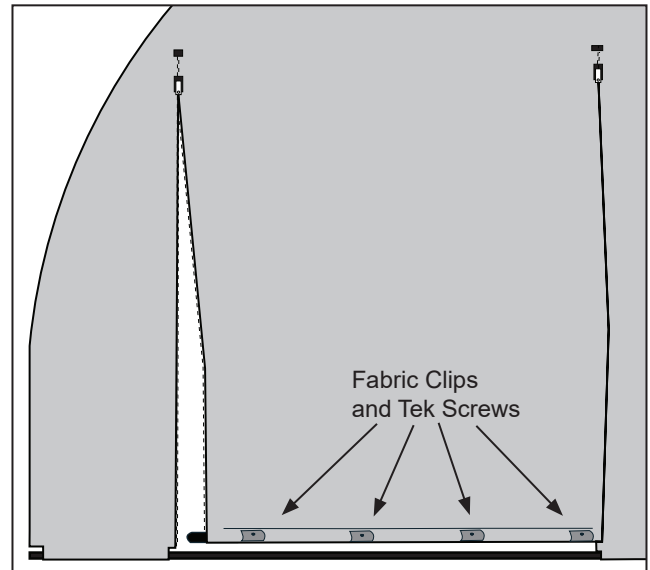
- Universal joint (#103396)
 - Crank handle (#103395)
 - Swaged pipe (#131S075)
 - Plain pipe (#131P024)
 - Fabric Clips (#CC6212): Quantity—5
 - Tek screws (#FA4482B)
1. Select a (#131P024) 24" plain pipe and a (#131S075) 75" swaged pipe.
 2. Assemble a crank extension by sliding the swaged end of a 75" pipe into the plain end of a 24" pipe. Secure the pipe joint using a Tek screw.
 3. Slide the crank handle (#103395) into one end of the extension and the universal joint (#103396) into the other end. Use a Tek screw to secure each component to the crank extension.



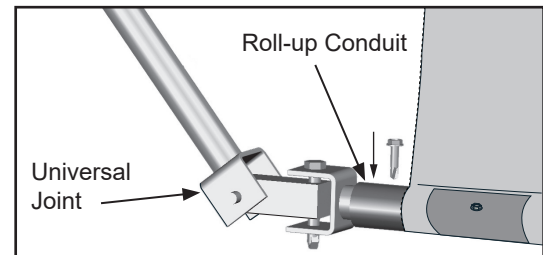
4. Assemble a roll-up door conduit by sliding the swaged end of a 75" pipe into the plain end of a 24" pipe. Secure the pipe joint using a Tek screw.
5. Wrap two layers of duct tape over the pipe joint and Tek screw head.
6. Insert the roll-up door conduit into the pocket in the bottom of the door. Leave 3"-4" of conduit extend out of the pocket where you want to attach the roll-up crank.

NOTE: If the roll-up door conduit is too long and extends past the door pocket on both ends, cut the conduit as required so it is 3"-4" longer than the door width. Remove any burrs from the cut end.

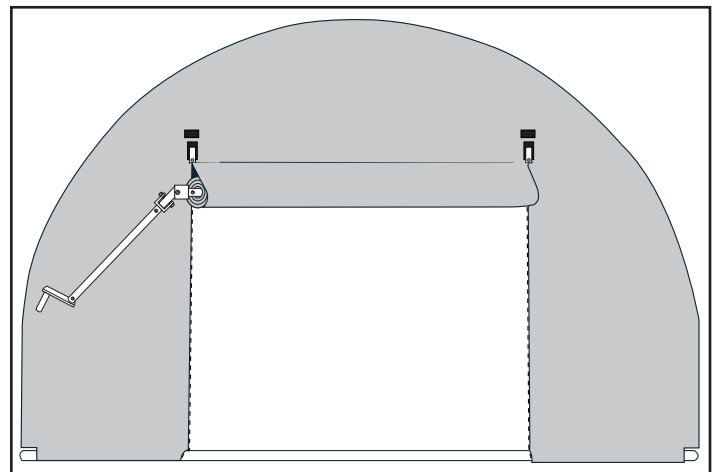
7. Secure the conduit to the roll-up door using fabric clips (CC6212) and Tek screws. Evenly space the fabric clips as shown. Diagram shows a similar door. Actual clip quantity may differ from what is shown.



8. Attach the universal joint to the exposed end of the roll-up conduit using a Tek screw.



9. Test the roll-up door assembly and make any adjustments needed.



10. Return to the door end of the frame and cut the opening for the roll-up overhead door.

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END PANEL INSTALLATION (continued)

Cut Door Openings in End Panel

ATTENTION: For best results and to keep the stretched panel in position, install Tek screws and washers *from the outside* around the door frame to secure the end panel to the door jambs and header. *Do this before cutting the opening in the panel.* If you do not want to install screws through the panel, continue with Step 1.

These steps describe one way to cut a door opening:

ATTENTION: Do not cut door openings if you are not installing doors. Remove dark, shaded area.

1. Working *from inside the frame*, mark a 12"-16" border along the door jambs and below the header. (Consult the diagram below.) These 12"-16" flaps are wrapped around the door framing and secured to the inside of the *door frame* once the final diagonal cuts are made.
2. Using the diagram as a guide, cut the end panel to remove the section that is shaded.

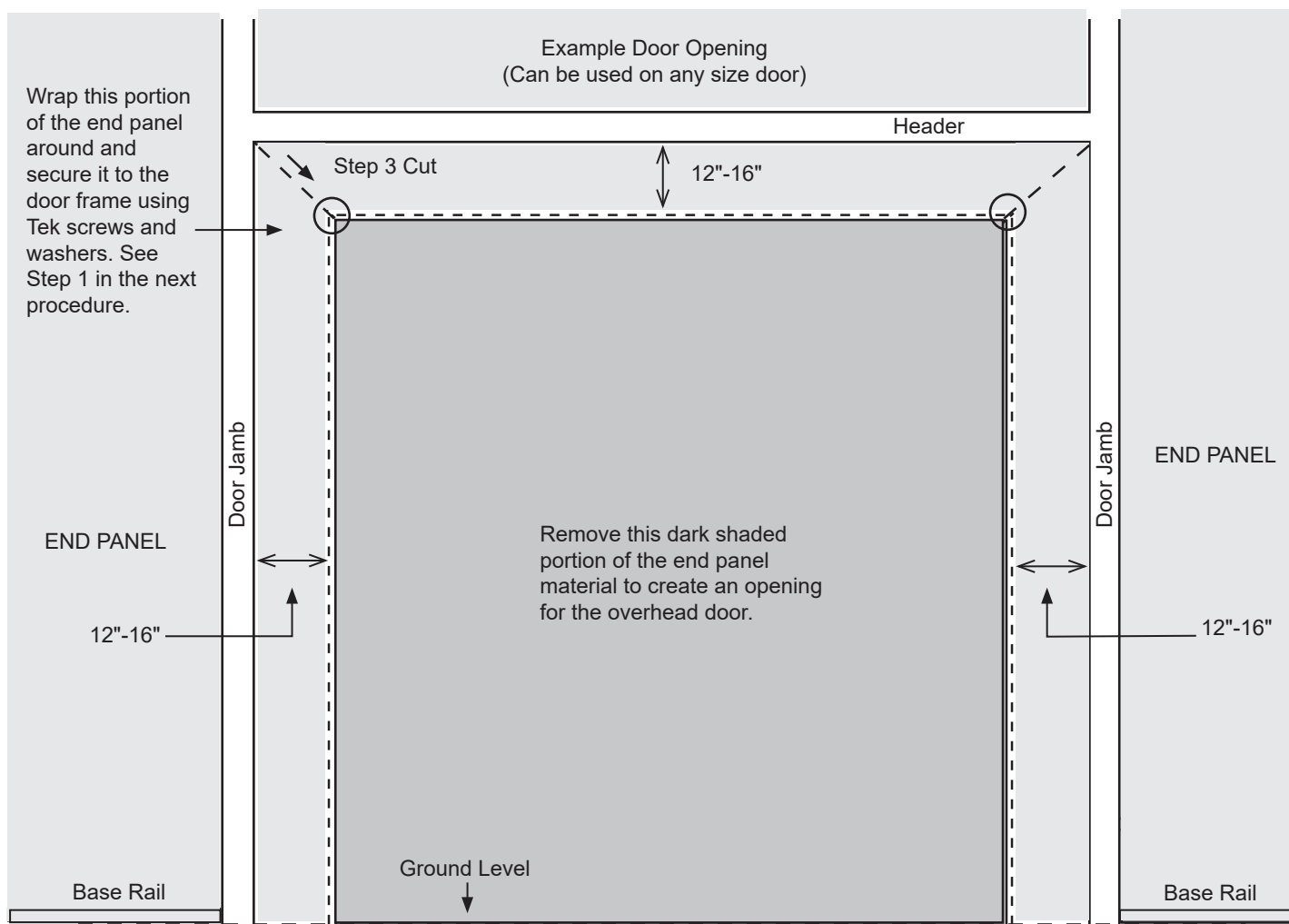


Diagram above shows the end wall and end panel as seen from inside a similar shelter.

3. Make two (2) diagonal cuts in the end panel as shown above to create the 12"-16" flaps.
4. Continue with the Secure End Panel to Door Frame instructions that follow.

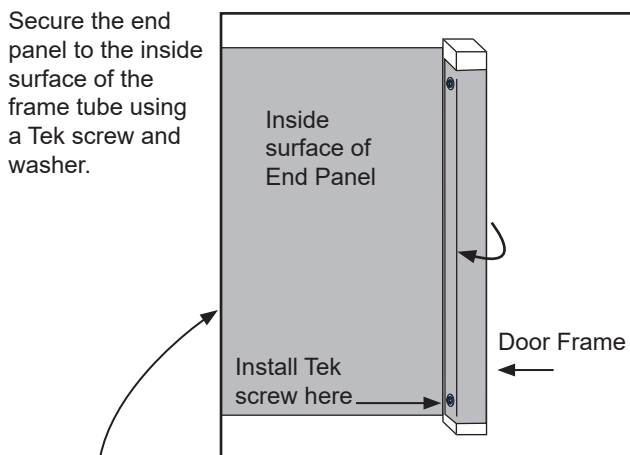
END PANEL INSTALLATION (continued)

Secure the End Panel to the End Frame

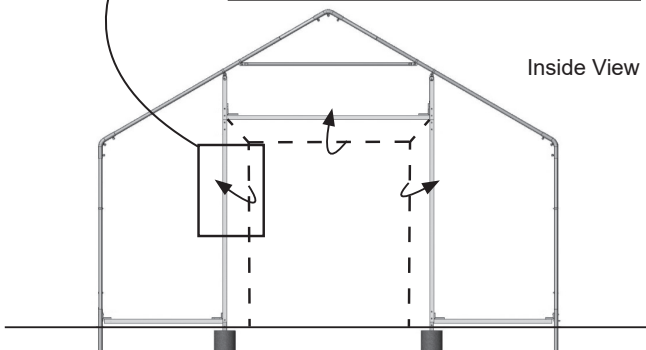
The frame shown in the following diagrams may differ from the actual frame. Installation steps are the same.

- With door opening cut, secure the end panel to the door frame using Tek screws and washers. See diagram below.

NOTE: For the exposed corners of the door frame that remain, cut a piece of material *from the scrap end panel material* to cover the exposed frame and secure the piece to the corners using Tek screws and washers (if desired).



Secure the end panel to the inside surface of the frame tube using a Tek screw and washer.



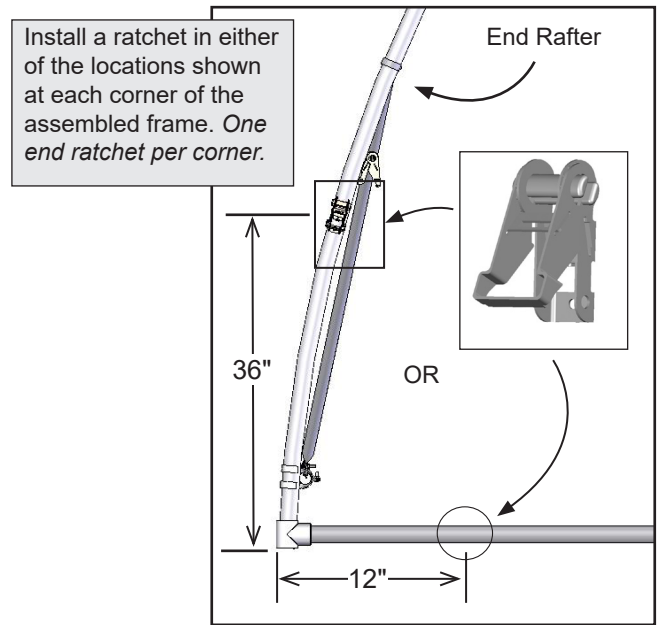
Sample frame is shown in the diagram. Actual frame may differ.

ATTENTION: DO NOT secure the end panel to the inside or backside of the door jambs. Some doors kits use this surface for tracks and brackets. Check the instructions that shipped with the door for additional details.

- Continue by installing the ratchets and main cover.

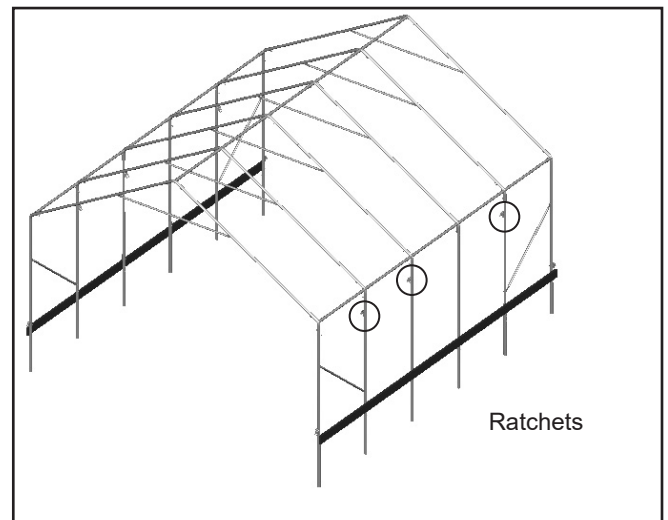
RATCHET INSTALLATION

The main cover is secured to the shelter using ratchets and straps. End ratchets can be either attached to the outside of an end rafter 36" above ground level as shown or they can be attached to the end wall base rail (if equipped).



End panel material not shown for clarity.

- Secure the ratchet to the end rafter (or base rail) using a Tek screw through the bottom hole in the ratchet.
- Repeat to install ratchets at the remaining three corners of the frame.
- Attach the remaining ratchets to the *inside of the rafters* 48" above ground level using a Tek screw.



Actual frame may be a different length than shown.

NOTE: Refer to the **Side Profile** drawings in the **Quick Start Guide** for the location of the remaining ratchets for your shelter.

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INSTALL MAIN COVER

Gather the parts:

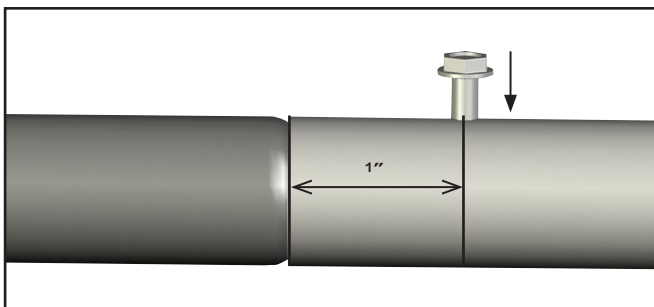
- Ratchets (1" 4000lb)
- Pipe 1.315" (See chart below.)
- Cover
- Plain strap (#103620B)
- Ropes long enough to reach over the frame (supplied by customer)
- Tek screws
- Duct tape (supplied by customer)

⚠ WARNING: To prevent damage to the cover and to prevent serious personal injury, DO NOT attempt to install the cover on windy days.

1. Locate the pipes for two (2) main cover conduits. Each cover conduit consists of the following pipes. See chart below.

Cover Conduit Lengths	
Length	Pipes
20'	(3) 75" & (1) 25.5"
24'	(3) 75" & (1) 73.5"
28'	(4) 75" & (1) 49.5"
36'	(5) 75" & (1) 73.5"
40'	(6) 75" & (1) 49.5"

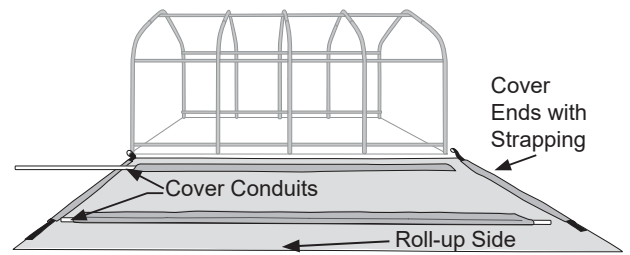
2. Connect these pipes by inserting the swaged ends of the pipes into the plain ends until each conduit is assembled. Secure each pipe joint with a Tek screw and wrap the joint with duct tape.



These cover conduits are inserted into the pockets sealed to the cover. The conduits are used to tighten and secure the cover.

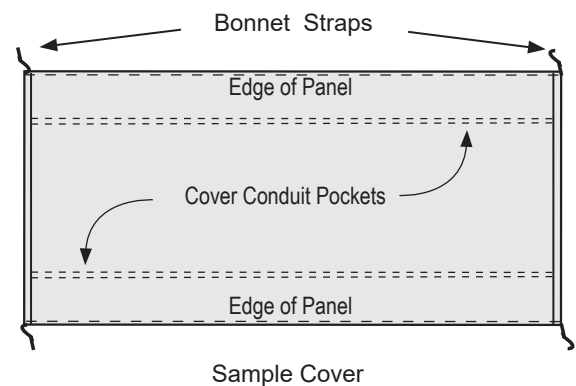
3. After assembling the cover conduits, locate the cover and unfold it on a clean, smooth surface near the frame.

NOTE: When handling the cover and setting it in position, do not pull on the end straps. They will pull out of the cover. Unfold the cover with the inside surface facing up.

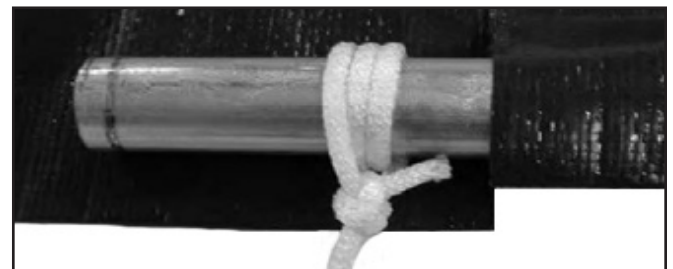


NOTE: Shelter shown above may differ in length from the actual model.

4. Locate the cover ends with strapping and align cover with the front and back of the shelter.
5. Insert a conduit into each *cover conduit pocket* of the main cover. *Do not install the roll-up conduits at this time.*



6. To pull the cover over the frame, attach ropes to both ends of the cover conduit. Wrap the rope around the conduit a few times to prevent it from slipping off.

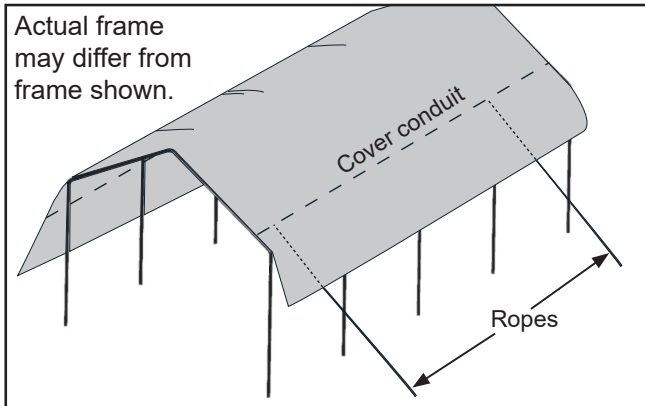


NOTE: Depending on the length of the cover it may be necessary to attach additional ropes to the cover conduit between the end ropes by cutting a small opening in the cover pocket and tying the rope around the conduit. **DO NOT** cut through the cover. *Cut through the conduit pocket only.*

7. With all ropes attached to the conduit, lift the conduit and carry the cover toward the base of the frame.

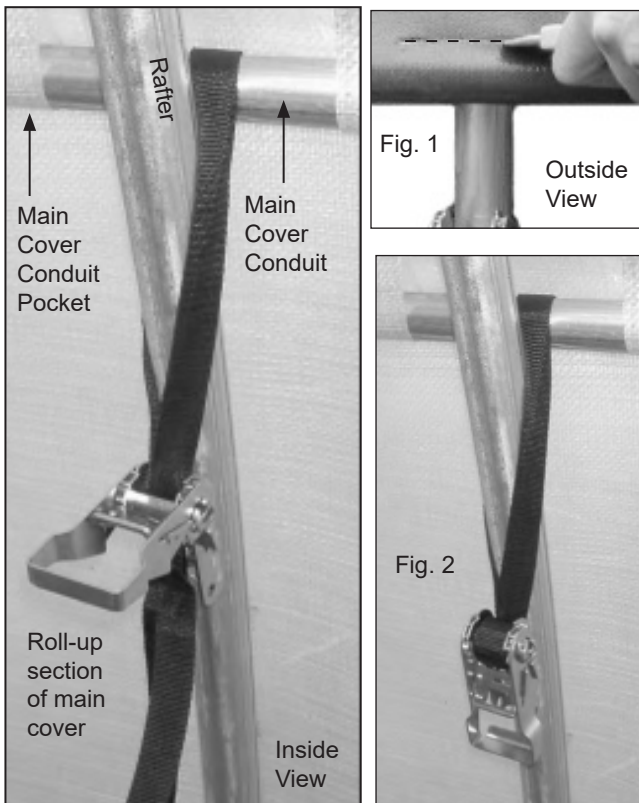
INSTALL COVER (CONTINUED)

8. Toss the ropes over the frame and pull the cover into position. One person is required at each rope.



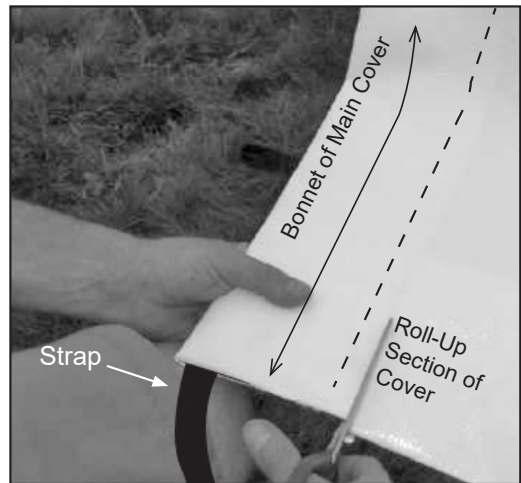
NOTE: Do not pull on the black straps in the end pockets of the cover. These straps will pull out.

9. Center the cover end-to-end and side-to-side.
10. Move to the side ratchets and secure the sides of the main cover by installing the straps as shown. Cut a slit *in the cover pocket* (Fig. 1) or remove the pocket material as shown (Fig. 2) to install the strap.



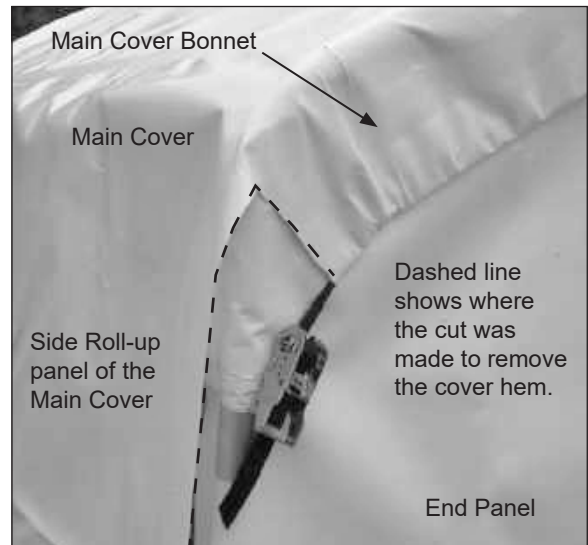
NOTE: Do not fully tighten the side straps at this time. Tighten enough to hold the main cover on the frame.

11. Beginning at one end of the main cover, determine the height of the roll-up side and remove the hem area. For example, if you want a 48" sidewall opening when the sidewall is rolled up, remove 48" of the main cover hem. *Maximum height of roll-up side is 60"*.



ATTENTION: Do not cut the strap contained within the main cover. Do not remove too much of the bonnet.

12. Repeat the steps to remove the hem from the remaining corners of the main cover as previously described.
13. With additional help, snug the cover into position by simultaneously pulling on the bonnet straps to seat the cover on the frame and over the end rafters.



14. Feed the pre-installed bonnet straps of the cover into the ratchets attached at the corners of the frame and tighten enough to hold the cover in place. Do not tighten completely at this time. Remove excess strap as needed to prevent binding in the ratchet.
15. Move to the inside of the shelter and evenly tighten the ratchets until the cover is tight.

NOTE: If the strap binds up in the ratchet, loosen the ratchet by opening it all the way, then cut some of the strap off. Re-tighten the ratchet.

16. Move to the ratchets on the outside of the end rafters and tighten them evenly to pull the cover tight lengthwise. Continue with the roll-up assembly.

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INSTALL ROLL-UP ASSEMBLY

Gather the parts:

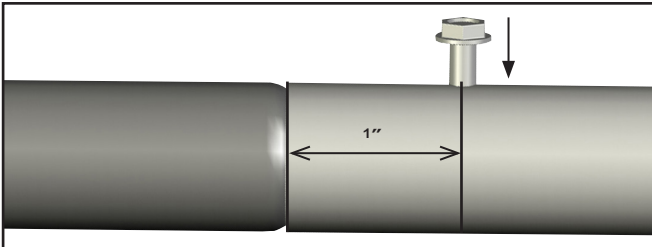
- Pipe 1.315" (See chart below.)
- Pipe 1.315" x 12" (#131P012)
- Spin handle (#103395)
- Universal joint (#103396)
- Fabric clips (#CC6212) (Use half for each side.)

Assembly Procedure

1. Locate the pipes for two (2) roll-up conduits. Each roll-up conduit consists of the following pipes. See chart below.

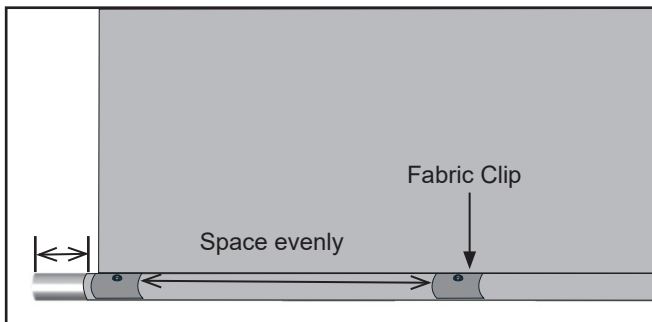
Roll-up Conduit Lengths	
Length	Pipes
20'	(3) 75" & (1) 49.5"
24'	(3) 75" & (1) 97.5"
28'	(4) 75" & (1) 73.5"
36'	(5) 75" & (1) 97.5"
40'	(6) 75" & (1) 73.5"

2. Connect these pipes by inserting the swaged ends of the pipes into the plain ends until each conduit is assembled. Secure each pipe joint with a Tek screw and wrap the joint with duct tape.



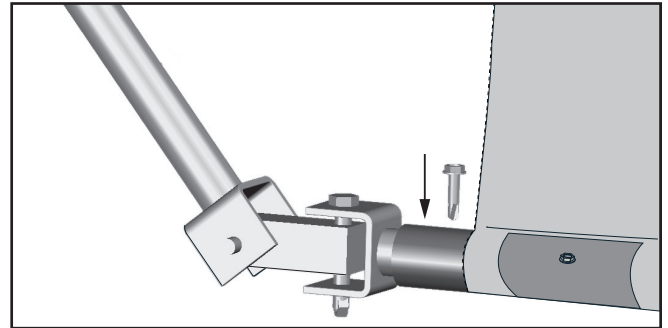
These roll-up conduits are attached to the edge of the roll-up side with fabric clips and Tek screws.

3. Align the roll-up conduit with the edge of the roll-up side. Wrap the panel around the conduit as shown below and attach using fabric clips and Tek screws. Position the conduit in the pocket so that a few inches extends beyond the panel at the end where the crank will be attached.

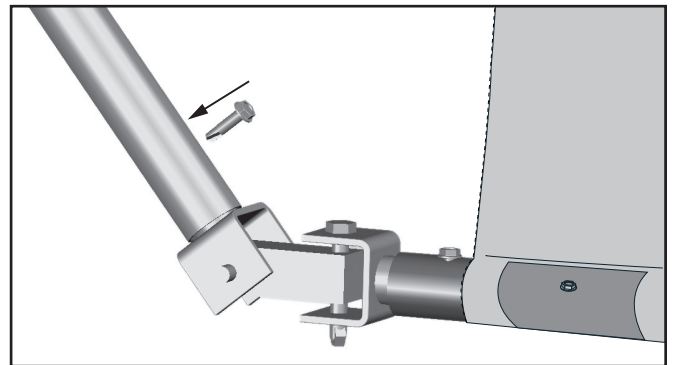


ATTENTION: A few inches of the conduit should extend beyond the edge of the cover. See diagram above.

4. Evenly space the fabric clips to secure the main cover to the roll-up conduit.
5. Attach the universal joint to the conduit in the pocket using a Tek screw to secure the connection.



6. Secure one (1) 12" plain pipe to the remaining end of the universal joint using a Tek screw.



NOTE: This extension pipe can be trimmed to the desired length.

7. Add the spin handle to the extension pole and secure the connection with a Tek screw.



8. Repeat the steps to secure the remaining roll-up conduit to the main cover.
9. With the crank assembly properly attached, test the operation of the crank assembly.
10. Continue by installing the anti-billow rope.

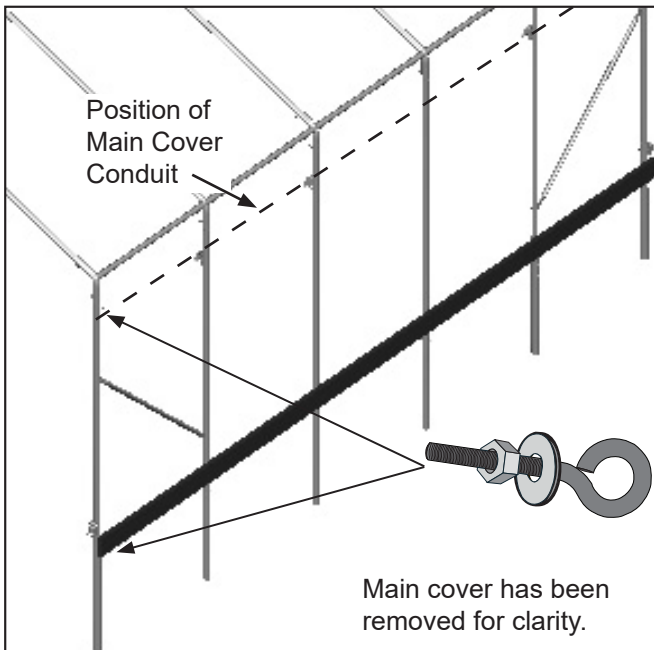
INSTALL ANTI-BILLOW ROPES

Gather the parts:

- Anti-billow rope (#CC5310)
- 3/8" Eye bolts (#FA2083) and 3/8" nuts and washers

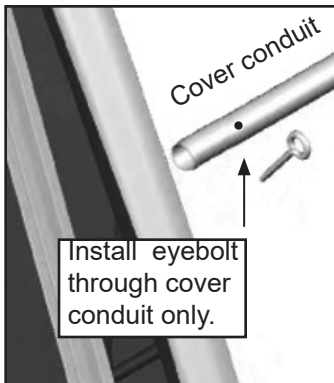
Anti-billow ropes secure the roll-up sides when they are in the down position. Complete the following steps to install the ropes.

1. Roll up the sidewall so that it is a few inches above the ground.
2. Drill a 3/8" hole through the baseboard (if equipped) and the end rafter. Insert an eye bolt and washer through the hole and secure the eye bolt with a nut and washer.
3. Move up the same end rafter and drill a 3/8" hole in the cover conduit a few inches from the end rafter. Align the upper eye bolt with the eye bolt at the bottom.

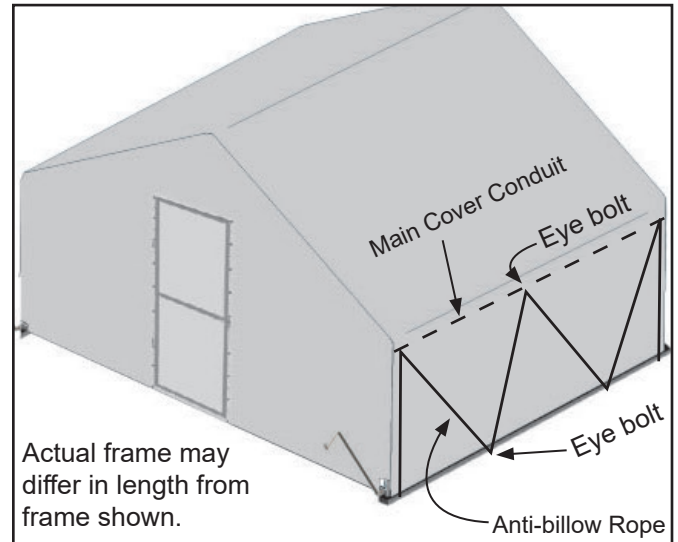


NOTE: When installing eye bolts, do not drill through the rafter.

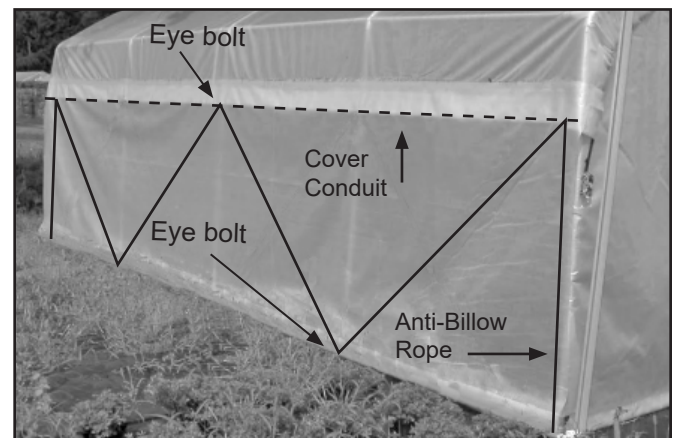
4. Insert an eye bolt and washer through the hole and secure the eye bolt with a nut and washer.



5. Repeat Steps 2-4 using the following photo as a pattern guide.



6. Once all eye bolts are installed in the proper locations, take the end of the black rope and thread it through the eye bolts as shown above.
7. Tie one end to the eye bolt at the bottom of one end rafter.
8. Roll up the side cover to its highest position.
9. With the cover rolled to its highest position, pull the anti-billow rope tight to remove excess slack.
10. Cut and tie the rope to the eye bolt at the base of the remaining end rafter.
11. Lower the roll-up side to check the operation.



NOTE: Dashed line shows the position of the cover conduit within the pocket of the main cover. Actual frame may differ from frame shown.

12. Repeat all of the above procedures for the remaining roll-up side for the building.
13. Continue by reading the Shelter Care and Maintenance section that follows.

MOO-TEL™ CALF NURSERIES

SHELTER CARE AND MAINTENANCE

Proper care and maintenance of your shelter is important. Check the following items periodically to properly maintain your shelter:



Space below is reserved for customer notes.

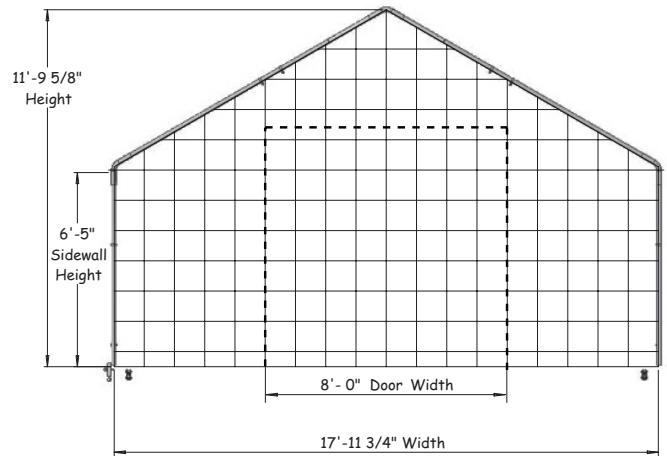
- Regularly check the main cover and panels (if equipped) to see that these remain tight and in proper repair.
- Check connections and all fasteners to verify that they remain tight.
- Do not climb or stand on the shelter at anytime.
- Remove debris and objects that may accumulate on the shelter. Use tools that will not damage the cover when removing debris.
- Remove snow to prevent excess accumulation. Use tools that will not damage the cover when removing snow.
- Check the contents of the shelter to verify that nothing is touching the cover or the side panels that could cause damage.
- Check the anchoring system to ensure that all components are tight and in good repair.
- If the shelter is moved, inspect all parts and connections before reassembling.
- For replacement or missing parts, call 1-800-245-9881 for assistance.

NOTE: With the exception of Truss Arch buildings, ClearSpan™ shelters and greenhouses do not have any tested loading criteria.

ClearSpan

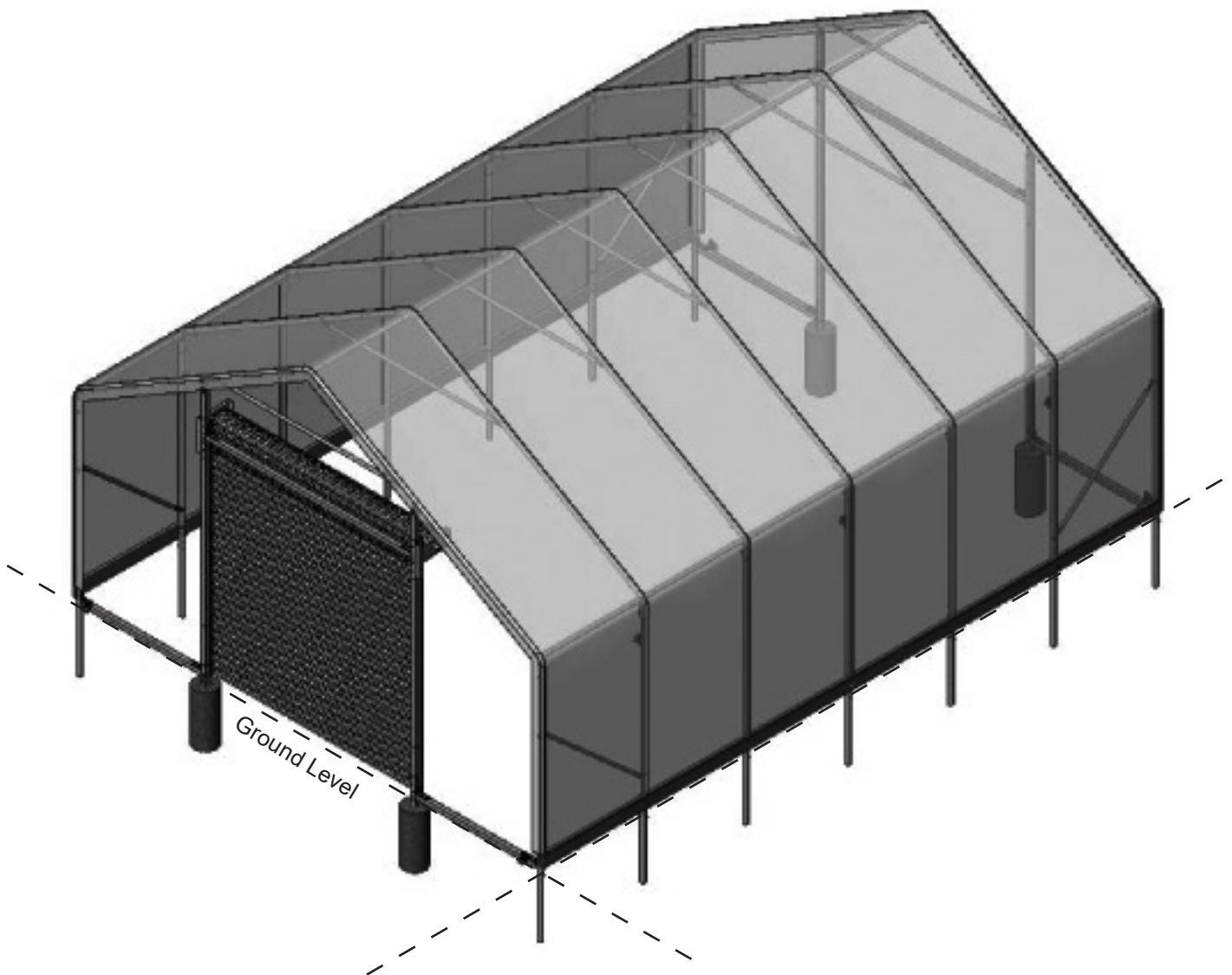
QUICK START GUIDE

18' Wide Calf Nurseries



FRONT

Grid Represents 12" Squares

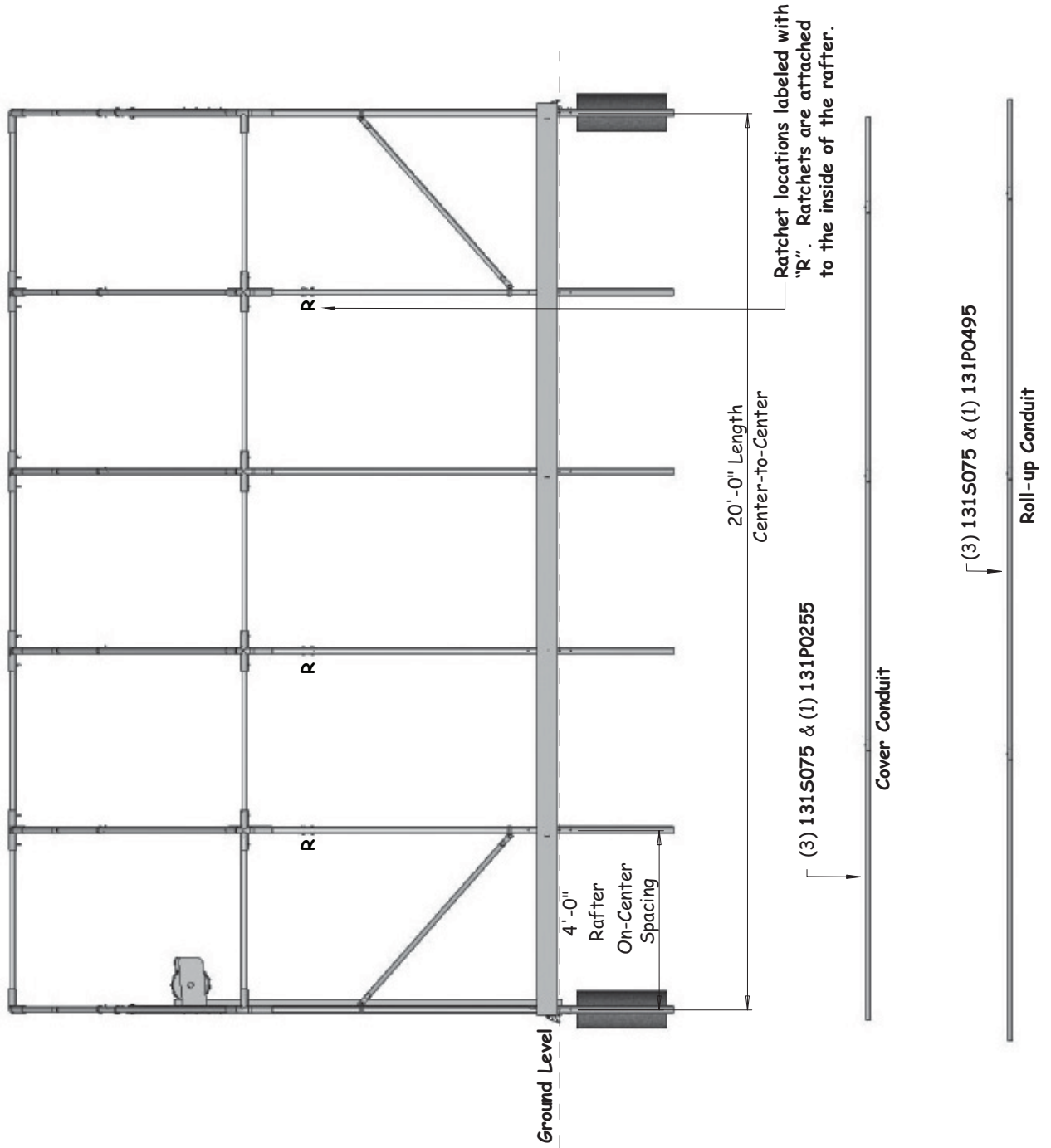


Actual frame may differ in length from frame shown.

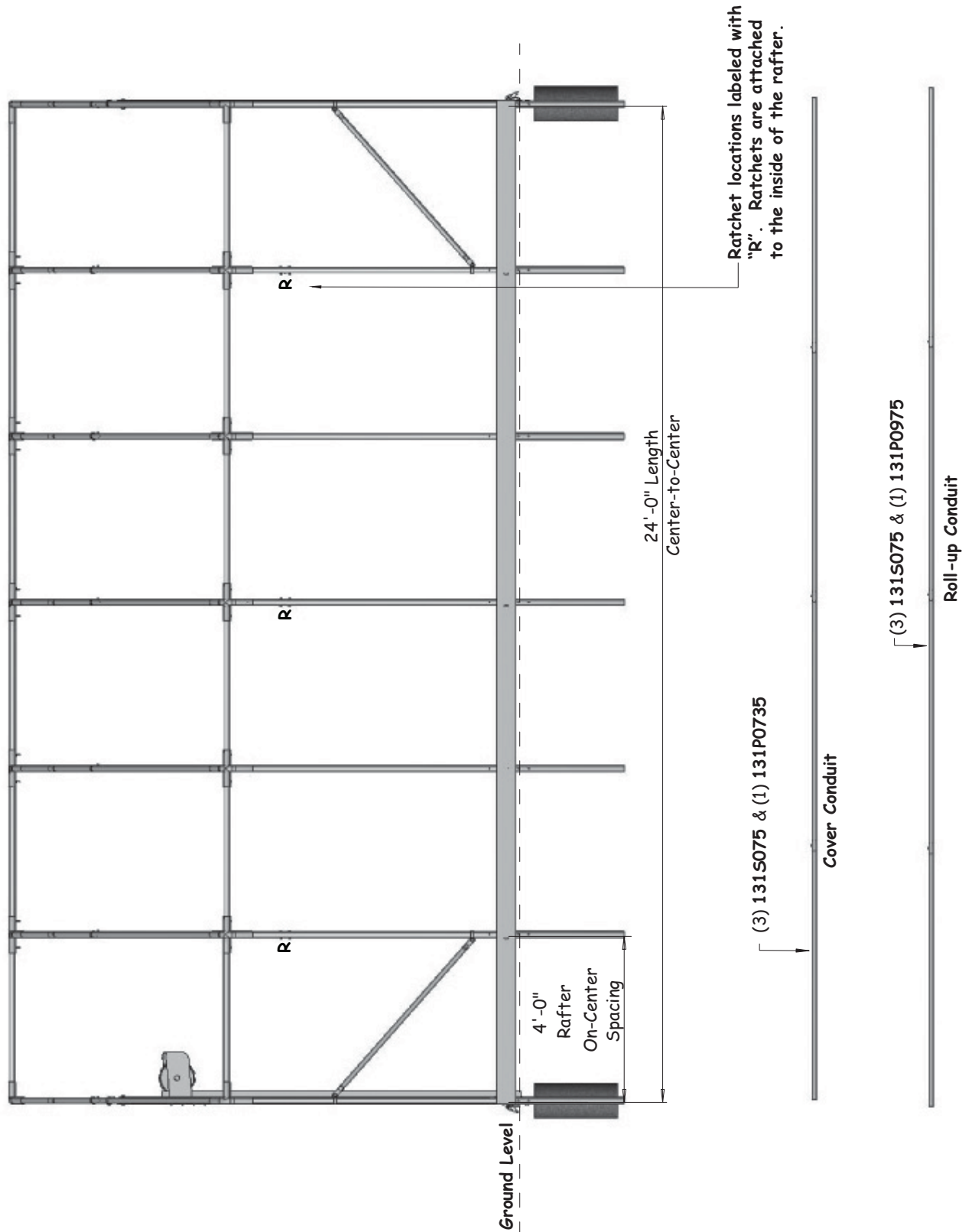
FRONT PROFILE



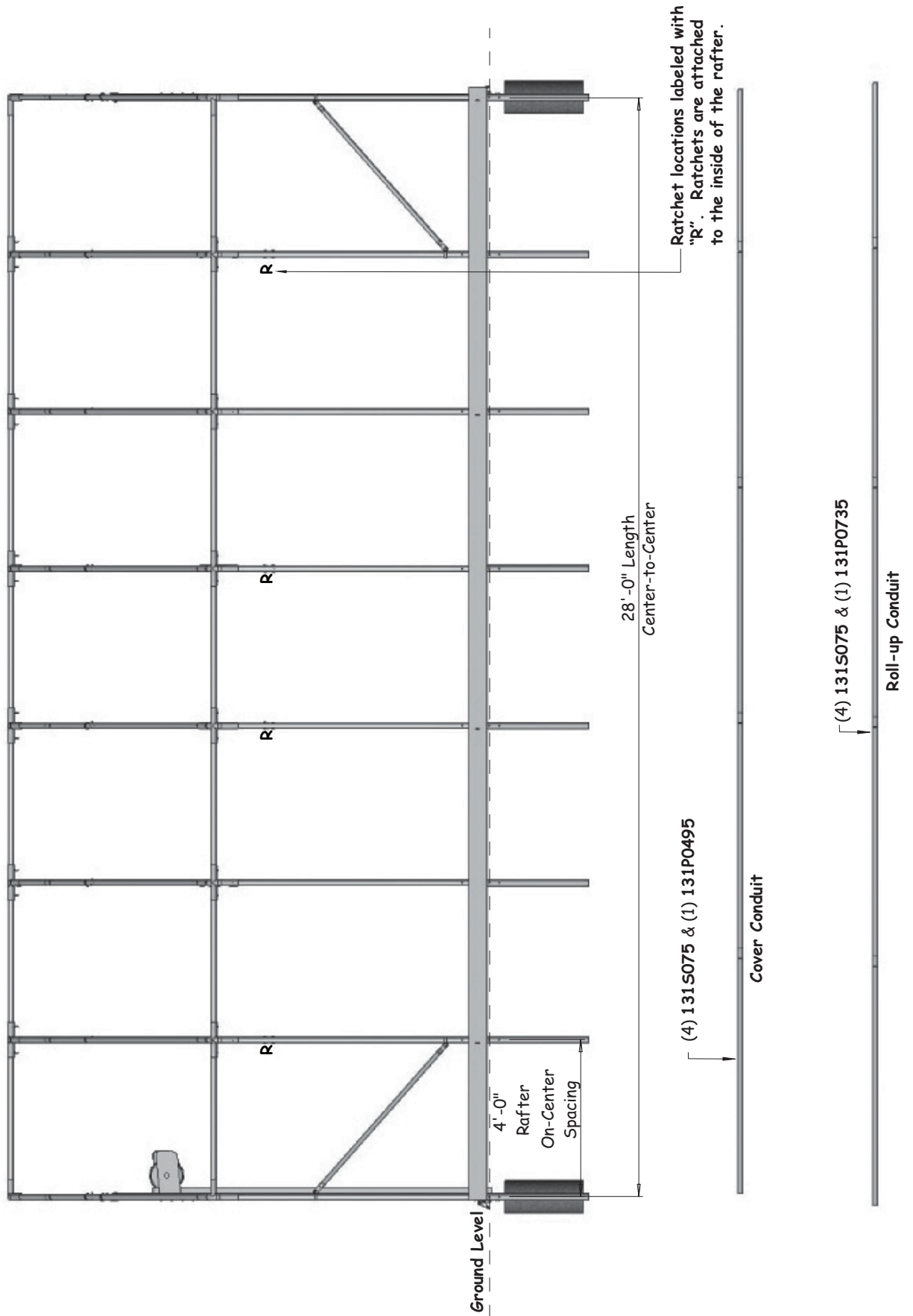
SIDE PROFILE - PB02710R4



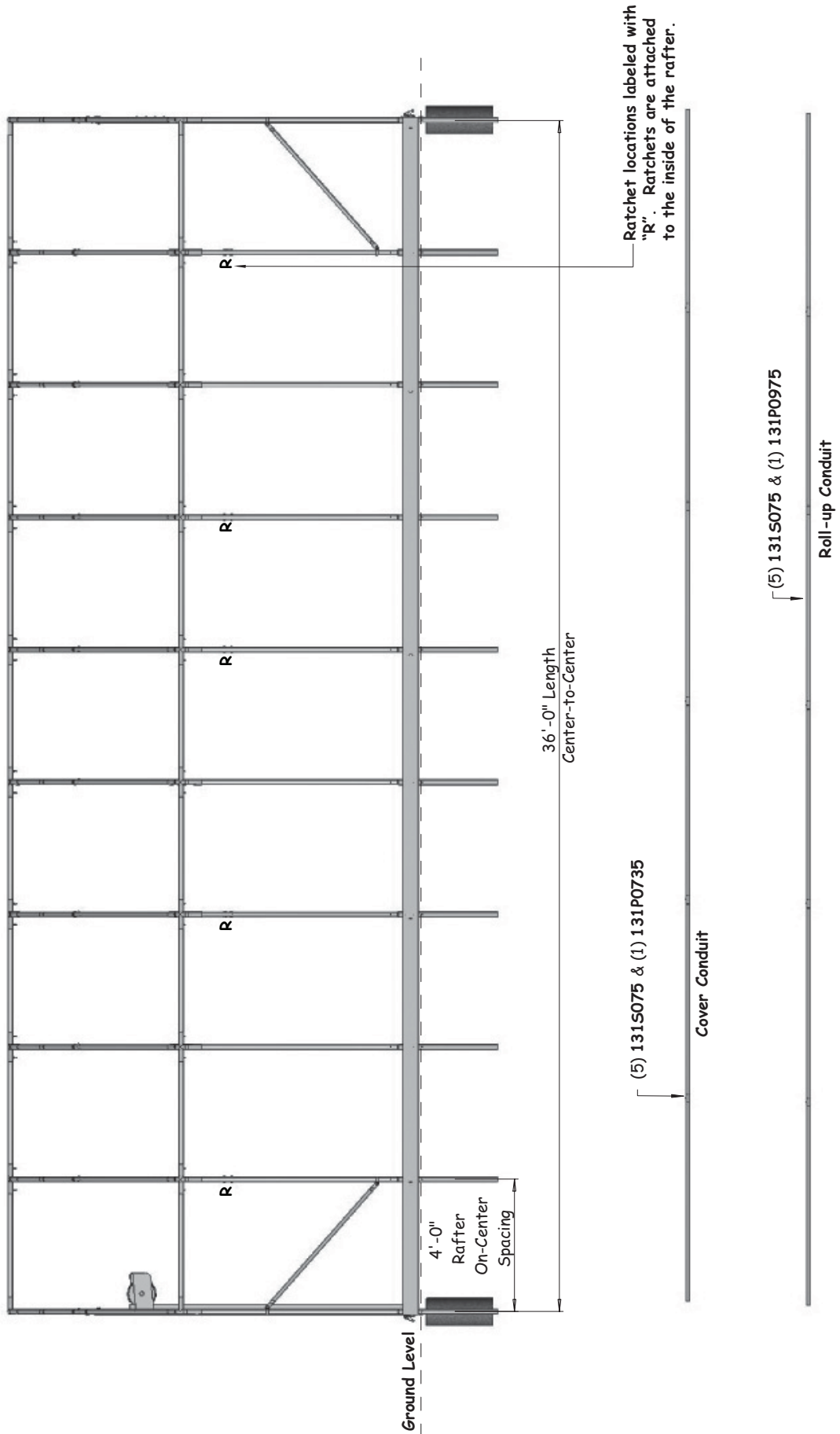
SIDE PROFILE - PB02712R4



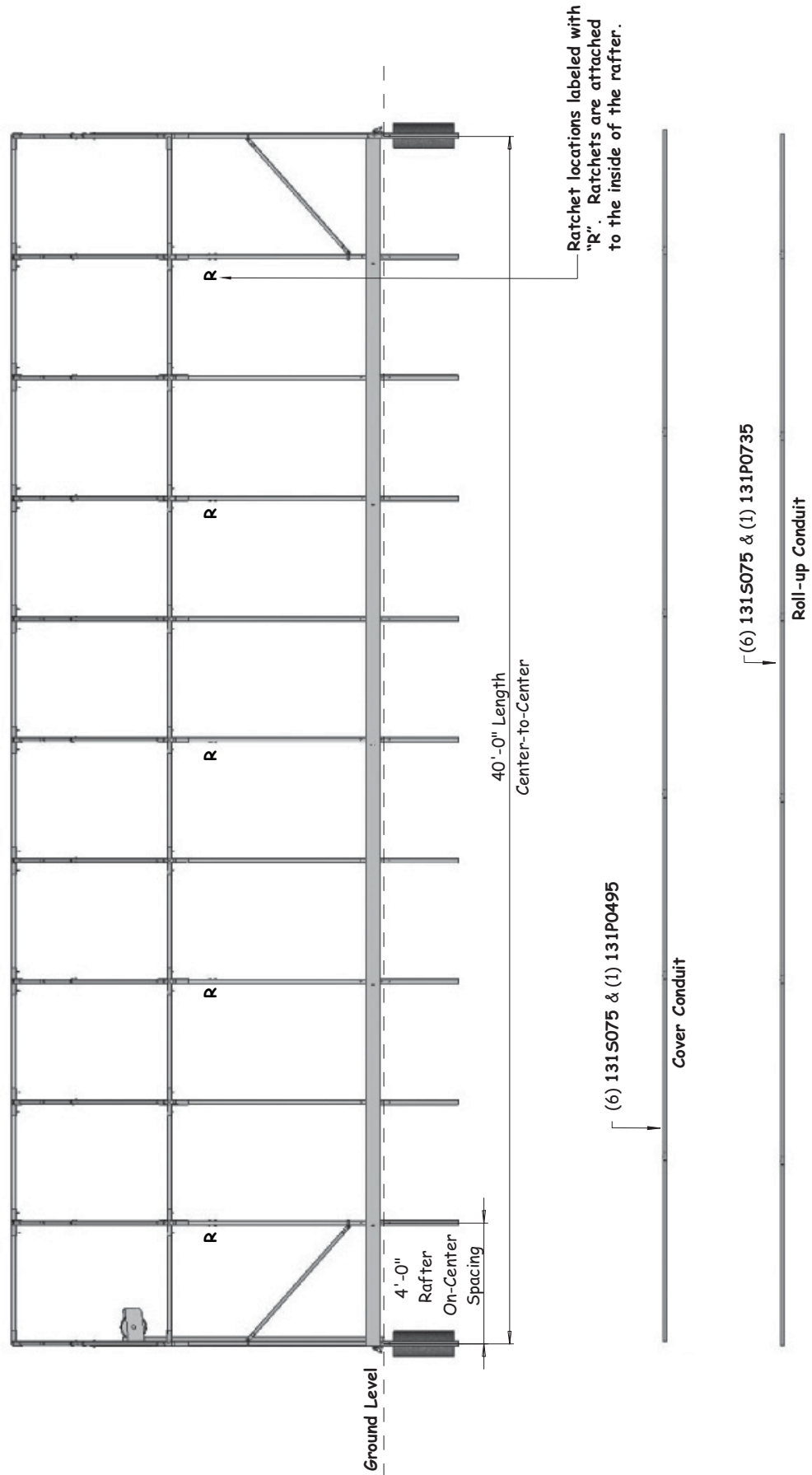
SIDE PROFILE - PB02714R4



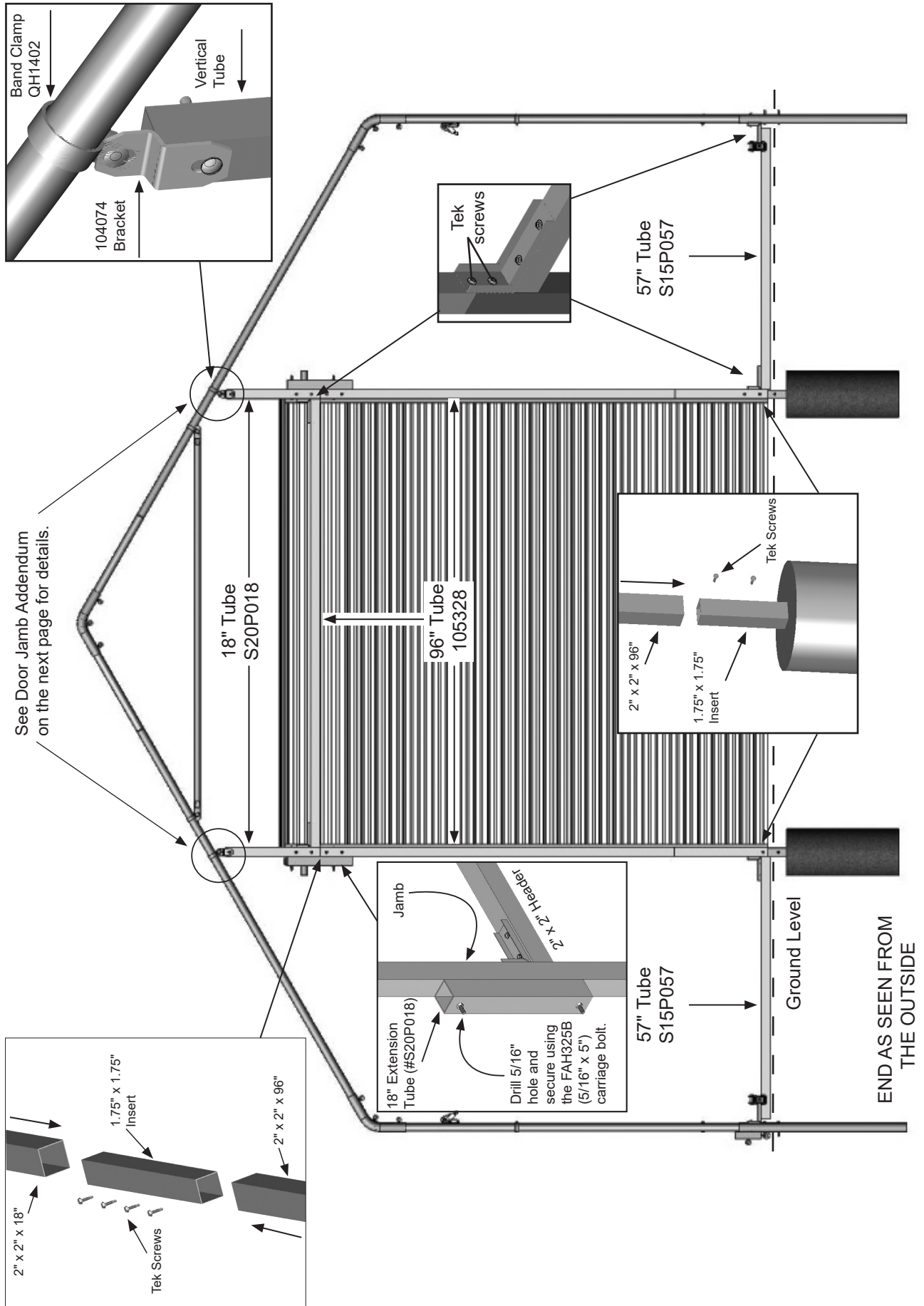
SIDE PROFILE - PB02716R4



SIDE PROFILE - PB02718R4



END FRAMING - FRONT



Door Jamb Addendum

ADDITIONAL 111708 BRACKET INSTALLATION FOR DOOR JAMBS (Door Installation Only.)

In addition to the standard door jamb and end frame installation instructions presented in this guide, please install the 111708 connection brackets as described below. **These brackets are not shown in any of the main building diagrams in this manual.** Use the diagrams on this page for proper bracket placement and installation.

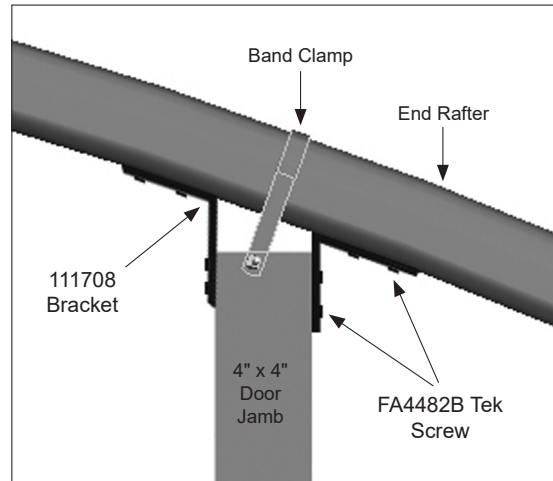
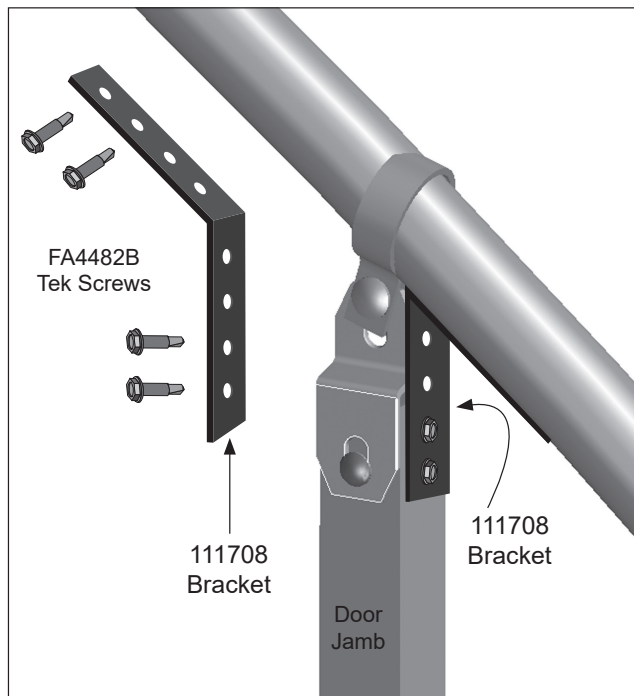
NOTE: The door jambs are the vertical frame members that the door is attached to when it is installed.

Complete these steps:

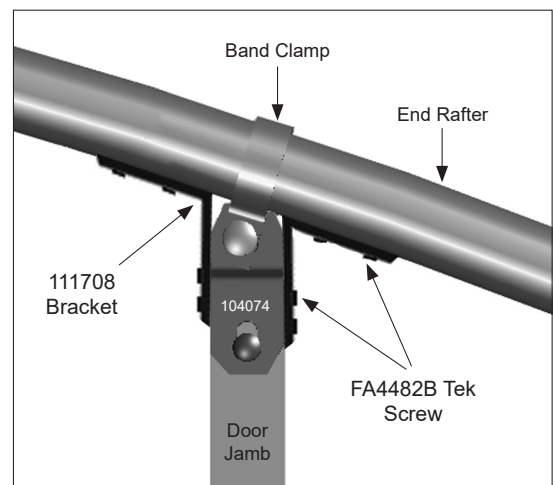
1. Locate the 111708 brackets and FA4482B Tek screws included with the building.
2. After installing the door jambs and end wall framing, bend each 111708 bracket as needed to install.

ATTENTION: Brackets are shipped as flat plates. Bend each one to conform to the angle created by the rafter curve. To bend the plate, tightly clamp it in a vise so the bend point is centered between the mounting holes. Lightly tap the free end of the plate with a small maul until the desired angle is reached.

3. Use four (4) FA4482B Tek screws to attach each 111708 bracket to the end rafter and top of each door jamb. **Brackets are used to secure the door jambs only. Do not use these for any other vertical frame member of the end wall. See diagram—lower right.**



4" x 4" Door Jamb and Band Clamp: Install one 111708 bracket on each side of each door jamb.



1.5" x 1.5" or 2" x 2" Door Jamb and 104074 Square-to-Round Tube Bracket: Install one 111708 bracket on each side of each door jamb.

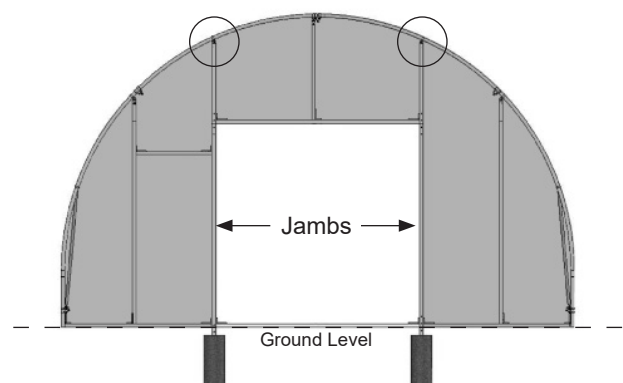
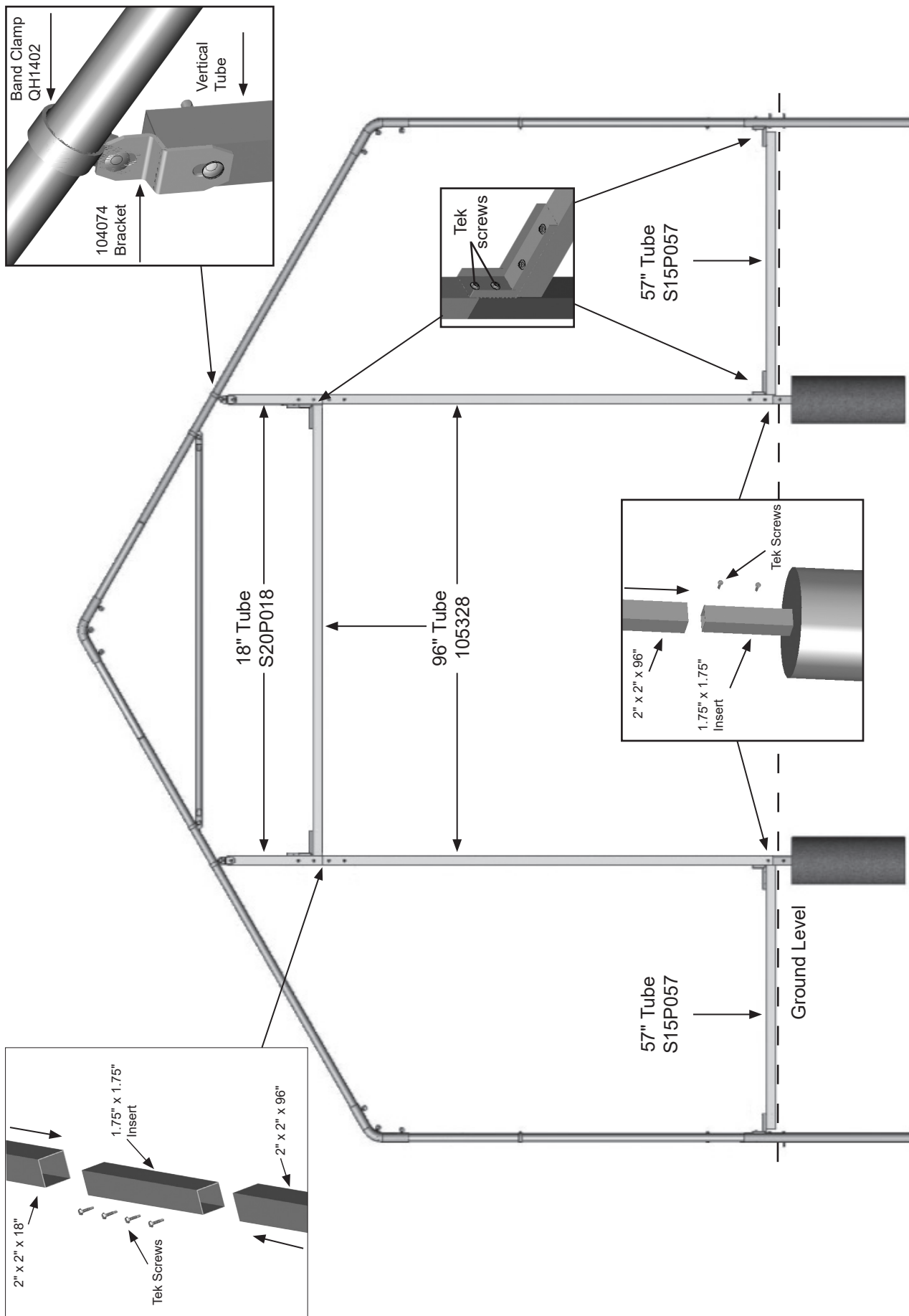
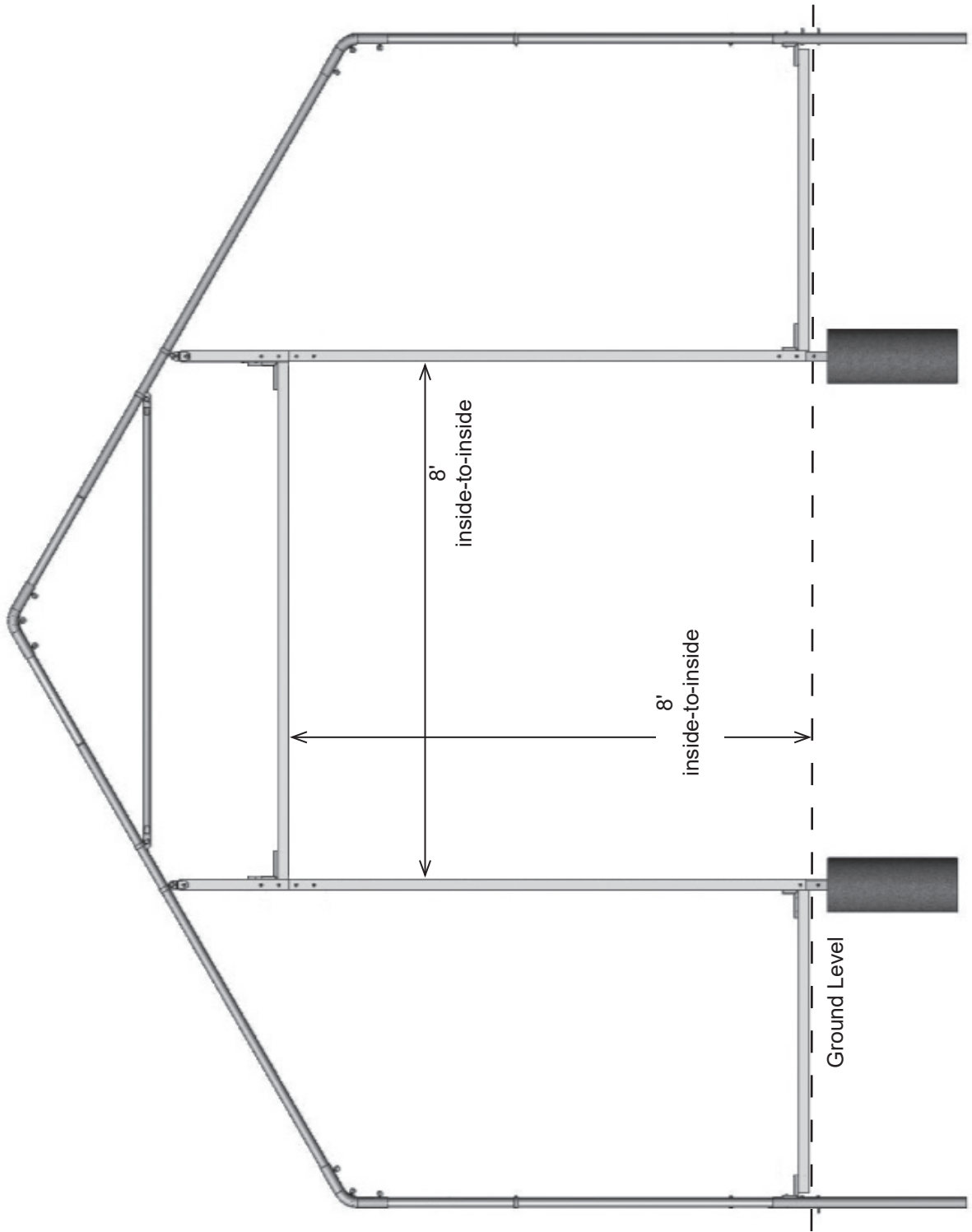


Diagram shows the location of the door jambs. Circles show where to attach the 111708 brackets.

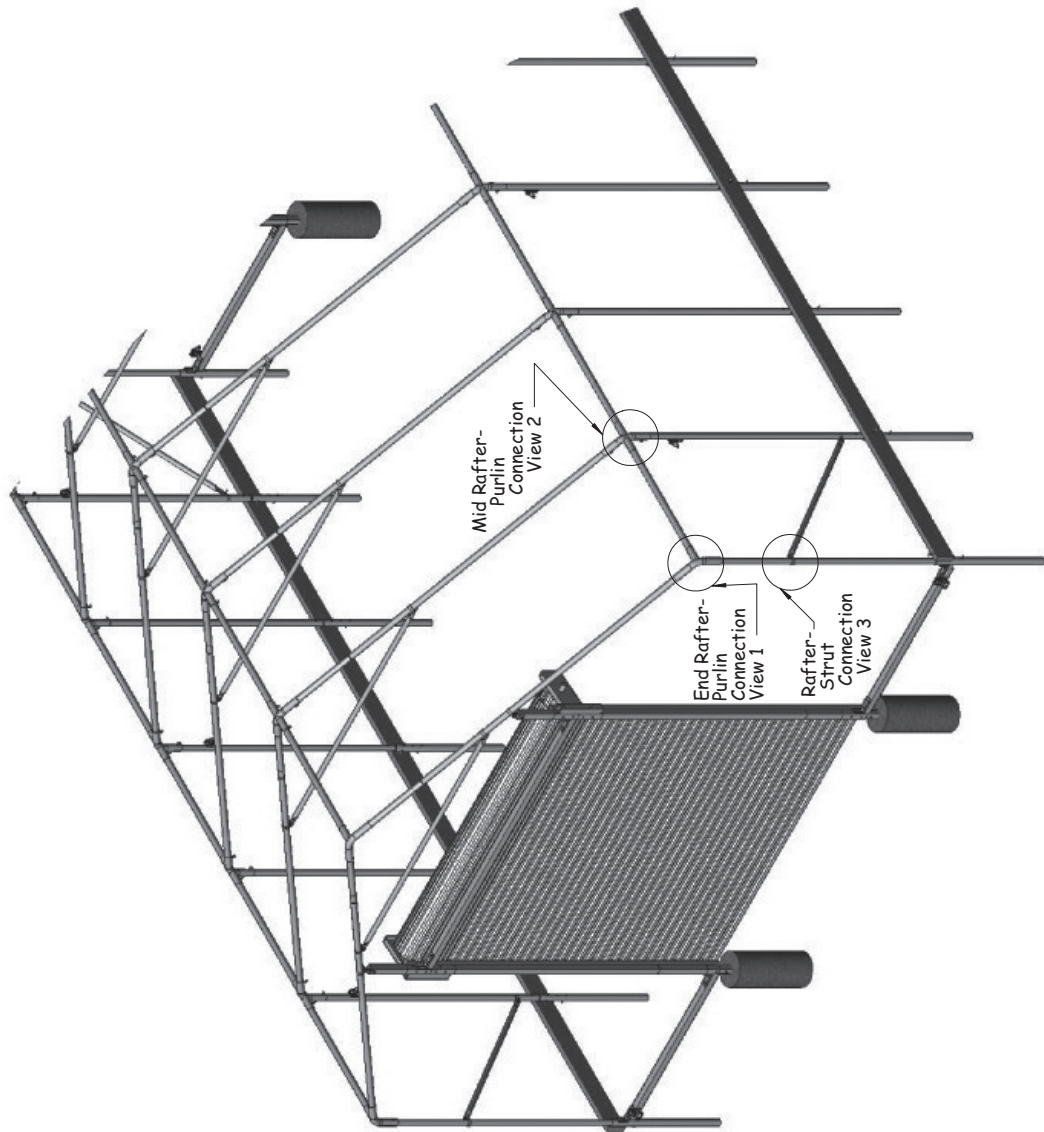
END FRAMING - BACK



END FRAMING - FRONT AND BACK DOOR DIMENSIONS



CONNECTIONS



CONNECTION - DETAILS

