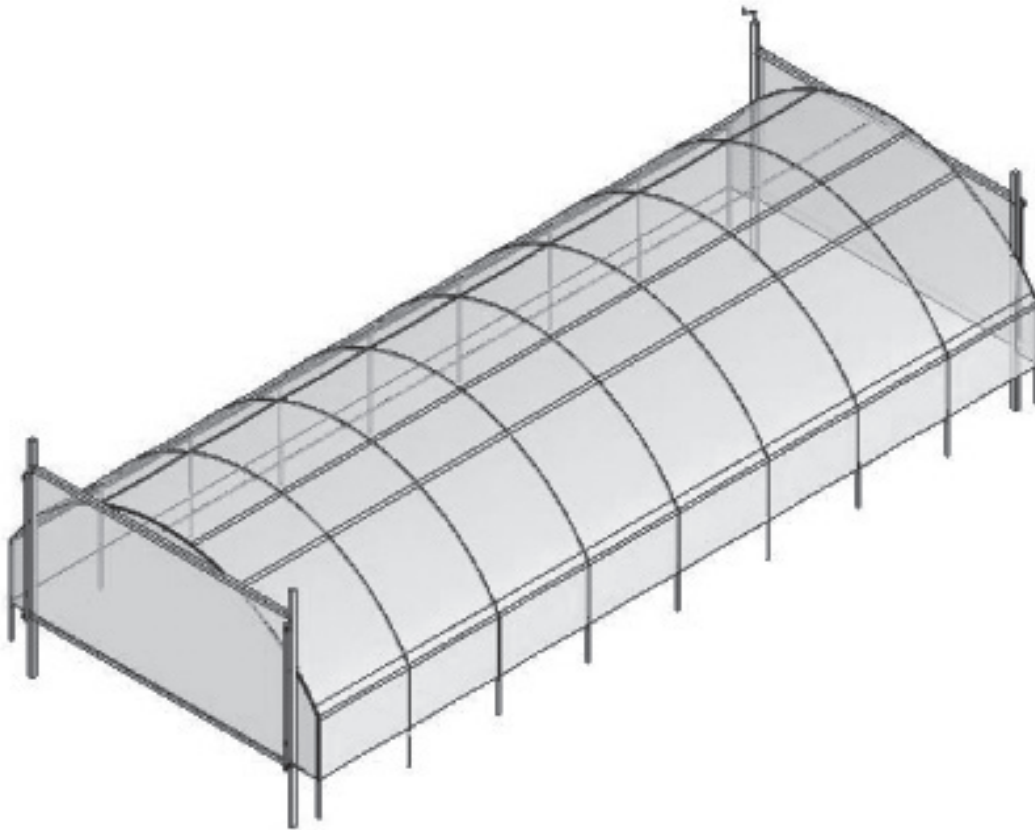




GrowSpan™ Single Bay High Tunnels



Actual building may differ from what is shown above.

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

STK#	DIMENSIONS
108203	24' x 56'
108204	24' x 105'
108205	24' x 154'
108206	24' x 203'

Revision date: 02.15.23



greenhouse structures

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

Thank you for purchasing this GrowSpan™ high tunnel. 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 high tunnel. 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 high tunnel or framing during or after construction.
- Do not occupy the high tunnel during high winds, tornadoes, or hurricanes.
- Provide adequate ventilation if the structure is enclosed.
- Do not store hazardous materials in the high tunnel.
- Provide proper ingress and egress to prevent entrapment.

ANCHORING INSTRUCTIONS

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

⚠ WARNING: The anchor assembly is an integral part of the high tunnel construction. Improper anchoring may cause high tunnel instability and failure of the structure. Failing to anchor the high tunnel 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 high tunnel 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.
- For sites that are not concrete or gravel, placing wood blocks or other suitable supports under each rafter leg helps prevent the pipes from sinking or working into the site. Does not apply to frames with ground posts.
- **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 high tunnel. Failing to follow these steps may result in an improperly assembled and anchored high tunnel 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 high tunnel.
3. Gather the tools, bracing, ladders (and lifts), and assistance needed to assemble the high tunnel.
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 (if equipped). This applies to film and fabric covers that stretch over the frame assembly. Install end panels and doors if equipped.
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 GrowSpan™ 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 or 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.

GROWSPAN™ SINGLE BAY HIGH TUNNELS



greenhouse structures

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



FA4482B
Tek Screw



CC6212 and
CC6213
Fabric Clips



102548
Cross Connector



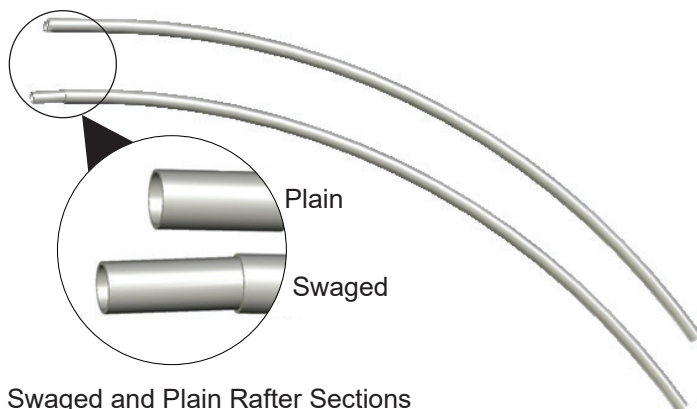
102675
Ground Post



102921
Neo-Bonded
Washers



102856
End Clamp



Swaged and Plain Rafter Sections

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
- Fine point marker to mark the location on tubing
- Variable speed drill and impact driver (cordless with extra batteries works best)
- Wrench, ratchet and socket (recommended)
- Ropes long enough to reach over the frame
- Hammers and gloves
- Metal file
- Duct tape (Customer supplied)
- 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 frame

UNPACK AND IDENTIFY PARTS

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

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 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 (if equipped).

Customer-Supplied Materials

This shelter requires additional materials to complete the assembly of the end frame. *These materials are chosen and supplied by the customer.* Fasteners, brackets, and door hardware are included. Refer to the diagrams in the Quick Start section near the back of this guide for details.

The diagrams show 4" x 4" posts as the recommended customer-supplied supports needed to complete the end frames of the high tunnel.

SHELTER ACCESSORIES AND CONSTRUCTION SUGGESTIONS

The diagram below describes accessories available for your building and suggests ways to improve the stability of the customer-supplied end framing. Contact your sales representative to purchase or to learn more about accessories.

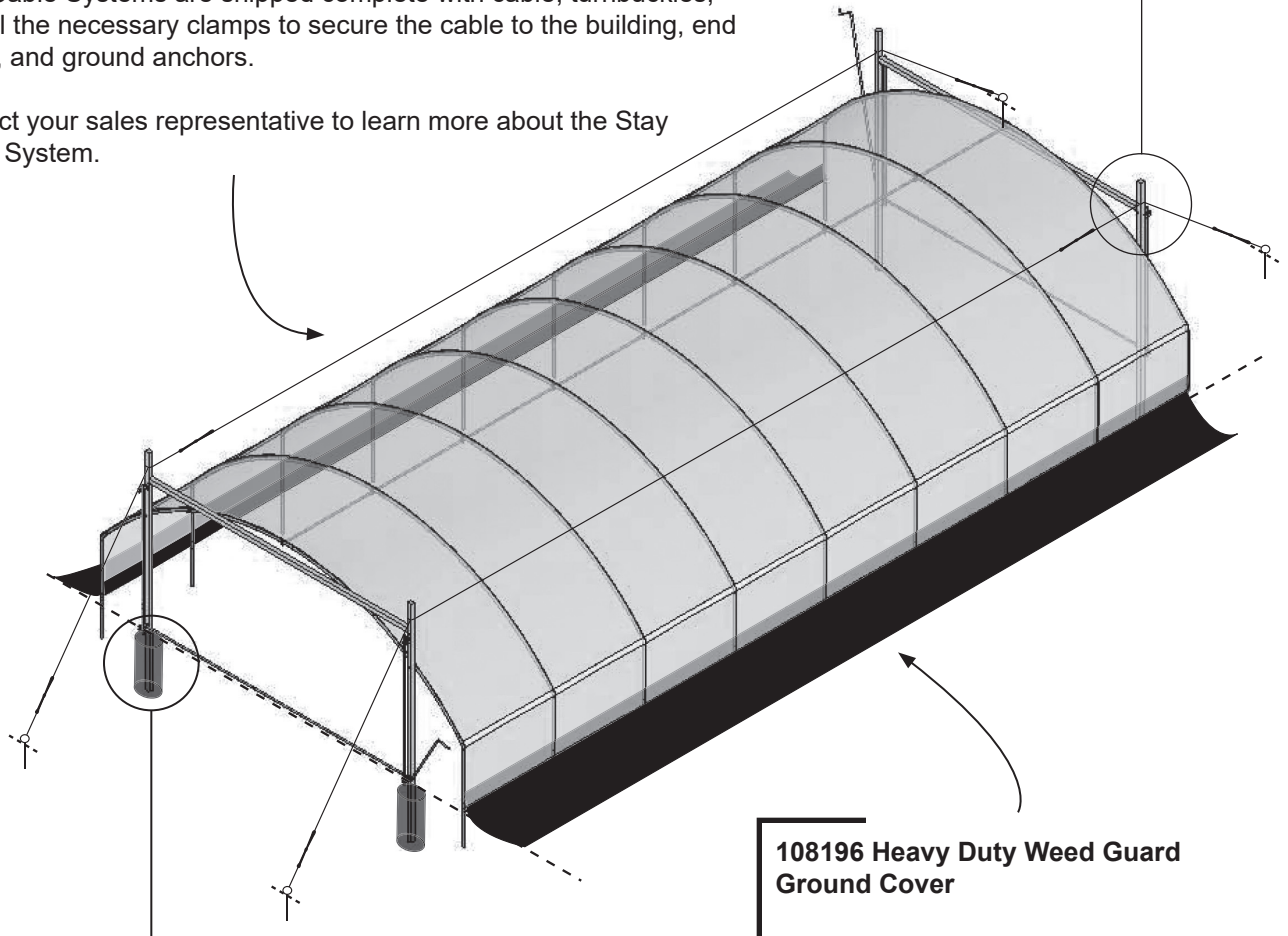
Stay Cable System

The Stay Cable System provides additional support to the building frame and customer-supplied end framing. When properly installed, stay cables help stabilize the main frame and end wall frame, especially in areas where strong winds are common.

Stay Cable Systems are shipped complete with cable, turnbuckles, and all the necessary clamps to secure the cable to the building, end frame, and ground anchors.

Contact your sales representative to learn more about the Stay Cable System.

ATTENTION: Construct the end wall frame as shown with the vertical jambs extending above the header 18" to 24". This provides an anchor point for cables if you decide to install them now or in the future.



End Framing Installation

In areas where loose or sandy soil conditions are found or where deep frost is common, setting the customer-supplied end frame posts in concrete is recommended. This helps prevent shifting and provides an additional level of stability in extreme climates and during adverse weather-related conditions.

Always consult local and regional building codes and follow construction practices common to the area when setting the customer-supplied end frame posts.

End frame materials and concrete are supplied by the customer.

108196 Heavy Duty Weed Guard Ground Cover

Premium, landscape quality, black 4.75 oz. woven needle-punched fabric is 30 mils thick and manufactured from UV-resistant polypropylene.

The 108196 Heavy Duty Weed Guard Ground Cover is 36" wide to provide maximum weed prevention. Length is determined by building.

GROWSPAN™ SINGLE BAY HIGH TUNNELS

LAY OUT THE BUILDING SITE

Taking these steps **before** assembling the shelter saves time and ensures that the structure is positioned as desired. The following steps describe one way to lay out the site. Experienced contractors may elect to use their own method of site preparation.

Drive ground posts to the proper depth. Width and length of the shelter are measured from the center of one ground post to the center of the remaining ground post. Consult diagrams and details for additional information.

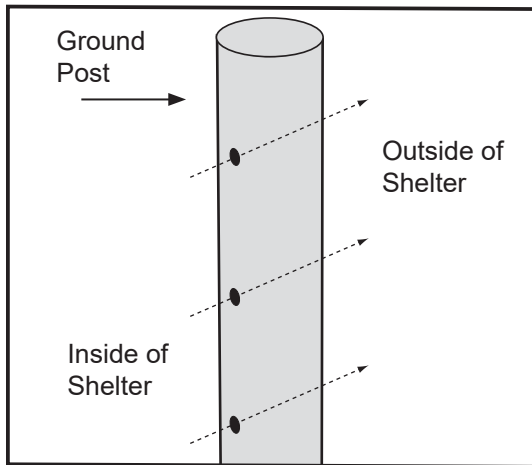
SQUARE THE SITE

Gather the parts:

- Ground posts
- 5/16" x 5" eye bolts
- 5/16" nuts

1. Identify a corner where a ground post will be positioned and drive the first 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 12" 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.

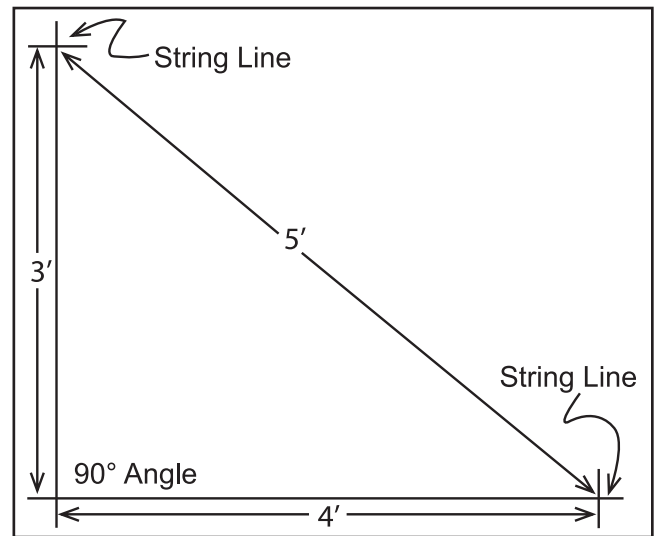
To align the bolt holes in the ground posts with those in the rafter *after driving the ground posts*, insert a tapered rod or pry bar into a ground post bolt hole and turn the post using the rod or pry bar.

2. After the first corner ground post is in place, string a line the width of the building (center-to-center) and drive the second ground post into the ground just enough to hold it in place.

3. Use a transit or line level to set and drive the second corner post to the same depth as the first ground post.
4. String a line at least as long as the building from the first stake at 90°.

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 next corner ground post.
6. Repeat the same step for the last corner post.



NOTE: The distance measured diagonally between corner 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 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 84" on-center locations of the remaining ground posts.
10. Drive the remaining ground posts into the ground at the required 84" on-center dimension and to 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.

ASSEMBLE THE HIGH TUNNEL FRAME COMPONENTS

NOTE: Assistance is required to assemble the high tunnel frame. Lifts and ladders are also recommended.

BASIC RAFTER ASSEMBLY STEPS

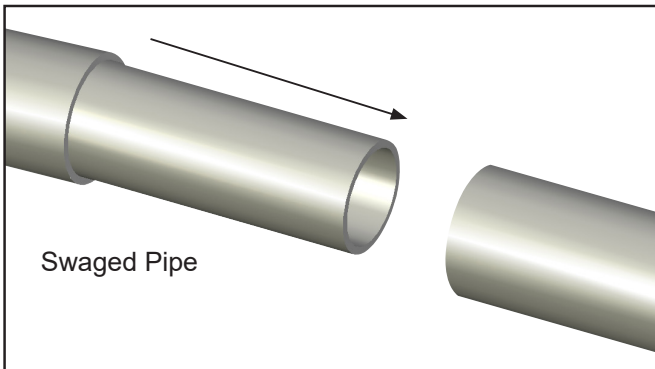
Gather the parts:

- Rafter pipe (#24GT166S1D)
- Rafter pipe (#24GT166S2)
- Rafter pipe (#24GT166P4)
- End clamps (102856) and Cross Connectors (102548)
- Tek screws and Magnetic nut setter 3/8" x 2-9/16" (Customer supplied)

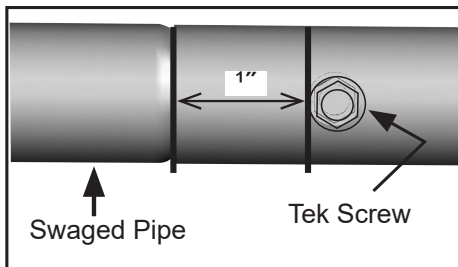
Rafter Assembly Procedure (Consult Front Profile Diagram)

Each rafter assembly consists of six (6) rafter sections: four (4) curved rafter pipes for the upper portion and two (2) leg pipes that connect to the upper pipes. The lower two (2) leg pipes are drilled to be anchored to the ground posts.

1. Select the six (6) pipes needed to assemble a rafter and arrange these on a flat surface.
2. Slide the swaged portion of each rafter pipe into the plain end of the pipe as shown.



3. With the main rafter pipes seated at each joint and the rafter positioned on a flat surface, secure each joint with a single self-tapping Tek screw. Position a Tek screw approximately 1" from pipe joint.



ATTENTION: 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 high tunnel once the frame is assembled.

RAFTER ASSEMBLY (CONTINUED)

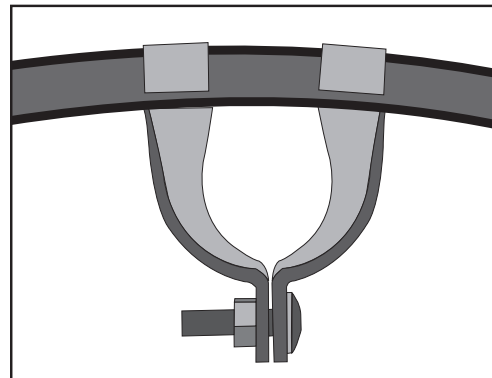
4. Assemble rafters as described and continue with the additional steps to complete the assembly of the two (2) end rafters.

END RAFTER ASSEMBLY

In addition to the steps in the previous procedure, complete the following steps *for the two (2) end rafters only*.

1. Take one of the assembled rafters and place it on a flat surface.
2. Slide one (1) end clamp (102856) onto the rafter and position it at the peak of the rafter.

NOTE: Use a piece of duct tape (if desired) to keep each clamp from sliding when the rafter is lifted into position.



View shows the end rafter and clamp as seen from the *outside* once the frame is assembled. Bolt and nut of the clamp are to the inside of the assembled frame. See Connection Details diagram near the back of this guide.

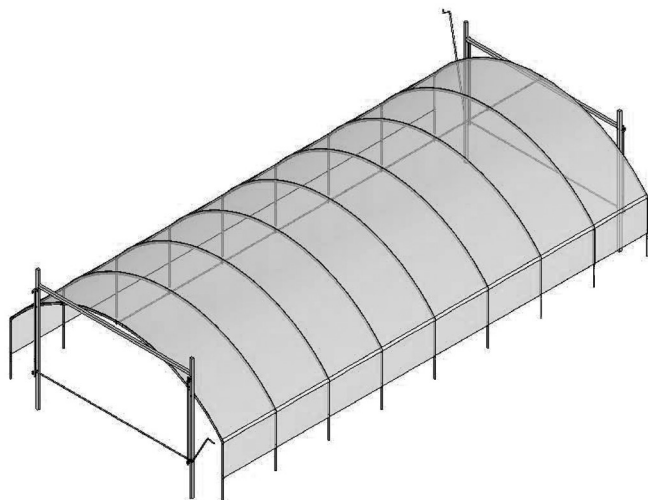
3. Repeat the same procedure for the final end rafter and set the two rafters aside for access.
4. Refer to the steps present on the following pages and assemble as instructed using the diagrams near the back of this guide.

GROWSPAN™ SINGLE BAY HIGH TUNNELS

ASSEMBLY SEQUENCE

These steps outline the suggested method of assembly. Local codes, location, site specifics, and other factors may require a different approach. Read through the following steps and adjust as needed to safely assemble the shelter.

1. Prepare the site. See Page 5 for a suggested method.
2. Set ground posts for the frame.
3. Construct main frame.



4. Assemble and attach all end frames using the supplied hardware and the customer-supplied support posts.
5. Cut and install all end wall end panels.
6. Install main cover film and ropes.
7. Install all roll-up end wall door panels.

SPECIAL ASSEMBLY NOTES

- Secure each 106755 bracket to the customer-supplied 4" x 4" header using a 104188B (1/2" x 5 1/2") bolt.
- Cut the FAK16 (3/8" threaded rod) to the required length. Measure accurately to reduce waste.
- Use four (4) 3/8" nuts for each section of FAK16 (3/8" threaded rod).
- End panel sections are cut from the DCC4931 bulk curtain material.
- Secure each main cover film to the end rafters of each bay using the CC6213 fabric clips and Tek screws.
- Evenly space fabric clips to secure main cover film. For best results, do not space clips more than 5' apart.
- Tie ropes to the eye bolts of the frame.

MAIN STEPS TO ASSEMBLE THE SINGLE-BAY HIGH TUNNEL AND ITS COMPONENTS

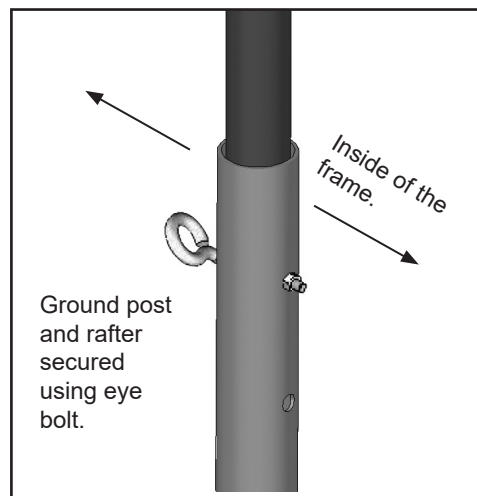
The general steps that follow suggest one way to assemble the single-bay economy high tunnel. Building site, local building codes, and other factors may require adjustments to these steps. Consult the services of a qualified contractor if you are not familiar with the construction of similar structures.

ATTENTION: Use the diagrams near the end of this guide to view details of the connections and component placement.

Use these main steps as a guide to complete the construction of the single-bay economy high tunnel.

1. Identify the location for the main frame and set the ground posts.
2. Assemble the rafters for the main frame.
3. Set the first end rafter onto the first set of ground posts and secure the rafter to the posts using the supplied 5/16" x 5" eye bolts and 5/16" nuts.

Brace the rafter in place using ropes or temporary bracing. *Do not allow the rafter to remain unsecured in the ground posts.*

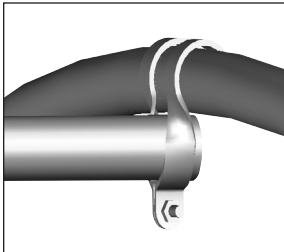


Position the eye of each eye bolt *to the outside of the frame.*

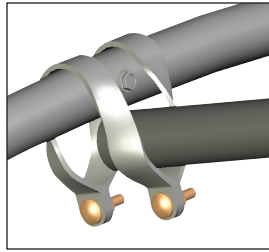
4. Set the next rafter onto the next set of ground posts and secure using eye bolts and nuts.

FRAME ASSEMBLY (CONTINUED)

- Assemble a purlin section using two (2) pieces of 1.315" pipe (131S075) and secure the joint using a Tek screw. See Side Profile for purlin pipe identification. *Use plain pipe to finish purlin run.*
- Add purlin to frame, center purlin on frame, and secure using 102856 and 102548 clamps.

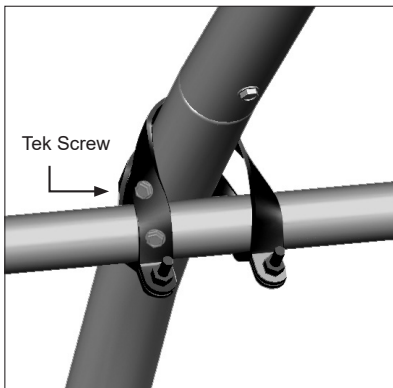
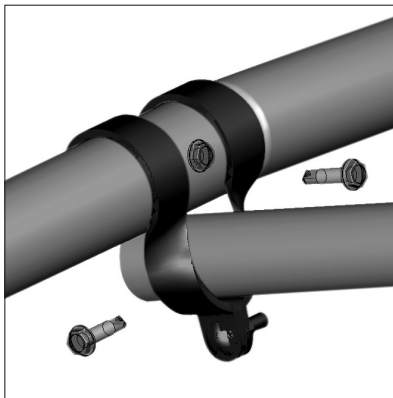


End Rafter



Interior Rafter

- Secure each clamp to the purlin and each clamp to the rafter using a Tek screw. See the examples in the diagrams that follow.



Actual rafter and purlin may differ.

- Repeat the procedure to complete the assembly of the single-bay economy high tunnel.
- After assembling the frame, install the end frames using the supplied hardware and customer-supplied support posts.

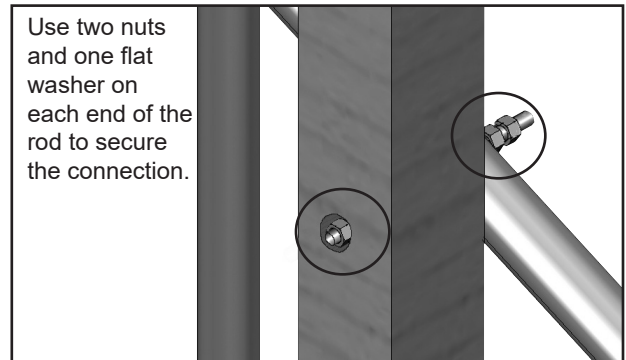
END FRAME ASSEMBLY

Use these steps to install the end wall supports and connecting hardware.

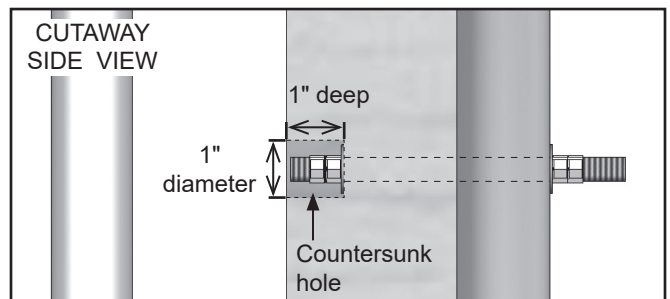
- Using the dimensions shown on the **End Framing Details diagram in the Quick Start section**, set the customer-supplied 4" x 4" posts.

NOTE: Use recognized construction practices when setting the customer-supplied 4" x 4" posts.

- After setting the posts, install the header. Consult the Connections Details diagram in the Quick Start section.
- Secure posts to end rafters as shown. Consult End Framing diagrams in the Quick Start section for details.



NOTE: Do not exceed 8" when cutting the individual lengths of rod from the bulk 3/8" threaded rod. Cut the threaded rod after installation. *To prevent conflicts with the end panel, countersink the "head" of the threaded rod so that it is below the surface of the customer-supplied support.*



- Repeat the steps to install the support posts and header for the remaining end wall.
- Continue by installing the roll-up panel and guide posts.

ROLL-UP PANEL INSTALLATION (Part #QEDxxxxxx)

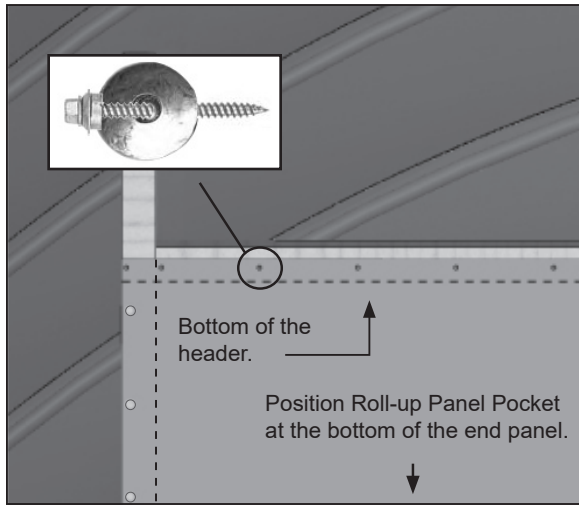
Before attaching the guide posts, attach each roll-up panel to the customer-supplied end framing (4" x 4") using Tek screws and neo-bonded washers. Complete these steps to install the roll-up panel conduit and hardware.

- Take one roll-up panel, move to one end of the frame, and unfold the panel.

GROWSPAN™ SINGLE BAY HIGH TUNNELS

ROLL-UP PANEL INSTALLATION (CONTINUED)

2. With assistance, lift and center the panel into position against the 4" x 4" end frame and attach the top to the header using wood screws and neo-bonded washers.



NOTE: Verify that the lower edge of the panel is on the ground before securing the upper edge to the header.

3. Install the guide posts and brackets over the roll-up panel.

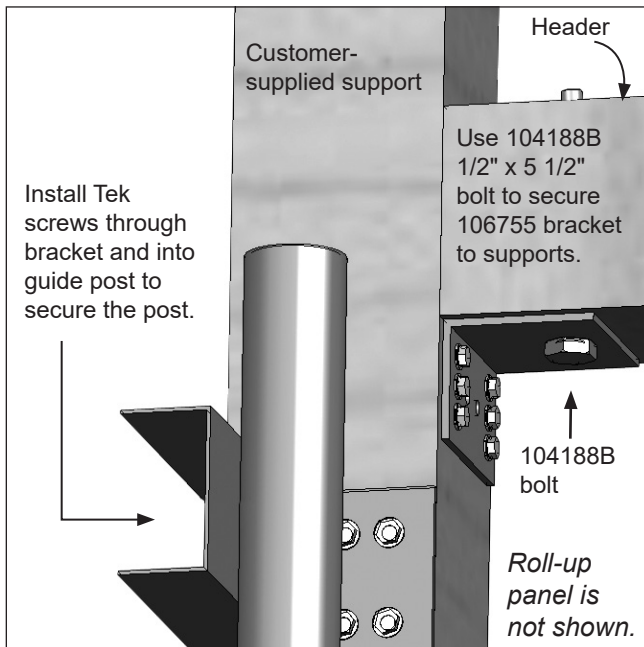
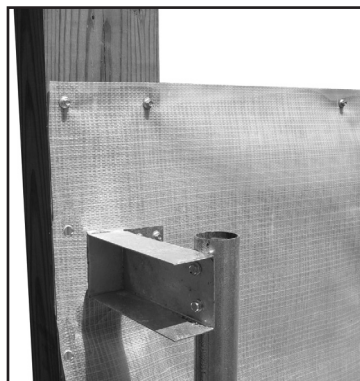


Diagram shows the guide post and bracket attached over the roll-up panel.



4. Use the pipe diagrams on the End Framing Details diagram to assemble the crank up assembly.
5. Secure each splice using a Tek screw and cover the Tek screw with duct tape to protect the panel pocket.
6. Insert the assembly into the panel pocket. Verify that the assembly runs between the guide post and the wooden support posts. Allow a few inches to extend beyond the panel opposite the crank handle to keep the conduit in place during operation.
7. With the assembly in the proper position, flip up the skirt at the bottom of the panel to secure the conduit to the end panel using the CC6212 fabric clips and Tek screws. Divide the clips evenly between the panels and space them evenly along each conduit.
8. Cut a vertical slice in the panel skirt to fit around the lower guide post assembly bracket. Do not cut through the end panel.
9. Test the roll-up panel.

NOTE: Verify that the 3/8" threaded rod that secures the customer-supplied end frame to the end rafter is sunk below the post surface (recommended) or has been cut off and taped to protect the panel.

10. Repeat the steps for the remaining panel.
11. After installing the door hardware and brackets, attach the end panel material to the end frame and end rafter.

END PANEL INSTALLATION

Consult the End Panel Location and Door Frame Panel Location diagrams at the back of this manual to view the areas that need to be covered with end panel material. Use these steps to cut and attach the end panel material to the end wall frame.

1. Measure the area of the end wall that needs to be covered with end panels and cut a section from the bulk material. Allow extra material for the best fit.

NOTE: Due to differences in construction methods and customer-supplied support materials, the customer determines the best way to prepare the bulk material for installation.

2. Set the prepared end panel in place and attach it to the end frame using wood screws and neo-bonded washers. Attach it to the rafter using Tek screws and neo-bonded washers (102921).
3. Repeat the steps to cut and attach the remaining end panels to cover the remaining end wall.
4. Repeat these steps to cut and attach the door frame panels.
5. After installing all end panel and door frame panel sections, install the roll-up panel ropes.

INSTALL ROLL-UP PANEL ROPES

The roll-up panel ropes are laced through the roll-up panel. These ropes wrap around hook lags that are screwed into the sides of the door frame. When installed correctly, these ropes help to keep the roll-up panel in place when it is fully or partially closed. These steps describe one way to lace the roll-up panel.

Gather the parts:

- Hook lags (#FAX120)
- Rope (#CC5505)
- Zipper extension pole (#CC2235)

1. Beginning on the *outside of a door frame*, attach a hook lag between the first two grommet holes below the bracket. Position the open end of the hook lag towards the end panel.

IMPORTANT: Screw hook lags into the sides of the door frame, not the front. *Do not screw into the roll-up panel.*

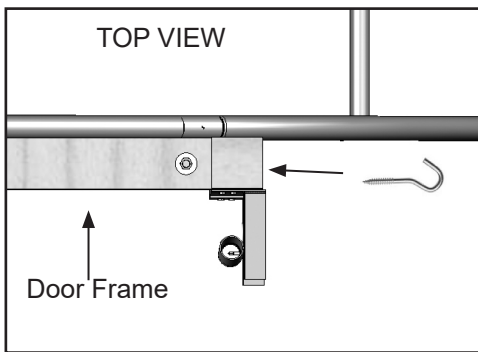
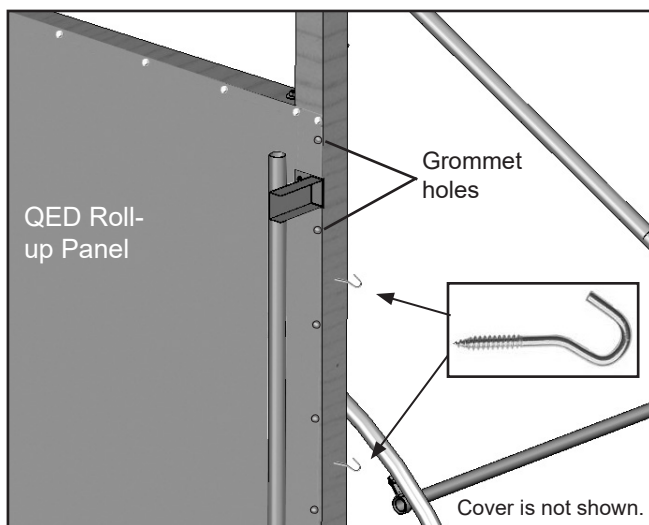
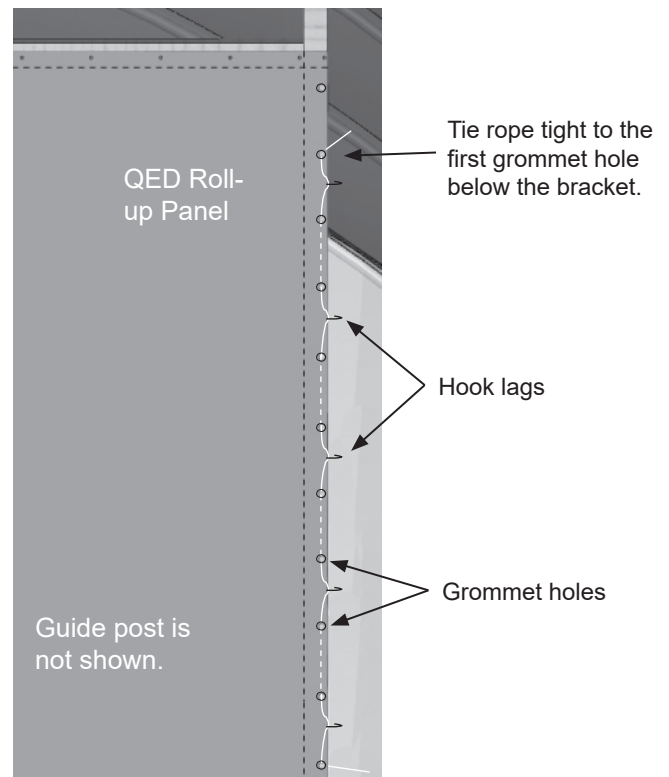


Photo shows the open end of the hook lag facing the end panels.

2. Install a hook lag at every other grommet interval as shown in the diagram below. Use five (5) hooks for each side.



3. Tie a length of rope to the first grommet hole below the guide post bracket, loop it around the first hook lag, and lace it back through the next grommet. Repeat this process until the rope is through the last grommet.



White dashed line shows the rope laced behind the roll-up panel.

4. Leaving some slack, loosely tie the rope off at the bottom grommet hole.
5. Repeat steps 1 through 4 for the other side of the door frame.
6. Once the ropes on both sides are laced and hooked in the correct position, untie the rope at the bottom grommet holes, pull tight to remove excess slack, and tie off at the bottom grommet holes.
7. Repeat for the remaining end.

NOTE: Use the included zipper extension pole (CC2235) to unhook the rope to open the roll-up panel. The pole can also be used to loop the rope back onto the hook lags when the roll-up panel is closed.

8. Install the main cover film.

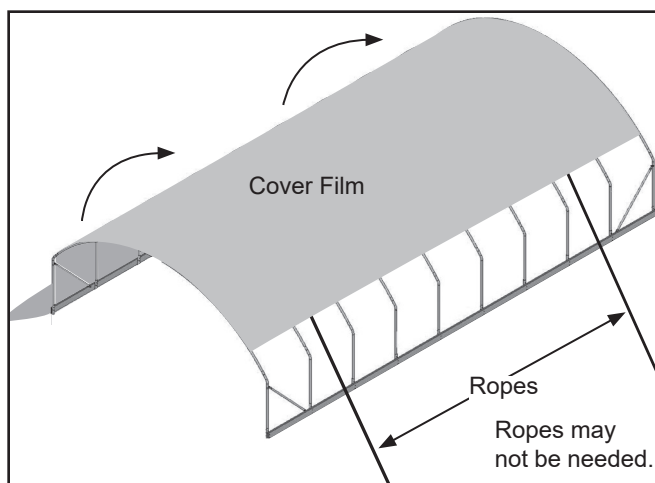
GROWSPAN™ SINGLE BAY HIGH TUNNELS

MAIN COVER FILM INSTALLATION

Use the roll of film to cover the frame. Complete these general steps to install the cover and retaining ropes.

⚠ DO NOT ATTEMPT TO PULL THE COVER DURING WINDY CONDITIONS OR WHEN SUCH CONDITIONS ARE EXPECTED.

1. With assistance, unroll the cover film along one side of the frame on the outside.



Frame shown may vary in length and design from the actual frame. End framing is not shown.

2. Locate one edge of the film and pull the film up and over the frame.
3. Stretch the film end-to-end and side-to-side evenly over the frame. Approximately 12" of the film should extend beyond each end rafter.
4. Attach each film end to each end rafter using the CC6213 fabric clips and Tek screws.

NOTE: Evenly space the clips. To best secure the film, do not space greater than 5' apart. Clips are removed to open the cover and are re-installed when the cover is closed. Creating a double-layered or triple-layered lip using the excess film material at each end will help to maintain a stronger edge for the clips.

5. With the film stretched and attached to the end rafters, install the main cover rope.

NOTE: Install two (2) sections of rope between each set of rafters. Tie ropes to the eye bolts of the frame. Loosen each rope to push the film up toward the peak of the frame to open the cover and then tighten the rope to secure the cover. Consult the Rope Installation Diagram near the back of this guide for pattern details.

6. With the cover and ropes installed, read the cover information that follows and continue by reading the Shelter Care and Maintenance section.

OPENING THE MAIN COVER FILM

Ropes and fabric clips hold the main cover film in place. To open the cover, remove fabric clips from the end rafter and push the film up toward the peak of the frame.

Loosen the ropes if needed to achieve the desired results. Loosen only one pair of ropes at a time, push the cover open, and retighten the ropes.

The film must remain attached to the end rafters with fabric clips near the top when fully opened to prevent it from blowing free. Never remove all fabric clips. Remove only enough to allow the film to be opened to the desired height.

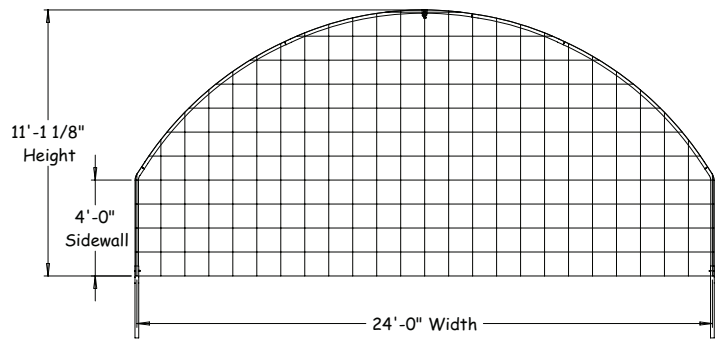
SHELTER CARE AND MAINTENANCE

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

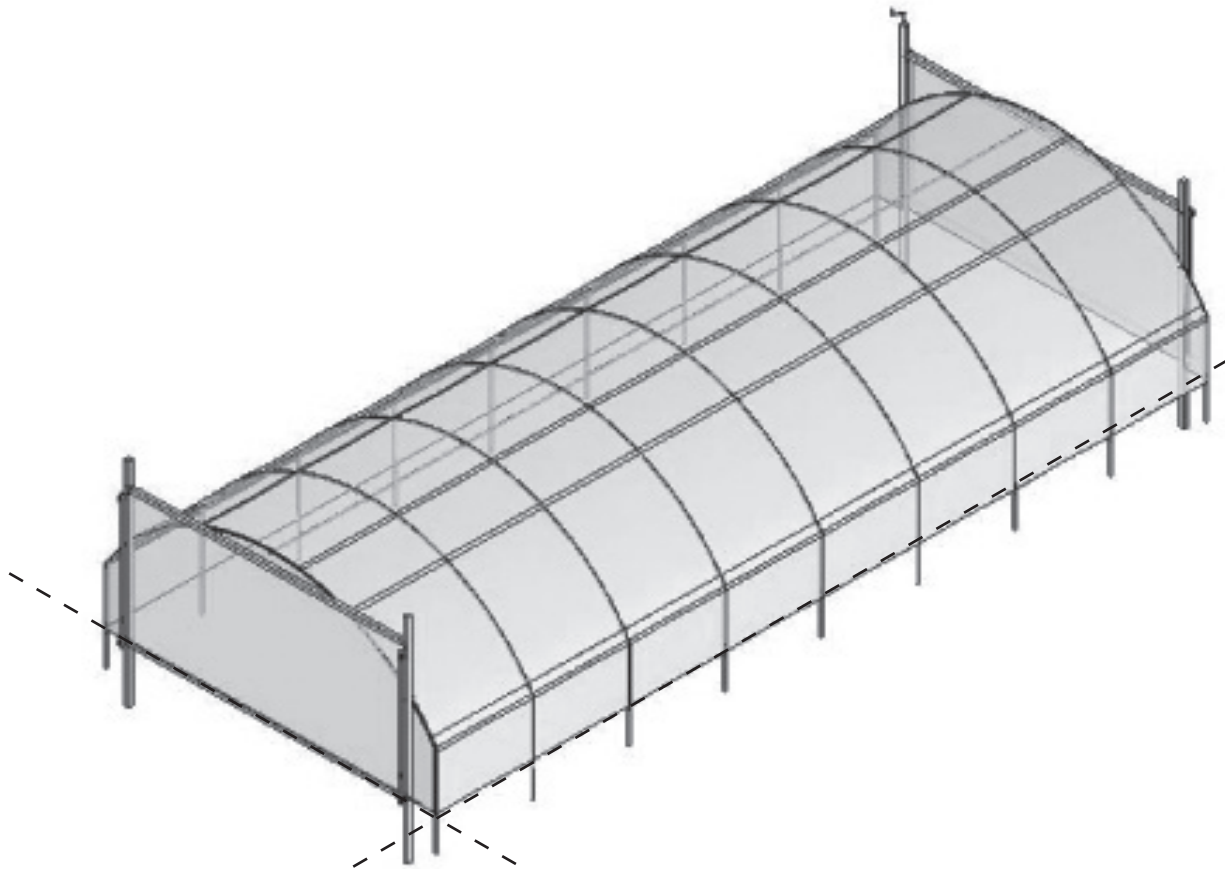
- Regularly check the main cover film and panels (if equipped) to see that these remain tight and in proper repair. **DO NOT LEAVE THE MAIN COVER FILM UNSECURED. VERIFY THAT THE ROPES REMAIN TIGHT AT ALL TIMES.**
- Check connections and all fasteners to verify that they remain tight.
- Do not climb or stand on the frame at anytime.
- Remove debris and objects that may accumulate on the cover film. 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 high tunnel 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.
- Verify that the anti-billow ropes are tight and in good condition. Replace ropes as needed.
- Replace worn or damaged parts immediately.
- If the shelter is moved, inspect all parts and connections before reassembling.
- For replacement or missing parts, call 1-800-245-9881 for assistance.



QUICK START GUIDE
Single Bay High Tunnels

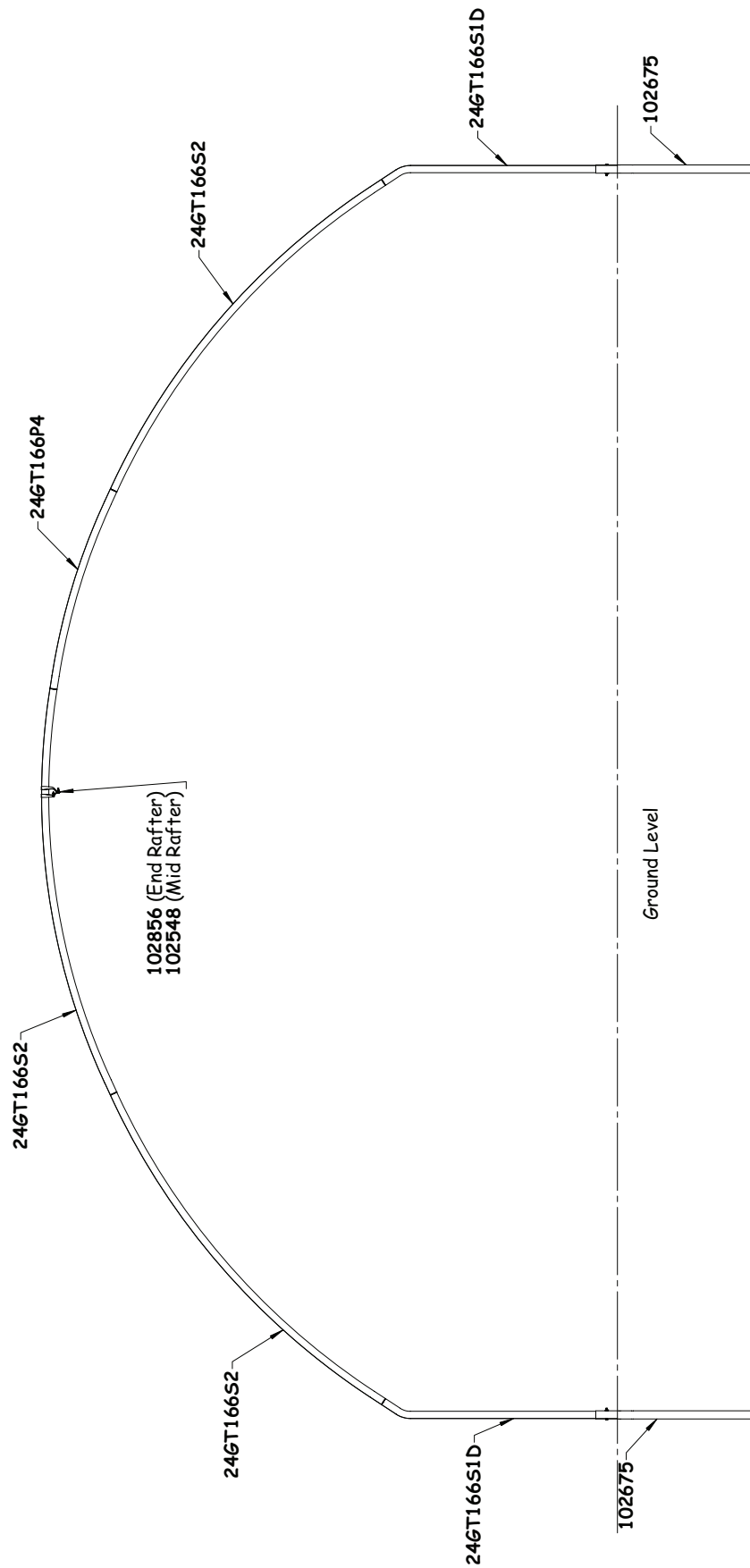


FRONT
Grid Represents 12" Squares

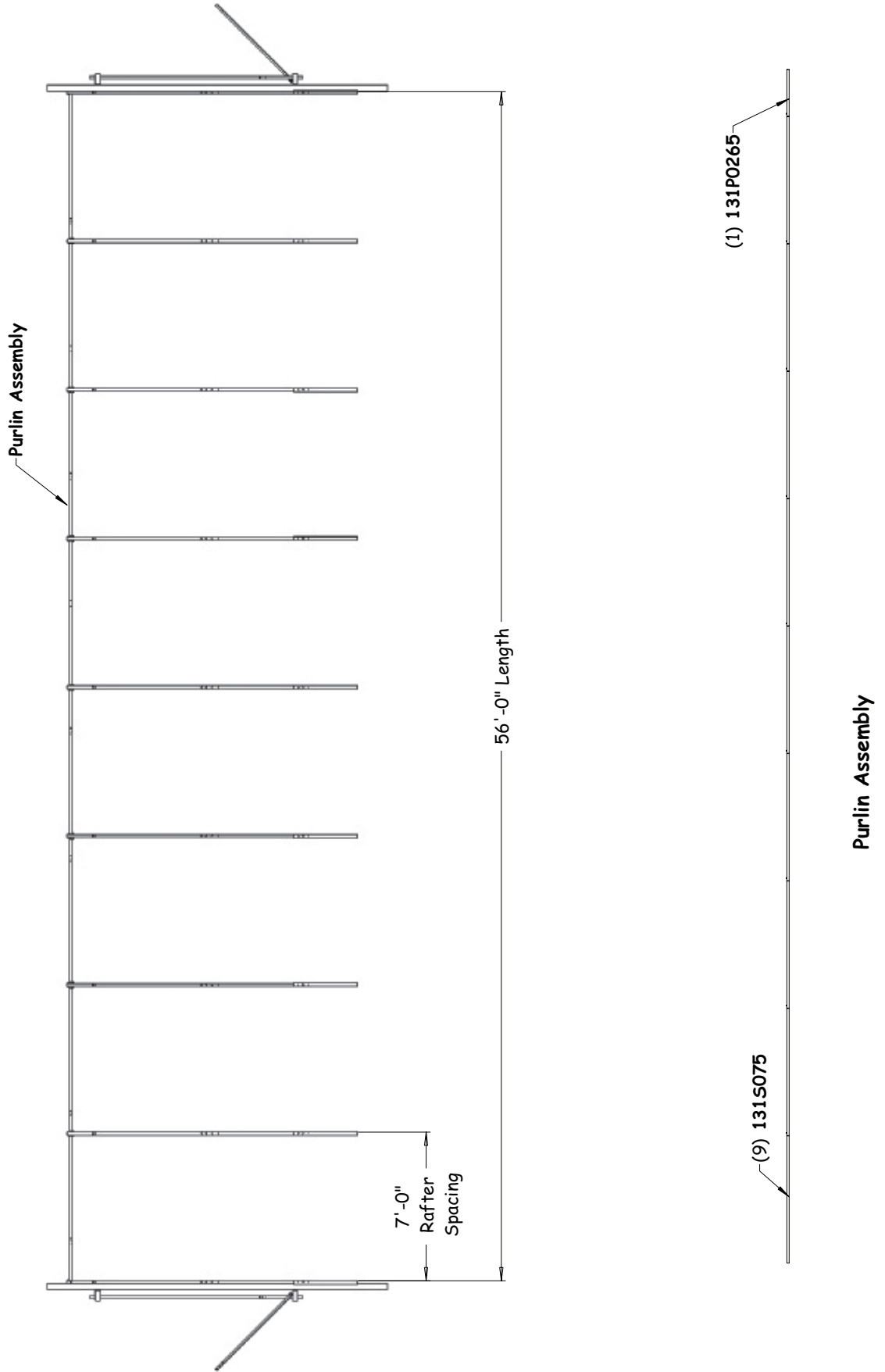


Actual building may differ in length.

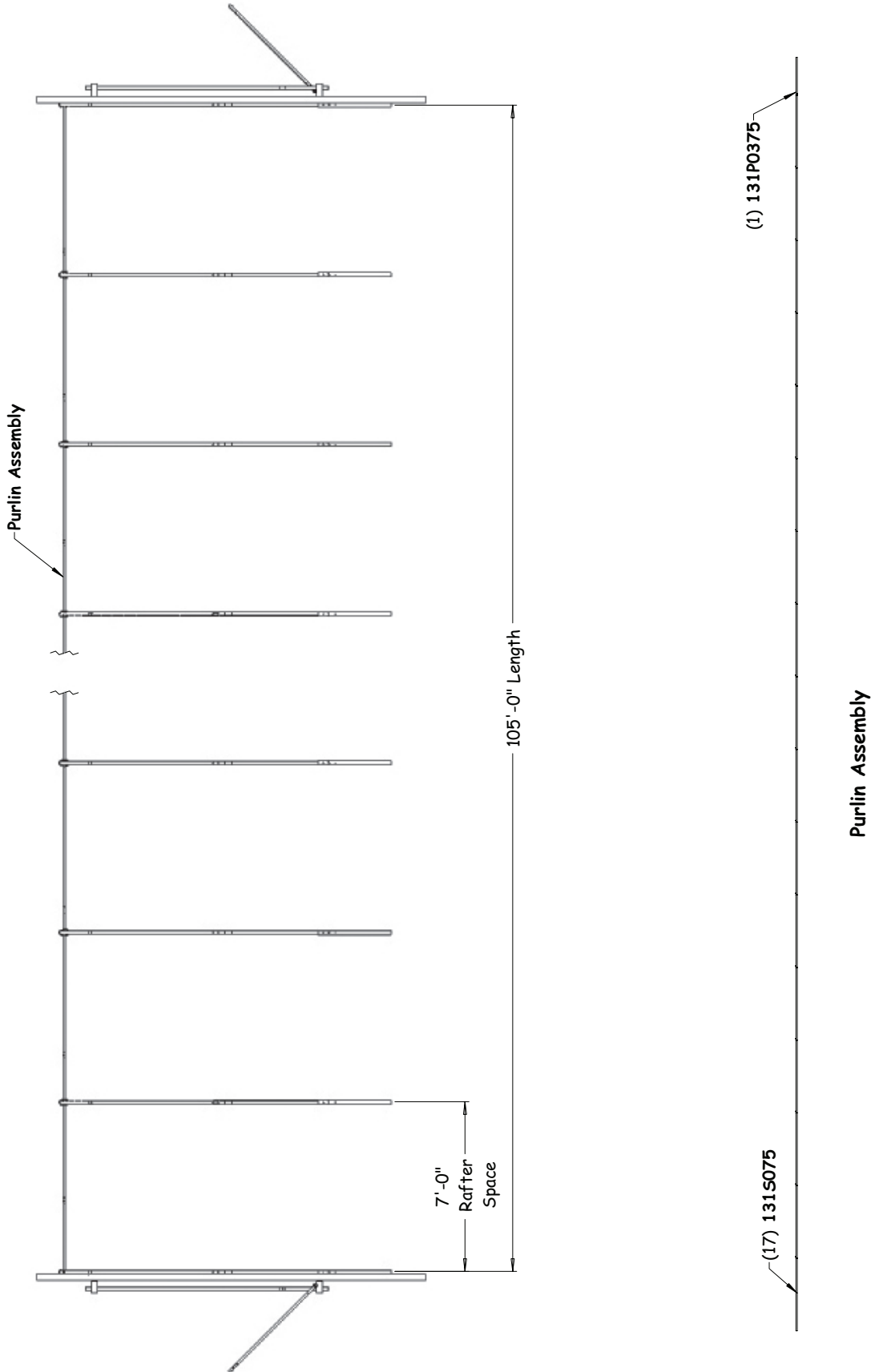
FRONT PROFILE



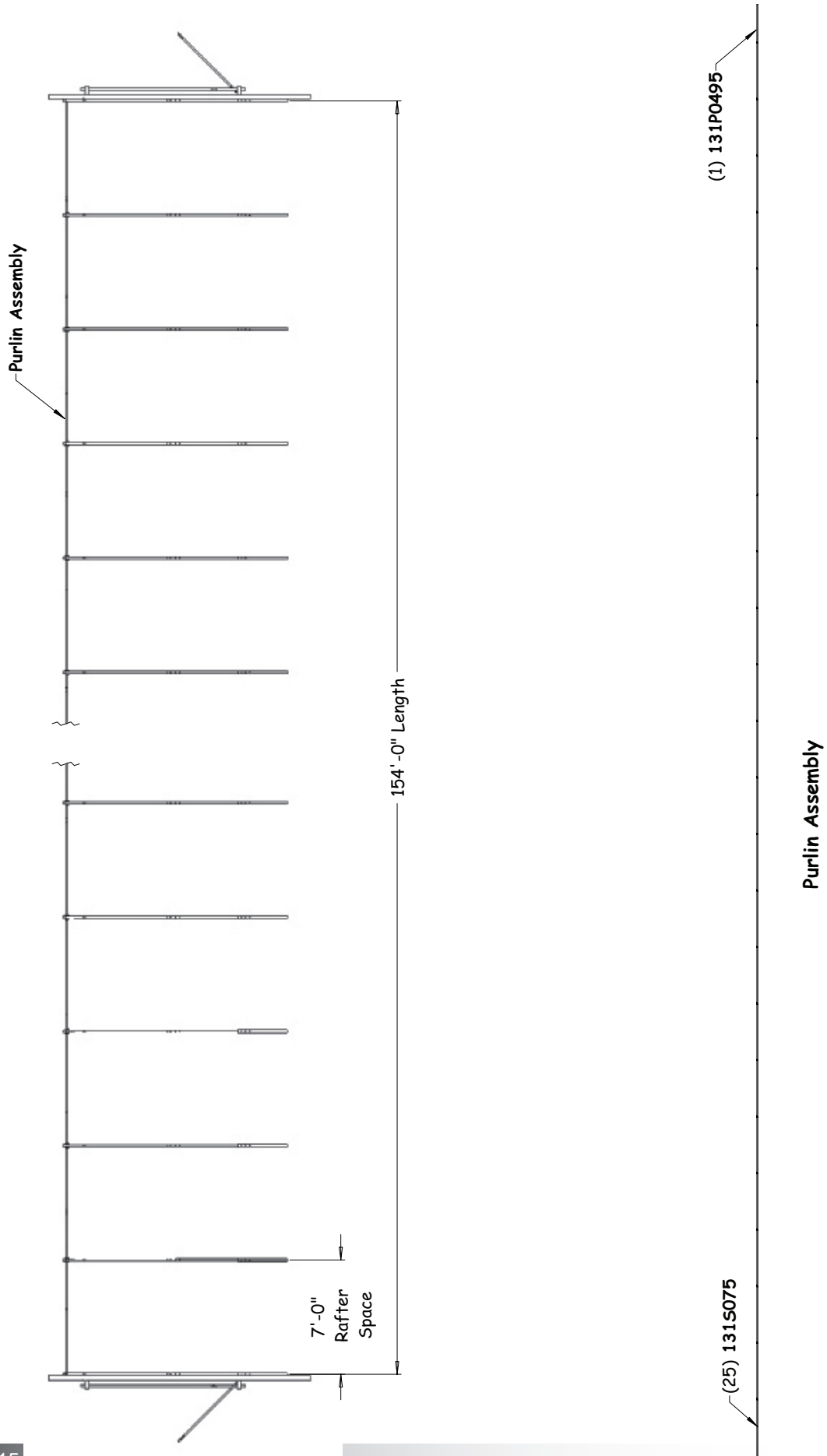
SIDE PROFILE-108203



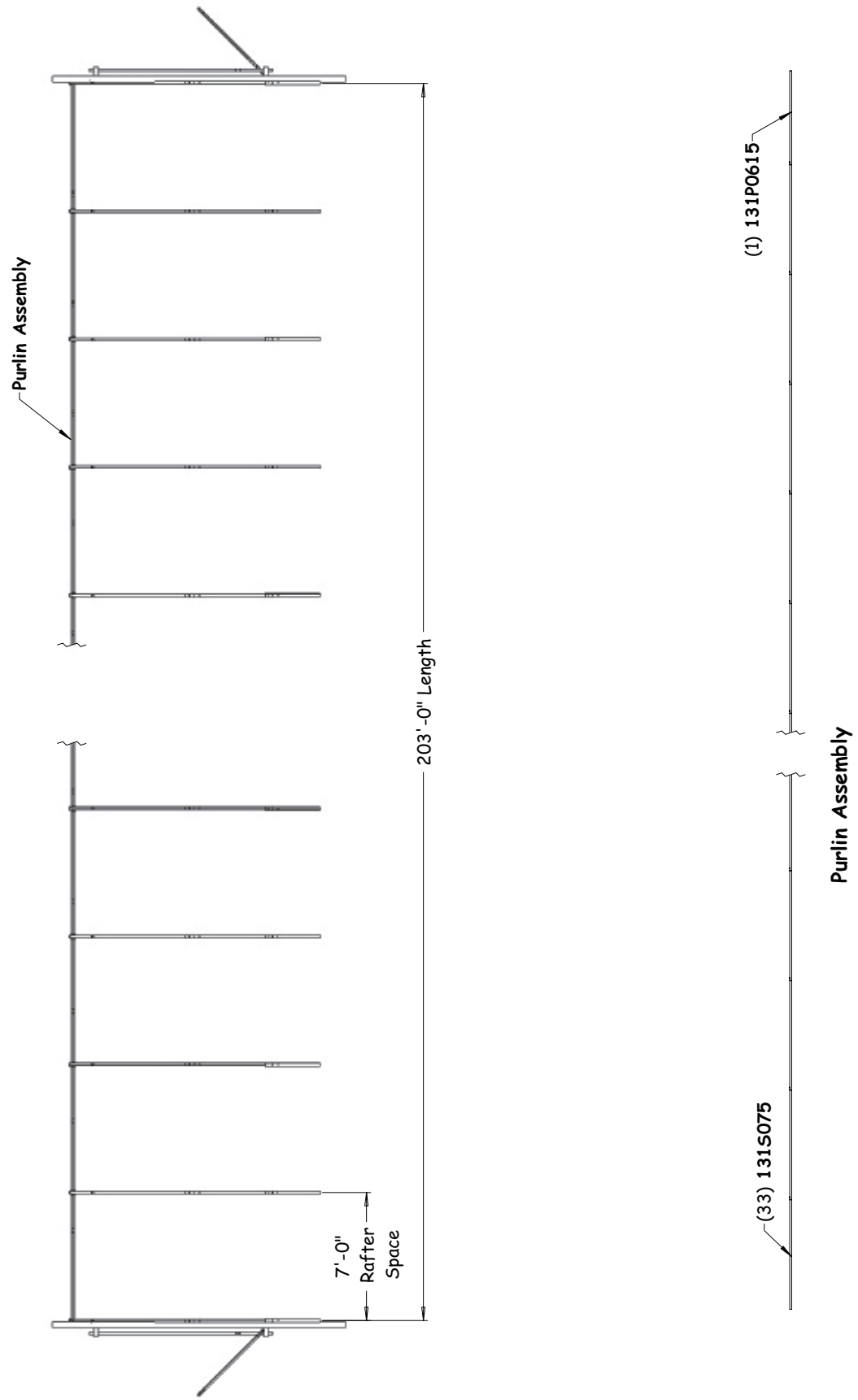
SIDE PROFILE-108204



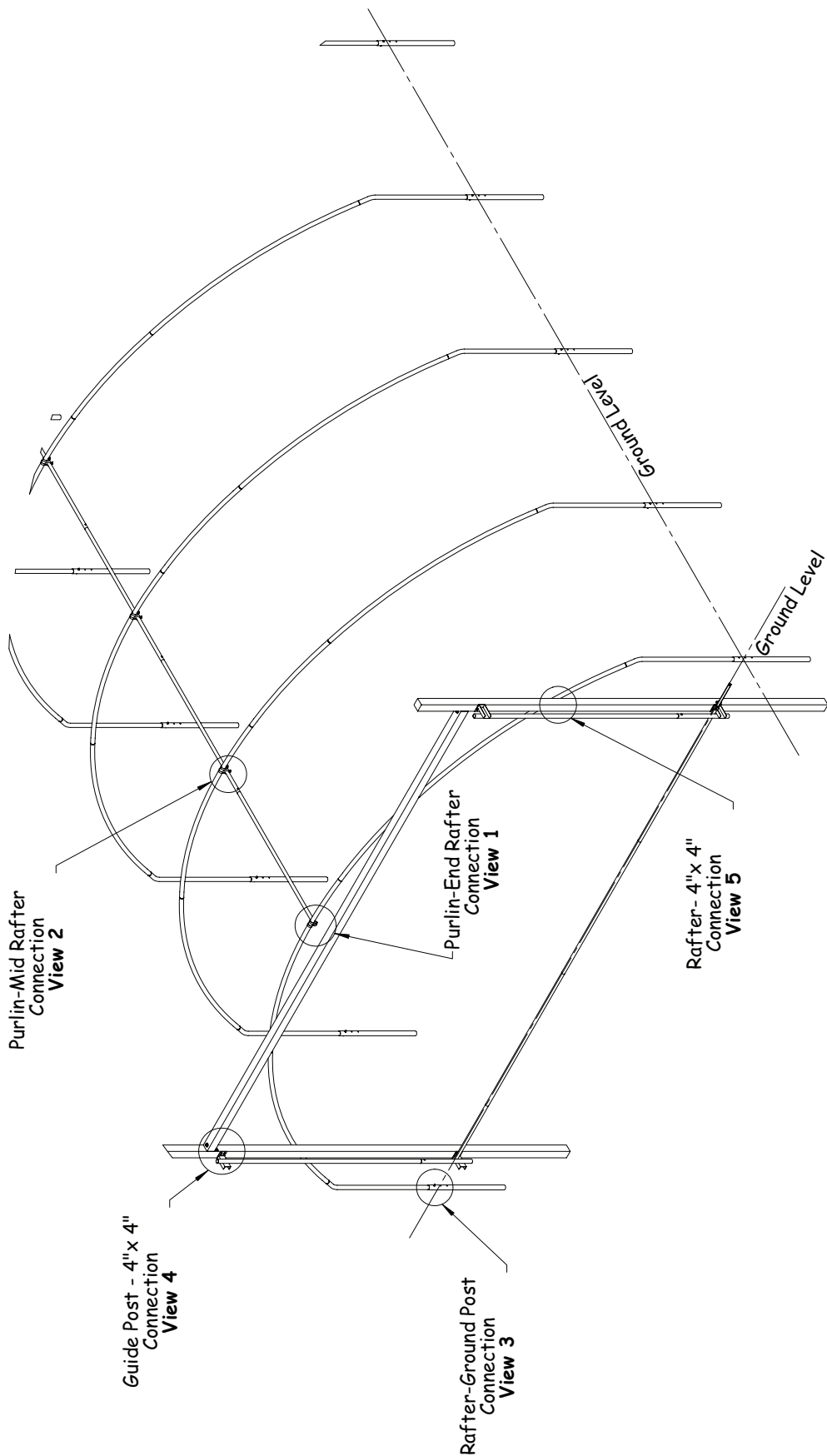
SIDE PROFILE-108205



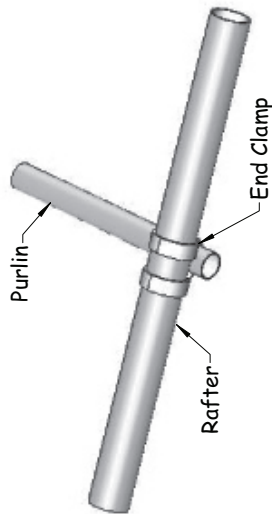
SIDE PROFILE-108206



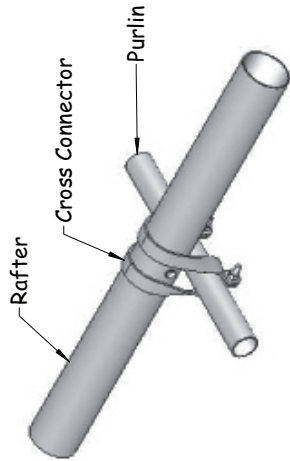
CONNECTIONS



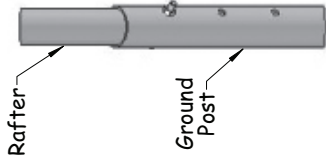
CONNECTION - DETAILS



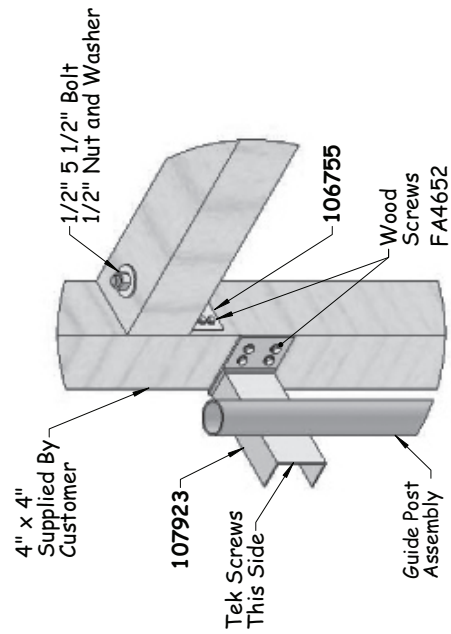
VIEW 1
PURLIN-END RAFTER



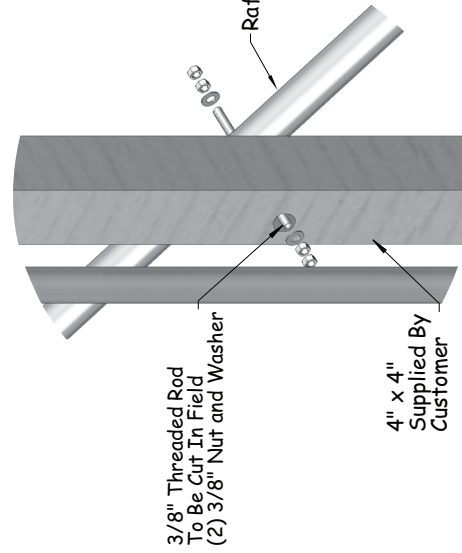
VIEW 2
PURLIN-MID RAFTER



VIEW 3
RAFTER-GROUND POST CONNECTION



VIEW 4
GUIDE POST- 4" x 4" CONNECTION

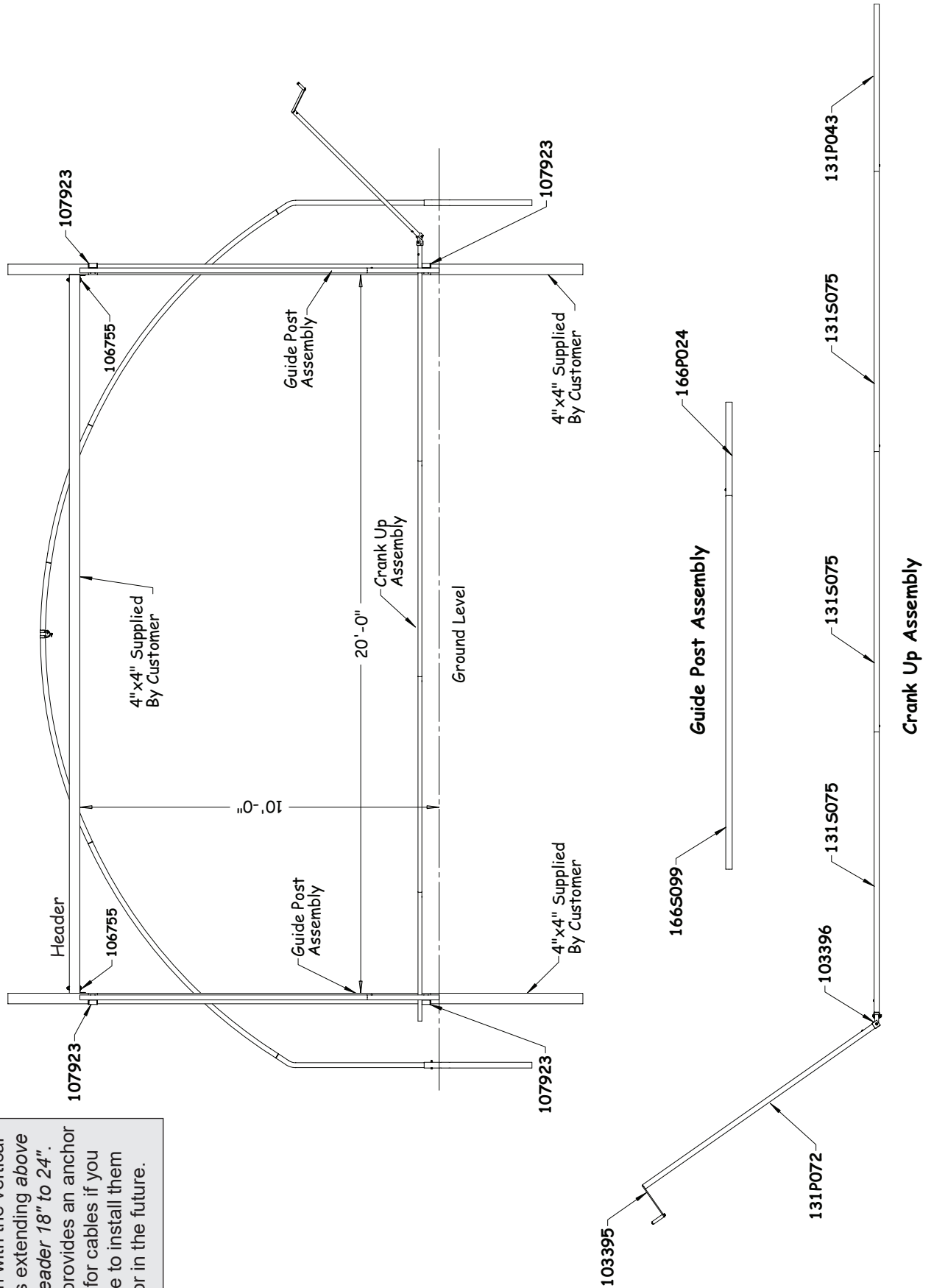


VIEW 5
RAFTER- 4" x 4" CONNECTION

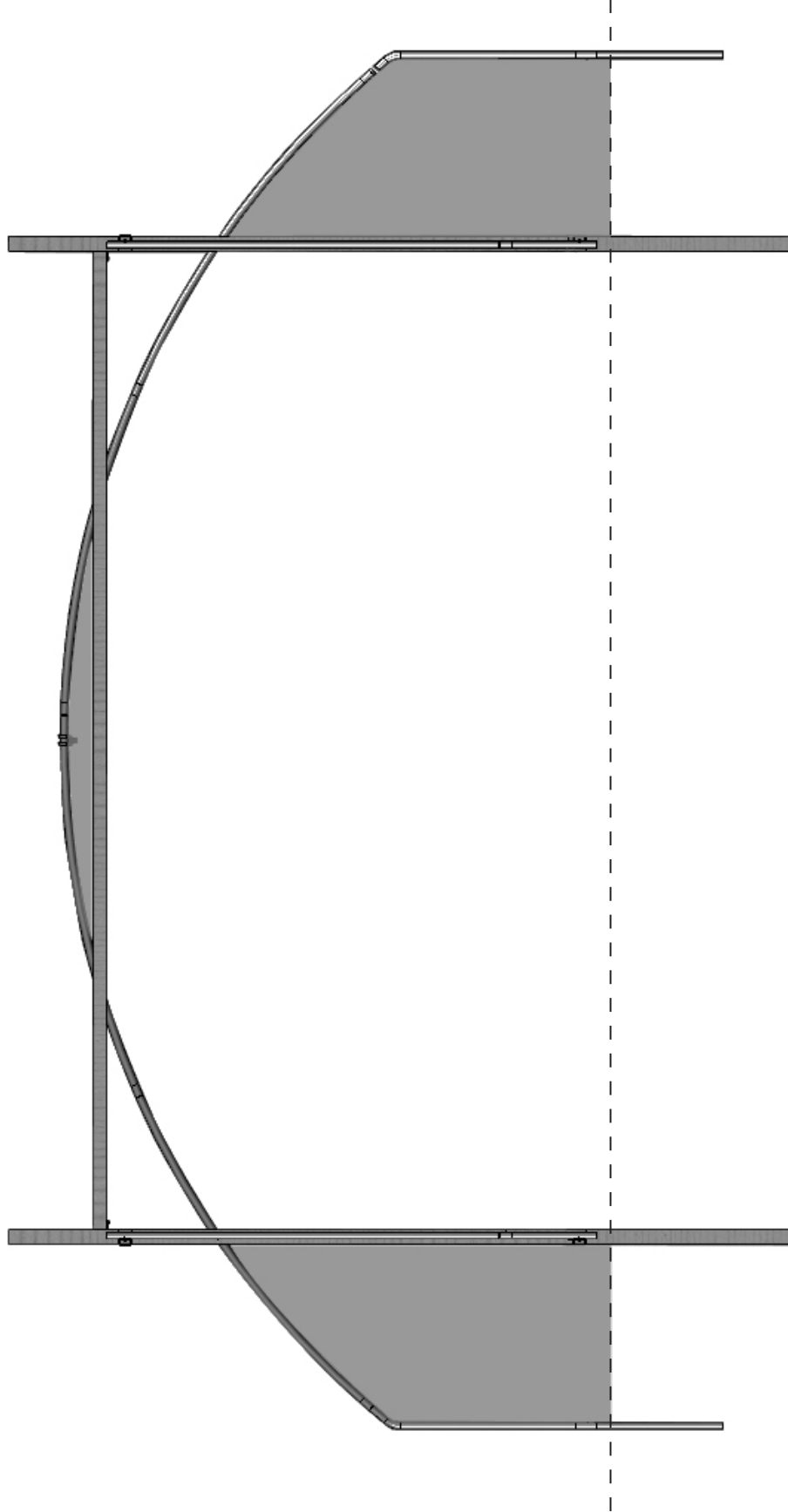
NOTE: End of threaded rod must be below surface of support.

END FRAMING - DETAILS

ATTENTION: Construct the end wall frame as shown with the vertical jambs extending above the header 18" to 24". This provides an anchor point for cables if you decide to install them now or in the future.



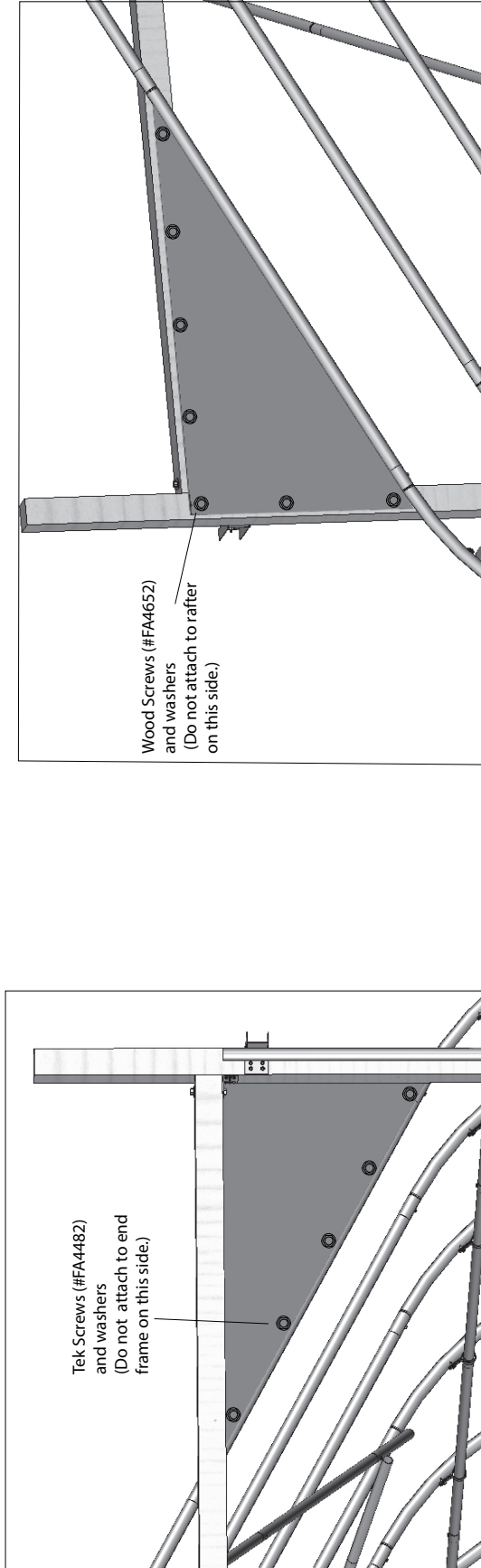
END PANEL LOCATION DIAGRAM



ATTENTION: The shaded areas above identify where to install the end panel material. Measure each area, cut a section from the DCC4931 bulk material, and attach the material to the end frame.

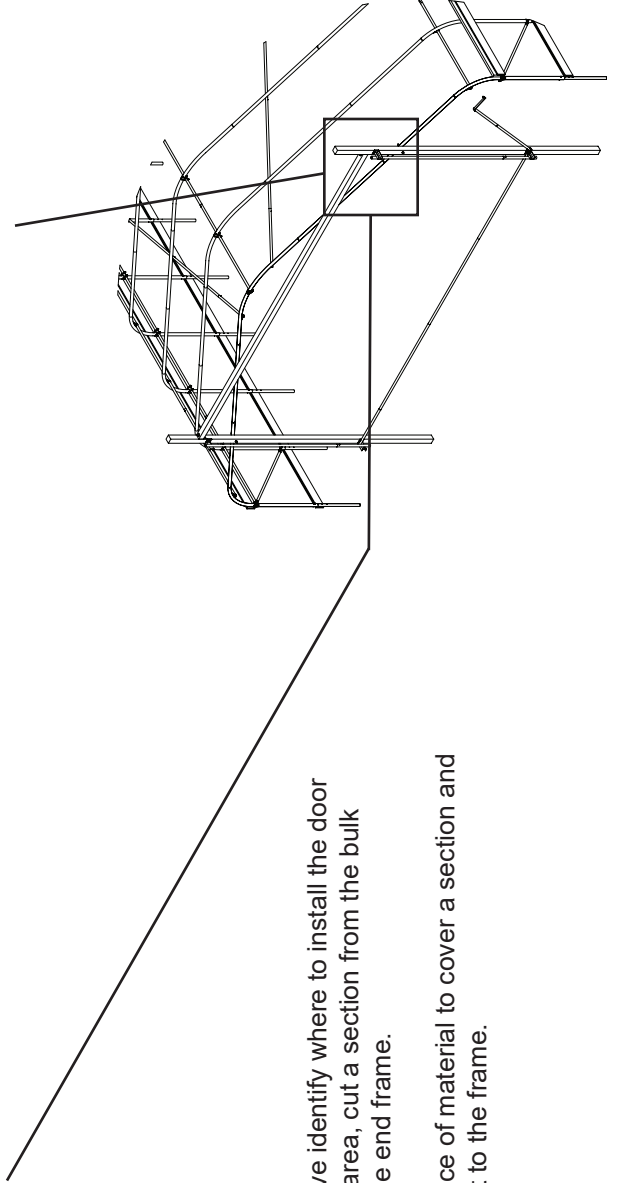
For best results, cut a rectangular piece of material to cover a section and trim the piece to size after attaching it to the frame.

DOOR FRAME PANEL LOCATION DIAGRAM



Front View

Back View

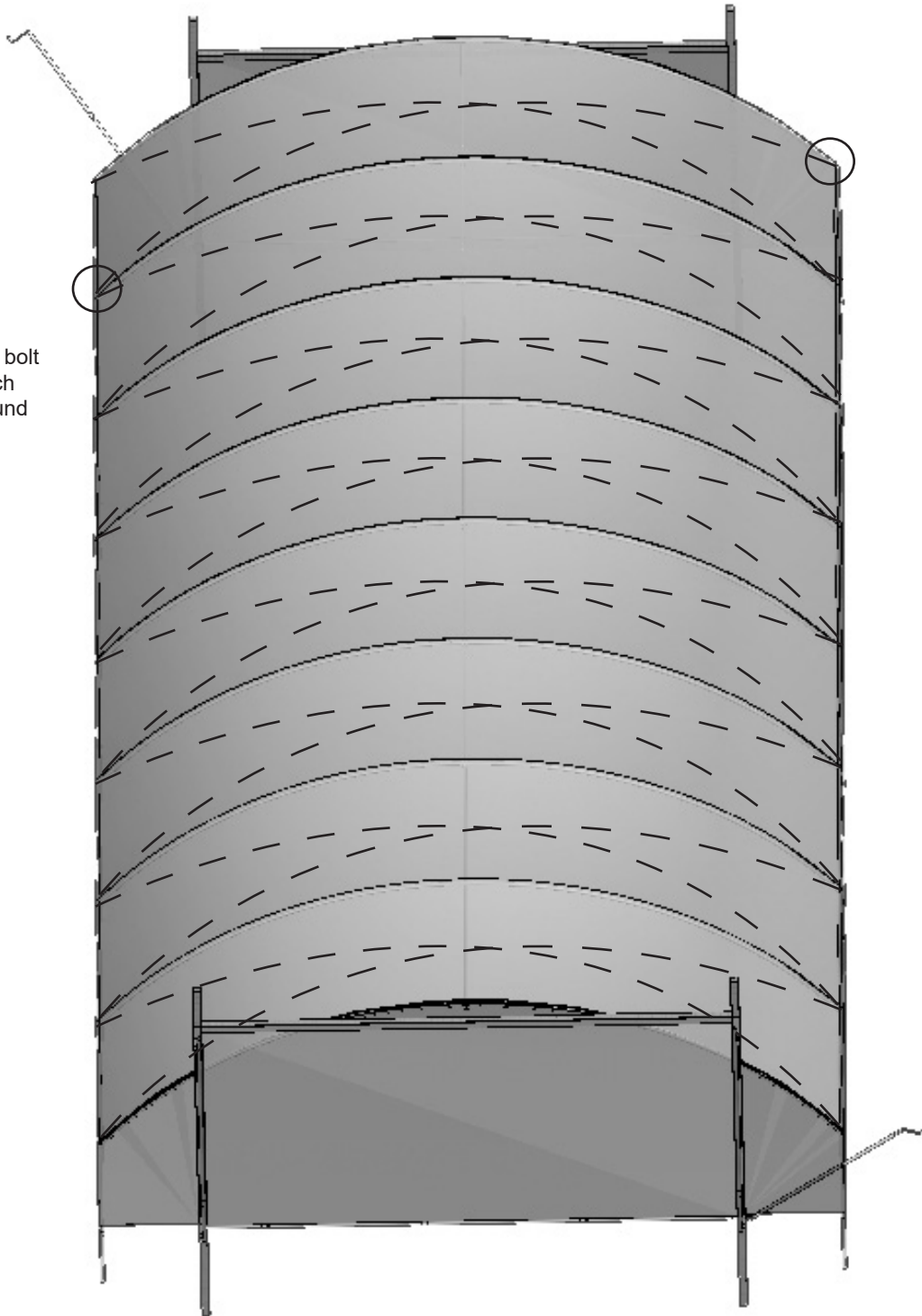


ATTENTION: The shaded areas above identify where to install the door frame panel material. Measure each area, cut a section from the bulk material, and attach the material to the end frame.

For best results, cut a rectangular piece of material to cover a section and trim the piece to size after attaching it to the frame.

ROPE INSTALLATION DIAGRAM

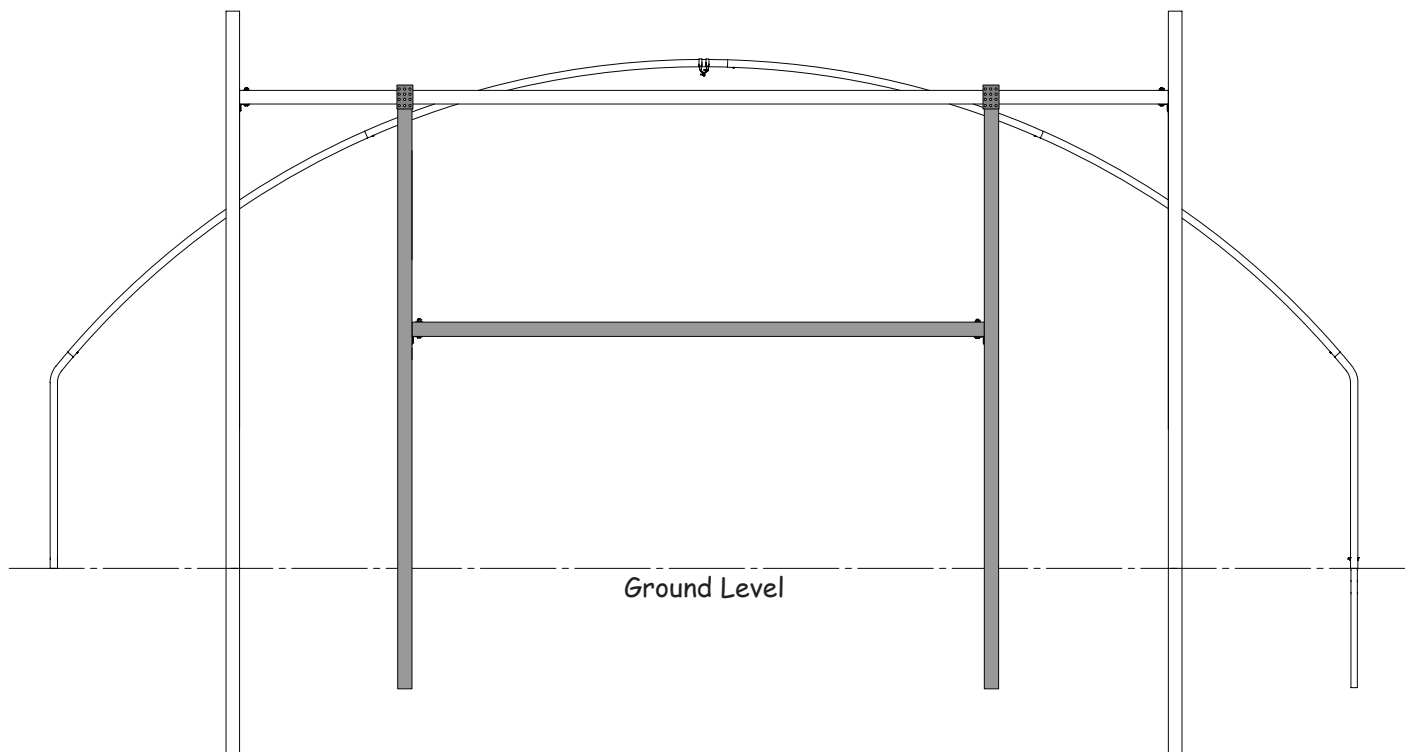
Tie ropes to eye bolt that secures each rafter to the ground post.



Individual ropes are installed between each set of rafters. These ropes help to keep the main cover in place when it is partially or fully opened. To install ropes, measure the from the eye bolt of one rafter, up and over the top of the installed cover to the eye bolt of the next rafter, add extra rope for tying and re-tying, and cut to length.

Tie ropes to one side of the frame and use a knot at the other end that can be undone and re-tied when cover is opened and closed. There are two ropes between each set of rafters.

Suggestions: Winterizing the High Tunnel



Using customer-supplied materials, create "H" bracing within the roll-up end panel frame to support the panel during winter months and strong winds. Secure horizontal support using pins for easy removal. Vertical bracing can remain throughout the year if spaced according to needs.

For added cold protection below ground, bury 2" foam insulation board down to the frost line around the perimeter of the building. Consult a qualified construction contractor **before erecting the high tunnel** to determine how best to install the customer-supplied 2" insulation board.

