exposure. It may help to watch the seasonal variations of sun angles in your yard to determine the placement.

- Depending on what you are growing and where you are located, you may wish to orient your greenhouse east/west or north/south many garden bloggers have weighed in on this and research may help you consider the options. In many areas of the US, we do get plenty of hours of sunlight. Some users end up placing the greenhouse based on layout/space available, aesthetics and convenience.
- The site must be level. If it is not, you will need to prepare the area to provide a firm and level surface to construct your greenhouse. This may include building a retaining wall or placing your greenhouse on a stem wall or just leveling out the site. Consider rainwater flow in your yard if you are in a hilly area.

Foundation and Anchoring

All greenhouses must be securely anchored. All Victorian greenhouses include corner brackets attached to the foundation/base frame that extend an additional 12" below ground level. <u>The VI 36</u> and 46 include an additional pair to use at the midpoint of the long wall. If you are in a high wind area or are trying to meet the structural specifications for a permit - you may wish to purchase additional corner anchor posts (PRO210) for use at all the vertical members.

The manufacturer recommends an 8" wide concrete strip foundation that extends down to the frostline in your area. Please consult your local building codes for this information. It is recommended to leave a 4" diameter hole at the corner for the anchors to be embedded in concrete after the greenhouse frame is assembled and it is confirmed to be level and square.

Alternatively, you may also choose to anchor the greenhouse by trimming the corner anchors off at ground level, cutting them in sections to be used as L brackets to secure the greenhouse frame to your anchoring surface with the appropriate hardware. An additional method of anchoring using concrete screws (not included) though the base frame may be used. Please see the following pages for these alternative options. Please choose the method best suited for your site and wind load.

Some users have chosen a variety of alternative anchoring methods based on their climate, location, soil composition, and site considerations. These include full concrete slabs, concrete footers, pier and beam constructions, and even timbers. If you are considering the use of wood in your construction, be aware that your greenhouse will likely outlast your wood. If you use pressure treated wood, it is recommended to use a barrier material between the wood and the aluminum frame. When planning your anchoring method, you should keep in mind frost line/ground heaving, wind load, greenhouse location, ground composition, weather, climate, and local building code. If you are unsure, you should consult with a local and experienced builder. Warranty coverage does not extend to damage resulting from improper anchoring of the greenhouse outside of manufacturer's recommendations (see above).

If a permit is needed in your area, we do have structural certification letters and permit sets for most of our greenhouses. They are Texas stamped. We may be able to obtain other state stamped documents, however if you need them specific to your state, we do not cover this expense. Your local

engineer may reach out to our Texas engineers for documents if needed. Please contact Exaco if structural documents are needed.

Anchoring Options (detail):

OPTION 1: Embedding the anchors into your concrete – most secure, manufacturer recommended. It is recommended to leave a 4" diameter hole for the anchors to be embedded in concrete after the greenhouse frame is assembled and it is confirmed to be level and square. You can also have a PVC pipe or Sonotube embedded into your concrete. The PVC or Sonotube must be at least 4" wide in diameter.



OPTION 2: Cutting the anchors and use concrete screws/self-tapping screws

VIDEO: <u>https://youtu.be/3W62iOgLVG4?t=59</u> (may be found at minute 0:59 in the Exaco animated assembly video.

Steps:

- You will have (4) 15 3/4" long L brackets. VI 36 & 46 will have (6) long L Brackets-Cut off 4" of the L bracket to connect the foundation frame pieces together.
- Cut the remaining 11 3/4" into thirds and flip horizontally to mount the top half into the foundation frame and the bottom half into the concrete or other foundation.
- Use self-tapping screws or pre-drill and use normal screws to mount the top part into the foundation frame of the greenhouse.
- Use concrete anchor screws (link provided below) to attach the bottom part to your concrete. We HIGHLY recommend predrilling and using a hammer drill to drill the anchors in.
- Tapcon Concrete Anchor Screws: <u>https://www.homedepot.com/p/Tapcon-1-4-in-x-1-3-4-in-410-Stainless-Steel-Hex-Head-Concrete-Anchors-8-Pack-26120/202097033</u>



- It is recommended to build your foundation down to the frost line in your area and/or consult a local contractor for recommendations.
- Greenhouse base frame is 2.25" wide
- Corner anchor posts are 1.5" x 1.5". They attach at the interior corners of the base frame, then extend 12" below ground. Bolts attach to the bottom of the anchor to be a "catch" in the concrete. We recommend leaving a 4 to 6" hole in your concrete for the anchor. Do not embed the corner anchors into concrete until the greenhouse structure is built, leveled and square.
- Embedding the corner anchor into concrete is the most secure method, although you may choose to trim them off, cut in half, and use as L brackets to attch to the greenhouse and foundtion with the appropriate stainless steel screws (i.e. Tap Con screws for concrete)