# ARCHED PERGOLA

# ASSEMBLY INSTRUCTIONS

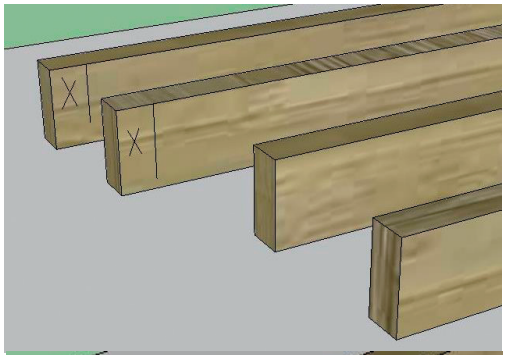
## Components

Floor template (comes in 4 or more pieces); post base brackets (same number as posts); wedge bolts; post base trim, posts, beams (4 complete beams two per side – may be in halves for sizes over 16'), 2x6 top plates, rafters (number varies), top runners, corner braces – 8 total (4 for each type), Keystone trim braces, hardware; 2 ½" screws, 3 ½" screws, 1" black flat head screws, 5" black ledgerlok screws, 1 ½" screws and #2 square head bolt.

## Tools needed

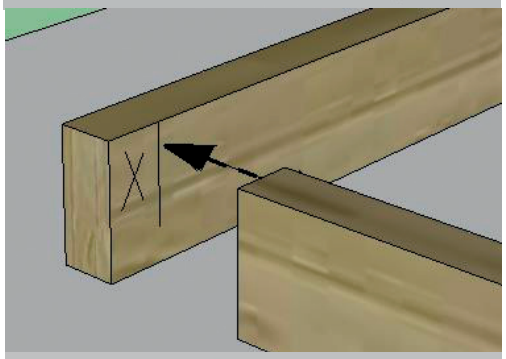
Ladder, tape measure, level, drill or cordless screw gun, if attaching to concrete, a corded drill and ½" masonry bit.

## Section One - Posts



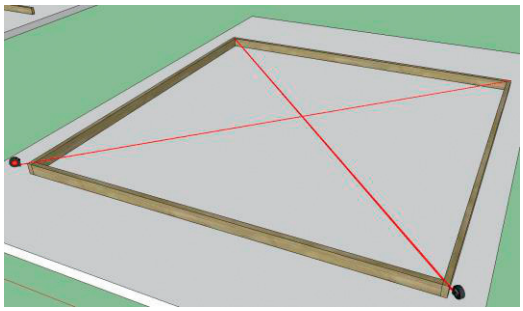
**Setting up the template:**

1. Your pergola kit includes a wooden template that is used to mark your post locations. Notice that two of the 2x4 boards have a marking near the ends. Build a box that will reveal the outside corners of the posts when properly placed.



2. Arrange the template pieces so that they are positioned in the exact location of where the pergola will be placed. The boards with the marking on the end will be across from each other. The marks will show where the other boards will be attached to create this box.

3. Connect the corners of the template pieces by driving two 2 ½" screws through the side of the template boards.



4. When the template is in position, square the template. Do this by measuring diagonally from one corner to its opposite corner, then measure diagonally between the other two corners. These two dimensions MUST be the same. Adjust the template until the diagonal measurements are identical.

5. Once the template is "square," mark the post locations using the INSIDE corners of the framed box on a concrete slab with a pencil. After all the post locations are marked on the concrete slab, remove and set the wooden template aside.

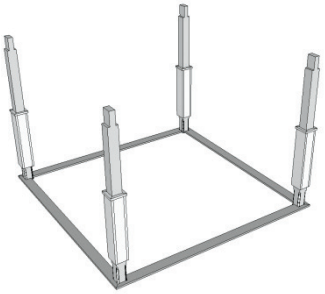
6. Set the Brackets: The brackets are stainless steel. Next, drill a hole into your concrete footer or slab. Using a ½" masonry bit, drill a 4" hole through the center of the large hole in the middle of the post base. Make sure all of the concrete dust is cleared from the hole. Use a vacuum if needed. Add the washer and put the nut on the bolt so the threads are just above the nut. Do not set the bolt too deep in the hole, as this will also protect the threads should it need to be tapped with a hammer. Tighten the bolt, and the base of the bolt will expand. If installing the pergola on concrete, use the supplied wedge bolt. If attaching the pergola to a wood deck, use a 4" lag bolt (not included) instead of a wedge bolt.

*Note: When installing posts, notice that they have notches on top. This is to set the beams on. When installing – be sure that the notches all run the same and correct way (along the long side – where the beams will set in the next section).*

*Also – it is best to set the posts and attach just one or two screws and check for level. If not level, unscrew the post(s) and make level by cutting or shimming as needed.*

*If needed cut the post from the bottom for leveling. Notice that there is a hole drilled in the bottom of the post. This is for the bolt in the bracket which may need to be drilled or the hole made deeper in the bottom of the post so that the post sits on the plate of the bracket.*

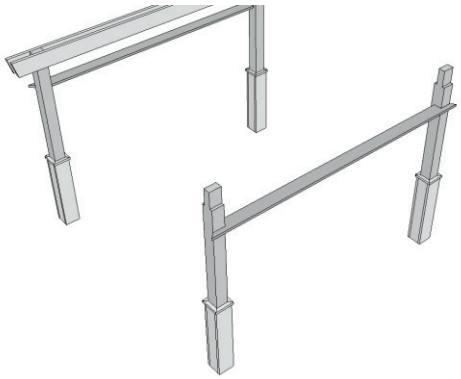
7. Before setting the posts in the bracket, slide the post base trim on the posts from the bottom. Slide the trim 12" up from the bottom of the posts to have access to the brackets. Slide the wooden posts into the bracket.



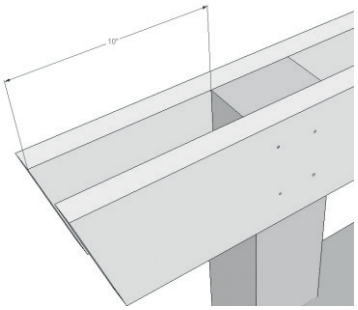
8. Attach the posts with 12 - 2 ½" stainless steel screws. 4 screws on each prong of the bracket.

## Section 2 – Installing Beams

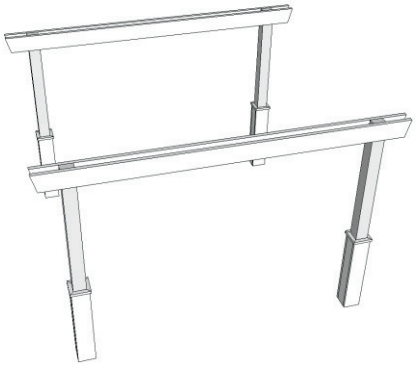
1. When installing the beams, there are some measurements needed to insure the rest of the installation goes smoothly. The first is to be sure that the posts are plumb. Since the bottom of the posts and the top of the posts should be the same, use the floor template as a guide or spacers. Using the two long side template pieces set them between the posts as shown during this section. Screw this to the posts near the top, just below the notches. Make sure the posts fit tight in the template.



2. Set a beam on the notches of the post. The overhang on each end is about 6", but make sure that it is the same on both sides. Move the beam back and forth, measuring the overhangs. When they are the same, attach with 4 - 2 ½" screws. Do the same on the other post.

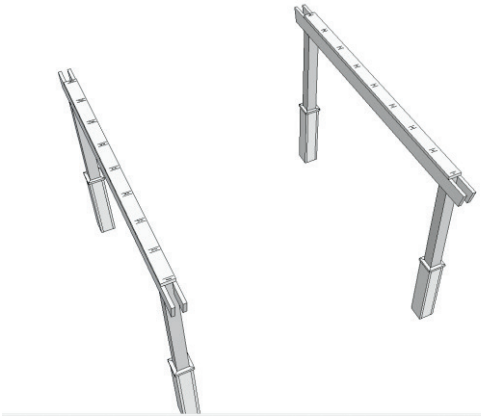


3. Do the same for all 4 beams, two per side. When done, remove the 2 template pieces.

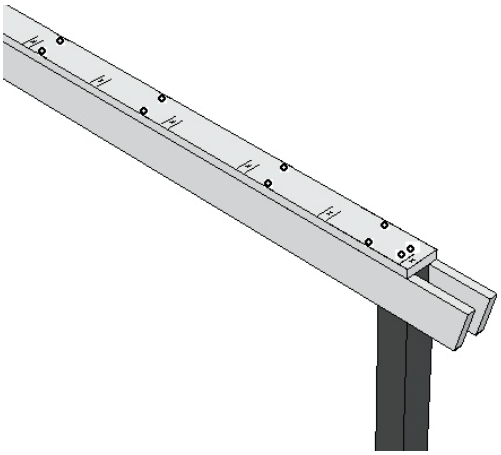


4. The 2x6 rafter plates will sit on the top of the beams just installed. The plate will line up with the outside edges of the posts. Before sitting them on the plates, be sure that the markings are the same on each by sitting them next to each other. If the lines and Xs (used later for setting rafters) appear wrong, flip one of the plates around. Generally they are the same no matter which way they are set, but if you have ordered a custom size or other options, they may be different.

5. Set the plates on the beams, with the markings faced up. Make sure that the ends align with the outside edges of the posts.



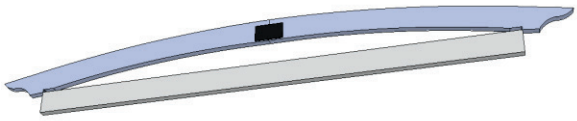
6. Attach the top plates into both beams with 2 ½" screws every 24" or so (do not screw through the markings). Also attach with 2 screws through the top plate and into the top of the posts. See example at right.



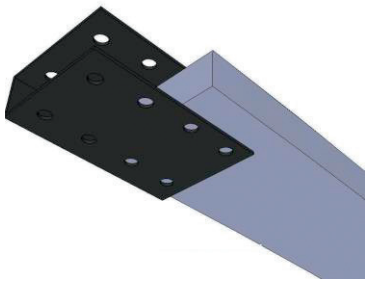
## Section 3 – Building and Installing Arched Rafters

1. Use the floor template when setting the beams, making sure that the beams are parallel with each other. This will provide the proper distance between the beams, which is needed when assembling and installing the arched rafters. Double check this by measuring at both ends and the middle from outside of the beams.

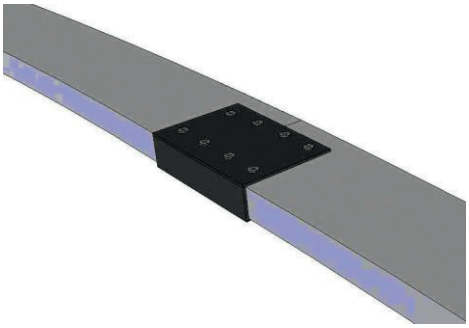
**TIP:** Create a template for assembling the arches using one of the other template pieces, or a scrap piece of lumber. Cut or mark it to the exact length of the outside to outside beam measurement. This will be the distance from one notch to the other on the arched rafters.



2. Slide the metal bracket onto the end of one of the arched rafters. All of the rafters are the same. The bracket will slide up from the bottom of the arch. As shown in the illustration in the previous step.

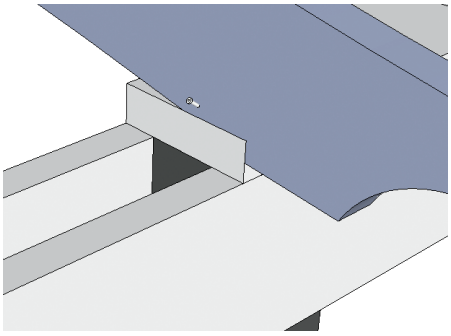


3. Slide another rafter in from the opposite direction. Make sure that the seams where the two sections meet are tight. Set the rafter over the jig board. Attach using 8 - 1" black flat head screws. Be sure that the screws go in straight and are tight against the bracket. There will be trim over this, so do not leave screws sticking up.



4. Flip the rafter over and install 8 more screws on the other side. Do this on all the rafters.

5. We recommend having a helper when setting the rafters. Set the first rafter on top of the top plate. Make sure that the notches are tight against the outside of the beam and flush with the end of the top plate. Attach with a 2 ½" screw on an angle from the outside, as shown. Fasten with 2 – 2 ½" screw, 1 screw on each side of the rafter and into the top plate. Attach the other end of the rafter the same way.



6. Attach both the front and back rafters first in this way.

7. Set the remaining rafters on the top plate and position over the markings. Fasten with 2 – 2 ½" screws, 1 on each side of the rafter and into the top plate. Do this for all the rafters.

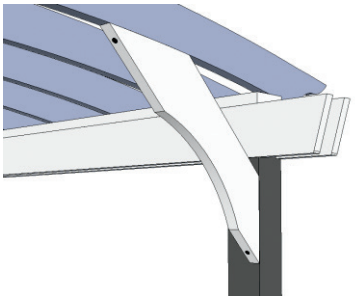
8. Remove the template from between posts.

***NOTE:*** *The wooden keystone covers will be installed later (last step). Do not install the wooden keystones at this time.*

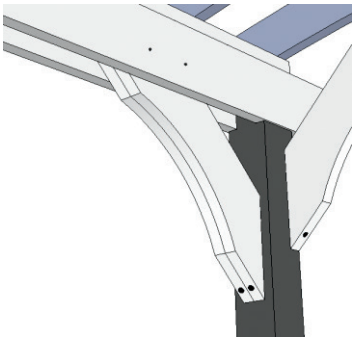
## Section 4 – Installing Corner Braces

There are two different types of corner braces. One of each will go on each post.

1. Install the longer braces first. These are single 2x8 pieces and will attach to the underside of the first and last rafter. Slide the brace up until it fits tight against the rafter and against the post. The bracket will be flush with the outside edge of the post. Attach with two 5" black screw – one, through the brace and into the rafter and one through the brace and into the post. Do this for all 4 corners.



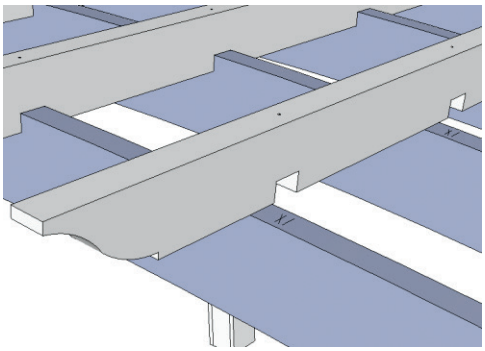
2. The other braces are a double 2x8. The brace will fit between the double beams. Slide the brace up until it touches the bottom of the top plate. These will mount to the post using two of the 5" black screws. Fasten to the beams using 4 - 2 ½" screws from each side of the beam. Repeat on all four corners.



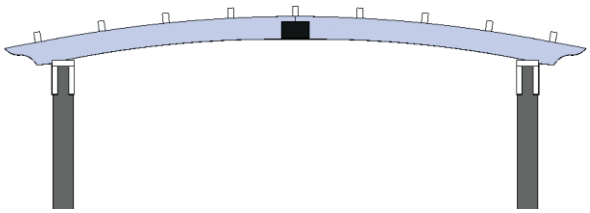
## Section 5 – Installing Top Runners

***NOTE:*** *With a lattice top, the top runners are installed the same was as shown below, but there will be no markings on the arched rafters for placement. See Steps 1A-3A for the positioning of the runners and top lattice.*

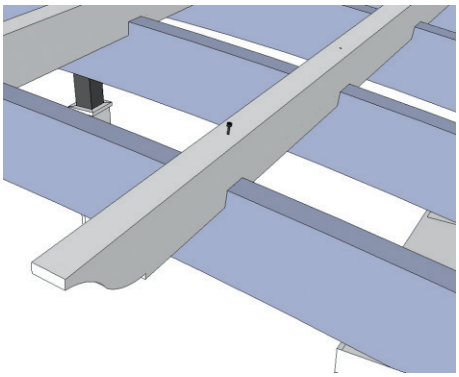
1. The tops of the runners are marked. This shows the positioning of the top runners. The top runners are notched and will fit over the top of the arched rafters.



2. Start with the runner at the top of the arches and work towards the ends. Be sure that the runners sit flat on the top of the runners, so that they follow the contour of the arches as shown.

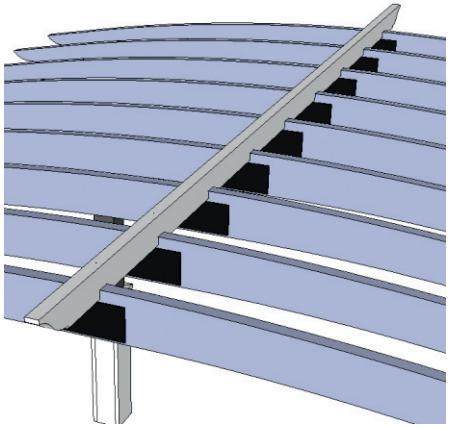


3. Fasten using 3 ½" screws, in the pre drilled holes on the top of the runners.

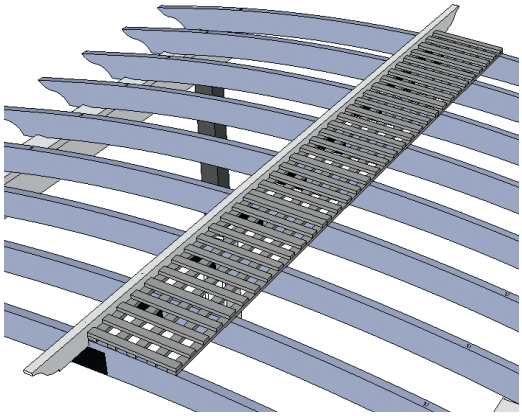


***Steps if you have ordered lattice roof***

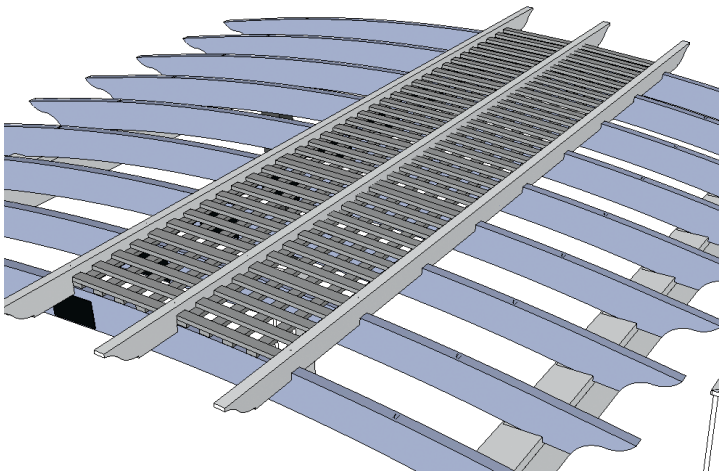
1. Review the above concerning the method for attaching the top runners with 3 ½" screws. The lattice roof will have no markings on the top of the rafters. Install the runners and the lattice at the same time. Starting at the top of the arch, place one top runner centered over the center seam.



2. Lattice sections come in panels that will vary in size, length and width depending on the size of the pergola ordered. If the panels are not all the same size, the parts list should include information as to which section goes where. Starting with a lattice panel, set it against the top runner that was just installed, making sure it touches the runners at both ends of the panel. The panel should be flush with the outside rafter. Attach the panel with 2 - 2 ½" screws into the arched runners. Then, install the next panel against the top of the runner. Continue until the row is finished.

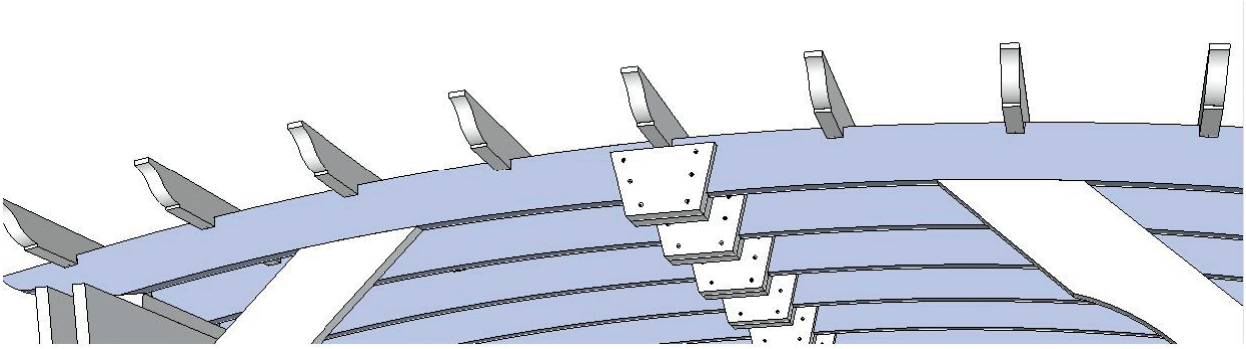


3. Set the next runner against the lattice panel and secure with 3 ½" screws. Alternate a runner and a row of lattice panels until you reach near the ends of the rafters. The last runner will be 10" - 14" from the end of the beams.

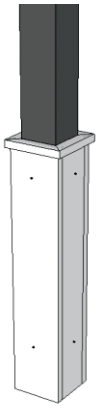


## Section 6 – Finish Trim

1. **Keystone Braces** - Slip over the bottom of the black brackets that hold the rafters together. Attach with 2¼" screw (2 per side). If the keystone covers seem too tight, check to make sure the black screws for the steel brackets are not raised up. If they are a little too tight and the screws are not interfering, loosen the screws holding the keystones together, and then slide over the brackets. Be sure to tighten all screws.



2. **Post Base Trim** - Attach with 1 - 2 ½" screws per side – 8 per post. This step can be done later if installing patio blocks, or other work that needs to be done near the post base.



The Arched Pergola is now complete. Any additional options selected will have instructions inserted.

Enjoy.