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#4FA Installation Instructions

WARNING: If the information in these instructions is not followed exactly, weakening or failure of the erected structure may result causing property damage, personal injury, or loss of life.

Contents of SKU #4FA

4x4, Floor anchor bracket

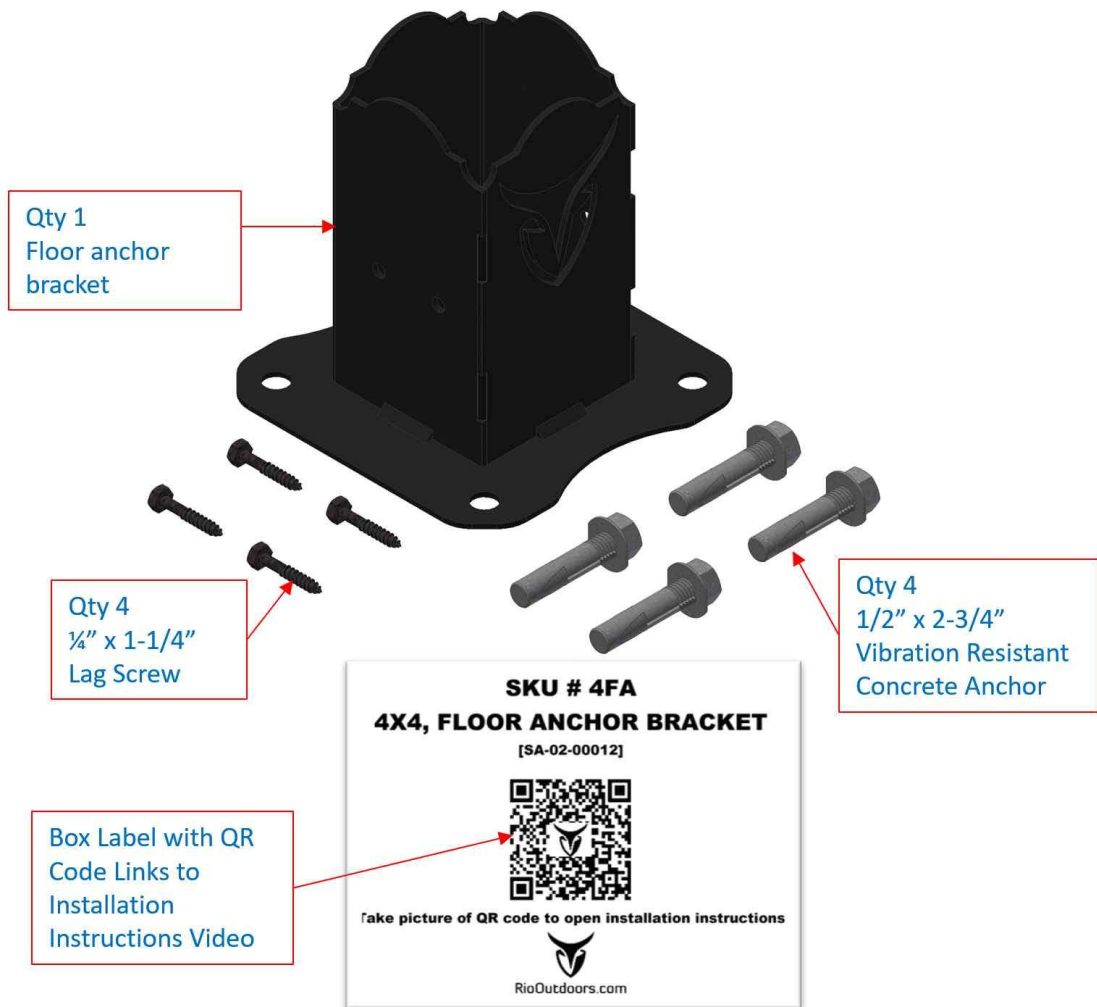


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A properly sized pilot hole must be drilled before you attempt to drive lag screws into any pergola lumber member. See Table, below. Driving lag screws into lumber, without first drilling a pilot hole, can prevent the lag screw from driving fully into the wood or can lead to crack formation while driving the lag screw in, or later, as the wood dries naturally. This can result in a weakened pergola structure.

Proper pilot hole diameter and depth for various lag screws and wood types		
Lag Screw Type	Wood Type	Pilot hole drill diameter and depth
¼" X 1-1/4" Lag Screw	Soft Wood	3/32" drill bit diam., 1-1/4" depth
	Hard Wood	3/16" drill bit diam., 1-1/4" depth
3/8" X 3" Lag Screw	Soft Wood	11/64" drill bit diam., 3" depth
	Hard Wood	¼" drill bit diam., 3" depth

1 GENERAL INFORMATION

1.1 SAFETY AND WARNING INFORMATION




1.1.1 Cautions

CAUTION: Adhere to all safety requirements. Wear safety glasses/goggles when working. Wear safety gloves when handling brackets, hardware, and lumber. Wear hearing protection when using a circular saw, miter saw, table saw, or hammer drill.

INSTALLER: Leave this manual with the consumer. **CONSUMER:** Retain this manual for future reference.

1.2 TOOLS REQUIRED

Listed below, are common tools required for pergola projects. These tools are not included in this kit. Your pergola project may not require all tools. Select and acquire the tools for your project from the "Required for" column in this table.

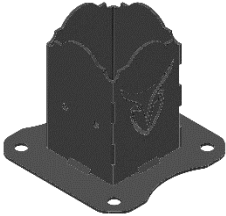


Description	Tool Purpose	Required for	Reference Image
Tape Measure	Measure and verify lengths.	All pergola types	
Framing Level	Verify Level/Plumb	All pergola types	
Hammer Drill	Drill holes in concrete pads or concrete footing for securing floor anchor brackets. Drill pilot holes for lag screws.	All pergola types	
Ratchet Socket Driver	Drive lag screws into Pergola lumber members.	All pergola types	
7/16" Hex Socket	Drive 1/4" X 1-1/4" Hex Hd. lag screws.	All pergola types	
3/32" Drill Bit	Drill pilot holes for 1/4" lag screws in soft wood.	All pergola types	
1/2" X 4" Masonry Drill Bit	Drill 1/2" X 2" deep holes in concrete pads or concrete footings.	Surface Mount styled pergola	
Circular Saw/Miter Saw	Cut headers to length; cut rafters to length.	All pergola types	
Crescent Wrench	Tighten down nut on concrete anchors.	Surface Mount Pergolas	Image not available.
Hammer	Various.	All pergola types.	

1.3 CONTENTS OF BRACKET # 4FA

The contents of this Bracket are shown in the table, below. All hardware for each bracket is placed inside a plastic bag and taped to the individual bracket. This packaging method makes it easy for you to locate the hardware at the location you will be attaching the bracket. The exact quantity needed to attach the bracket is included.

Before you begin your project, take an inventory of all items that you received from us. If any items are missing, contact us directly via email at info@RioOutdoors.com. Include your name and shipping address and your order number, if available. We will respond within 24 hours with a resolution to your problem.

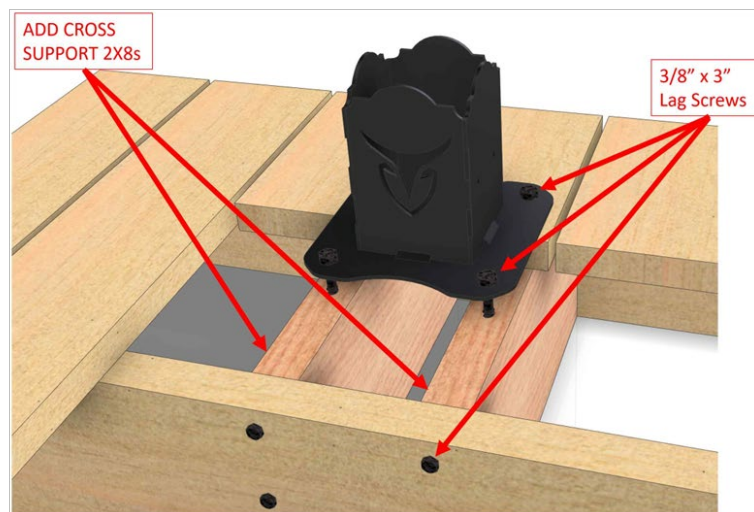
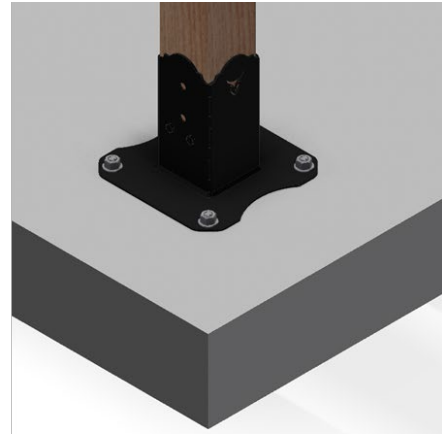
Please note that the bracket parts you receive may appear slightly different than those depicted in these instructions. We perform continuous improvements in our designs and update our current products accordingly. The parts you receive will contain our most-recent improvements and will perform superior to those depicted in these instructions.

Item SKU #, Description	Item Qty	Item Image
<p style="text-align: center;">4x4 Fixed Floor Anchor Bracket SKU# 4FA</p> <p>(The hardware required to mount this bracket are taped inside the bracket)</p>	1	
<p style="text-align: center;">1/4" x 1-1/4" Lag Screw</p> <p>(This Qty shows the total of this item included in this kit)</p>	4	
<p style="text-align: center;">1/2" X 2-3/4" (1/2-13 threads) SS Vibration Resistant Hammer-On Stud Anchor for Concrete. McMasterCarr.com SKU 92188A305</p> <p>(This Qty shows the total of this item included in this kit)</p>	4	

1.4 DESIGN INTENTS (INTENDED APPLICATIONS) FOR THE FLOOR ANCHOR BRACKET

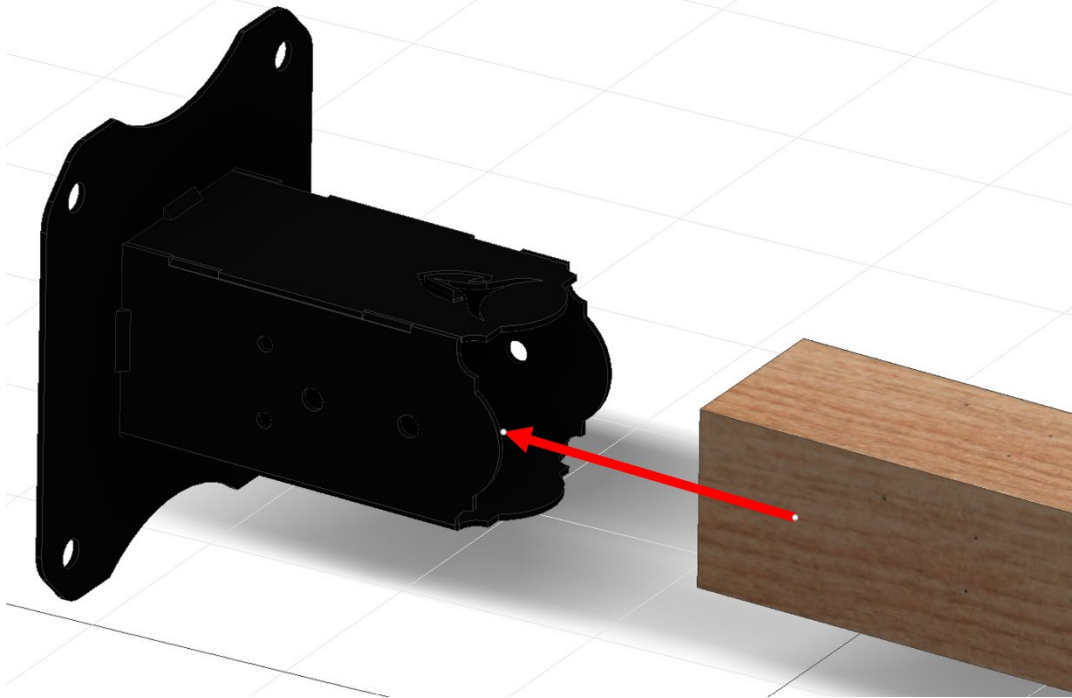
The Floor Anchor Bracket is designed to secure a dimensional 4x4 (3.5" x 3.5") vertical post to a solid concrete pad, footing, concrete block, or a structurally sound wooden deck with appropriate support structure under the deck boards.

This Floor Anchor Bracket may be used to anchor the post of any residential structure.



1.5 ATTACHING THE FLOOR ANCHOR BRACKET TO POST END

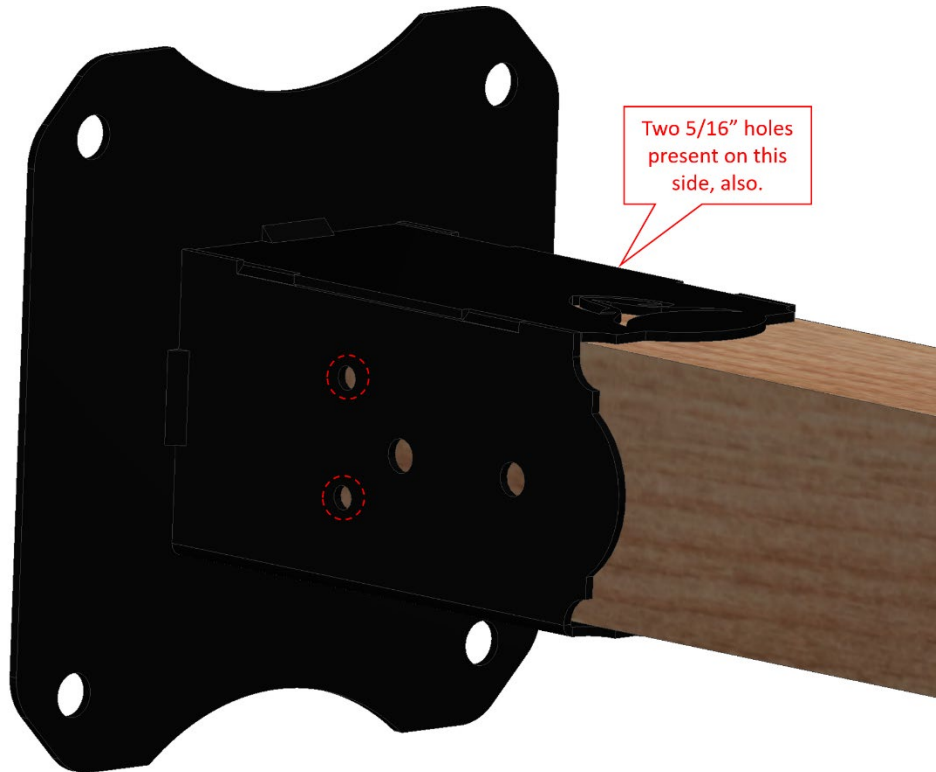
1. Lay a post on the ground.
2. Lift one end of the post up and slide a floor anchor bracket, all the way over the post end.



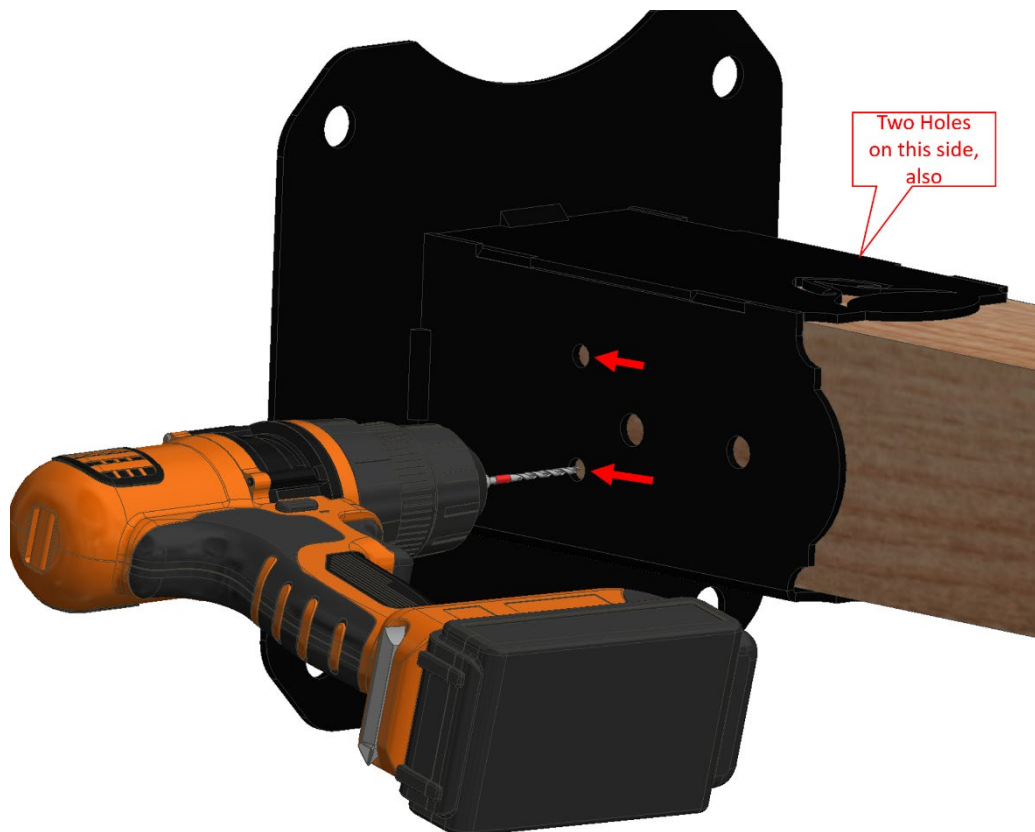
3. Wrap a piece of electrical tape around the drill bit, spaced 1-1/4" from the drill bit tip. This will act as a hole depth indicator when you drill each pilot hole. Pilot holes should be drilled at least 1-1/4" deep. A little bit deeper is acceptable but do not drill less than the required 1-1/4" depth.



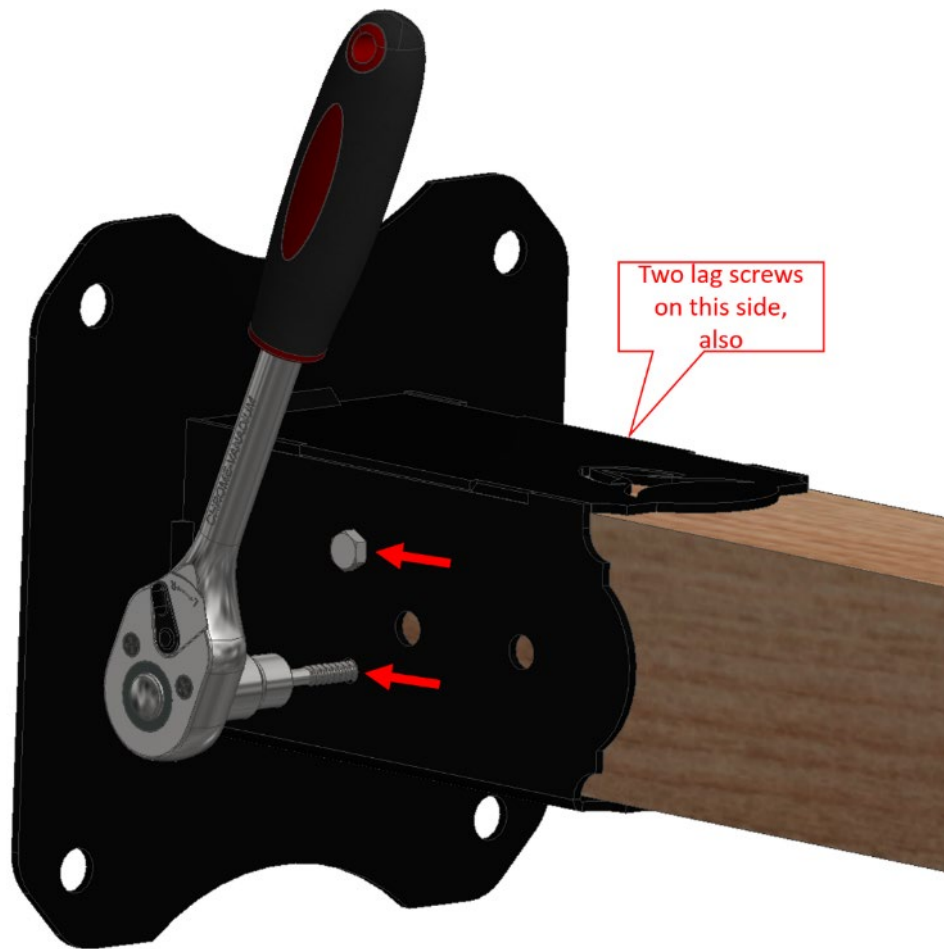
4. Locate four 5/16" diameter holes, two holes in each opposing face of the floor anchor's square tube.



5. While holding the floor anchor tightly against the post end, drill 3/32 X 1-1/4" pilot holes through the center of four 5/16" holes.



- Using a ratchet driver and a 7/16" socket, drive one 1/4" x 1-1/4" Lag Screw through all four pilot holes you drilled.

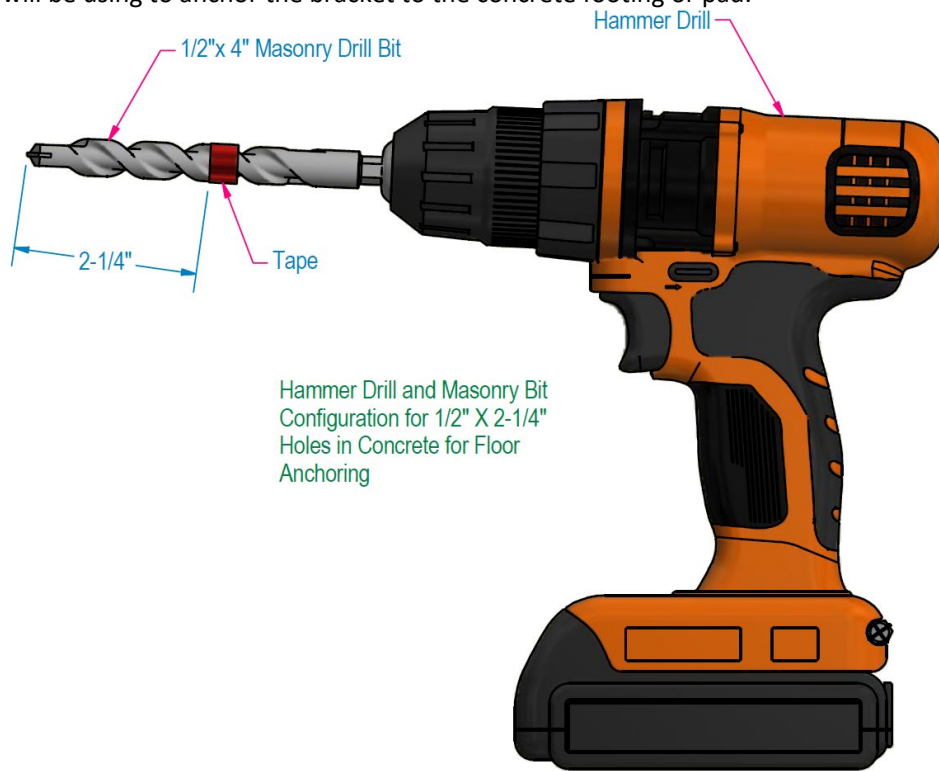


- Tighten all lag screws.
- Repeat steps 1-6 and add a floor anchor bracket to all remaining posts.

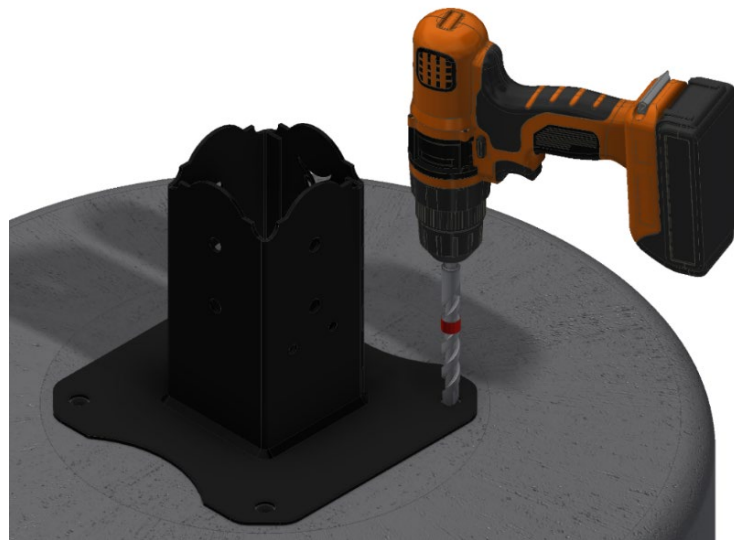
1.6 ATTACHING THE FLOOR ANCHOR BRACKET TO FLOOR SURFACES

1.6.1 Concrete Footing, Concrete Pad, or Concrete Block Anchoring

1. Apply tape to the drill bit to mark the 2" depth required for the **2-3/4" Vibration Resistant Hammer-On Stud Anchor** you will be using to anchor the bracket to the concrete footing or pad.

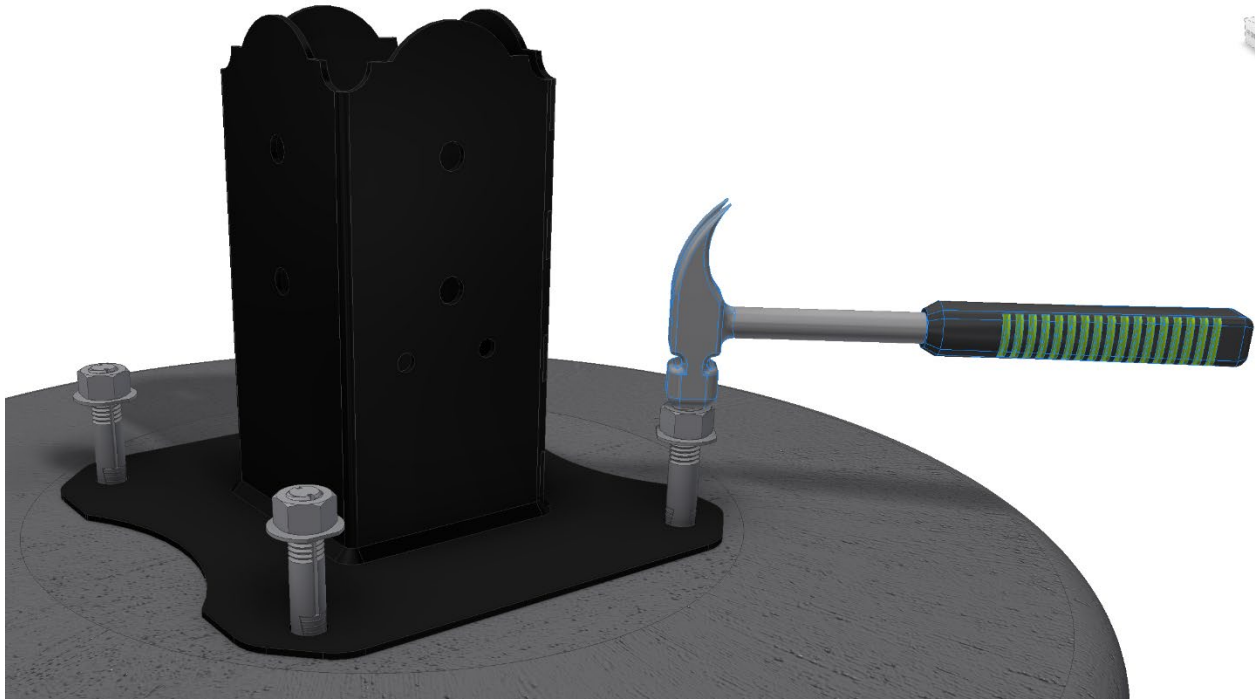


2. Drill into the concrete through the four holes in the bracket bottom plate and into the concrete using a hammer drill and 1/2" masonry drill bit. Drill minimum 2-1/4" deep and maximum 2-3/8" depth. Do not drill less than 2-1/4" depth as the anchor will not pinch the bracket down fully if the hole is less than 2" deep.



3. Using compressed air, blow out the drilling dust out of all holes.

4. Hammer in one concrete anchor (1/2" X 2-3/4") into each hole you drilled through the hole in the Floor Anchor floor bracket until the washer below the hex nut in the concrete anchor touches the bracket base.



5. Tighten down the nut using a crescent wrench.
6. Repeat steps 2-3 for all Floor Anchor Brackets.

1.6.2 Anchoring on existing deck

Consult your local building permits office. Do not proceed without consulting your building permit office. It is important to be cautious when installing a pergola on top an existing wooden deck. You must plan to add extra cross-support beams for low weight pergolas, like cubic shaped pergolas. For heavier pergolas, like raftered pergolas, you must plan and add additional support posts directly under the pergola posts which will transfer the pergola load to the ground. At the ground level, a concrete footing must be added per local code requirements to provide permanent support to the posts. Your building permit office is the best free information source.

