2024 Version 1

UglyDeck.com®

DIY ASSIST MANUAL

What to Expect After Footings Installation

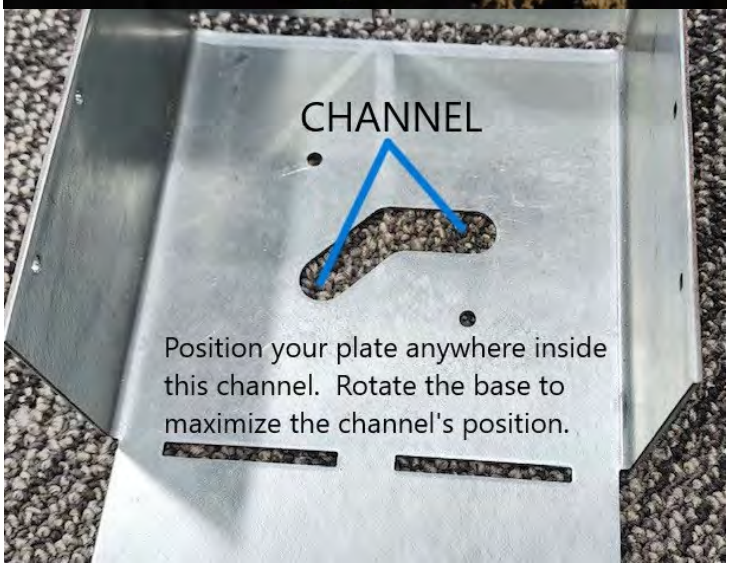
All helicals are placed within 3" of the final "perfect" location. The final location of each footing is adjusted with both the helical's eye bolt and the Simpson post-to-base hanger.

Loosen the nut on the post base to adjust the plate and base to the desired location.

The helical's eye bolt can be positioned anywhere inside the pipe. You may be limited by the bolt's angle. A longer eye bolt can be used to utilize the lower holes if that angle is better.

The Simpson post base comes with a channel (see pic). Position your bolt anywhere inside this channel. Rotate the base if necessary to maximize the channel's position.

The helical top plate and Simpson base do not need to be centered on the helical to be load-bearing, and most installations will be off center. Both can be off to the side as far as the eye bolt and channel allows.



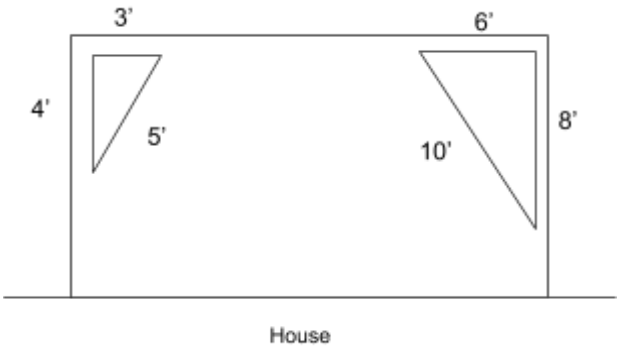
SCAN ME!

What to Expect After Ledger Installation

1. A 3” gap between the door threshold and the new ledger is ideal. This allows the drip cap to tuck under the siding/trim.
2. We attempt to pick the straightest board when attaching a ledger. However, wood is inherently imperfect and carpentry knowledge is often required to solve these issues.
3. The ledger may crown in the middle and/or taper at the ends. Carefully measure the top edge using a string and level to identify your high and low points.
4. Use the highest point of your ledger to determine the height of your joists. You may need to hang joists 1/16” – 1/8” higher than the ledger to level your frame. Do not cut your posts and lay your beam until you identify your highest ledger point.
5. Your drip cap is not finished until you pinch it under your decking. Until then, expect it to be loose and “unfinished”. The inspector will approve the ledger as long as the cap is tucked under the siding, even if it is loose. They will check it again at final inspection to verify that it was pinched by the decking.
6. Caulk is used on the sides and bottom of the ledger. If the siding (including stucco) on top of the ledger was cut by us, the homeowner is responsible for adding finish trim or hiring a stucco specialist to finish the edge if they desire. Siding is behind the edge of the decking and not required to have trim.

Start Your Deck

https://youtu.be/xaulN7-loI8



A square deck will save you time and frustration throughout the remainder of the project. If you do not have proper 90-degree angles, you will struggle to align deck boards, borders, and fascia. Take the time to "square your deck". Watch the video link above and read the descriptions below as Master Carpenter Pat takes you step by step through his process of framing a deck to be at proper 90-degree angles. This step can be done before you place concrete or Diamond Pier Footings – in fact it is easier to build the frame outline, then spot your footings with a plumb bob. However, if we are installing helical footings for you, this step is done AFTER helicals are installed with our tractor (height is needed for the machine).

Tools Needed: Tape measure, hammer, level, framing gun, mechanical connector gun, compressor, framing square, circular saw.

WARNING: In the videos and pictures, our carpenters use 2 different guns; a special MECHANICAL CONNECTOR (MC) gun for attaching hangars, and a FRAMING NAIL gun for nailing lumber to lumber. A FRAMING NAIL gun CANNOT be used to attach hangers. Any attempt to use a nail gun to attach metal hangars can lead to serious injury. Always wear eye and ear protection.

1 ½" Hot-Dipped Galvanized Joist Hanger Nails: These nails must fill every hole on the hanger tabs and are attached straight into the ledger.

STEP 1: Install concealed hangar at corner.

STEP 2: Hang the outer Rim Joist to the outside.

STEP 3: Level the Rim Joist by attaching to a temporary 2x4.

STEP 4: Make a mark along the **ledger** at 6 feet.


STEP 5: Make a mark along the **rim joist** at 8 feet.


STEP 6: Cut a temporary 2x4 with diagonal ends to brace the rim. Attach under the Ledger first.

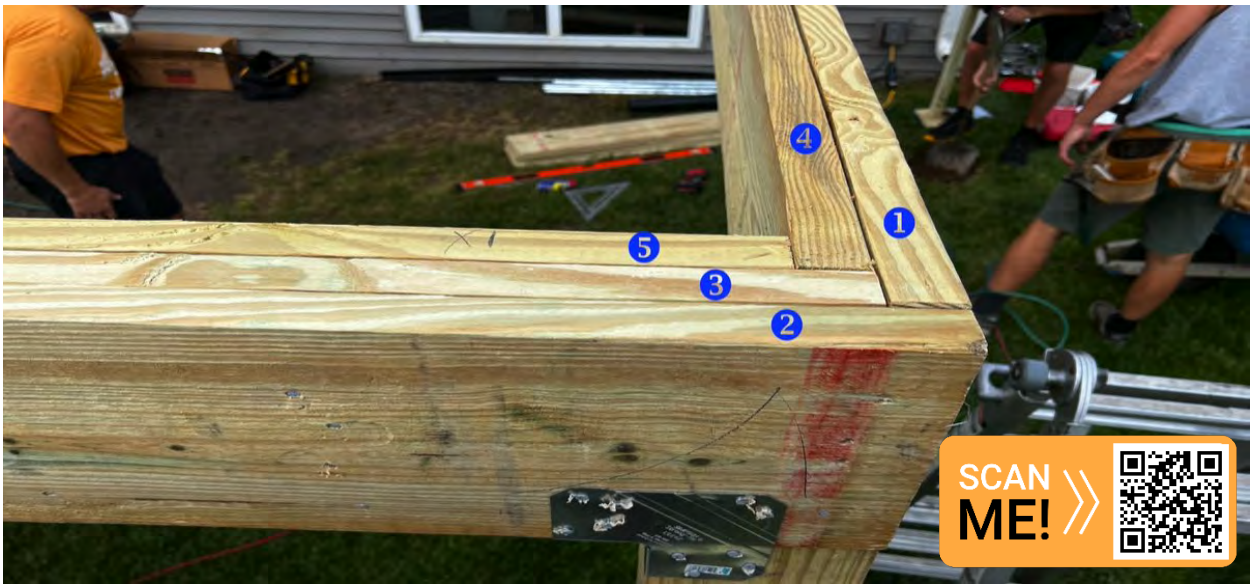
STEP 7: Measure between the 6 foot and 8 foot marks. Move the Rim Joist in or out until your tape measure reads 10 feet on the Rim Joist mark. Attach the diagonal 2x4 to the bottom of the Rim Joist.

STEP 8: Attach the outer ply of your Flush Beam to the Rim Joist. Use 4 nails or screws.

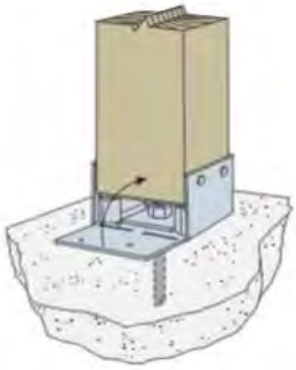
STEP 9: Level the Flush Beam and attach to a temporary 2x4.

STEP 10: Attach the other Rim Joist


STEP 11: Add a middle ply ❸ to the **Flush Beam**. Then add an inner ply to the **Rim Joist** ❹ on both sides of deck. Then finish with the inner ply ❺ for the **Flush Beam**.
Fasten the beam and double rim joists with four 3 ½" nails every 12". Nail at a slight angle so that nails do not poke through the double rim joist. Nail the beam from both sides.



STEP 12: Cut columns to correct height and attach to helical/footing bracket with 3 ½" nails. Attach the upper brackets with 1 ½" nails. Posts should be plumb, but if they are slightly angled, the tolerance is 3/8" every 3 feet.

16D Galvanized Box 3½" Nails:

- Use nails on Base.
- Also can be used to nail the 3-2x10 boards of your beam together. Use 4 nails every 12". You can also use screws to make your beam. You can also alternate between nails and screws.

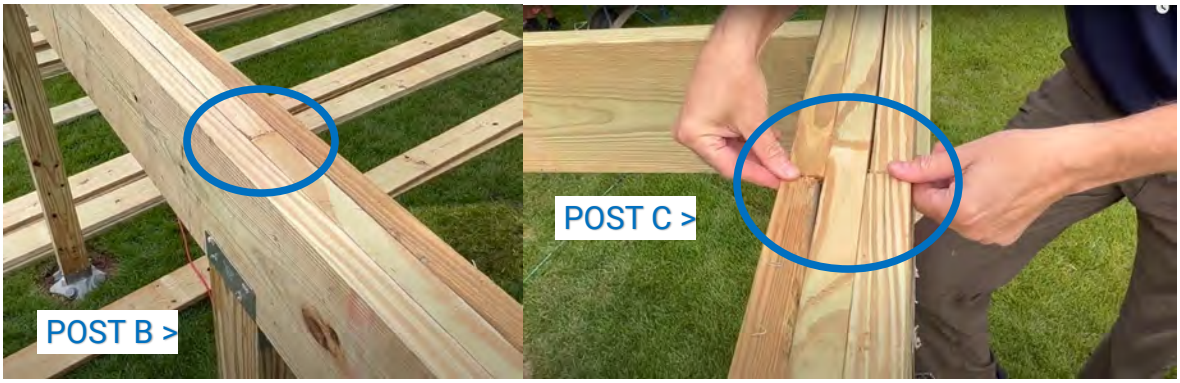
STEP 13: Screw on a 2x4 brace from corner of beam to bottom of 6x6 to stabilize the frame.

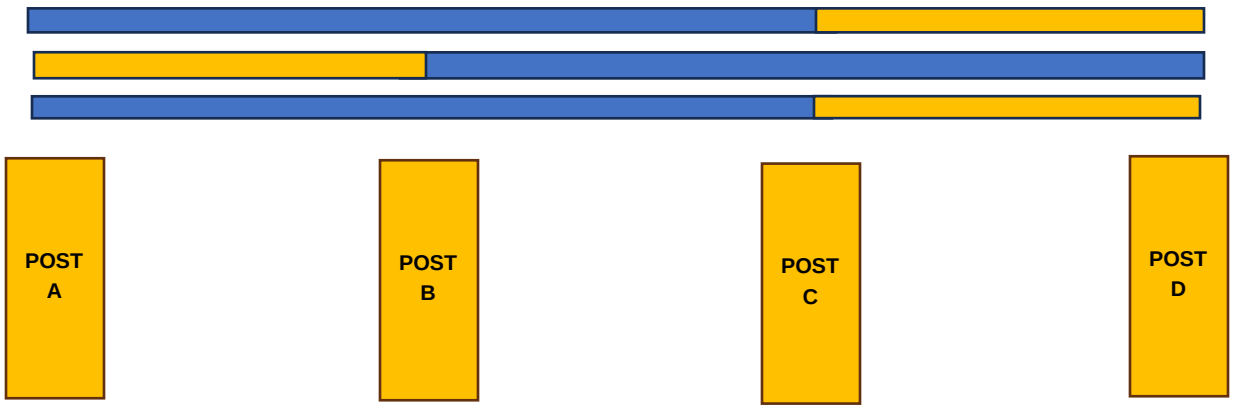
Beam Splicing

Click to watch video or scan the QR Code

Your beam boards are limited to 20-foot boards or less. If your deck is wider than 20 feet, splice the beam boards (ply's) on top of the support posts/columns. Stagger the ply's of your beam as shown below. Do not place all of your splices over the same post/column.

In the example below (and in the video), the middle ply is spliced and centered over POST B. The inner and outer ply's are spliced and centered over POST C. This example uses a combination of 18-foot boards and 9-foot boards to make a 27-foot beam.





Your width may vary, but as long as you stagger the ply's and splice the beams over a post/column, you will pass inspection.

Joist Hangers: Concealed vs Regular

Click to watch video or scan the QR Code

Concealed Hangers: Use on the rim joist at the ends of your ledger. Hang these before you hang the rim joist.

Regular Hangers: Use on your interior joists. Hang these AFTER you temporarily nail your interior joists to the beam and ledger (see next video).

WARNING: Bent hangers will not pass inspection. All circular holes must have a fastener.

Hanging Joists by Yourself

Click to watch video or scan the QR Code

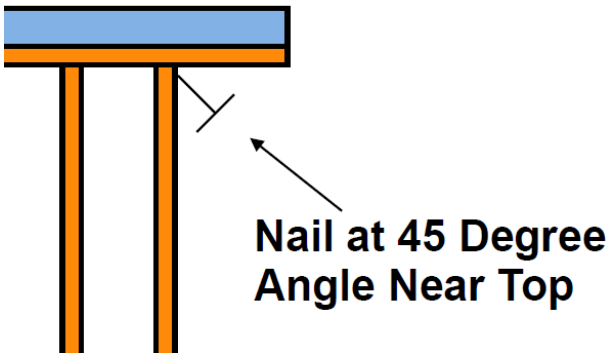
*** This method works best with a FRAMING NAIL gun.

1. Nail a cleat using a scrap 2x4 to the bottom of the beam. Create a lip for the joist to sit on.

2. Before lifting the joist in place, look down the edge of the board and identify the crown, or curve, of the board. Place the crown, or curve, UP. Use a pencil to mark the board with an arrow UP on the end of the joist.

3. Place one end on the cleat lip.

4. Lift the joist in place and temporarily toe-nail the joist by placing a nail into the side near the top at a 45-degree angle. Always wear eye and ear protection.



5. Add a second nail (at an angle) under the joist and into the ledger to keep the joist plumb.

Install your hangers. This can be done after you hang all of your joists with temporary toe-nailing. Remember to fill all circular holes with fasteners. If you cut a joist too short, you can still use it if the gap at each end is less than ¼".

NOTE: Each regular joist hanger uses two different nails.
1. 1 ½" for straight in nailing
2. 3" for angle nailing

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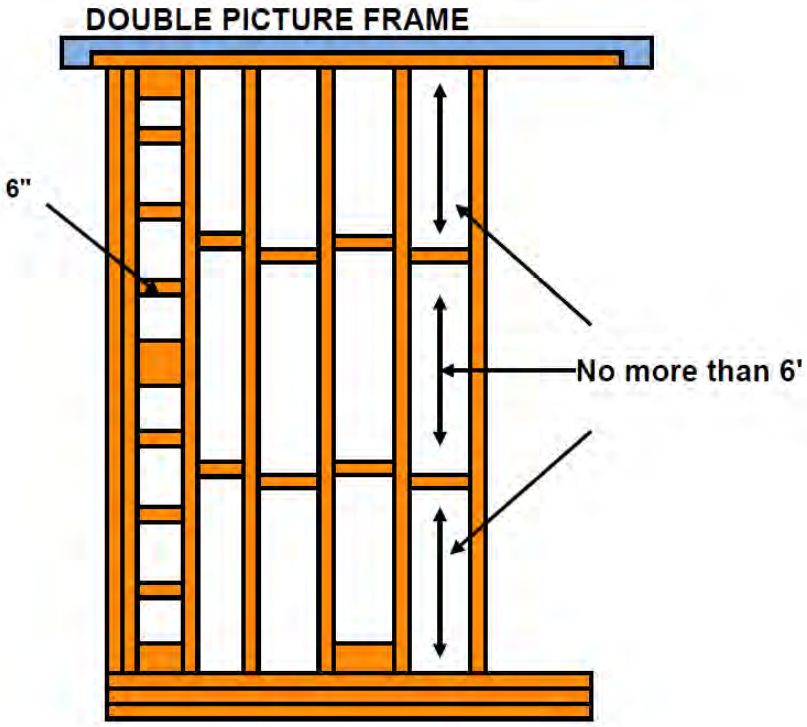
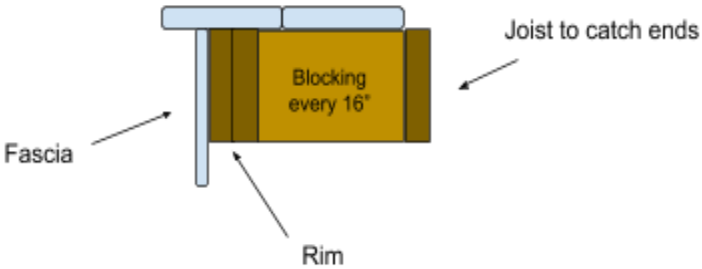
Blocking

Click to watch video or scan the QR Code

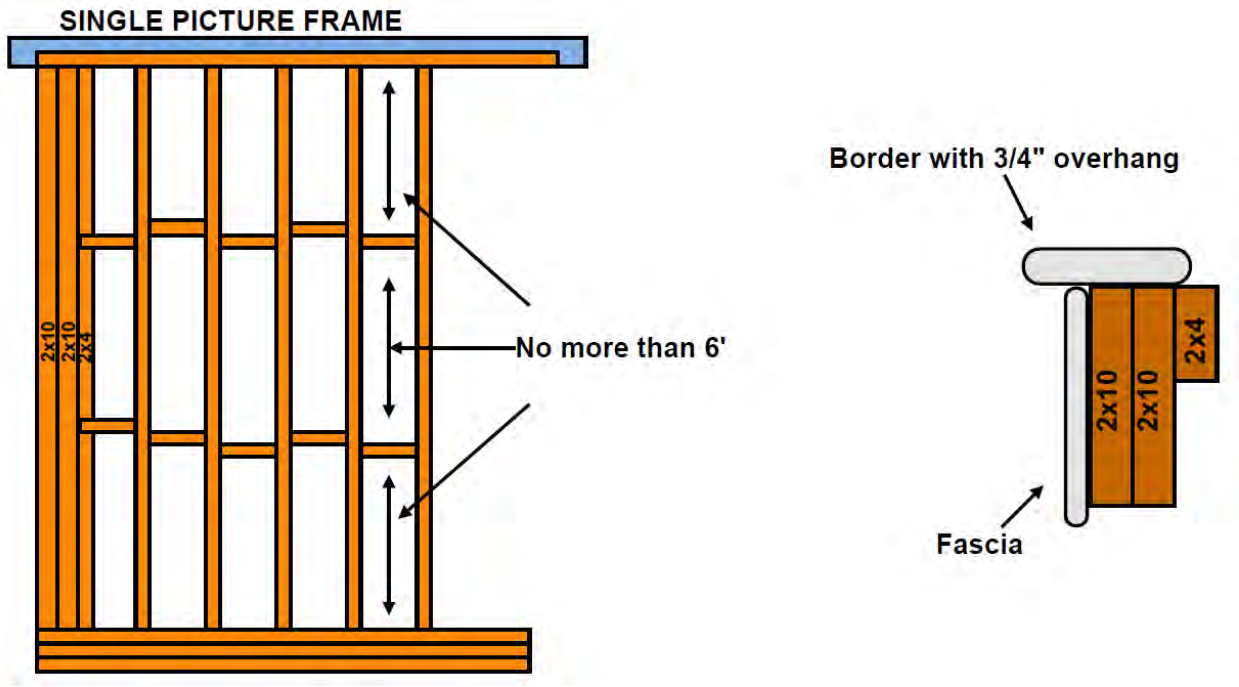
Blocking is the secret step to flattening crowned or wavy joists. Blocking is required within 8 feet of a ledger, ideally centered between the house and the outer beam. But we recommend a distance no greater than every 6 feet to minimize the waves in your joists. After this step, your blocking will force the joists more level. If you have a 16' deep deck, place 2 rows of blocking equidistant between the house and outer beam, at approximately 5.33' apart.

In this video, master carpenter Pat blocks a deck with a DOUBLE PICTURE FRAME and a SEAM BOARD running down the center of the deck.

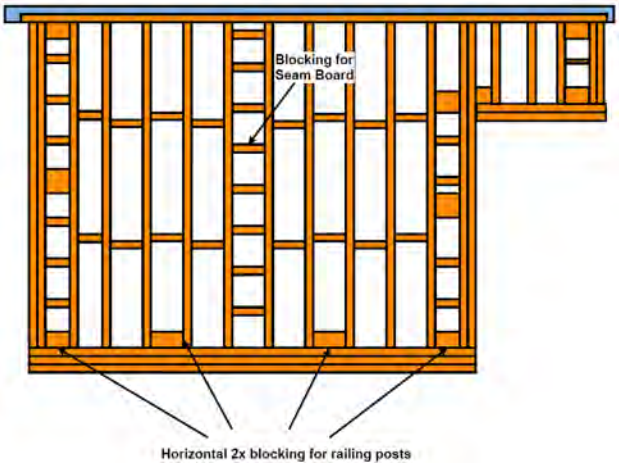




In a SINGLE PICTURE FRAME layout, insert a 2x4 in between the joist blocking to catch the ends of the main deck boards.



Blocking for your Railing Posts



Railing posts will be “surface mounted” and supported with lag screws into the frame. Now is the best time to add horizontal blocks at future railing post locations. We recommend applying joist tape over any large flat areas that will collect water. This blocking also catches the ends of the mitered picture frame boards and the end screws.

Stair Stringers

Click to watch video or scan the QR Code

Go to the spot where your stairs will land and measure the height to the top of the frame. Add 1" for future decking. This deck frame PLUS decking was 89".

CALCULATE YOUR STAIR RISE:

EXAMPLE DECK HEIGHT: 89" (Deck frame was at 88" but we add 1" for decking thickness.)

1. 89" **divided** by the max RISE of a stair, 7.75 = 11.48
2. **Round up**. 11.48 = 12 rises. (You will need to cut 11 treads because your deck will be the 12th step).
3. **Divide** 89" by 12 = 7.416" This is your exact RISE for your stairs.
4. Take the decimal from your result (.416) and **multiply** by 8 to get the number of 8th's of an inch. (In this case 3/8")
5. Cut your stringers' RISE at 7-3/8"

STAIR REQUIREMENTS

Use 2x12 boards

RISE: Max = 7-¾" / Min = 4"

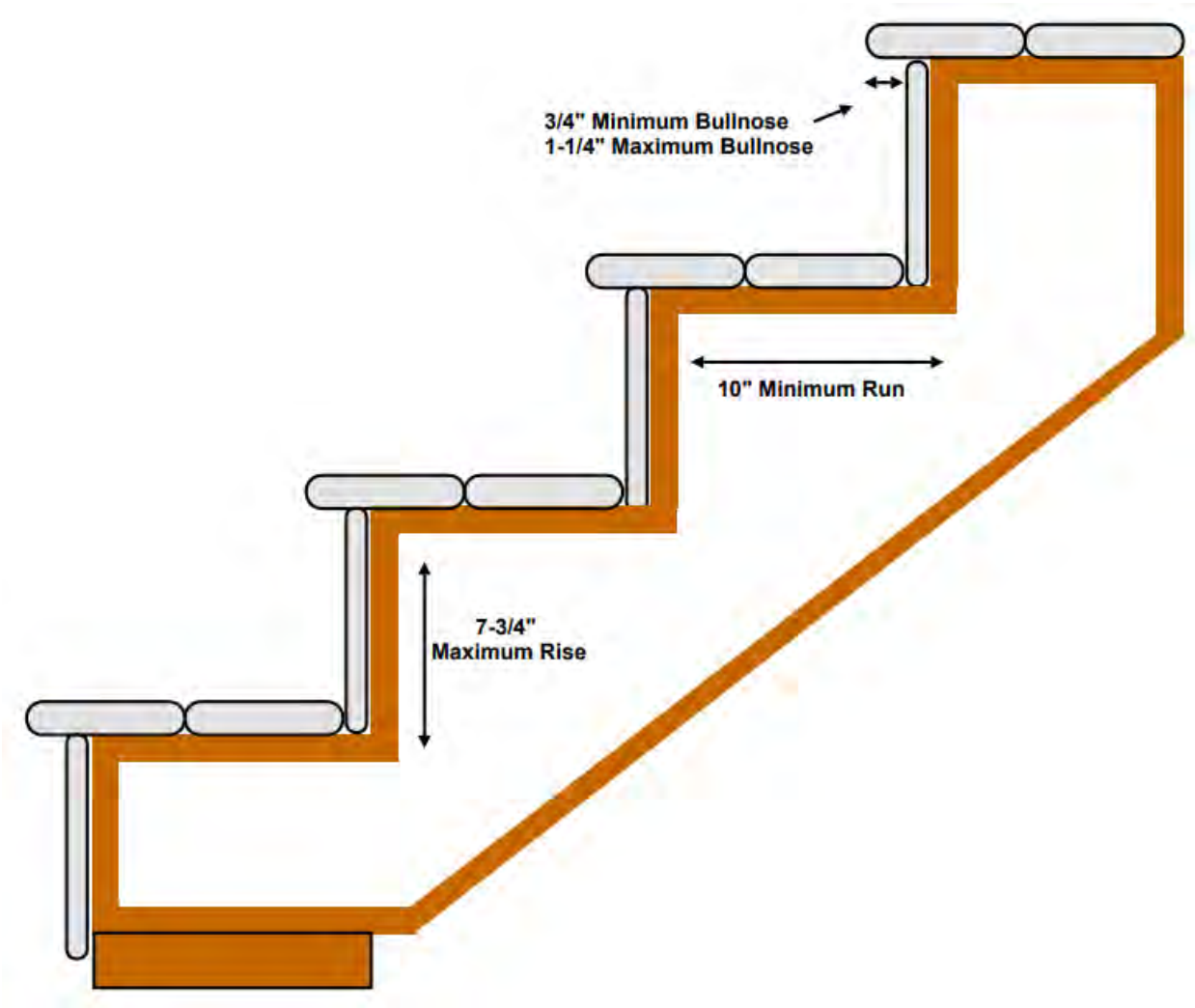
RUN = Min 10"

BULLNOSE = ¾" – 1 ¼"

STRINGER SPACING = Between 6-10" (refer to permit)

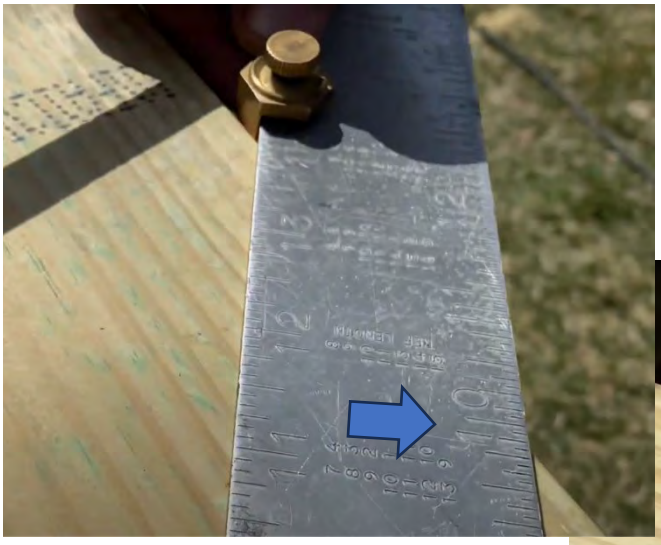
USE A 2x10 base plate for all stringers to land on.

Remember to cut one less step and use your deck as the final step.



To draw your lines on your 2x12 stringers, use brass stair gauges on a steel framing square.

We like attaching the gauges on the outside of the square and drawing our lines on the inside of the square.



In this example, we placed the gauges on the outside of the square so that the inside of the gauge intercepted the edge of the 2x12 at 10” (RUN) and 7-3/8” (RISE).

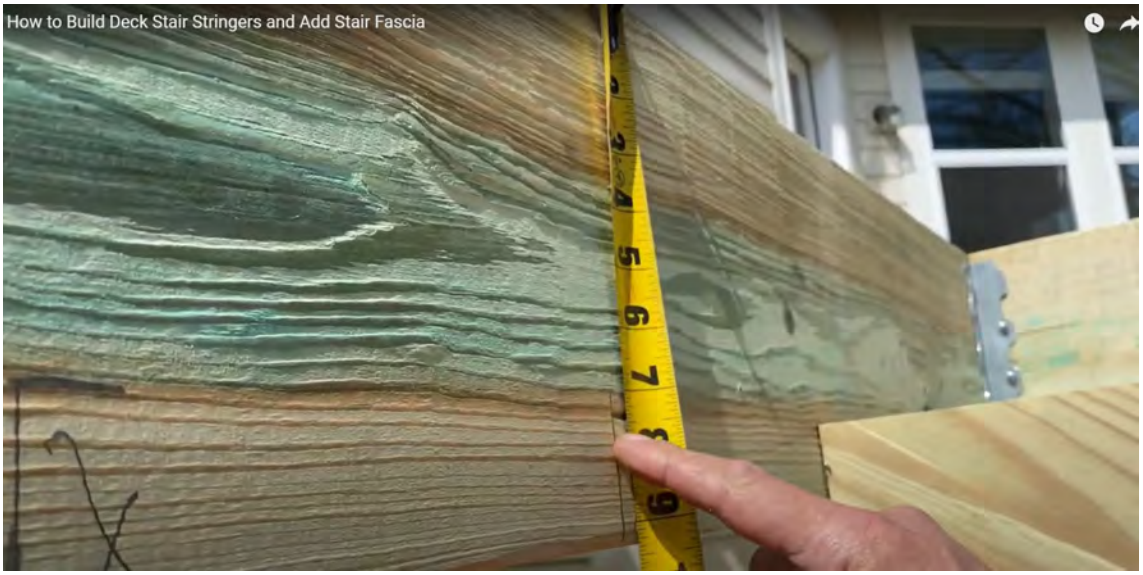
Slide the square to the next position and line up 11 ½” on the previous pencil mark. 11 ½” is on the outside edge, opposite your 10” mark (inside edge).

Cut 1 ½” off the bottom heel for the 2x10 base plate (required).

Cut the stringer with a circular saw. Be careful not to overcut the inside corners. Use a hand saw or multipurpose tool to trim out the extra material left inside the inside corners.

Screw your finished stringer to another 2x12 and use it as a tracing template.

Mark the RISE on your deck where the stringer will attach. In this example: 7 3/8”.



Now is a good time to build your backer board.

Attach a horizontal backer board along the back of the deck frame using vertical supports. If you already have a double rim joist, double up the horizontal boards to make the extra beam flush.

Attach angled stair brackets first, then attach stringers to brackets.

Use the stringer spacing requirement approved on your permit drawing.