Vocabulary

The main elements of a stair project are very similar to decks but also include:

1) **Stringers –** PT 2x12s that are cut in a way that supports the stairs' decking
2) **Hand railing –** stained DF dowels
3) **Concrete pad –** 3 ½"-thick pad that extends at least 12" in front of the stairs and 4 ½" to the sides of posts
4) **Riser** – vertical rise in a step
5) **Tread** – horizontal run in a step; surface is made of two stained DF 2x6 decking boards

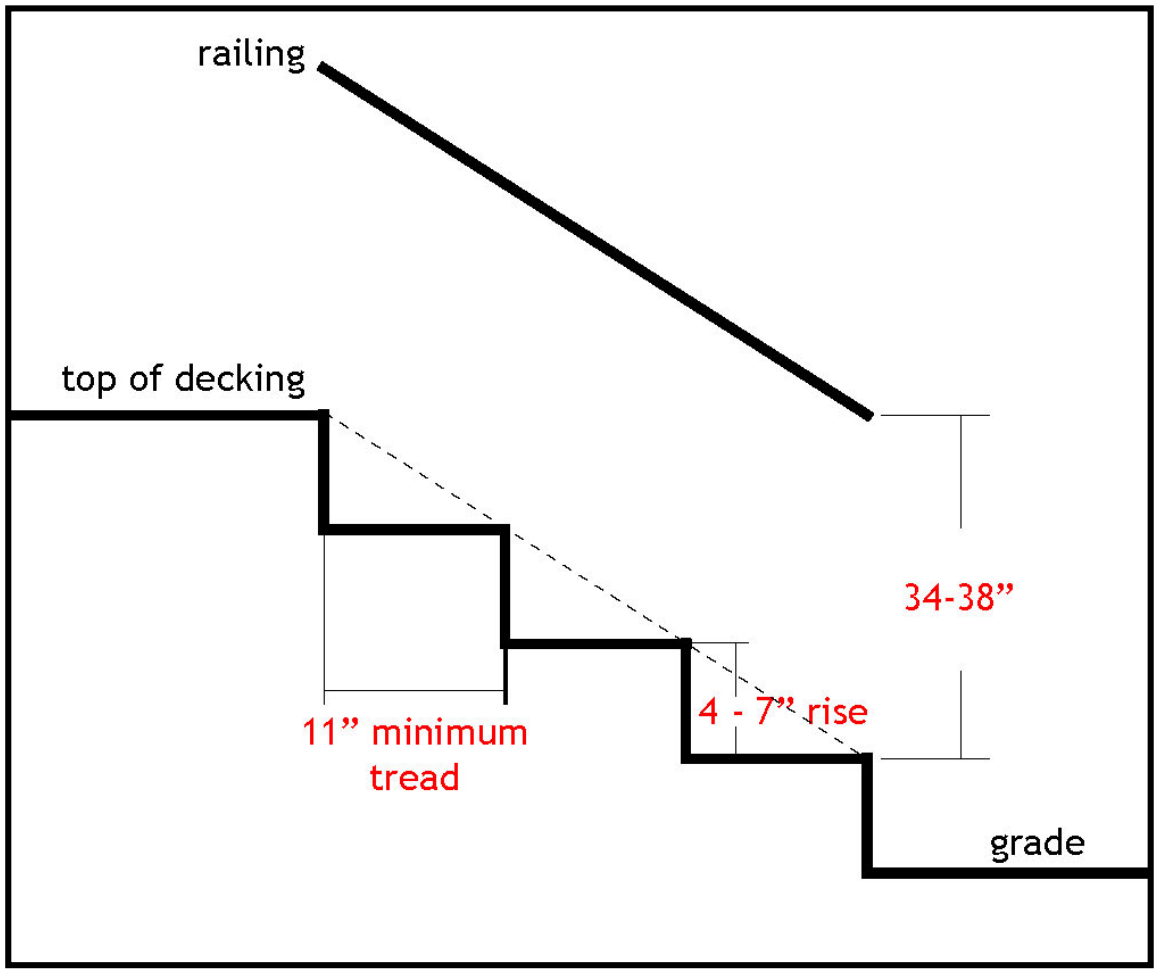


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Stairs

- Stairs must have a width of at least **36”** inside the railing, and handrails **34-38”** from the nose of the stair decking to the top of the handrail.
- A stair is required to have handrails if there are more than 4 risers (more than 21” rise).
- Each stair must have the same tread and rise measurements within **3/8”**. The tread should be at least **11” deep**; the rise should be a maximum of **7” tall** and a minimum of **4.”**



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Steps to build an SSP set of stairs:

1. Clear the surrounding area
2. Set layout and build the first landing*
3. Measure and cut stringers
4. Set stringers in place and determine location of concrete pad
5. Dig and pour concrete pad
6. Install bottom posts
7. Install stringers and blocking
8. Install stair treads
9. Complete handrail

*These slides will only cover steps involved in stairs; refer to *Chapter 8: Decks* to review the prerequisite steps

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1. Clear the surrounding area

- De-nail any lumber removed and pile debris out of the way.



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2. Set the layout and build first landing

Use instructions from Chapter 8: Decks to set the layout, dig and pour footings, etc.



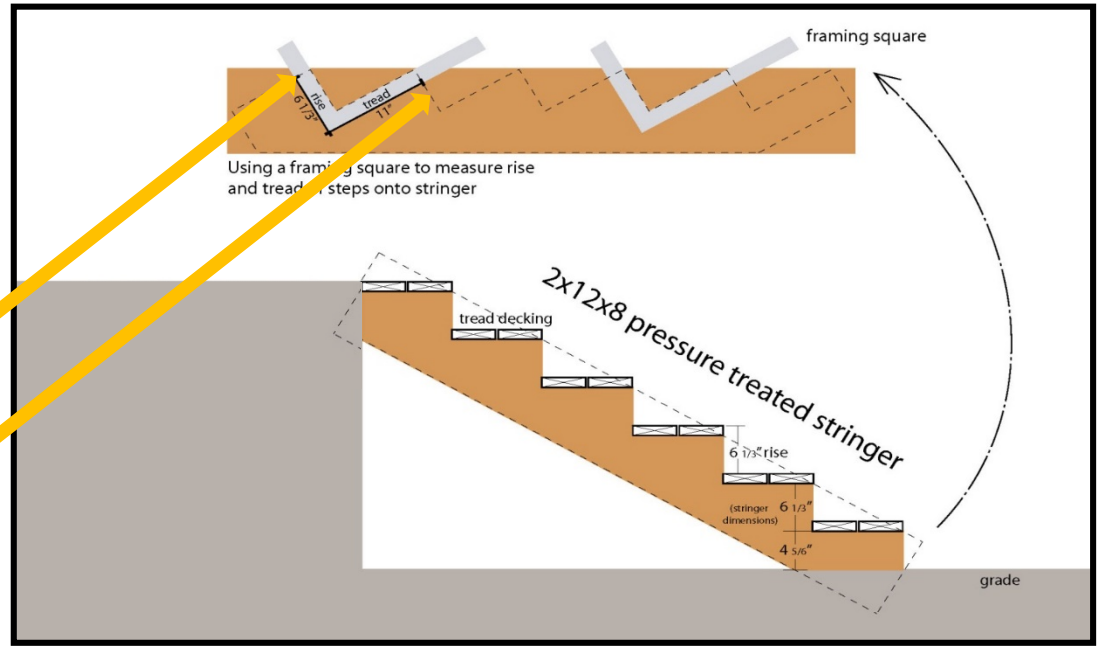
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3. Measure and cut stringers

- **Stringers** are made with **PT 2x12s**. For a 3-4 foot wide set of stairs, three stringers are used, 24" o.c.
- By marking the length of the rise and tread on a carpenter's square and lining the marks up with the edge of the PT 2x12, using "L" shape to trace however many steps are needed to create the pattern to cut out.

Mark with tape



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3. Measure and cut stringers

Use a circular saw to make the rise and run cuts. It's best to be on site with teams as they make this cut as it can be confusing.



Smith River 2017

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4. Set stringers in place and determine location of the concrete pad

- To determine where a **concrete pad** should be poured, hold the stringers up to the deck.
- The pad should be at least as wide as the stair and be **one tread length** in front of the stair and go underneath the stair an additional **foot** to protect the ends of the stringers.



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5. Dig and pour concrete pad

Don’t forget to dig 18-24” holes below the post bases!



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Tsaile 2016

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6. Install bottom posts

Hopefully volunteers have set the post bases so that they won't get in the way when you're ready to attach the stringers.



Chiloquin 2016

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7. Install stringers and blocking

- Attach the outermost stringers to each post using one ½” by 6” bolt with nuts and washers.
- Make sure that all of the stringers are level so that the tread decking will also be level.
- Install PT 2x6 blocking between each stringer by toenailing through the stringer.



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8. Install stair treads

- The **treads** or decking for a stair are made of two 2x6s for each step.
- Remember, all sides of the decking lumber are **stained** before it is screwed into place.
- The decking is secured with two decking screws into each stringer.





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9. Complete handrail

- The railing should be all non-pressure treated lumber and should be stained before secured.
- The round wooden railing top must be mounted 34-38” from the nose of the stair.
- Make sure that the balusters are plumb.
- **Handrail brackets** should be set every 4’.

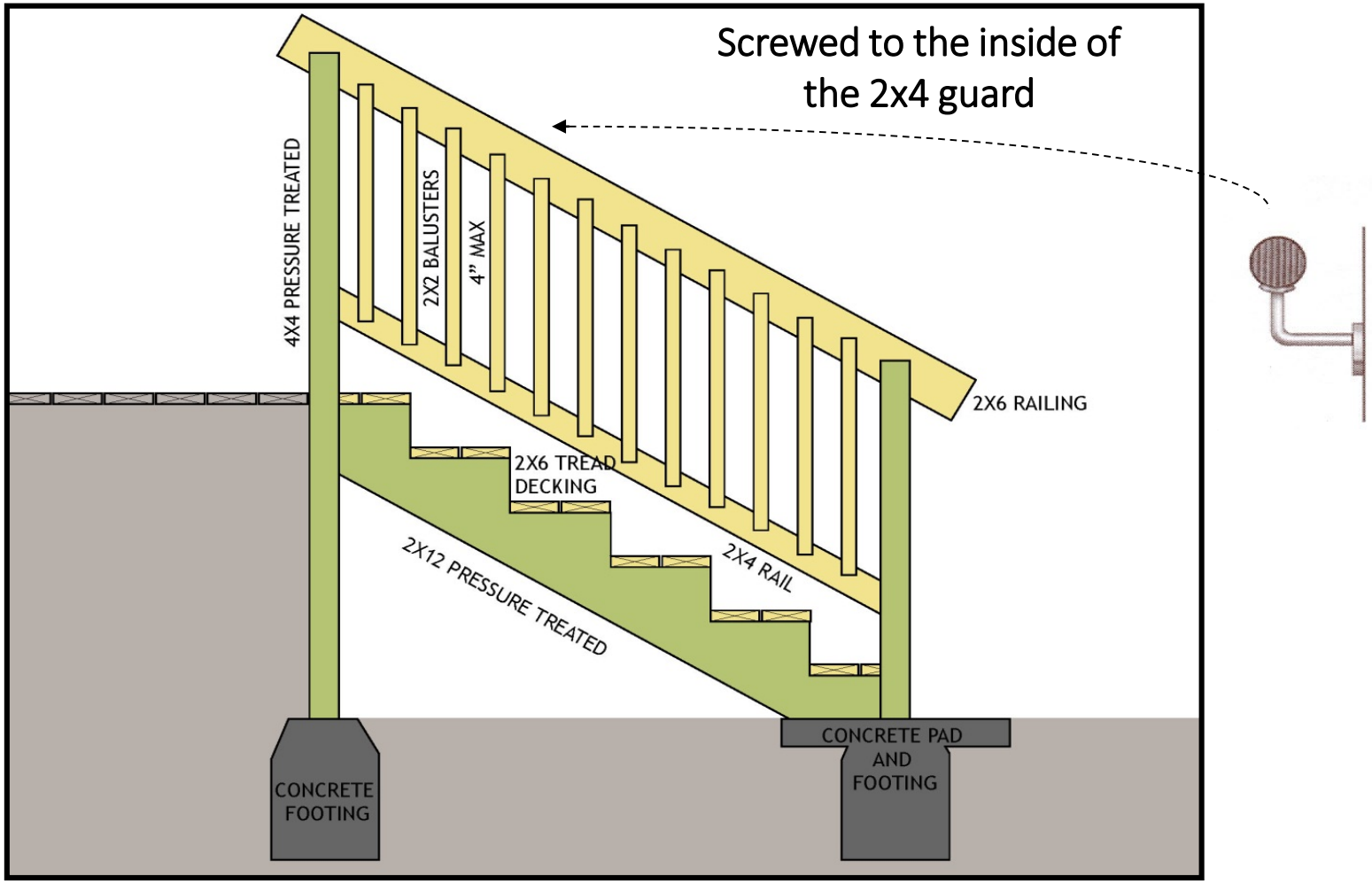


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