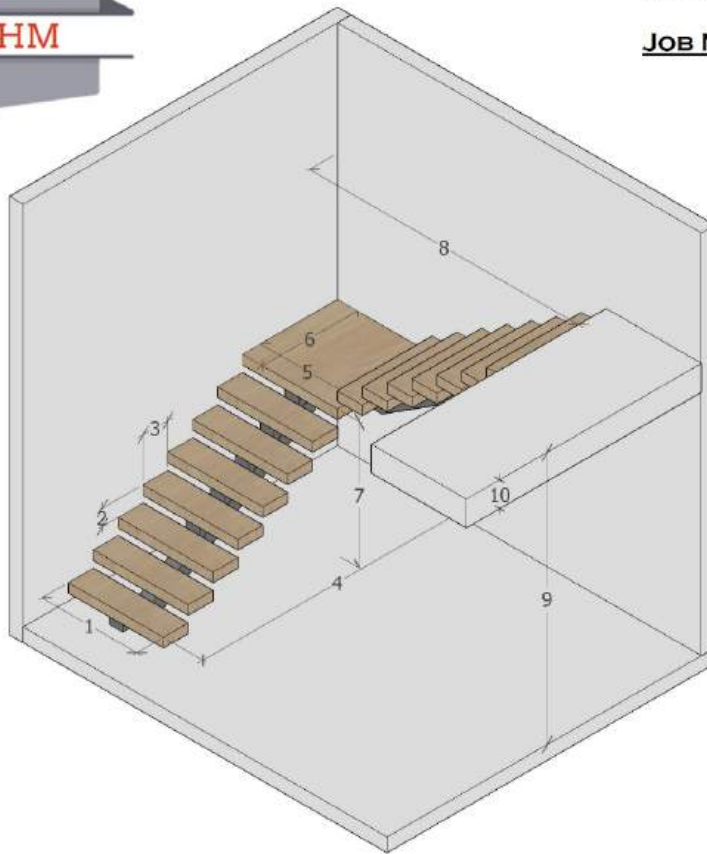




HOW TO MEASURE STAIR STRINGERS

JOB NAME _____



- ① Width of steps
- ② Step rise
- ③ Step run
- ④ Length from wall to step
- ⑤ Width of landing
- ⑥ Length of landing
- ⑦ Total rise
- ⑧ Width of well
- ⑨ Floor height
- ⑩ Thickness of floor

Pls Provide information based on the above content.

The first to the second floor staircase in the vestibule:

1. Please refer to **mark 1:** measure and provide the length of the staircase tread. (Answer:)
2. Please refer to **mark 2:** measure and provide the riser height. (Answer:)
3. Please refer to **mark 3:** measure and provide the tread run. (Answer:)
4. Please refer to **mark 4:** measure and provide the horizontal distance from the lower section of the staircase to the wall.(Answer:)
5. Please refer to **mark 5:** measure and provide the landing width. (Answer:)
6. Please refer to **mark 6:** measure and provide the landing length. (Answer:)
7. Please refer to **mark 7:** measure and provide the height from the ground to the landing. (Answer:)

HM DOORS AND WINDWOS LLC

hm.doors2025@gmail.com

(732) 558-3815

3350 US Route 9, Freehold, New Jersey 07728, United States

8. Please refer to **mark 8:** measure and provide the width of the well. (Answer:)
9. Please refer to

A floating staircase is a modern design that appears floating in mid-air. They typically feature hidden support structures to create a light, open feel. The design of these staircases aims to bring a unique visual appeal to a room, giving it a more contemporary and stylish look.

Making stairs correctly means more than complying with building codes. It's about ensuring your clients' safety. This guide reviews how to measure stair stringers, as well as how to cut stair stringers and the relevant building requirements.

Measure the stairway's total rise and divide by the estimated riser height (around 7 inches) for the number of steps. Divide the total rise by the steps for the exact riser height. Use a framing square and pencil to mark all steps on a 2- x 12-inch board.

HM DOORS AND WINDWOS LLC

hm.doors2025@gmail.com

(732) 558-3815

3350 US Route 9, Freehold, New Jersey 07728, United States



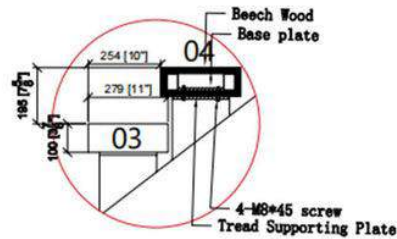
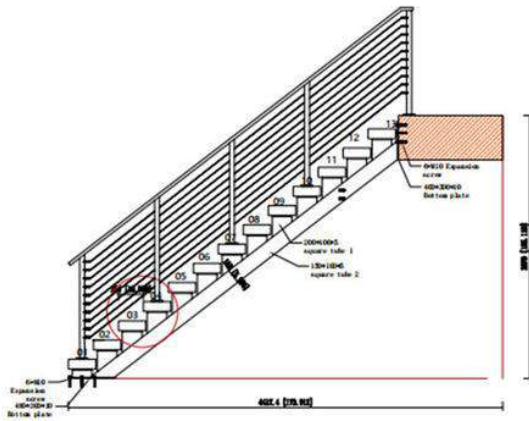
- Stair risers are the vertical section of an individual stair. They have a maximum height of $7 \frac{3}{4}$ inches. The IRC does not set a minimum height, but other codes, such as the International Building Code, set a minimum riser height of 4 inches.
- The height of the stairs must be consistent, and the risers cannot vary more than $\frac{3}{8}$ inch on a staircase.
- The nosing, or horizontal overhang of a stair, is required to be a minimum of $\frac{3}{4}$ inch and a maximum of $1 \frac{1}{4}$ inch. Nosings are not required but make stairs safer.
- The tread depth of stairs with nosing must be a minimum of 10 inches. If the stairs do not have a nosing or overhang, the tread has a requirement of 11 inches minimum.

HM DOORS AND WINDWOS LLC

hm.doors2025@gmail.com

(732) 558-3815

3350 US Route 9, Freehold, New Jersey 07728, United States



Knowing how to measure stair stringers requires some simple math. Use the following stair stringer calculator.

- Determine the total rise of the staircase. Use a tape measure to record the distance from the upper floor to the lower floor. If the flooring is not yet installed, add the thickness of the flooring to the total rise.
- Divide the total rise by the estimated height of the stair risers (7- 7 3/4 inches) to determine the approximate number of stairs. If you get an uneven number, round up to the nearest whole number to ensure that the stair risers will not be too high. (See the example below.)
- Divide the total rise by the number of stairs to determine the exact height of the stair risers.

Suppose you're building stairs that have a total rise of 50 3/4 (50.75) inches:

- Divide 50 3/4 by an estimated height of 7 3/4 (7.75). This leaves a total of 6.55.
- Round 6.55 up to 7 for the total number of stairs.

HM DOORS AND WINDWOS LLC

hm.doors2025@gmail.com

(732) 558-3815

3350 US Route 9, Freehold, New Jersey 07728, United States

- Divide $50 \frac{3}{4}$ by 7 stairs. This leaves a total riser height of $7 \frac{1}{4}$ inches. (If you rounded 6.55 down to 6, for 6 total stairs, the rise would be more than 8 inches and would not be code compliant.)

Determine the total run of the staircase by multiplying the number of stairs by the tread. For example, 7 steps with 11 inches of tread each means a total run of 77 inches.

Pro tip: When estimating the minimum board size you need, assume 14 inches of board length per step. For example, a stringer with 7 steps will need a board of 84 inches ($7 \times 14 = 84$).

Building Codes For Floating Stairs

When it comes to constructing floating stairs in the United States, adherence to building codes and regulations is paramount to ensure safety and compliance with legal standards. These codes not only provide guidelines for the structural integrity of the staircase but also address critical safety measures such as handrails, tread dimensions, and spacing requirements.

In the United States, building codes for floating stairs are typically based on the International Residential Code (IRC) or the International Building Code (IBC), which set forth minimum standards for construction and safety in residential and commercial buildings, respectively. However, it's crucial to note that specific regulations

HM DOORS AND WINDWOS LLC

hm.doors2025@gmail.com

(732) 558-3815

3350 US Route 9, Freehold, New Jersey 07728, United States

may vary from state to state or even within municipalities, so consulting local building authorities for specific requirements is essential.

Some commonly accepted IRC stair regulations include:

1. **4-inch Sphere Rule:** This rule stipulates that the spacing between railings must be such that a 4-inch diameter sphere cannot pass through. While many carpenters interpret this rule to apply to every space on the railing, there is an exception, especially for the areas behind the tread nosing.
2. **6-inch Sphere Rule:** This allows for slightly wider spacing in some areas of the railing, particularly at the backs of treads where the balusters are placed.
3. **Rise and Run Dimensions:** Building codes typically specify maximum rise and minimum run dimensions for stair treads. The maximum allowable riser height is often set at 7 3/4 inches, while the minimum tread depth is typically 10 inches.
4. **Handrail Requirements:** If a floating staircase has more than three risers, handrails are generally required. The minimum height for floating staircase handrails is typically set at 34 inches, with a maximum height of 38 inches. The standard quoted height for floating staircase handrails is usually 36 inches.

In addition to these regulations, specific requirements may exist for factors such as load-bearing capacity, material specifications, and

HM DOORS AND WINDWOS LLC

hm.doors2025@gmail.com

(732) 558-3815

3350 US Route 9, Freehold, New Jersey 07728, United States

fire safety. Familiarizing themselves with all applicable codes and standards is essential for builders and homeowners to ensure that their floating staircase meets or exceeds regulatory requirements.

Moreover, hiring a licensed professional familiar with local building codes can help ensure compliance and avoid potential legal issues down the line. By adhering to building codes and regulations, homeowners can enjoy the aesthetic appeal of floating stairs while maintaining safety and structural integrity within their living spaces.

It's worth noting that these codes and regulations are in place to prioritize safety and prevent potential hazards, aligning with the earlier discussion on the safety considerations for floating stairs. Compliance not only ensures legal standards are met but also provides peace of mind for homeowners and their families when incorporating this modern architectural feature into their living spaces.

HM DOORS AND WINDWOS LLC

hm.doors2025@gmail.com

(732) 558-3815

3350 US Route 9, Freehold, New Jersey 07728, United States



HM DOORS AND WINDWOS LLC

hm.doors2025@gmail.com

(732) 558-3815

3350 US Route 9, Freehold, New Jersey 07728, United States