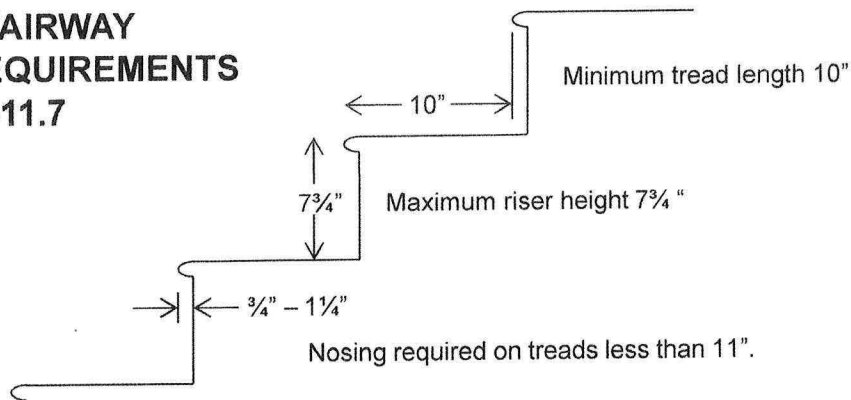




STAIR HANDOUTS

RESIDENTIAL DECKS, EXITS AND GUARDRAILS

STAIRWAY REQUIREMENTS R311.7

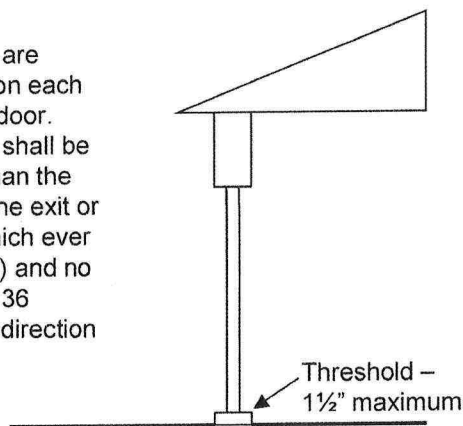


The largest riser or tread in any flight of stairs shall not exceed the smallest riser or tread by more than 3/8 of an inch.

Open risers greater than 30 inches above grade or floor below shall be guarded such that a 4-inch diameter sphere cannot pass through (Sec R311.7.5.1).

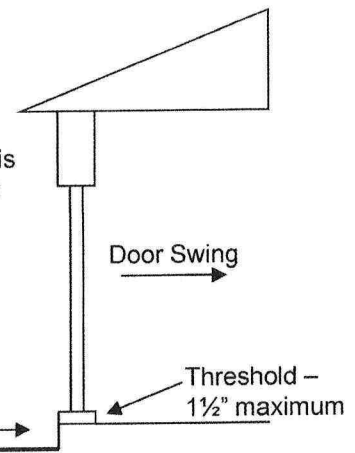
EXIT REQUIREMENTS - MAIN EXIT DOOR (FRONT DOOR OF HOUSE)

Landings are required on each side of a door. Landings shall be no less than the width of the exit or stairs (which ever is greater) and no less than 36 inches in direction of travel.



One step (7 $\frac{3}{4}$ " maximum) is permitted outside the main entry door when the door does not swing over the step.

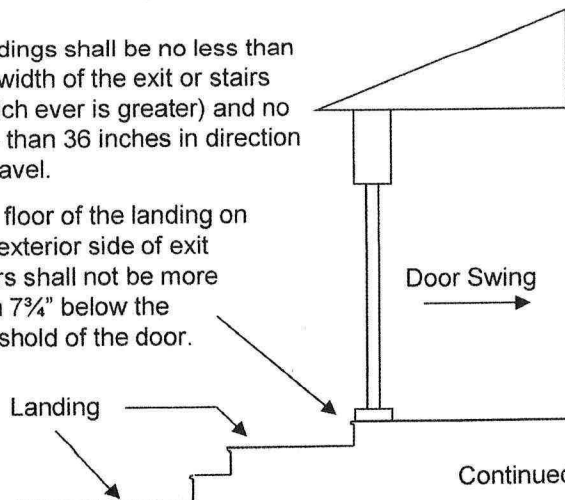
Step 7 $\frac{3}{4}$ " maximum from top of threshold



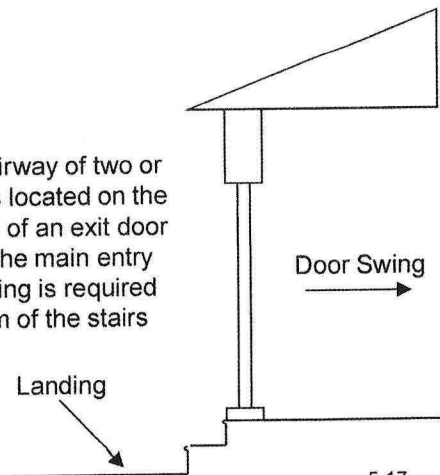
EXIT REQUIREMENTS - DOORS OTHER THAN THE MAIN EXIT DOOR

Landings shall be no less than the width of the exit or stairs (which ever is greater) and no less than 36 inches in direction of travel.

The floor of the landing on the exterior side of exit doors shall not be more than 7 $\frac{3}{4}$ " below the threshold of the door.



Where a stairway of two or less risers is located on the exterior side of an exit door (other than the main entry door) a landing is required at the bottom of the stairs only.





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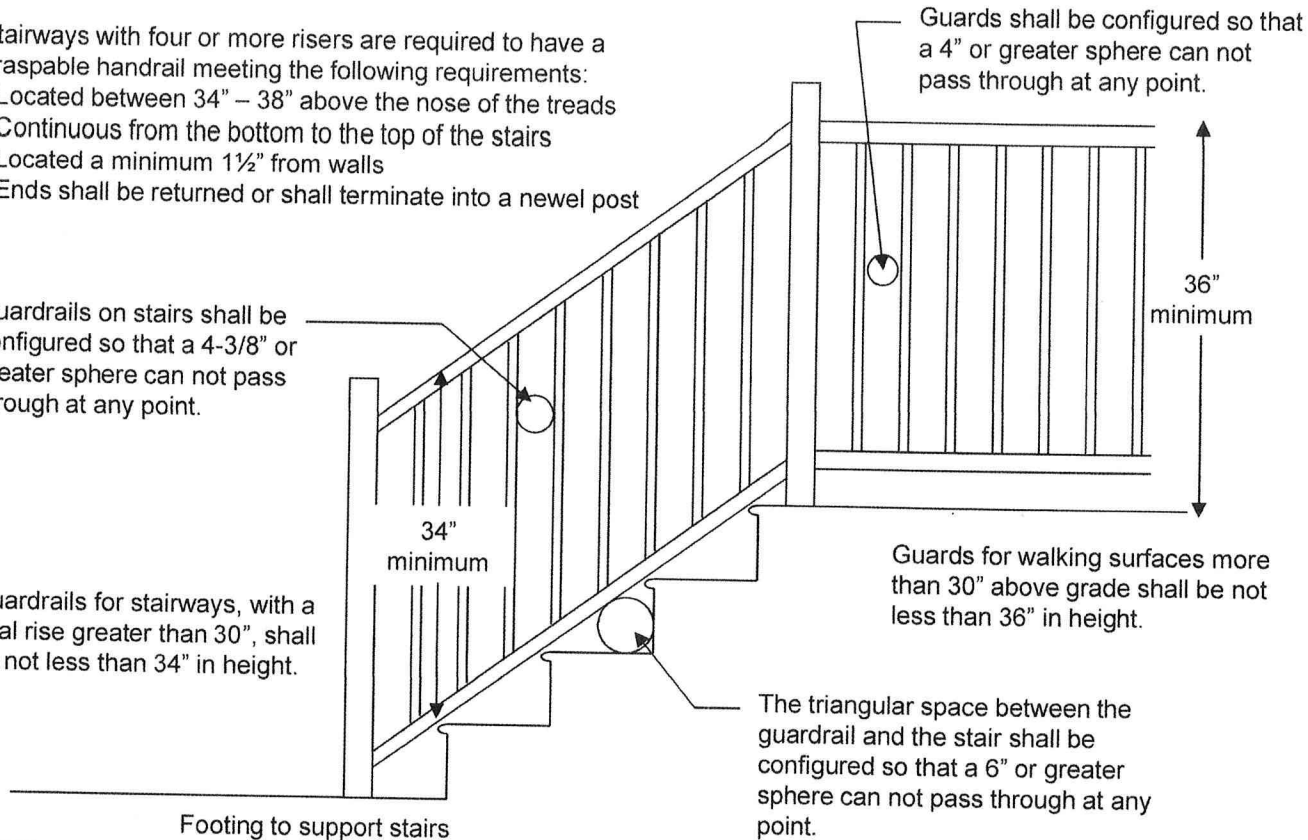
HANDRAIL R311, AND GUARDS R312

Stairways with four or more risers are required to have a graspable handrail meeting the following requirements:

- Located between 34" – 38" above the nose of the treads
- Continuous from the bottom to the top of the stairs
- Located a minimum 1½" from walls
- Ends shall be returned or shall terminate into a newel post

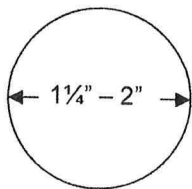
Guardrails on stairs shall be configured so that a 4-3/8" or greater sphere can not pass through at any point.

Guardrails for stairways, with a total rise greater than 30", shall be not less than 34" in height.

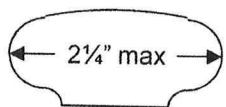


HANDRAIL CONFIGURATIONS

Type I Handrails



Circular cross-section –
Diameter: 1¼" – 2"



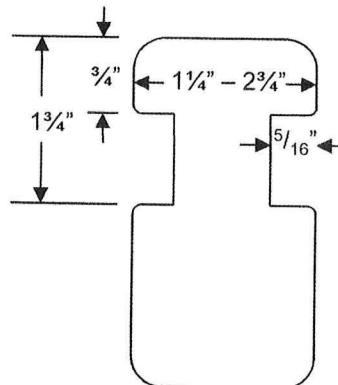
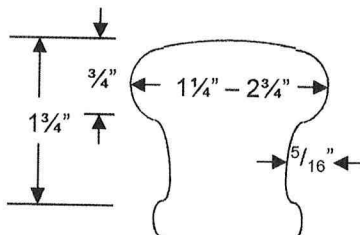
Type II Handrails – Perimeter greater than 6¼" with graspable finger recesses

Cross-section: 1¼" – 2¾" above the finger recess

Finger recess depth: 5/16" minimum

Finger recess location:

- Must begin a maximum of ¾" from top
- Must extend at least to 1¾" from the top

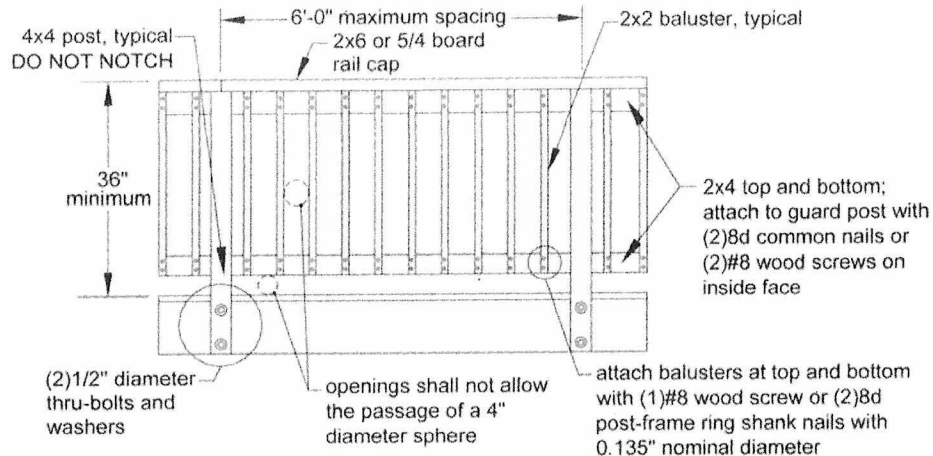




STAIR HANDOUTS

RESIDENTIAL DECKS, EXITS AND GUARDRAILS

Figure 24: Example Guard Detail



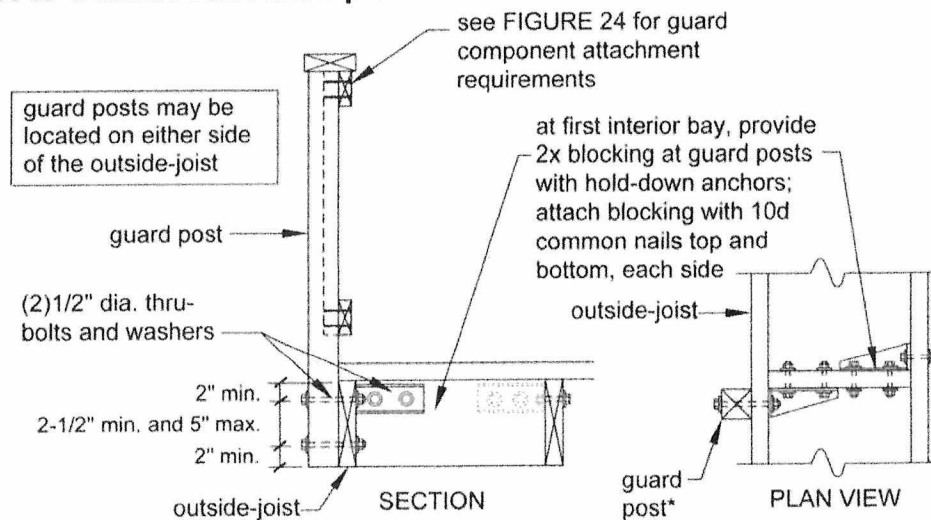
GUARD POST ATTACHMENTS

Deck guard posts shall be a minimum 4x4 (nominal) No.2 or higher grade (for species listed in Table 1) with an adjusted bending design value not less than 1,050 psi.

GUARD POST TO OUTSIDE JOIST: Guard posts

for guards which run parallel to the deck joists shall be attached to the outside joist per Figure 25.

Figure 25: Guard Post to Outside Joist Example



*guard posts can be installed as shown in Figure 26 (between joists) if blocking is installed as shown above within 12" of each side of the post

GUARD POST TO RIM JOIST: Guard posts for guards that run perpendicular to the deck joists shall be attached to the rim joist in accordance with Figure 26. As shown in Figure 26, hold-down anchors must be installed to attach the guard post and rim joist to the

deck joists. There shall be a minimum of two 1/2" diameter bolts at the hold-down anchors' attachment to the joist. Only hold-down anchor models meeting these minimum requirements shall be used.

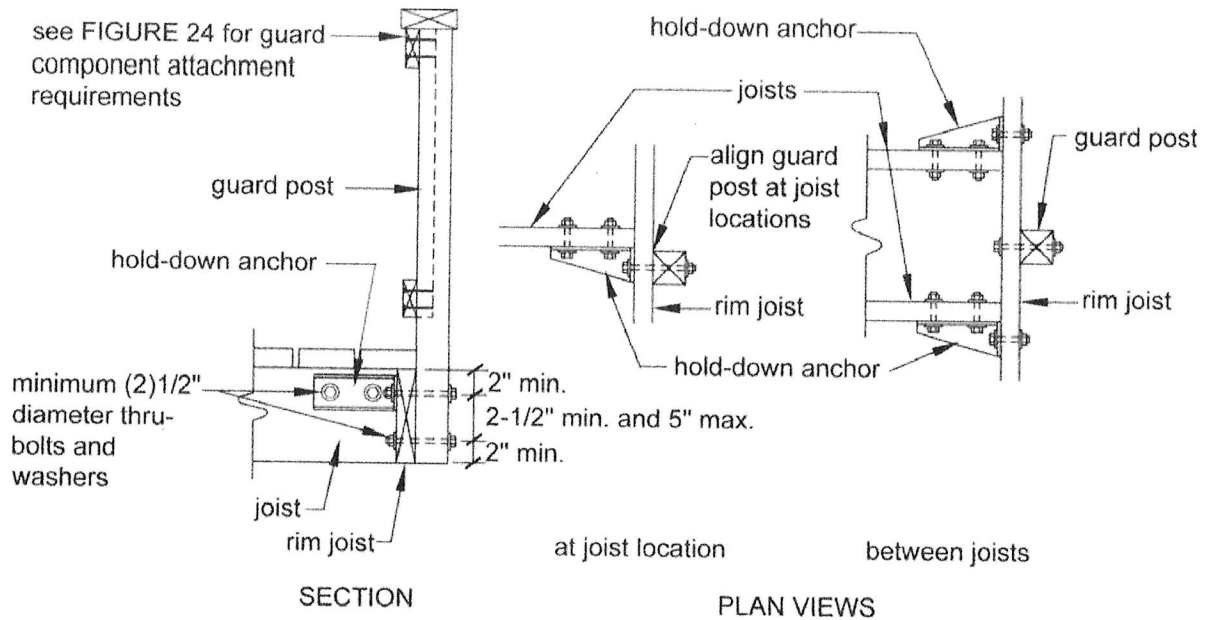
Continued reverse side



STAIR HANDOUTS

RESIDENTIAL DECKS, EXITS AND GUARDRAILS

Figure 26: Guard Post to Rim Joist Example



SECTION R312

Guards shall be located along open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches measured vertically to the floor or grade below at any point within 36 inches horizontally to the edge of the open side.