

Township of Derry



Dauphin County, Pennsylvania

Residential Guardrail and Stair Details
Submittal Guide and Construction Fact Sheet



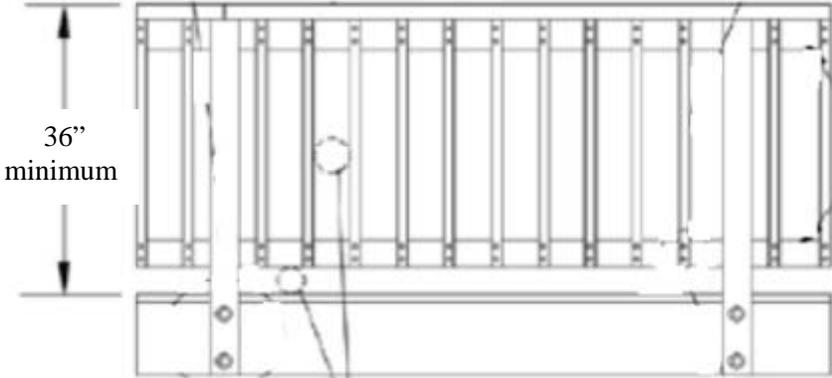
The text and illustrations included in this guide represent tables and illustrations from the 2009 International Residential Code and the opinions of the Township of Derry Community Development Department. This guide is for information purposes and should not be misconstrued as a full and complete interpretation of the Building Code.

GUARDRAIL REQUIREMENTS

2009 IRC

- **Table 301.5** Guardrails shall have a minimum uniformly distributed live load of 200 pounds, at a single concentrated load applied in any direction at any point along the top.
- **312.1 Where required.** 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. Insect screening shall not be considered as a guard.
- **312.2 Height.** Required guards at open sided walking surfaces, including stairs, porches, balconies or landings, shall not be less than 36 inches high measured vertically above the adjacent walking surface, adjacent fixed seating or the line connecting the leading edges of the treads.
 - **Exceptions:**
 1. Guards on the open sides of stairs shall have a height not less than 34 inches measured vertically from a line connecting the leading edges of the treads.
 2. Where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall not be less than 34 inches and not more than 38 inches measured vertically from a line connecting the leading edges of the treads.
- **312.3 Opening limitations.** Required guards shall not have openings from the walking surface to the required guard height, which allow passage of a sphere 4 inches in diameter.
 - **Exceptions:**
 1. The triangular openings at the open side of a stair, formed by the riser, tread and bottom rail of a guard, shall not allow passage of a sphere 6 inches in diameter.
 2. Guards on the open sides of stairs shall not have openings, which allow passage of a sphere 4 3/8 inches in diameter.
- **312.4 Exterior wood plastic composite guards.** Wood plastic composite guards shall comply with the provisions of Section 317.4
- **317.4 Wood/plastic composites.** Wood/plastic composites used in exterior deck boards, stair treads, handrails and guardrail systems shall bear a label indicating the required performance levels and demonstrating compliance with the provisions of ASTM D 7032.

GUARDRAIL DETAILS

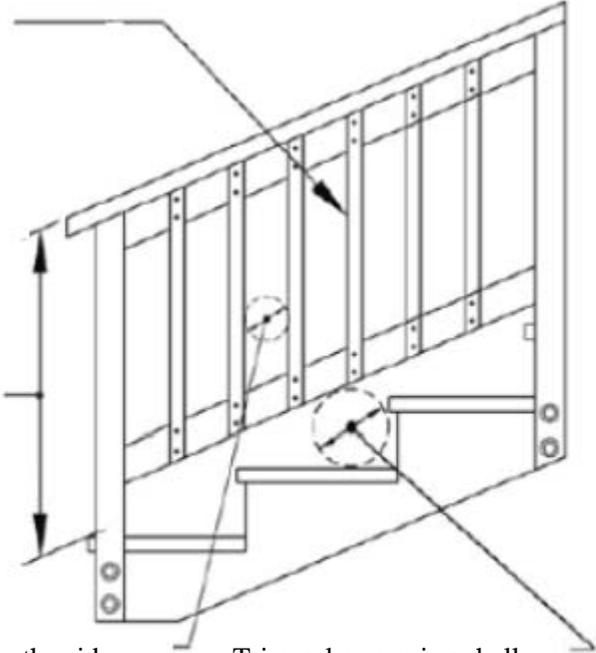


Opening shall not allow the passage
Of a 4" diameter sphere

STAIR DETAILS

Stair guard is required for
stairs with a total rise of
30" or more; see GUARD
REQUIREMENTS for
more information

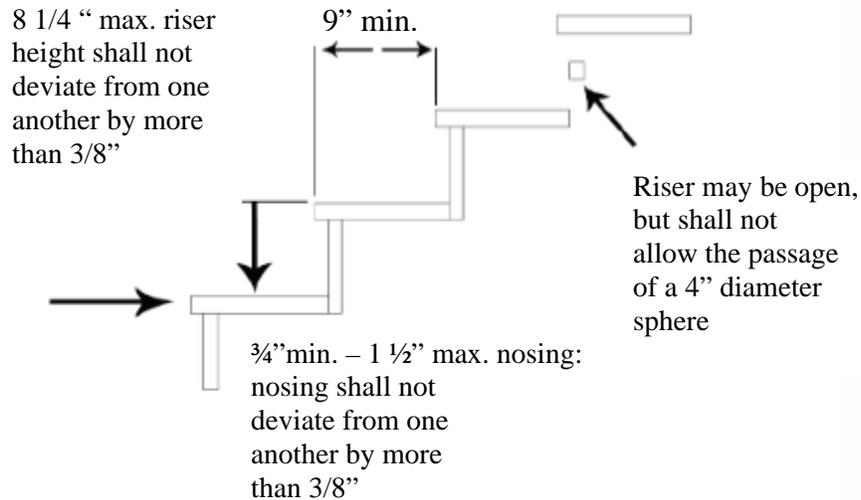
Stair guard height 34"
min. measured from
nosing of step



Openings for required guards on the sides
of stair treads shall not allow a sphere
4-3/8" to pass through.

Triangular opening shall
not permit the passage of
a 6" diameter sphere

STAIR DETAILS (Continued)



The following are UCC amendments under Section 403.21(6)(A) thru (F) made to the International Residential Code for stair requirements.

- The maximum riser height is 8 ¼ inches. There may be no more than a 3/8-inch variation in riser height within a flight of stairs. The riser height is to be measured vertically between leading edges of the adjacent treads.
- The minimum tread depth is 9 inches measured from tread nosing to tread nosing.
- The greatest tread depth within any flight of stairs may not exceed the smallest by more than 3/8 inch.
- All treads may have a uniform projection of not more than 1 ½ inches when solid risers are used.
- Stairways may not be less than 3 feet in clear width and clear headroom of 6 feet 8 inches shall be maintained for the entire run of the stair.
- Handrails may project from each side of a stairway a distance of 3 ½ inches into the required width of the stair.