





LOFT PLAN SCALE1/8"=1'

Notes 1. All measurements are to be field verified. 2. All work shall meet any and all applicable codes.







R311.7 Stairways. R311.7.1 Width.

elow the required headroom HEIGHT Handrails shall not runners roject more than 41/2 inches (114 mm) on either side of the **§R311.7.5.1 Risers**. tairway and the clear width of the stairway at and below the The riser height shall be not more than 8 1/4 inches (209 e less than 31 1/2 inches (787 mm) where a handrail is stalled on one side and 27 inches (698 mm) where andrails are provided on both sides.

xception: The width of spiral stairways shall be in ccordance with Section R311.7.10.1.

R311.7.2 Headroom.

he headroom in stairways shall be not less than 6 feet 8 ches (202 mm) measured vertically from the sloped line djoining the tread nosing or from the floor surface of the anding or platform on that portion of the stairway. xceptions:

Where the nosings of treads at the side of a flight extend nder the edge of a floor opening through which the stair asses, the floor opening shall be allowed to project orizontally into the required headroom not more than 3/4inches (121 mm).

vith Section R311.7.10.1.

R311.7.3 Vertical rise.

ches (3734 mm) between floor levels or landings. R311.7.4 Walkline.

urved direction of travel through the turn and located 12 ches (305 mm) from the side where the winders are arrower. The 12-inch (305 mm) dimension shall be heasured from the widest point of the clear stair width at the projection shall not exceed the smallest nosing projection by continuous transition between flights, transitions at winder valking surface of the winder. If winders are adjacent djacent winders shall be used.

§R311.7.5 Stair treads and risers.

Stair treads and risers shall meet the requirements of this tairways shall be not less than 36 inches (914 mm) in clear section. For the purposes of this section, dimensions and width at all points above the permitted handrail height and dimensioned surfaces shall be exclusive of carpets, rugs or Plastic composite exterior stair treads shall comply with the Handrail ends shall be returned or shall terminate in newel

andrail height, including treads and landings, shall be not mm). The riser shall be measured vertically between leading each stairway. The width perpendicular to the direction of edges of the adjacent The greatest riser height within any travel shall be not less than the width of the flight served. inch (9.5 mm). Risers shall be vertical or sloped from the underside of the nosing of the tread above

> vertical. Open risers are permitted provided that the openings located more than 30 inches (762 mm), as

the passage of a 4-inch-diameter (102 mm) sphere. Exceptions:

1. The opening between adjacent treads is not limited on spiral stairways.

with Section R311.7.10.1.

§R311.7.5.2 Treads.

The tread depth shall be not less than 9 inches (229 mm). Handrails shall be provided on not less than one side of each2. Type II. Handrails with a perimeter greater than 61/4inches . The headroom for spiral stairways shall be in accordance The tread depth shall be measured horizontally between the continuous run of treads or flight with four or more risers. vertical planes of the foremost projection of adjacent treads §R311.7.8.1 Height.

> smallest by more than 3/8 inch (9.5 mm). §R311.7.5.3 Nosings.

he walkline across winder treads shall be concentric to the The radius of curvature at the nosing shall be not greater than $\frac{9}{16}$ inch (14 mm). A nosing projection not less than 3/4 inch (19 mm) and not more than 11/4 inches (32 mm) shall allowed over the lowest tread. be provided on stairways with solid The greatest nosing

more than 3/8 inch (9.5 mm) between two stories, including treads, the transition from handrail to guard, or used at the less than 0.01 inch (0.25 mm). within the flight, the point of the widest clear stair width of the the nosing at the level of floors and landings. Beveling of

nosings shall not exceed 1/2 inch (12.7 mm).

Exception: A nosing projection is not required where the tread depth is not less than 11 inches (279 mm). §R311.7.5.4 Exterior plastic composite stair treads. provisions of this section and Section R507.3. §R311.7.6 Landings for stairways.

There shall be a floor or landing at the top and bottom of flight of stairs shall not exceed the smallest by more than 3/8Landings of shapes other than square or rectangular shall bepost at the turn. permitted provided that the depth at the walk line and the 2. The use of a volute, turnout, starting easing or starting total area is not less than that of a quarter circle with a radiusnewel shall be allowed over the lowest tread. at an angle not more than 30 degrees (0.51 rad) from the equal to the required landing width. Where the stairway has **§R311.7.8.3 Grip-size**. a straight run, the depth in the direction of travel shall be not Required handrails shall be of one of the following types or less than 36 inches (914 mm).

> interior flight of stairs, including stairs in an enclosed garage, an outside diameter of not less than 11/4 inches (32 mm) provided that a door does not swing over the stairs. §R311.7.7 Stairway walking surface.

2. The riser height of spiral stairways shall be in accordance be sloped not steeper than one unit vertical in 48 inches horizontal (2-percent Slope). §R311.7.8 Handrails

and at a right angle to the tread's leading edge. The greatest Handrail height, measured vertically from the sloped plane distance of 3/4inch (19 mm) measured vertically from the shall be not less than 34 inches (864 mm) and not more thanthan 5/16 inch (8 mm) within 7/8inch (22 mm) below the 38 inches (965 mm). Exceptions:

1. The use of a volute, turnout or starting easing shall be

2. Where handrail fittings or bendings are used to provide start of a flight, the handrail height at the fittings or bendings §R311.7.8.4 Exterior plastic composite handrails. shall be permitted to exceed 38 inches (956 mm). §R311.7.8.2 Continuity.

Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 11/2 inches (38 mm) between the wall and the handrails.

Exceptions:

1. Handrails shall be permitted to be interrupted by a newel

provide equivalent graspability.

measured vertically, to the floor or grade below do not permit Exception: A floor or landing is not required at the top of an 1. Type I. Handrails with a circular cross section shall have and not greater than 2 inches (51 mm). If the handrail is not circular, it shall have a perimeter dimension of not less than The walking surface of treads and landings of stairways shall4 inches (102 mm) and not greater than 61/4 inches (160 mm) with a cross section of dimension of not more than 21/4 inches (57 mm). Edges shall have a radius of not less than

0.01 inch (0.25 mm).

(160 mm) shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within a flight of stairs shall not have a vertical rise larger than 147 tread depth within any flight of stairs shall not exceed the 👘 adjoining the tread nosing, or finish surface of ramp slope, 🛛 tallest portion of the profile and achieve a depth of not less widest portion of the profile. This required depth shall continue for not less than 3/8 inch (10 mm) to a level that is not less than 13/4 inches (45 mm) below the tallest portion of the profile. The width of the handrail above the recess shall be not less than 11/4 inches (32 mm) and not more than 23/4 inches (70 mm). Edges shall have a radius of not

> Plastic composite exterior handrails shall comply with the requirements of Section R507.3.

§R312: GUARDS AND WINDOW FALL PROTECTION

§R312.1 Guards.

Guards shall be provided in accordance with Sections R312.1.1 through R312.1.4.

§R312.1.1 Where required.

Guards shall be located along open-sided walking surfaces, §R312.1.4 Exterior plastic composite guards. including stairs, ramps and landings, that are located more Plastic composite exterior guards shall comply with the than 30 inches (762 measured vertically to the floor or grade requirements of Section R317.4. below at any point within 36 inches (914 mm) horizontally to §R312.2 Window fall protection. the edge of the open side. Insect screening shall not be considered as a guard.

§R312.1.2 Height.

Required guards at open-sided walking surfaces, including In dwelling units, where the top of the sill of an operable stairs, porches, balconies or landings, shall be not less than window opening is located less than 24 inches (610 mm) 36 inches (914 mm) in height as measured vertically above above the finished floor and greater than 72 inches (1829 the adjacent walking surface or the line connecting the leading edges of the treads. Exceptions:

1. Guards on the open sides of stairs shall have a height not 1. Operable windows with openings that will not allow a less than 34 inches (864 mm) measured vertically from a line 4-inch-diameter (102 mm) sphere to pass through the connecting the leading edges of the treads.

open sides of stairs, the top of the guard shall be not less prevention devices that comply with ASTM F 2090. mm) as measured vertically from a line connecting the

leading edges of the treads. §R312.1.3 Opening limitations.

Required guards shall not have openings from the walking 2090. The window opening control device, after operation to surface to the required guard height that allow passage of a release the control device allowing the window to fully open, sphere 4 inches (102 mm) in diameter.

1. The triangular openings at the open side of stair, formed by the riser, tread and bottom rail of a guard, shall not allow passage of a sphere 6 inches (153 mm) in diameter. 2. Guards on the open side of stairs shall not have openings that allow passage of a sphere 43/8 inches (111 mm) in diameter

Exceptions:

Window fall protection shall be provided in accordance with Sections R312.2.1 and R312.2.2. §R312.2.1 Window sills.

mm) above the finished grade or other surface below on the exterior of the building, the operable window shall comply with one of the following:

opening where the opening is in its largest opened position.

2. Where the top of the guard serves as a handrail on the 2. Operable windows that are provided with window fall than 34 inches (864 mm) and not more than 38 inches (965 3. Operable windows that are provided with window opening

control devices that comply with Section R312.2.2. §R312.2.2 Window opening control devices.

Window opening control devices shall comply with ASTM F shall not reduce the net clear opening area of the window unit to less than the area required by Section R310.2.1.



