

2009 IRC DECK INFORMATION

Required Technical Information for Application

1. Submit 2 copies of the plot plan showing the proposed deck and distances to the side, rear and front property lines and location of and distances to all components of the septic system. Show all existing structures.
2. Submit 2 sets of detailed scaled drawings. All drawings should indicate the owners name, address of job site and PIN. Drawings shall be neat and of sufficient detail to check for building code compliance.

Samples of Construction Details

Footings

The footing (footer) shall be a minimum of 12 inches in diameter and at a depth which is below the frost level. In this area the frost level is considered to be 42 inches below existing grade.

All concrete shall be a minimum of 2500 psi. The holes for the footing shall be dry and free of mud and organic debris at the time of inspection.

Lumber

All lumber used in the construction of the deck shall be pressure treated or be of natural decay resistant wood (heartwood of redwood, black walnut or cedar).

Metal Connectors

The following are the locations and model number of the metal connectors to be used. The examples shown are Simpson connectors. Any approved metal connector may be used. Toenail or nails subject to withdrawal are not acceptable.

- 1 Post to Footing.....Simpson ABE44 or Equal
- 2 Post to Girder.....Simpson LPC4 or Equal
- 3 Joist to Girder.....Simpson H3 or Equal
- 4 Joist to Ledger Board.....Simpson LU210 or Equal

Girder Sizing

Joints and splices must be directly above the support columns.

Max. Clear Span for:	One Story	Two Stories
2-2 x 6	4' 8"	4' 0"
3-2 x 6	6' 0"	5' 2"
2-2 x 8	5' 11"	5' 0"
3-2 x 8	7' 5"	6' 5"
2-2 x 10	7' 3"	6' 4"
3-2 x 10	9' 1"	7' 8"
2-2 x 12	8' 5"	7' 11"
3-2 x 12	10' 7"	9' 2"

Floor Joist Sizing

Values given are for 40# live load using SPF #2.

Joist Size	Clear Span for Joist Spacing of:		
	12"	16"	24"
2 x 6	10' 3"	9' 1"	7' 9"
2 x 8	13' 3"	11' 6"	10' 0"
2 x 10	16' 3"	14' 1"	12' 0"
2 x 12	18' 10"	16' 3"	14' 0"

Cantilever

Backspan to cantilever ratio must not exceed 2:1

Solid blocking shall be provided at the cantilever support

Joist Size	Joist Spacing		
	12"	16"	24"
2 x 8	39"	34"	N/A
2 x 10	57"	49"	40"
2 x 12	N/A	67"	54"

Ledger

Board against the house securely attached in accordance with 2009 IRC Table R502.2.2.2.1.

Deck lateral load connection must be provided per 2009 IRC R502.2.2.3.

Flashing

Provide continuous corrosion-resistive flashing along the ledger in such a manner as to prevent the passage of moisture into the wall, untreated wood or siding. **Exception:** Not required if against vinyl siding, metal siding or masonry. In this case provide shims as not to crush the siding when bolts are tightened.

Guardrails

On decks with surfaces greater than 30 inches from grade within 36" horizontally to the edge of the open side guardrails must be installed to a height of 36 inches. The railing system must not be capable of allowing a 4" sphere to pass. Open sides of stairs with a rise greater than 30 inches shall have guards not less than 34 inches and the opening between rails must not exceed 4 $\frac{3}{8}$ inches. The guardrail system must be capable of resisting a 200# thrust at any point. Triangular openings at riser, tread and bottom rail must not allow a 6 inch sphere to pass.

Stairs

Minimum width is 36 inches

Maximum riser height is 8 $\frac{1}{4}$ inches

Minimum tread is 9 inches

When solid risers are used a nosing of $\frac{3}{4}$ to 1 $\frac{1}{2}$ inches is required. No nosing is required if treads are 11 inches or greater. Open risers must not allow a 4 inch sphere to pass. **Dimensional Uniformity:** There shall not be a variation greater than $\frac{3}{8}$ inches between adjacent treads nor in the entire run. The greatest difference in treads may not exceed $\frac{3}{8}$ inches.

Handrails

All stairs with 4 or more risers require a **graspable** handrail the entire length. Handrails having a circular cross section shall have an outside diameter of at least 1 ¼ inches and not more than 2 inches.

Note: 2x 4's on the flat and 2x on edge are not acceptable substitutions. The clear space between the handrail and wall shall be 1 ½ inches minimum. The height of the handrail shall be 34 inches minimum and 38 inches maximum measured from the nosing.

Lateral Bracing

Decks with a floor surface greater than 7 feet above grade or detached from the structure shall be braced diagonally between girder and posts.

Connectors

All connectors, nails, screws bolts and related hardware shall be hot-dipped zinc-coated (galvanized), stainless steel silicon bronze, copper or other corrosion resistant material.

Inspections

- 1 The bottom of footings prior to placement of concrete
- 2 Framing – before covering with decking
- 3 Final – prior to occupancy application