



DECK & PORCH INFORMATION

Basic Required Technical Information for Application

*Not all inclusive, Consult IRC and DCA-6 Manual for compliant construction

- 1) Submit 3 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 on the property.
- 2) Submit 3 sets of detailed scaled drawings. All drawings should indicate the owners name and address of job site. Drawings shall be neat and of sufficient detail to check for building code compliance.
- 3) Decks with additional loads such as brick pavers or hot-tubs, spas must be submitted by a licensed architect or engineer.

Footings and Piers

The footing (footer) shall be a minimum of 13"x13" or 15-inches in diameter for round tube forms and at a depth which is below the frost level. Width of footer is dependent on tributary load and may have to be larger. In this area the frost level is considered to be 36-inches below existing grade to the top of the footer. Consult R403 of the IRC and utilize Table 4 of the DCA-6 manual for uncovered decks.

Roof loads are in addition to the deck load for covered decks/porches and are to be calculated separately and submitted for verification. Roof loads are 40 PSF ground snow and 10 PSF for dead load for regular asphalt shingles or lightweight metal roofs.

The footing can also be 8 inches of concrete placed in the bottom of the 42 inch deep hole. The post would extend from the top of the concrete to the bottom of the girder. The backfill material must be well compacted around the post.

All concrete shall be a minimum of 3,000 psi if exposed and 2,500 psi if not. The holes for the footing shall be dry and free of mud and organic debris at the time of inspection. All concrete must be wet mixed.

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. All connectors must be hot dipped galvanized.

- Post to Footing.....Simpson AB or Equal
- Post to Girder.....Simpson LPC or Equal
- Joist to Girder.....Simpson H2.5 or Equal
- Joist to Ledger Board.....Simpson LUS or Equal
- Joist to Ledger Tie Back.....Simpson DTT2Z or Equal
- Rail Post to Frame.....Simpson HD2A or Equal
- Stair Stringer to Frame.....Simpson LSC7 or Equal

Girder Sizing

Joints and splices must be directly above the support columns. All values used are for #2 So. Yellow Pine. Must Utilize Table 3 of the DCA-6 Manual.

Floor Joist Sizing

Values given are for 40# live load using #2 So. Yellow Pine. Must utilize Table 2 of the DCA-6 Manual.

Cantilever

Refer to DCA-6 Manual and Table 2.

Ledger

Board against the house securely attached with ½” diameter galvanized lag screws of sufficient length (typ. 4”) to bolt firmly into rim joist or engineered fasteners designed for that use. Provide galvanized washers between heads of bolts/screws and wood. Refer to IRC 502 for pattern.

Flashing

Provide continuous corrosion-resistive flashing behind and over the top of the ledger in such a manner as to prevent the passage of moisture into the wall, untreated wood or siding.

Guardrails

On decks with surfaces greater than 30 inches guardrails must be installed to a minimum 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 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 ¼ inches.

Minimum tread is 9 inches.

When solid risers are used a nosing of ¾ to 1 ½ 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 3/8 inches between adjacent treads nor in the entire run. The greatest difference in treads may not exceed 3/8 inches. A landing is required the same width as the stairs and for 3-feet outward in the direction of travel.

Handrails

All stairs with 3 or more risers require a **graspable** handrail the entire length. All handrails shall have a circular cross section and have an outside diameter of at least 1 ¼ inches and not more than 2 5/8 inches or be of equivalent graspability. **Note:** 2 x 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. Handrail ends must not be open.

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

- The bottom of footings prior to placement of concrete
- Ledger board flashing
- Framing- before covering with decking
- Final- prior to occupancy application

Please take note that the span tables in the IRC are for dry application only and do not apply to lumber in wet locations. Use of the DCA-6 manual is required. This manual is provided electronically free of charge by the American Wood Council (AWC) and the American Forest & Paper Association, Inc. (AF&PA).

For a free copy of the DCA6 Manual go to:

WWW.AWC.ORG/PUBLICATIONS/DCA/DCA6/DCA6-09.PDF