



Decks -State Building Code Requirements

Permit: A building permit is required. Homeowners may do their own work. Contractors shall be state licensed. Cost of the permit is based on project value, and determined by using the Residential Building Permit Fee schedule.

Plans: Deck plans shall show the following:

Size and depth of footing	Size of beams	Height and design of guardrail
Type of footing forms	Size and spacing of joists	Size of deck
Size and spacing of posts	Type of floor boards	Distance to property lines
Type of lumber	Height of deck off ground	Plans shall be 8 ½ x 11, or 11x17

Footings: Shall be at least 42 inches deep by 8 inch diameter. Footing forms shall be cardboard tubes. Deck footings are subject to frost heave. Deeper footings and footings wider at the bottom will help prevent frost heave.

Treated Wood: All wooden members of decks shall be treated or rot resistant wood, such as redwood or cedar.

Posts: Shall be anchored to prevent movement. See additional post requirements at the bottom of following page.

Beams: Beam end joints and splices shall be made over posts. Beams bolted to posts shall have at least two ½ inch carriage bolts, staggered on each post.

Ledger: Ledger boards shall be bolted to solid material such as 2x10 rim joist, floor trusses, sill plate, top plates, etc. Materials not acceptable to bolt into include: Manufactured I joists. Foam filled rim joists. Wall sheathing. Bolt ledger with a minimum of ¾ inch bolts spaced 16 inch on center, staggered top and bottom. Flashing is required where the deck ledger board is attached to the house.

Cantilever: Cantilevered areas, a boxed out area or bay usually with a patio door, will not support a deck. Double the joists around the cantilever area to make the deck self supporting. See diagram.

Joist hangers: Joist hangers are required wherever joists do not have at least 1½ inch of bearing. Joist hangers shall be of proper size (i.e. 2x8 joists require 2x8 joist hangers). Joist hangers require one nail per nailing hole. Stainless steel or hot-dip galvanized connectors and fasteners are required with treated wood. Electroplated galvanized fasteners are not acceptable.

Guardrail: Decks more than 30 inches off grade require a guardrail at least 36 inches high, built so that a 4 inch object cannot pass through.

Stairs: The maximum rise on stairs is 7¾ inch. Maximum opening in risers is 4 inches. The greatest riser height shall not exceed the smallest by more than ¾ inch. Special attention should be given to make sure the top and bottom riser heights are correct. The minimum run is 10 inches. All runs shall be equal.

Handrails: Continuous handrails are required for 4 or more stair risers. Handrails shall be 34-38 inches above the tread nosing. The handgrip portion of handrails shall be 1 ¼ - 2 inches wide and in a shape that is easy to grip firmly. The ends of the handrail shall be returned to a wall or end in safety terminals to avoid the possibility of catching loose clothing. Stairs to decks more than 30 inches above grade require guardrails built so that a 4¾ inch object cannot pass through.

Escape Windows: There shall be a minimum of 36 inch clear height over basement escape windows.

Inspections: Call for footing inspection after footing holes are dug, before pouring concrete. Footing holes shall not contain loose soil or water. Call for final inspection when deck is complete.

Call before you dig: Contact Gopher State One Call excavation notification center at 651-454-0002. <http://www.gopherstateonecall.org/contact-us> to locate utilities. All utility lines will be located free of charge.

Future Porch: Future porch additions on the deck require additional structural design and additional distance or setbacks to the property lines. Typical porch footings are up to 24 inch diameter and up to 60 inches deep. 8x42 inch footings will not work on a porch. Beams should be located under future wall locations and sized to carry the wall and roof loads. It is recommended that future porch plans be submitted with the deck plans for review.

Completion Date: Decks must be completed within six months of issuance of the permit.

While not all inclusive, this information and illustrations should be used as a general guide to meeting the minimum standards of the building code. Diagrams are for illustrative purposes only. Other designs that meet the code are also acceptable.

Supplement to Deck Permit Application

Plans and all of the following information are required with deck permit applications.

- Size and depth of footing _____
- Type and size of footing forms, such as 8 inch cardboard tubes _____

- Size and spacing of posts _____

- Type of lumber _____
- Size of beams (2 - 2 x 10) _____
- Size and spacing of joists. Location of double joists _____

- Is the deck to be built around a cantilevered area (a boxed out area or bay usually with a patio door)? Yes _____ No _____
If yes, how will joists be supported? _____

- Type of floor boards _____

- Height of deck off ground _____
- Height and design of guardrail _____
- Size of deck _____
- Distance to property lines: Side 1 _____
Side 2 _____
Rear _____
Other _____
- Estimated Completion Date: _____

All decks must be completed within six (6) months of issuance of the permit.

Posts must be centered on the concrete pier over the footing and securely fastened to the concrete so as to resist both uplift and lateral displacement. R502.2 Splices in beams must be centered over posts. Beams made of 2x10 (or larger) materials require 3 - ½ inch diameter bolts connecting the beam to the posts. 2x8 (or smaller material) beams require 2 - ½ inch diameter bolts. Beams setting atop posts must be fully anchored with appropriate fasteners to resist uplift and lateral displacement. Each joist must be connected to the beam with the proper fastening criteria using either nails or "hurricane clips". BEAM MEMBERS SHOULD BE NAILED TOGETHER ACCORDING TO CODE SPECIFICATIONS. R602.3 SPLIT BEAM ATTACHMENT TO POSTS IS NOT ACCEPTABLE AND WILL REQUIRE ADDITIONAL MEANS OF SUPPORT FOR THE BEAM. 6-1/2 foot needs 6x6 posts.