

# Basic Residential Deck

## Building Permit is Required

The structural requirements will depend on the size of the deck you plan to build. The size of the framing members will be determined by this. Guardrails on the deck and steps will largely depend on how high the finished deck is above final grade.

1. A building permit is required prior to starting any work. If you decide to proceed with this project, please contact our office to make an appointment to obtain a building permit. You will need a “plot” plan or sketch indicating the location of the deck in relation to your house and to the location on the lot. Decks with roof structures have to comply with all setback requirements related to your building and property. You should receive an inspection schedule when you obtain your permit. This will help you in scheduling inspections for your project.
2. When fastening a deck to a house, the deck cannot be simply fastened to the brick veneer on the house. It is to be fastened to the structural components of the house. Brick is a veneer and is non-structural.
3. Decks shall be supported on concrete footings or other approved structural systems designed to accommodate all loads in accordance with Section 301 of the International Residential Code. The minimum size of concrete footings shall be in accordance with Table R507.3.1, based on the tributary area and allowable soil-bearing pressure in accordance with Table R401.4.1. Deck footings shall extend below the frost line specified in Table R301.2(1) in accordance with Section R403.1.4.1. We will do an inspection of pier footings **BEFORE** concrete is placed, just as in all other footings.
4. Frequency of piers/posts will be determined by the size and span of the band/header boards of the deck along with the tributary loading factors of the floor system.
5. Maximum spans of floor joists will be determined by the size and species of lumber used for such joists.
6. Guardrails will be required if in any area the deck is more than 30 inches above finished grade (average measured at a point not more than 3 feet from the structure). Guardrails are to be a minimum of 36 inches in height from the decking with intermediates (spindles, etc.) spaced so that a 4-inch sphere cannot pass between them. Steps serving a deck more than 30 inches in height will require guardrails on open sides of steps. In addition, a “graspable handrail” shall be located between 34 and 38 inches above the leading edge of the treads.
7. If the deck is less than 30 inches above finished grade, rails are at your discretion. However, if it requires more than 4-risers (steps) to get onto the deck, a graspable handrail shall be required on at least one side of the steps, mounted between 34 and 38 inches above the leading edge of the treads. (Handrails are graspable rails used for stability when ascending or descending steps). Intermediates (spindles, etc.) are not required for handrails, while they are a vital part of guardrails.
8. Steps are to be designed and installed so that the rise of the treads does not exceed  $7\frac{3}{4}$  inches and the tread width is NOT less than 10 inches measured from nose to nose. All steps are to be uniform in tread and rise. Tread nosings shall not exceed  $1\frac{1}{4}$  inches.

