



FOOTING REINFORCEMENT

All continuous concrete foundations and footings require steel reinforcement to minimize differential settlement. For slabs on grade with monolithically cast footings, there shall be one #4 (½" diameter) continuous deformed steel reinforcement bar at the top and bottom of the footing. Please note that reinforcing steel must be placed so that it is at least 1½ inches from any soil (see Figures A and B following).

TIES BETWEEN OLD AND NEW CONCRETE

New concrete slabs cast up against existing concrete footings or other slabs shall be positively attached to one another by installing #4 dowels at 24 inches on center. For concrete footings, two dowels shall be installed—one near the top of the footing and the other near the bottom. The dowels shall be “glued” into the existing concrete a minimum of 6 inches using epoxy specifically made for anchoring bolts. The drilling, cleaning, and installation of the epoxy shall be done in conformance with the epoxy manufacturer’s printed instructions. The epoxy is made by a number of manufacturers, including Simpson Strong Tie, and can be obtained at most hardware stores (see Figures E and F following).

ANCHOR BOLTS

All wood sill plates shall be positively attached to concrete foundations with 5/8" diameter anchor bolts spaced no more than six feet (6') on center. Bolts shall extend into the concrete at least seven inches (7"). Each bolt shall have a two inch square, 3/16" thick steel washer installed under the bolt nut. (This is a new requirement. The previous codes allowed thin round washers. However, experience gained from past earthquakes showed that thin round washers could fail.) (See Figure C following.)

POWER-DRIVEN NAILS

Power-driven nails cannot be used to secure sill plates on exterior walls or any interior wall used to resist earthquake forces. They may be used only on interior nonstructural partitions.

If power-driven nails are used, they shall be installed per the manufacturer’s printed instructions. Such instructions shall be approved by the International Conference of Building Officials.

RAISED WOOD FRAMED FLOORS

Continuous footings for raised wood framed floor systems shall have one #4 (½" diameter) continuous deformed steel reinforcement bar at the top and bottom of the footing. Small interior piers need not be reinforced. The floor girders shall extend and be attached to perimeter foundation walls using factory made sheet metal beam hangers. All interior pier posts and footings shall be tied together using factory sheet metal post caps and bases. Toe nailing of pier posts to girders or pier blocks is not a code acceptable method of attachment (see Figures B and D following).

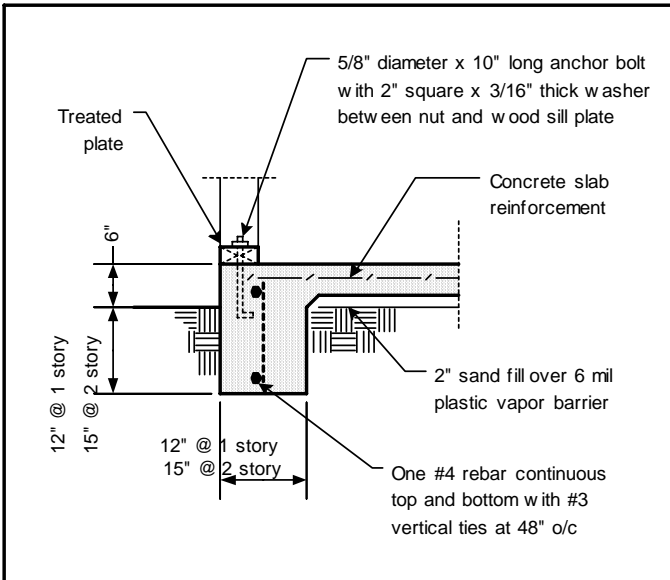


Figure A
Typical Footing - Concrete Floor

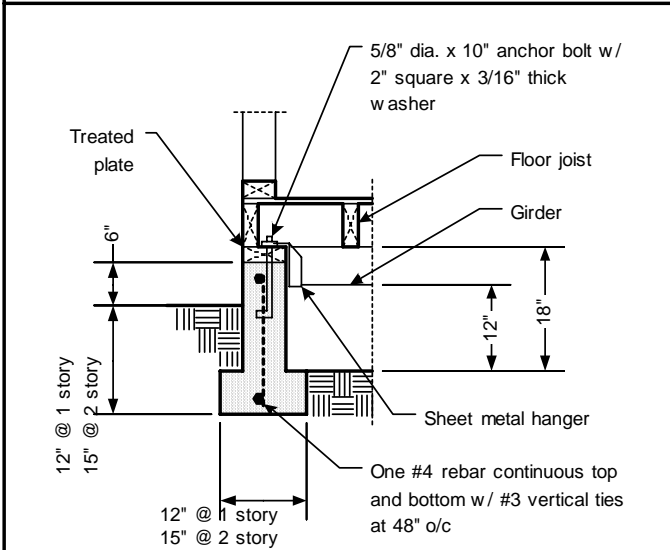


Figure B
Typical Footing - Raised Wood Floor

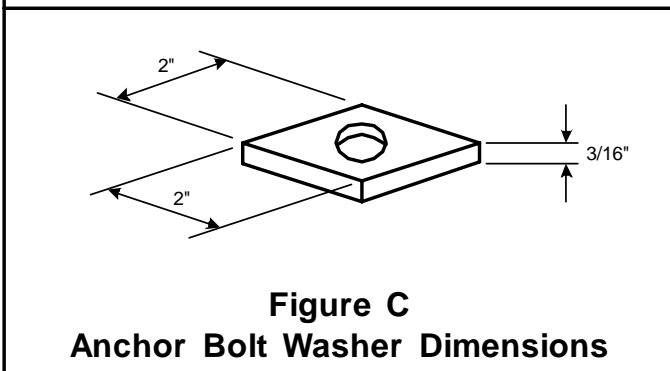


Figure C
Anchor Bolt Washer Dimensions

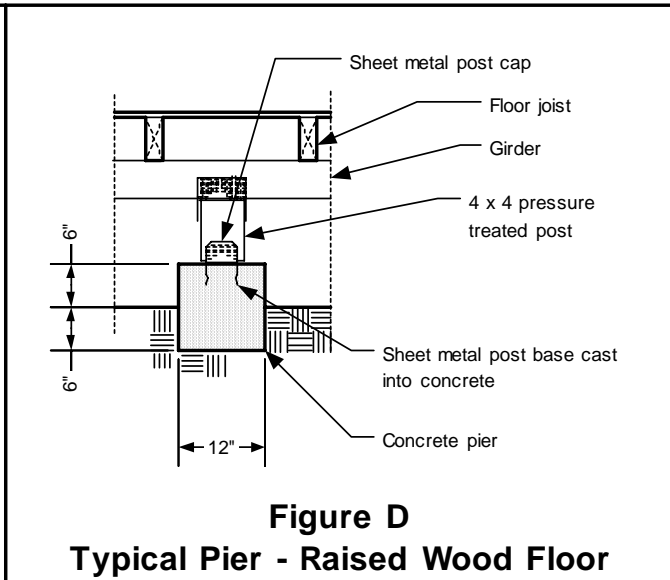


Figure D
Typical Pier - Raised Wood Floor

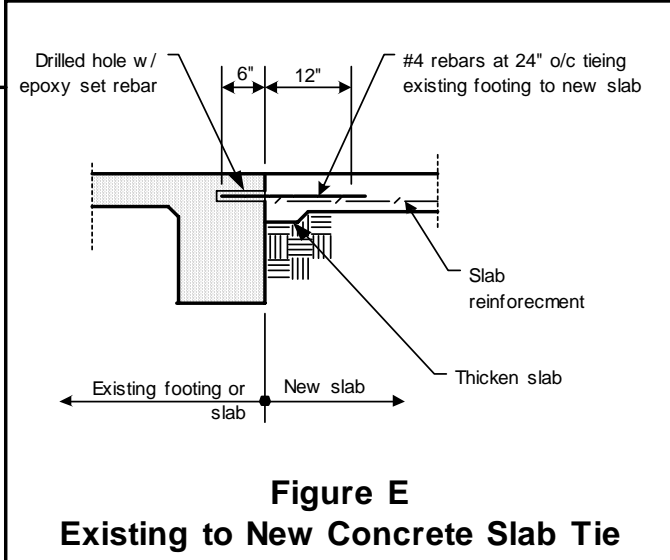


Figure E
Existing to New Concrete Slab Tie

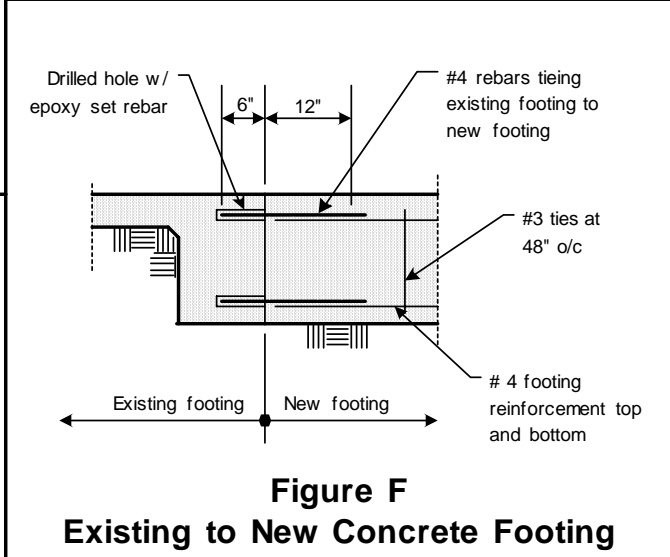


Figure F
Existing to New Concrete Footing