



BUILDING CODE MANUAL

1804.1
Article 1
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FOUNDATION REQUIREMENTS ON EXPANSIVE SOILS

One and Two Story R-3 Dwellings

Foundation systems on expansive soils shall be designed and constructed in a manner that will minimize damage to the structure from movement of the soil. Slab-on-grade and mat-type footings for structures located on expansive soils may be designed in accordance with Los Angeles County Building Code Section 1815 Division III or such other engineering design based on geotechnical report as approved by Building and Safety Division. When such approved design and methods of construction are not provided, the prescriptive requirements listed below may be used:

1. Depth of foundations below the natural and finish grades shall not be less than 24 inches for exterior (610mm) and 18 inches (457mm) for interior footings.
2. Exterior walls and interior bearing walls shall be supported on continuous foundations.
3. Foundations shall be reinforced with at least four continuous one-half-inch diameter deformed reinforcing bars. Two bars shall be placed within 4 inches of the bottom of the foundation and two within 4 inches of the top of the foundation.
4. Concrete floor slabs on grade shall be cast on two layers of a 2-inch fill of sand and a moisture barrier membrane sandwiched between the two layers of fill. The slabs shall be at least 3-1/2 inches thick and shall be reinforced with welded wire mesh or deformed reinforcing bars. Welded wire mesh shall have a cross-sectional area of not less than 5/100-square-inch per foot, each way(6x6-W2.9XW2.9). Reinforcing bars shall have a diameter of not less than 3/8-inch and be spaced at intervals not exceeding 24 inches each way.
5. The soil below an interior concrete slab shall be saturated with moisture to a depth of 18 inches prior to casting the concrete .
6. Provide No. 3 dowels at 24 inches o.c. bent 2 feet into slab and 1 foot into footing. Dowels may be omitted when slab is a "mono-pour" or designed as an independent "floating slab".

Tract Homes Subdivisions, Residential (R-1, R-2, R-6) & Non-Residential Type Structures

A soil report is required and must include a determination of the expansive qualities of the soil, expansion index value, and specific design and construction recommendations for the foundation system to be approved by Building and Safety Division.

RECOMMENDED BY:

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