AMENDMENT NUMBER: Structural 3

APPROVAL DATE: August 8, 2013

SUBJECT: Proposed amendment to CRC to prohibit plain concrete continuous footings without longitudinal reinforcing in Seismic Design Categories D₀, D₁ and D₂

This amendment is developed by the Tri-chapter Uniform Code Committee and is intended to enhance regional consistency in application and enforcement of the Building Code. Please verify acceptance of this amendment with your local building department prior to its application.

CODE REFERENCE (S):

2013 CRC Section R403.1.3

ISSUE (S):

Modify Section R403.1.3 by adding wording to the first sentence of the first paragraph to specify the minimum amount of longitudinal reinforcing, to read:

R403.1.3 Seismic reinforcing. Concrete footings located in Seismic Design Categories D₀, D₁ and D₂, as established in Table R301.2(1), shall have minimum reinforcement of at least two continuous longitudinal reinforcing bars, one top and one bottom and not smaller than No. 4 bars. Bottom reinforcement shall be located a minimum of 3 inches (76 mm) clear from the bottom of the footing.

In Seismic Design Categories D₀, D₁ and D₂ where a construction joint is created between a concrete footing and a stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom of the footing, have a standard hook and extend a minimum of 14 inches (357 mm) into the stem wall.

In Seismic Design Categories D₀, D₁ and D₂ where a grouted masonry stem wall is supported on a concrete footing and stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom of the footing and have a standard hook.

In Seismic Design Categories D₀, D₁ and D₂ masonry stem walls without solid grout and
vertical reinforcing are not permitted.

**Exception:** In detached one- and two-family dwellings which are three stories or less in height and constructed with stud bearing walls, isolated plain concrete footings supporting columns or pedestals are permitted.

**RATIONALE:**

This proposed amendment to the CRC is made to be consistent with TUCC amendment 2 that modifies the plain concrete provisions in CBC Section 1905.1.8 and ACI 318 Section 22.10.1.

This proposed amendment addresses the problem of poor performance of plain or under-reinforced concrete footings during a seismic event. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance of plain and under-reinforced concrete footings observed in 1994 Northridge earthquake.