



Building and Safety Guidelines for Engineers and Architects Existing Foundations in Fire-Damaged Buildings... January 10, 2018

Generally, existing footings, slabs, and foundation systems in buildings destroyed by fire should not be re-used in the reconstruction of the building.

Building and Safety will not approve the re-use of existing foundations affected by fire unless a determination is made by a design professional that the foundation is appropriate for re-use and will meet all of the strength, durability and serviceability requirements of the Building Code. This determination must be documented in the form of a certification on the design professional's letterhead and submitted to Building and Safety with a report outlining any findings, limitations, and recommendations for retrofitting the foundation.

Upon request, the Ventura County Building and Safety office will review and approve, when warranted, the request for re-using an existing foundation that was previously supporting a building destroyed by fire, when properly certified.

As part of the approval process, the Building and Safety office will conduct a visual inspection of the foundation to confirm its general condition and will evaluate the soundness of the design professional's overall assessment of the foundation's condition. Building and Safety will also review any supporting documentation, analysis, and test results that support the professional's overall assessment.

The professional should exercise due care and professionalism to ensure the necessary tests and assessments are made. It is important that the foundation's existing condition is adequate, or is made to be adequate by retrofitting and repairs, as necessary to ensure that it meets all applicable State and local code requirements for strength, durability and safety in supporting the newly constructed building.

The certification must be based on sound engineering assessment, analysis, and/or testing. The foundation will not be approved for reuse without proper certification by the design professional. In particular, the professional's report must address the following conditions...

1. The compressive strength of the concrete, as determined by representative samples that have been tested in accordance with ACI, by a certified lab.
2. Any signs of rust, damage, or deleterious impacts to the reinforcing steel in footings and stem walls.
3. The overall condition of the slab to ensure that its serviceability for use as a floor is acceptable.
4. The condition of the moisture barrier, where one is present, and its relative ability at preventing moisture intrusion into habitable areas of the building.
5. The condition and feasibility of replacing steel bolts and anchors for shear connections and hold-downs, with recommendations on retrofitting methods and specifications to ensure adequate load transfer.
6. The condition of underground plumbing and electrical conduit, and identification of any repairs or retrofits needed, including patching methods and specifications for affected concrete.