

1803.5

Investigated Conditions

CHANGE TYPE: Modification

CHANGE SUMMARY: The requirements addressing the evaluation of rock materials for foundation support have been updated to be more consistent with current geotechnical engineering practice. In addition, basic requirements for providing adequate underpinning and excavations have been added.

2015 CODE: 1803.5.6 Rock Strata. Where subsurface explorations at the project site indicate variations ~~or doubtful characteristics~~ in the structure of the rock upon which foundations are to be constructed, a sufficient number of borings shall be drilled to sufficient depths to assess the competency of the rock made to a depth of not less than 10 feet (3048 mm) below the level of the foundations to provide assurance of the soundness of the foundation bed and its load-bearing capacity.

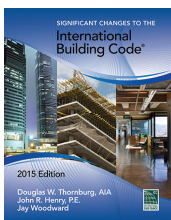
1803.5.7 Excavation Near Foundations. Where excavation will re-~~duce~~ remove lateral support from any foundation, ~~an investigation shall be conducted to assess the potential consequences and address mitigation measures.~~ a registered design professional shall prepare an assessment of the structure as determined from examination of the structure, the review of available design documents and, if necessary, the excavation of test pits. The registered design professional shall determine the requirements for underpinning and protection and prepare site-specific plans, details and sequence of work for submission. Such support may be provided by underpinning, sheeting and bracing, or by other means acceptable to the building official.



Photo Courtesy of Crux Subsurface, Inc.

Geotechnical investigation

CHANGE SIGNIFICANCE: The past wording of Section 1803.5.6 suggested that it would be possible to provide “assurance of the soundness of rock” during the geotechnical evaluation phase, which may not necessarily be the case. Unfortunately, experience has shown that even at sites where rigorous evaluation of rock conditions is undertaken, it is often determined during construction that rock conditions between the locations sampled can vary significantly. Often the actual rock conditions at foundation locations are exposed or better defined (through excavation, proof-drilling, etc.) during construction, and interpretations of the conditions exposed during the construction process are necessary to complete the design of the foundation system. The modifications to Section 1803.5.6 express the characteristics necessary to assess the rock strata and estimate a load-bearing capacity based on observations and testing. Modifications to Section 1803.5.7 provide specific guidelines to identify responsibilities and basic requirements for providing safe and adequate underpinning and excavations. New Section 1804.2 was also added to provide specific requirements when underpinning is chosen to provide support for adjacent structures.



This excerpt is taken from ***Significant Changes to the International Building Code®*, 2015 Edition.**

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