

Presented by ASCE and the Structural Engineering Institute –
Sponsored by the SEI Pittsburgh Section

Design of Anchor Bolts - A Live ASCE Webinar

Date: Wednesday, August 28, 2013

Time: 11:30 a.m. - 1:30 p.m. ET

Location: L.R. Kimball – 437 Grant St, Frick Building, Room 802

Parking: Macy's garage recommended

Cost: \$15 Members, \$25 Non-Members, Includes lunch

2 PDH's will be given for attendance

Course Description:

Design of anchor bolts used to be rather straight-forward. The building codes contained simple design formulas, and the procedures were easy to follow. To a limited degree, the latest editions of the International Building Code (IBC) continues the tradition by including a table of the allowable service load capacities for embedded bolts and a simple interaction formula for combined shear and tension. However, those capacities are very limited, and they are based on relatively large edge distances and spacing of the anchors.

For strength design, IBC references Appendix D of ACI 318, which contains a rather complex design methodology, and IBC further modifies some of its provisions. Since the introduction of Appendix D in 2002, its design approach changed drastically in every subsequent edition, attesting to the rapidly evolving state of our knowledge of the matter. Many challenges have been reported in trying to use Appendix D to design anchor bolts in practical applications.

The difficulties of meeting the new code provisions are particularly acute in metal building systems (MBS). In these ubiquitous structures the frame columns often exert significant lateral reactions on the foundations, yet the typical anchor bolt spacing and edge distances are rather small. For decades, the frame anchorage in MBS relied largely on anchor bolts designed to resist both shear and tension. Since ACI 318 Appendix D often makes this practice difficult to justify, in some cases other types of embedments must be used instead. This will lead to a major change in common practices in this area of construction. This webinar explores the complexities of the new design methodologies and explains how they affect the traditional practices of designing and placing anchor bolts. A number of alternative embedments are debated. The design examples illustrate the discussion.

PLEASE RSVP TO LINDA KAPLAN lkaplan@gfnet.com BY AUGUST 26, 2013