

Simplified Design of Concrete Buildings of Moderate Size and Height, an ACI/PCA Seminar

ONE DAY, 7.5 HOURS

Design in accordance with ACI 318, IBC, and ASCE 7

Program Content:

This seminar will focus on the design of concrete buildings of moderate size and height, in accordance with ACI 318, IBC, and ASCE 7. The purpose of this seminar is to provide civil, architectural, and structural engineers with ways to simplify design procedures, thus reducing time required to analyze, proportion, and detail small to moderate size projects, while still complying with the ACI 318, "Building Code Requirements for Structural Concrete." Various design considerations that need to be addressed in the structural design and detailing of reinforced concrete buildings will be discussed, including fire resistance, economy, and forming techniques. Numerous design examples will be presented. The examples include wind load calculations, seismic force analysis, simplified design of different slab systems, beams, columns, structural walls, and footings with emphasis on economy. Results obtained from the simplified design methods are compared with those obtained from computer programs.

The seminar is based on the newly updated book by PCA, *Simplified Design of Reinforced Concrete Buildings of Moderate Size and Height*. In addition to detailed design examples, the PCA book includes numerous time-saving design aids, graphs, and tables.

- Frame analysis
- Design of beams and one-way slabs
- Design of two-way slabs
- Design of columns
- Design of structural walls
- Design of footings
- Structural detailing of reinforcement for economy
- Design considerations for economical formwork
- Design considerations for fire resistance
- Design considerations for earthquake forces

Who should attend:

Civil, architectural, and structural engineers, building officials, and others involved with reinforced concrete buildings of moderate size and height

Instructors:

Attila Béres, Mahmoud E. Kamara, Dominic J. Kelly, Lawrence Novak, Basile G. Rabbat, Amy Reineke Trygestad

Seminar handouts:

PCA EB104, *Simplified Design of Reinforced Concrete Buildings of Moderate Size and Height*
Seminar notes authored by the Portland Cement Association



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