Troubleshooting Concrete Forming and Shoring

In-House Seminar
ONE DAY, 7.5 HOURS (7.5 PDHs/0.75 CEUs)
Minimize problems during construction process

Who should attend: Contractors and engineers

Program Content:

Forming systems
Wood wall forms, Panel forms, Gang forms, Column forms, Column-hung forms, Flying table forms, Tunnel forms, Shoring and scaffolding, Specialty systems

Forming economics
Design repetition, Dimensional standards, Dimensional consistency, Slopes for drains, Beam sizes, spandrel beams, beam-column intersections, Column shapes and sizes, PCA preliminary design guides

Loads and pressures
Lateral pressures, Vertical loads, Lateral loads, Shoring loads

Form removal and reshoring
Form removal specifications and requirements, Calculation techniques, Stripping and reshoring techniques, Reshoring example problem

Tolerances and finishes
Wall finishes (smooth form, rough form, rubbed finishes), Vertical alignment and relative alignment, Balcony drainage issues, Tolerance compatibility issues

Formed surface defects
Definitions and specifications, Honeycomb, Air voids in formed surfaces, Form streaking, Aggregate transparency, Subsidence cracking, Color variation, Sand streaking, Layer lines, Form offsets, Cold joints

Advanced topics
(some of the following topics will be included)
One-sided forming, Bracing to slabs on grade and elevated slabs, Forming overhangs (balconies), Overhanging access forms for materials and equipment, Strength rating of used materials, Wall pour size and joint location, Shrinkage trips, SCC formwork basics, Mudsill settlement, Formwork failures, Form liners, Free fall and concrete splatter on reinforcing steel

Learning Objectives:
• Learn how to economically design formwork to meet dimensional standards and consistency, and how to utilize design repetition for beams and columns.
• Recognize formed surface defects and methods to prevent surface defects.
• Identify available forming systems, including wood wall, panel, gang, column forms, and which types of systems are more suitable for various construction processes.
• Understand the loads and pressures on formwork.

Instructors:
Two industry experts will present this seminar.

Related Documents:
To expand attendees knowledge, ACI In-House Seminar customers may purchase multiple copies of related documents at 50% off the regular price.
• Guide to Formwork for Concrete (ACI 347)
• Guide for Shoring/Reshoring of Concrete Multistory Buildings (ACI 347.2R)
• Specifications for Tolerances for Concrete Construction and Materials and Commentary (ACI 117)
• Identification and Control of Visible Effects of Consolidation on Formed Concrete Surfaces (ACI 309.2R)
• Guide to Cast-in-Place Architectural Concrete Practice (ACI 303R)

Up to 40 copies of the presentation slides included. Additional copies can be purchased.

ACI is an approved education provider for AIA and ICC.