

Concrete Slabs-On-Ground

ONE DAY, 7.5 HOURS

Learn to design, specify, and build quality concrete floors

Program Content:

- **Introduction**
 - Seminar objectives
- **Soil Support Systems**
 - Design considerations
 - Desirable properties
 - Post-tensioning—expansive soils
 - Vapor transmission control
- **Concrete Materials Analysis**
 - Desirable characteristics for slabs-on-ground
 - Beyond strength and *w/cm*
 - Optimizing aggregate gradation
 - Controlling shrinkage
 - Pozzolans and admixtures
- **Curling of Joints and Cracks**
 - Causes
 - Effects of design, materials, and construction
 - Minimizing or eliminating curling
- **Slab System Design**
 - Thickness design methods
 - ACI 360 slab type selection
 - Portland Cement Association
 - Wire Reinforcing Institute
 - Post-Tensioning Institute
 - Corps of Engineers
 - Shrinkage-compensating concrete
- **Slab-on-Ground Reinforcing**
 - Why reinforce slabs and pavements?
 - Current quantity calculations
 - Fiber reinforcing
- **Joint Detailing and Load Transfer**
 - Joint types and application
 - Round, square, plate, and diamond dowels
 - Dowel alignment systems
- **Floor Surface Flatness and Levelness**
 - F-Numbers, straightedge, and other systems
 - Random traffic
 - Defined traffic (“Superflat” tolerances)
 - Construction techniques to achieve flat floors
- **Curing and Surface Treatments**
 - Liquid surface treatments
 - Dry shake hardeners
 - Moist versus membrane cures
 - Special finishes
- **Problems**
 - Recognition, causes, prevention

Who should attend:

Specifiers, architects, contractors, building owners, government agencies, and all others seeking the most up-to-date information on concrete slabs-on-ground.

Instructors:

Patrick J. Harrison, Jerry A. Holland, W. Calvin McCall, Richard E. Smith, and R. Gregory Taylor.

Seminar handouts:

Guide for Concrete Floors and Slab Construction (ACI 302.1R)
Design of Slabs-on-Ground (ACI 360R)
Course Notes authored by the instructors



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