

## 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, Arthur W. McKinney, 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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