PERSONNEL QUALIFICATIONS

F. Dirk Heidbrink | Associate Principal

EDUCATION

- Purdue University
  - Bachelor of Science, Civil Engineering, 1979
- Keller Graduate School of Management
  - Master of Business Administration, 1986

PRACTICE AREAS

- Failure Investigation
- Testing and Instrumentation
- Laboratory Testing
- Load Testing
- Nondestructive Evaluation

REGISTRATIONS

- Professional Engineer in FL and IL

PROFESSIONAL AFFILIATIONS

- American Concrete Institute
- American Society of Civil Engineers

TECHNICAL COMMITTEES

- ACI 228 - Nondestructive Testing of Concrete
- ACI 437 - Strength Evaluation of Concrete
- ACI 444 - Experimental Analysis for Concrete Structures

CONTACT

fheidbrink@wje.com
847.272.7400
www.wje.com

EXPERIENCE

Since joining WJE in 1979, Dirk Heidbrink has managed and participated in numerous instrumentation projects both in the laboratory and in the field. Project assignments have included load tests on buildings, bridges, crane structures, nuclear containment structures, and a variety of structural components. Mr. Heidbrink's major responsibilities have been in design, installation, and operation of electronic instrumentation and computer-controlled data acquisition systems.

Mr. Heidbrink also has a wide variety of experience testing construction materials in the laboratory. He has developed and implemented programs for testing various types of stone, concrete, steel, and wood and has conducted several failure investigations of copper HVAC riser tubes due to environmentally assisted cracking. Mr. Heidbrink has extensive laboratory testing experience in the areas of reinforcing bar connectors and concrete anchors. He has participated in projects involving full-scale mock-ups, investigations of bridges, buildings, and parking structures. After Hurricane Katrina, he conducted inspections of three naval shipyards, a theme park, six water treatment facilities, various churches and office buildings, and numerous residences all along the Gulf coast. In addition, Mr. Heidbrink has investigated water and storm sewer pipes comprised of concrete, fiberglass, and corrugated metal.

REPRESENTATIVE PROJECTS

Failure Investigation

- Food Supply Warehouse - Chicago, IL: Bar joist roofing system
- Concrete Parking Structure - Minneapolis, MN

Testing and Instrumentation

- Kennedy Space Center - FL: Structural testing of the Vehicle Assembly Building facade
- Bailly Generating Station - Chesterton, IN: Computer-controlled monitoring during repair of failed cooling water pipes
- Holy Name Cathedral - Chicago, IL: Long-term health monitoring of historic church
- Balancing of six bascule bridges in the U.S. Midwest and along the East Coast

Laboratory Testing

- Structural testing of full-scale concrete sandwich wall panels
- Two High-Rise Buildings - Chicago, IL: Evaluation of copper tube failures
- Full-scale pressure testing of sixty-inch-diameter fiberglass water pipe
- Static and dynamic testing for manufacturers of mechanical and adhesive concrete anchors

Load Testing

- Historic Building - Richmond, VA: Reuse
- Wastewater Treatment Facility - Fox River Grove, IL: Upgrade
- Perry's International and Peace Memorial - Put-in-Bay, OH: Severely deteriorated plaza
- Six Elementary Schools - Chicago, IL: Verification of roof loads