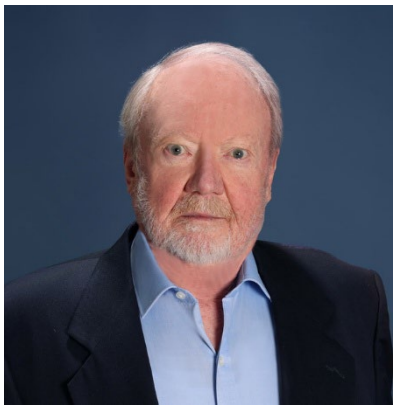
PERSONNEL QUALIFICATIONS

John Fraczek | Senior Principal



EDUCATION

- Stanford University
  - Bachelor of Science, Civil Engineering, 1968
- Cornell University
  - Doctor of Philosophy, Structural Engineering, 1975

PRACTICE AREAS

- Structural Investigation
- Failure Investigation
- Repair and Rehabilitation Design
- Materials Evaluation
- Nondestructive Testing
- Litigation Support
- Research and Testing
- Structural Analysis/Computer Modeling
- Construction Troubleshooting

REGISTRATIONS

- Professional Engineer in KY

PROFESSIONAL AFFILIATIONS

- American Concrete Institute
- Precast/Prestressed Concrete Institute
- Structural Engineers Association of Illinois

CONTACT

jfraczek@wje.com
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EXPERIENCE

John Fraczek is an expert in the resolution of design-, construction-, and materials-related structural issues. He has investigated issues with mat and deep foundations, mass concrete, and numerous reinforced and prestressed concrete structures. Dr. Fraczek also has expertise in structural steel, structural vibrations, nondestructive testing, and structural repair and rehabilitation.

Dr. Fraczek is an established author who previously served as a principal speaker in a nationwide seminar series on concrete repair and restoration. He has presented numerous lectures on structural failures, repair techniques, mass concrete, materials performance, and nondestructive testing.

He originally joined WJE in 1979 and was actively involved in in-house research on corrosion and concrete durability during the early years of his career. From 1991 to 1999, he served as the president and CEO of Construction Technology Laboratories, Inc., a 130-person concrete-materials testing and consulting firm in Skokie, Illinois. After working as an independent consultant, Dr. Fraczek rejoined WJE in 2001.

REPRESENTATIVE PROJECTS

Failure Investigation

- Morgantown, WV: Collapse investigation of hopper in coal silo
- Minneapolis, MN: Collapse investigation of falsework for Lake Street/Marshall Avenue bridge over the Mississippi River
- Dhahran, Saudi Arabia: Failure investigation of SANG precast water tower
- Various Structures - Mexico City, Mexico: Investigations after 1985 earthquake

Repair and Rehabilitation Design

- North Bend, OH, and Steubenville, OH: Repair of cooling sections of natural draft cooling towers
- Calvert City, KY: Design of new foundation and seismic retrofits for large liquid retention structure
- Procter & Gamble Headquarters - Mexico City, Mexico: Design of seismic strengthening for beam/column joints

Materials Evaluation

- Evaluation and repair of concrete piers and bridge girders subjected to alkali-silica reactivity and delayed ettringite formation
- Evaluation of concrete durability issues associated with cooling towers at power plants
- Evaluation of cracking in concrete bridge decks
- Evaluation of mix designs for mass concrete

Research and Testing

- National Cooperative Highway Research Program Report No. 313: Corrosion Protection of Prestressing Systems in Concrete Bridges

Structural Analysis/Computer Modeling

- Henderson, NV: Review analysis and construction of world's largest Venturi meter
- Minneapolis, MN: Modeling of collapse of falsework for Lake Street/Marshall Avenue bridge
- Review analysis of collapse of desulfurization platform in steel mill
- Denver, CO: Probabilistic analysis of effects of large clay inclusions in airfield pavement
- Dallas, TX: Finite element modeling of cold joints in chimney mat foundation
- Finite element modeling of effects of voids at CIDH pile/navigation lock interface