

Flora A. Calabrese | Associate Principal



EDUCATION

- University of Illinois at Urbana-Champaign
 - Bachelor of Science, Civil Engineering, 1987
 - Master of Science, Structural Engineering, 1990

PRACTICE AREAS

- Construction Troubleshooting
- Structural Design
- Structural Evaluation
- Repair and Rehabilitation Design

REGISTRATIONS

- Structural Engineer in IL and SC

PROFESSIONAL AFFILIATIONS

- American Concrete Institute (ACI)

TECHNICAL COMMITTEES

- ACI Committee 435 - Deflections, voting member

CONTACT

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EXPERIENCE

Flora Calabrese is experienced in the evaluation and repair design of concrete, concrete masonry, and steel structures. She specializes in the condition assessment of these structures related to serviceability and structural distress and deterioration caused by environmental factors, design issues, and/or construction factors. Ms. Calabrese has also designed and evaluated shoring for construction; designed load tests of existing structures; performed assessments and repair design for existing building structures, foundations, and facades; designed new bridges and culverts; and has performed peer reviews for new structures. This work has been performed for a number of structure types, including residential, office, parking structures, hospitals, and manufacturing and warehouse buildings, as well as bridges, tunnels, and sanitary structures.

Ms. Calabrese authored a chapter on formwork design and construction in the *Construction Handbook for Bridge Temporary Works* for the Federal Highway Administration. She has also coauthored a chapter in the National Park Service book *Twentieth-Century Building Material: History and Conservation*, and has lectured on the subject of concrete slab behavior.

REPRESENTATIVE PROJECTS

Construction Troubleshooting

- Elevated Train Tube at Illinois Institute of Technology - Chicago: Analysis of the effect of construction sequencing on deflections and design of shoring
- Engravers Lofts Condominiums - Chicago, IL: Design of shoring system for steel-framed structure during replacement of column footings
- Chicago Transit Authority Station at Cermak Road - IL: Contractor support during construction, including redesign of pile caps, evaluation and modifications to formwork, shoring, and connection details

Structural Design

- Cook County Domestic Violence Courthouse - Chicago, IL: Design of major modifications to a one-hundred-year-old foundation and superstructure and design of the new six-story atrium, ramp, and retaining wall structure
- CenterPoint Intermodal - Joliet, IL: Design of a steel girder vehicular bridge, a precast concrete bulb tee vehicular bridge, precast culverts, and a cast-in-place culvert
- City of Evanston - IL: Peer review of new structural designs

Structural Evaluation

- Winston Towers No. 2 Parking Structure - Chicago, IL: Evaluation of two-way slab structure with advanced concrete deterioration and loss of reinforcement and design of comprehensive structural slab rehabilitation
- New Buffalo Middle School and New Buffalo Senior High School - New Buffalo, MI: Documentation of the as-built construction of concrete masonry unit shear walls, analysis of the lateral load resisting system, and design of repairs to existing load-bearing walls
- Metropolitan Water Reclamation District - Blue Island, Glenview, and Chicago, IL: Evaluation of three reinforced concrete siphon structures, including material studies, concrete inspection, impact response testing, and assessment of corrosion rates

Repair and Rehabilitation Design

- Lutheran Home Chapel and Administrative Building - Arlington Heights, IL: Design of foundation underpinning to address settlement
- Courthouse Parking and Plaza Two-Way Slab Structure - New York, NY: Structural evaluation, design of structural modifications, and design of load testing of repaired structure
- Three-Story Precast Concrete Parking Structure - Indianapolis, IN: Evaluation of advanced concrete and reinforcement deterioration and overall condition assessment of parking structure; design of repairs; construction phase services, including resolving contractor questions and inspection of repairs