PERSONNEL QUALIFICATIONS

Hussien ElBatanouny | Associate III

EDUCATION

- Helwan University, Egypt
  - Bachelor of Science, Civil Engineering, 2017
- University of South Carolina
  - Master of Science, Civil Engineering, 2021
  - Doctor of Philosophy, Civil Engineering, 2023

PRACTICE AREAS

- Structural Analysis
- Structural Evaluation and Condition Assessment
- Repair and Rehabilitation
- Failure Investigation
- Parking Structures
- Reinforced Concrete Structures
- Steel Structures
- Nondestructive Evaluation
- Acoustic Emission Monitoring
- Litigation Support

PROFESSIONAL AFFILIATIONS

- American Concrete Institute
- Structural Engineers Association of Illinois

CONTACT

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EXPERIENCE

Since joining WJE in 2024, Hussien ElBatanouny has been involved in multiple projects involving structural investigation, analysis, and repair of existing concrete, steel, and wood structures. His projects include nondestructive testing and field assessment of structural conditions, failure damage investigations, computer and structural analyses of existing and new structures, repair design, and acoustic emission monitoring.

Prior to joining WJE, Dr. ElBatanouny worked on multiple sponsored research projects at the University of South Carolina related to development of cost-effective strengthening methods for load-posted bridges in South Carolina, applying acoustic emission monitoring and machine learning for objective condition assessment, and vehicular load prediction of channel and precast slab bridges. During this period, he authored ten peer-reviewed journal articles. He also has experience as a structural design engineer, working on the design and construction observation of new reinforced and post tensioned concrete structures.

REPRESENTATIVE PROJECTS

Structural Analysis

- ComEd Buildings: Peer-review of structural drawings and calculations
- Capitol Parking Garage - Springfield, IL: Repair design for deficient post-tensioned girders
- Magid Safety - Romeoville, IL: Wind hazard risk assessment through analysis of relevant building components
- Calcasieu Parish Judicial Complex - Lake Charles, LA: Analysis of slab-on-ground for crane loads
- Knowles Cancer Center - Elmhurst, IL: Analysis of the roof slab to withstand construction loads
- Element Hotel - Philadelphia, PA: Analysis of slab deflections for a high-rise building

Structural Evaluation and Condition Assessment

- Amazon Facilities - Fifteen US States: Evaluation and recommendation of best available refuge areas for extreme weather conditions
- 222 South Riverside Plaza - Chicago, IL: Inspection of concrete and steel deterioration above active train tracks
- Facade Anchorages - Various Locations: In situ load testing using reaction beams and chain pulls
- Union Commons Condominium - Wheeling, IL: Condition assessment of multiple wood balconies
- Kenilworth Beach Improvement Project - Kenilworth, IL: Condition assessment of underground tanks

Failure Investigation

- Condominium Building - Chicago, IL: Investigation of the root cause of a timber column failure and condition assessment of the remaining timber columns

Parking Structures

- Baxter Healthcare - Deerfield, IL: Annual parking garage inspection, repair design, and construction administration
- Sherman Plaza Parking Garage - Evanston, IL: Condition assessment of parking garage

Health Monitoring and Instrumentation

- Bal Harbour 101 Condominium - FL: Acoustic emission monitoring for multiple transfer girders