



## PERSONNEL QUALIFICATIONS

### Blake M. Andrews | Associate Director



#### EDUCATION

- Ohio University
  - Bachelor of Science, Civil Engineering, 2006
- University of Illinois at Urbana-Champaign
  - Master of Science, Civil Engineering, 2008

#### PRACTICE AREAS

- Building Envelope Assessment
- Structural Evaluation
- Structural Analysis/Computer Modeling
- Repair and Rehabilitation Design

#### REGISTRATIONS

- Structural Engineer in IL
- Professional Engineer in IL, IN, and TX

#### PROFESSIONAL AFFILIATIONS

- Precast/Prestressed Concrete Institute (PCI)

#### CONTACT

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#### EXPERIENCE

Since joining WJE in 2008, Blake Andrews has been involved in a variety of structural evaluation, analysis, and repair design projects. His experience includes behavioral characteristics and code requirements for concrete, steel, aluminum, masonry, wood, and glass materials. Mr. Andrews has analyzed numerous structures using two-dimensional and three-dimensional finite element modeling, including nonlinear behavior.

Mr. Andrews has experience with evaluation and repair of building envelopes and facades, including masonry, stone panel, concrete, and glass and aluminum curtain wall systems. His experience includes several historic buildings with limestone masonry facades in downtown Chicago, Illinois, and Paris, France.

Mr. Andrews has also evaluated a variety of cast-in-place and precast concrete structures, including buildings, bridges, parking garages, cooling towers, and foundations. Some of these projects involved field investigation and assessment of safety-related nuclear structures.

#### REPRESENTATIVE PROJECTS

##### Building Envelope Assessment

- InterContinental Hotel - Chicago, IL: Investigation and repair of parapet distress
- Westin Paris Vendôme - Paris, France: Assessment of limestone facade and concrete balconies
- 135 South LaSalle Street - Chicago, IL: Limestone facade examinations and repair period services
- Eco Sapucaí Business Tower - Rio de Janeiro, Brazil: Prepurchase inspection of high-rise building under construction
- Fairmont Hotel - Chicago, IL: Granite panel evaluation and repair

##### Structural Evaluation

- Oceanfront Condominium Complex - United States: Consulting and peer review for temporary support of existing historic structure incorporated into design of new complex
- Byron Nuclear Generating Station Hyperbolic Shell Cooling Towers - Byron, IL: Structural condition assessment of two five hundred-foot-tall natural draft cooling towers

- Indiana Toll Road - IN: Condition assessment of concrete bridge decks
- Wind Turbine Installations - Multiple Locations, United States: Review of design of concrete-spread footing foundations
- Byron Nuclear Generating Station Essential Service Water Cooling Tower - Byron, IL: Structural condition assessment of safety-related cooling tower in support of license renewal

##### Structural Analysis/Computer Modeling

- Solar Array Installation - United States: Analysis of dynamic response and structural reliability of large array of solar panel support structures subject to time-varying wind loads
- Electric Generating Station Hyperbolic Shell Natural Draft Cooling Towers - Mid-Atlantic Region: Structural evaluation and repair program development for four hundred-foot-tall natural draft cooling towers
- Precast/Prestressed Concrete Institute - Applied Research Project: Nonlinear modeling and evaluation of dapped end double-tee members
- University of Nebraska - Lincoln: Structural peer review/vibration analysis of stadium expansion
- Oak Island Bridge - Oak Island, NC: Investigation of construction collapse
- University of Guam, Leon Guerrero Building - Mangilao, Guam: Seismic evaluation

##### Repair and Rehabilitation Design

- Alamosa School Districts - Alamosa, CO: Seismic evaluation and retrofit of elementary schools
- Fenner Wind Farm - Madison County, NY: Foundation upgrade design
- Medical Campus - IL: Design of concrete wall overlay
- North Avenue Pedestrian Bridge - Chicago, IL: Deck bracing repairs
- Olympia Center - Chicago, IL: Design of point-supported glass canopy
- Larimer County Fairgrounds - Loveland, CO: Structural design of roof framing repairs