



## PERSONNEL QUALIFICATIONS

### Richard Arnold | Associate Principal



#### EDUCATION

- University of Illinois, Chicago
  - Bachelor of Science, Civil Engineering, 1979
  - Master of Science, Structural Engineering, 1986

#### PRACTICE AREAS

- Building Envelope Assessment
- Concrete Deterioration
- Field Inspection
- Masonry Deterioration
- Parking Structures
- Reinforced Concrete Structures
- Repair and Rehabilitation Design

#### REGISTRATIONS

- Professional Engineer in IL

#### PROFESSIONAL AFFILIATIONS

- American Concrete Institute (ACI)
- American Society of Civil Engineers (ASCE)

#### CONTACT

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#### EXPERIENCE

Since joining WJE in 1980, Richard Arnold has been involved in the assessment and repair of building exteriors and in investigation, analysis, assessment and repair of both structural and nonstructural building components. Much of his work has involved distressed concrete, brick masonry, terra cotta, and stone facades. Mr. Arnold has extensive experience in evaluation and repair of high-rise building facades, including more than one hundred structures nationwide. He has also performed more than fifty City of Chicago facade ordinance inspections on a range of cladding materials, including cast-in-place concrete, precast concrete, brick masonry, stone masonry, and terra cotta.

Mr. Arnold also has experience in the assessment and repair of reinforced concrete parking structures, as well as distressed steel and wood structures. His other investigative work has involved blast monitoring, vibration analysis, and earthquake damage assessment, and fire damage assessment. In addition, Mr. Arnold has conducted laboratory tests of masonry, steel, concrete, and glass structural components and assemblies.

Mr. Arnold has authored several articles on concrete and masonry behavior that have appeared in ASCE and ASTM publications and other trade magazines.

#### REPRESENTATIVE PROJECTS

##### Building Envelope Assessment

- Malibu Condominium - Chicago, IL: Concrete and masonry facade and balcony assessment and restoration, including membrane application and balcony railing replacement; pool deck assessment and restoration; roof replacement
- Thorndale Beach South Condominium, Chicago, IL: Concrete and masonry facade and balcony assessment and restoration, including membrane application and balcony railing replacement

- 850 North Lake Shore Drive - Chicago, IL: Brick, stone, terra cotta, and concrete facade repairs, and flashing and glazing repairs to 1930s building
- 3150 North Sheridan Condominium - Chicago, IL: Concrete facade and balcony assessment and restoration
- Northwestern University Ward Building - Chicago, IL: Assessment and rebuilding the stone facade of the tower
- Northwestern University Library - Evanston, IL: Limestone repair and sealant replacement
- Holiday Inn Chicago City Centre (Doubletree Hotel) - Chicago, IL: Masonry wall assessment, brick masonry, and flashing repairs
- Avenue Hotel Chicago (Hampton Inn) - Chicago, IL: Concrete wall assessment and restoration; window glazing repairs
- St. Louis City Center, St. Louis, MO: Assessment of masonry walls
- Marriot Hotel Oak Brook - Oak Brook, IL: Concrete wall assessment and restoration; glazing repairs
- Union Station - Chicago, IL: Assessment of stone facade

##### Parking Structures

- CUNA Mutual Insurance - Madison, WI: Concrete parking structure investigation, repair design, and construction monitoring for four parking structures
- Harbor Point Condominium - Chicago, IL: Concrete parking structure investigation, repair design, construction monitoring
- Thorndale Beach South Condominium - Chicago, IL: Concrete parking structure assessment, repair design, repair design, and construction monitoring
- Malibu Condominium - Chicago, IL: Concrete parking structure assessment