

Beth L. McCoy | Senior Associate



EDUCATION

- University of Oklahoma
 - Bachelor of Science, Civil Engineering, 2003
 - Master of Science, Civil Engineering, 2004
- University of Minnesota
 - Doctor of Philosophy, Civil Engineering, 2009

PRACTICE AREAS

- Concrete Structures
- Structural Metals
- Failure/Damage Investigation
- Masonry
- Wood Structures
- Nondestructive Evaluation

REGISTRATIONS

- Certified Welding Inspector
- Civil Engineer in CA
- NHI Course 130078 - Fracture Critical Inspection Techniques of Steel Bridges
- Professional Engineer in TX
- Structural Engineer in AZ and OK

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers (ASCE)
- Structural Engineers Association of Southern California (SEAOSC)

TECHNICAL COMMITTEES

- ASCE/SEI Athletic Field Lighting Standards Committee

EXPERIENCE

Beth McCoy conducts condition assessments and structural analyses, and designs repairs for steel, concrete, masonry, and wood building and non-building structures. Many of her assessments have incorporated nondestructive evaluation methods. Several of these assessments include evaluation of the foundation system and the effects of post-construction soil movements. She also has significant experience with structural analysis, including finite element analysis of structures and elements.

Prior to joining WJE, Dr. McCoy worked as a research assistant in the Multi-Axial Subassemblage Testing (MAST) Laboratory at the University of Minnesota. Her work focused on the behavior and seismic detailing of nonrectangular reinforced concrete shear walls under multidirectional lateral loads.

REPRESENTATIVE PROJECTS

Concrete Structures

- Crowne Plaza Redondo Beach Parking Structure - Redondo Beach, CA: Structural and waterproofing evaluation of multistory post-tensioned parking structure and rooftop amenity with deterioration due to long-term water leaks and chloride exposure
- Multistory Office Building and Parking Garage - Houston, TX: Evaluation of precast concrete members with deterioration due to alkali-silica reaction and delayed ettringite formation
- Multistory Office Building - Irving, TX: Evaluation and structural analysis of precast concrete tilt-up panel cracking
- Mesquite Memorial Stadium - Mesquite, TX: Structural evaluation and design of modifications to existing concrete structure in support of major renovations

Structural Metals

- Heavy Industrial Facility - Tarrant County, TX: Structural evaluation and design of repairs to steel framing damaged by equipment impact

Failure/Damage Investigation

- State Highway 332 Bridge - TX: Evaluation of steel bridge girder instability during construction
- Elementary School - North TX: Evaluation of damage following tornado
- Elementary School - Quanah, TX: Evaluation of historic masonry building and shoring design following tornado
- Hillcrest Hospital - Cushing, OK: Evaluation of damage following earthquake

Masonry

- Church - Dallas, TX: Evaluation and structural analysis of exterior masonry walls and retaining wall
- Middle School - Central TX: Evaluation of damaged historic masonry structure
- Hospital Parking Garage - Dallas, TX: Evaluation and repair design of masonry cladding

Wood Structures

- Warehouse - Commerce, CA - evaluation and repair design of damaged wood-framed roof
- Major Retail Bank - Multiple Locations, TX: In-place reinforcement of metal plate connected wood trusses
- Condominiums - Dallas, TX: Evaluation of wood studs and trusses following fire

Nondestructive Evaluation

- McKinney North High School - McKinney, TX: Nondestructive testing of recently constructed concrete slab to determine thickness and bar placement

CONTACT

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