WJE

Sarah V. Rush | Senior Associate

EDUCATION
- Michigan Technological University
  - Bachelor of Science,
    Civil Engineering, 2010
  - Master of Science,
    Civil Engineering, 2012

PRACTICE AREAS
- Failure/Damage Investigation
- Structural Analysis
- Repair and Rehabilitation
- Condition Assessment
- Facade Assessment and Repair
- Historic Preservation

REGISTRATIONS
- Professional Engineer in MI

PROFESSIONAL AFFILIATIONS
- American Concrete Institute - Greater Michigan Chapter, past president
- Post-Tensioning Institute

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EXPERIENCE
Sarah Rush has led numerous projects related to structural and architectural systems. Ms. Rush's projects include field investigation and analysis, development of technical repair and rehabilitation documents, construction period and administration services, litigation assistance, and collapse and damage assessments. Her technical focus involves concrete and masonry structures, including historic and conventional concrete, prestressed and post-tensioned concrete, and load-bearing brick masonry. Her expertise includes several structural types and materials, as well as historic masonry claddings.

REPRESENTATIVE PROJECTS

Failure/Damage Investigation
- Joe Louis Arena Parking Structure - Detroit, MI: Investigation of cause of collapse of upper-level, double-tee precast concrete beams
- Eastern Market Building - Detroit, MI: Investigation of cause of exterior mass masonry building partial collapse
- Warehouse Adaptive Reuse - Fort Wayne, IN: Development of conceptual repair approaches following collapse of historic mass masonry building; support of shoring and demolition activities and partial occupancy

Structural Analysis
- Boulevard Apartments - Detroit, MI: Investigation of cause of cracked, five-year-old post-tensioned concrete structure, analysis, and repair design documents for structural distress
- Fisher Building Entrances - Detroit, MI: Analysis, repair documents, and construction observation of historic vaulted sidewalk concrete structure deterioration
- Alden Towers Apartments - Detroit, MI: Assessment, analysis, repair documents, and construction observation of historic concrete frame deterioration and preload shoring system
- Baltimore Parking Structure - Detroit, MI: Assessment, analysis, repair documents, and construction observation of button head wires post-tensioned concrete structure deterioration

Condition Assessment
- Aretha Franklin Amphitheatre - Detroit, MI: Structural assessment of fabric structure, steel framing, and concrete substructures
- 800 Superior Parking Structure - Cleveland Township, MI: Condition assessment of post-tensioned structure to maintain occupancy and support capital improvement planning
- Detroit Public Schools - MI: Structural and building envelope assessments of 63 vacant historic school buildings
- Grand Hotel - Mackinac Island, MI: Assessment, analysis, and repair documents for multiple buildings on hotel's campus
- Nonprofit Organization - US Midwest: Structural and facade condition assessments to develop maintenance and repair plan for building portfolio

Facade Assessment and Repair
- The Kahn Building - Detroit, MI: Assessment, repair documents, and construction observation of limestone, granite, and clay brick masonry elements
- The Kales Building - Detroit, MI: Assessment of terra cotta and clay brick masonry elements to satisfy City of Detroit facade ordinance requirements; repair documents development and construction observation during stabilization/repair work
- Alden Towers Apartments - Detroit, MI: Assessment, analysis, and design repairs for nine-story, brick masonry-clad building with missing or compromised gravity and lateral load carrying elements; window replacement
- Metropolitan United Methodist Church - Detroit, MI: Assessment, repair documents, and construction observation for sandstone, granite, and brick masonry elements
- Royal Oak Public Schools - Royal Oak, MI: Assessment, repair documents, and construction observation of historic brick masonry school buildings

WJE | ENGINEERS
ARCHITECTS
MATERIALS SCIENTISTS