PERSONNEL QUALIFICATIONS

Mark R. Krueger | Principal

EDUCATION

- Michigan Technological University
  - Bachelor of Science, Civil Engineering, 1984
- Princeton University
  - Master of Science, Engineering, 1986

PRACTICE AREAS

- Damage Assessment
- Failure Investigation
- Materials Evaluation
- Repair and Rehabilitation Design
- Structural Evaluation
- Testing and Instrumentation
- Wood Testing and Analysis

REGISTRATIONS

- Professional Engineer in MI and NJ

PROFESSIONAL AFFILIATIONS

- American Concrete Institute (ACI)
- Building Owners and Managers Association (BOMA)
- International Facility Managers Association (IFMA)
- Structural Engineers Association of Michigan (SEAMi)

CONTACT

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EXPERIENCE

Since joining WJE in 1986, Mark Krueger has gained extensive experience in field and analytic assessment of new and historic structures. His expertise extends to peer review of design documents; prepurchase surveys; repair design and construction period services for parking structures and precast concrete facades; monitoring of climate, construction activity, and structural response; analysis, inspection, and load testing of wood trusses; and assessment of construction materials. Mr. Krueger has experience in the assessment of damage and the collapse of steel, wood, and masonry structures and damage from settlement, wind, explosion, earthquake, snow, vibration, tornado, impact, fire, water, and nearby construction.

Mr. Krueger has served numerous times as an expert in strength loss of fire retardant-treated wood and attic ventilation as well as structural engineering for precast concrete, pre-engineered metal buildings, and residential wood construction. He has also served as an expert in wood testing, building code issues, standard of care, construction contract administration, thermal and moisture effects in structures, construction materials issues, and underground piping failures.

REPRESENTATIVE PROJECTS

Damage Assessment

- Family Dollar - LA and MS: Hurricane Katrina storm and flood damage in multiple stores
- Detroit Music Hall - Detroit, MI: Assessment of damage from utility explosion

Failure Investigation

- Twelve Oaks Mall - Novi, MI: Floor tile bond failure repair
- Flushing High School - Flushing, MI: Fatal masonry wall collapse
- Alpinist Building - Walker, MI: Failure of underground fire service main and related damage

Materials Evaluation

- Heritage in the Hills - Auburn Hills, MI: Deterioration of concrete driveways and sidewalks
- Northern Michigan University - Marquette: Deterioration of underground concrete utility vaults

Repair and Rehabilitation Design

- University of Michigan, North Hall - Ann Arbor: Assessment and repair design for settlement distress of historic masonry
- Conner Creek Combined Sewer Overflow (CSO) - Detroit, MI: Assessment, repair design, and construction period services for underground concrete CSO conveyance structures
- Trillium Parking Deck - Northridge, CA: Assessment and design of earthquake damage repairs

Testing and Instrumentation

- Javits Convention Center - New York, NY: Monitoring of structural response with computerized system of electronic sensors
- Michigan Department of Transportation Bridge Repairs - Multiple Locations: Monitoring of construction vibrations

Wood Testing and Analysis

- Whiting Healthcare - Whiting, NJ: Assessment of strength and temperature of fire-retardant-treated wood roof framing
- Cummings Equine Center - Haslett, MI: Inspection and analysis of cause of wood roof truss collapse

TECHNICAL COMMITTEES

- 2009 Michigan Building Code Review Committee
- BOMA - Education Committee
- SEAMi - past president and Code Committee chair