

### Nicholas B. Lehmann | Senior Associate



#### EDUCATION

- Swarthmore College
  - Bachelor of Science, Engineering, 1997
- Cornell University
  - Master of Engineering, Structural Engineering, 1998

#### PRACTICE AREAS

- Collapse Investigation
- Structural Investigation
- Disaster Response
- Litigation Consulting
- Nondestructive Testing
- Construction Documents and Specifications
- Parking Structures

#### REGISTRATIONS

- Professional Engineer in PA

#### PROFESSIONAL AFFILIATIONS

- International Concrete Repair Institute (ICRI)
- American Society of Civil Engineers (ASCE)

#### CONTACT

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#### EXPERIENCE

Nicholas Lehmann is an expert in the field of structural investigation of existing infrastructure. He has investigated, analyzed, and designed repairs for hundreds of steel, concrete, timber, and masonry structures and associated systems, such as waterproofing, sealants, and expansion joints. After the events of September 11, 2001, Mr. Lehmann investigated the World Trade Center site and surrounding buildings for debris impact damage.

Mr. Lehmann has extensive experience in the investigation and repair of concrete structures. He has utilized various non-destructive methods to evaluate both modern and historic concrete structures and materials in a variety of locations and environments, including tunnels, water vessels, historic buildings, parking garages, and industrial facilities. Mr. Lehmann currently serves on the Board of Directors of the International Concrete Repair Institute, Delaware Valley Chapter, and has taught courses on concrete deterioration and repair at the University of Pennsylvania and elsewhere.

#### REPRESENTATIVE PROJECTS

##### Collapse Investigation

- World Trade Center Buildings 1, 2, 4, and 5 - New York, NY: Debris spread analysis and glass breakage analysis
- 1100 Race Street Garage - Philadelphia, PA: Investigation of partial collapse of exterior wall due to vehicle impact

##### Disaster Response

- World Trade Center - New York, NY: On-site engineering related to debris removal following September 11, 2001 terrorist attack
- Hurricane Katrina - New Orleans, LA: Investigation of hundreds of structures with flood and wind damage
- Hurricane Sandy - Various Locations in NY and NJ: Investigation of dozens of flood damaged structures

##### Nondestructive Testing

- Brooklyn Battery Tunnel - Brooklyn, NY: Measurement of five thousand half-cell potentials on the underside of the roadway slab

- Walt Whitman and Benjamin Franklin Bridges - Philadelphia, PA: Nondestructive evaluation of steel rocker/hanger pins
- City of Chester Water Storage Tanks - Chester, PA: Corrosion potential survey of reinforced concrete water storage tanks

#### Construction Documents and Specifications

- Fashion Center Parking Deck - Paramus, NJ: Investigation and design of parking deck renovation, including concrete repairs, expansion joint replacement, waterproofing, and asphalt paving
- Holiday Inn Historic District Hotel Parking Garage - Philadelphia, PA: Investigation and design of repairs to tendons in post-tensioned floor slabs
- AutoPark at Independence Mall Parking Garage - Philadelphia, PA: Investigation and design of concrete and waterproofing repairs
- Jefferson Frankford Hospital Parking Garage - Philadelphia, PA: Condition assessment, emergency repairs, exploratory probes, repair drawings and specifications of precast double tee structure
- Two Bala Plaza Parking Garage - Bala Cynwyd, PA: Condition assessment, materials testing, half-cell potentials survey, repair drawings and specifications, bid and construction period services

#### Structural Investigation

- Municipal Water Tower - Roosevelt, NJ: Investigation and design of repairs to seventy-five-year-old steel water tower
- Drexel Armory Building - Philadelphia, PA: Structural condition survey of steel-trussed roof framing
- Pencoyd Bridge - Bala Cynwyd, PA: In-depth survey of historic steel truss bridge, including ultrasonic testing, below-water investigation of pier foundations and post-flood damage assessment
- West Branch Regional Authority WWTP - Muncy, PA: Condition survey, materials testing, and repair recommendations for four precast, post-tensioned tanks
- Penn State University Water Reclamation Facility WWTP - State College, PA: Condition survey, materials testing, repair recommendations at cast-in-place water tanks