

Robert D. Kuykendall | Senior Associate



EDUCATION

- Erskine College
 - Bachelor of Science, Physics, 1996
- Georgia Institute of Technology
 - Bachelor of Mechanical Engineering, 1996
 - Master of Civil Engineering, Structural Option, 2006

PRACTICE AREAS

- Bridge Engineering
- Construction Services
- Failure Investigation
- Nondestructive Testing
- Repair and Rehabilitation Design
- Structural Analysis/Computer Modeling
- Structural Evaluation

REGISTRATIONS

- NHI Course 130078 - Fracture Critical Inspection Techniques of Steel Bridges
- Professional Engineer in GA, NC, and SC
- Structural Engineer in GA

PROFESSIONAL AFFILIATIONS

- American Institute of Steel Construction
- American Society of Civil Engineers
- American Welding Society

CONTACT

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EXPERIENCE

Robert Kuykendall joined WJE in 2006 and is experienced in structural investigation, analysis, and repair of low- and high-rise commercial structures, heavy industrial facilities, parking garages, soil retaining walls, bridges, and residential structures. These projects include structures involving reinforced concrete, post-tensioned concrete, concrete masonry, timber, steel, and carbon fiber materials. Mr. Kuykendall routinely uses nondestructive testing techniques and computer modeling for analysis of existing structures.

Prior to WJE, Mr. Kuykendall worked as a surveying project manager at a civil engineering site design firm. While an undergraduate at the Georgia Institute of Technology, Mr. Kuykendall completed cooperative work studies with a private architectural firm and with a load cell manufacturing facility.

REPRESENTATIVE PROJECTS

Bridge Engineering

- Varina-Enon Cable-Stayed Bridge - Richmond, VA: Documentation of replacement of post-tensioning tendons
- Four Bridges - Oklahoma City, OK: Remedial grouting of post-tensioning tendons
- Four Bridges - Orlando, FL: Condition assessment of post-tensioning systems
- IH-345 - Dallas, TX: Detailed fatigue assessment of 1.6 miles of twin-girder spans

Construction Services

- Palo Verde Nuclear Generating Station Water Reclamation Facility - Tonopah, AZ: Observation of installation of steel reaction frames, inspection of welds, and lifting of existing structures

Failure Investigation

- Berkman Plaza II - Jacksonville, FL: Investigation of a six-story, post-tensioned parking structure that collapsed during construction
- Precast Concrete Parking Garage - Atlanta, GA: Investigation of a collapsed bay
- 17th Street Bridge - Atlanta, GA: Investigation of collapsed architectural steel canopy structure

Nondestructive Testing

- Elevated Rail - Washington, D.C.: Weld and anchor bolt inspections using ultrasound, magnetic particle, and dye penetrant tests in steel box girders
- The Lakes III - Columbus, GA: Investigation of slab-on-ground for subgrade settlement using ground penetrating radar

Repair and Rehabilitation Design

- Concrete Masonry Retaining Wall - LaGrange, GA: Design of supplemental support and anchorage for deficient soil retaining wall
- Equipment Innovators - Marietta, GA: Design of retrofit of steel framing for an overhead crane for increased capacity
- Precast Concrete Double-Tee Beam Repairs - Various Locations: Repair of impact-damaged beams using concrete, steel, and carbon fiber-reinforced polymer materials
- Sears Crosstown - Memphis, TN: Design of lateral load retrofits for historic masonry parapets

Structural Analysis/Computer Modeling

- 155 North Lake Avenue - Pasadena, CA: Analysis of an elevated, post-tensioned, concrete slab for increased loading
- Five-Story Residential - Gainesville, FL: As-built analysis of 125,000-square-foot, timber frame structure for lateral loading

Structural Evaluation

- Major Retail Chain - Various Locations, U.S.: Investigation of steel framing connections for gravity and lateral load resistance
- Gressette Building - Columbia, SC: Investigation of a six-story office building for excessive deflection of post-tensioned concrete slabs
- Two-Story Residence - Birmingham, AL: Investigation of 13,000-square-foot, timber frame structure for design and construction defects
- Heavy Manufacturing Facility - Birmingham, AL: Investigation of tornado damage at 120,000-square-foot, steel-framed facility