PERSONNEL QUALIFICATIONS

Brian J. Santosuosso | Principal and Executive Director of Administration

MNBEDUCATION

- Lehigh University
  - Bachelor of Science, Civil Engineering, 2001
  - Master of Science, Civil Engineering, 2003

PRACTICE AREAS

- Bridge Engineering
- Collapse Investigation
- Instrumentation and Field Testing
- Nondestructive Testing
- Structural Analysis

REGISTRATIONS

- AWS Certified Welding Inspector
- Bridge Program Mgr. in IL
- INDOT Certified Bridge Inspection Team Leader
- MT NDE Level II
- NHI Course 130055 - Safety Inspection of In-Service Bridges
- NHI Course 130078 - Fracture Critical Inspection Techniques for Steel Bridges
- Professional Engineer in IN, MI, MS, NY, and OH
- Structural Engineer in IL

PROFESSIONAL AFFILIATIONS

- American Welding Society
- AREMA Technical Committee 15, Steel Structures

CONTACT

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EXPERIENCE

Since joining WJE in 2002, Brian Santosuosso has acquired extensive experience through work on projects involving fatigue and fracture of steel bridge components, including the retrofit of fatigue-sensitive details. These projects have involved fixed and movable span bridges and generally have been geared toward extending the service life of an existing structure, damage assessment and repair, or forensic investigation of a failure. Mr. Santosuosso also has experience with nondestructive test methods, including strain and displacement sensors and monitoring, ultrasonic testing, magnetic particle testing, and visual inspection.

Mr. Santosuosso's recent projects involved ultrasonic testing of pin and hanger connections, removal and replacement of steel bridge truss members under live load, repair and balancing of vertical lift and bascule bridges, and rehabilitation of fixed span and movable structures. In addition, he has performed many structural and material evaluations and condition surveys.

REPRESENTATIVE PROJECTS

Bridge Engineering

- 92nd Street Bascule Bridge East Leaf - Chicago, IL: Assessment of trunnion bearing deterioration and design of structural components, jacking scheme, and step-by-step jacking procedure for in-place trunnion refurbishment
- 92nd Street Bascule Bridge West Leaf - Chicago, IL: Assessment of rack and pinion gear interference issue and development of rehabilitation scheme; design of structural modifications to reset rack and pinion alignment and construction observation
- Boston Central Artery/Tunnel - Boston, MA: Safety inspection of more than 120 steel viaduct structures
- Central Avenue Bridge - Stickney, IL: Inspection of fatigue-sensitive details
- Chicago Skyway Bridge - Chicago, IL: Truss member replacement under traffic
- I-435 Bridge over the Missouri River - Kansas City, MO: Retrofitting of fatigue-sensitive details
- Joe Page Bridge - Hardin, IL: Rack and pinion damage investigation
- Michigan Avenue Bascule Bridge - Chicago, IL: Assessment and investigation of tail lock operational issues
- I-64 Sherman Minton Bridge - New Albany, IN: Routine, fracture critical, and in-depth inspection of main river crossing unit and approach structures; development, design, and installation of retrofits to correct steel stringer and floor beam deterioration

Instrumentation and Field Testing

- Benicia-Martinez Bridge - Martinez, CA: Development and installation of health monitoring system
- I-5 over the Columbia River - Portland, OR: Instrumentation and field testing to assess stringer cracking
- I-80 over the Missouri River - Council Bluffs, IA: Instrumentation and field testing
- I-435 over the Missouri River - Kansas City, MO: Instrumentation and field testing
- IL 100/106 over the Illinois River - Florence, IL: Balancing of vertical lift span
- Jackson Blvd Bridge - Chicago, IL: Balancing of Chicago-style bascule bridge
- Joe Page Bridge - Hardin, IL: Balancing of vertical lift span
- McDonough Street Bridge - Joliet, IL: Balancing of two leaf rolling bascule bridge
- Murray Baker Bridge - Peoria, IL: Instrumentation during bridge rehabilitation
- Wells Street Bridge - Chicago, IL: Balancing of double-deck bascule bridge supporting vehicular and CTA passenger train traffic

Nondestructive Testing

- Three Bridges in South Dakota: Ultrasonic and visual inspection of pin and hanger connections
- Twenty-Six Bridges in North Dakota: Ultrasonic and visual inspection of pin and hanger connections
- Blackhawk Bridge - Lansing, IA: Ultrasonic and visual inspection of pin and hanger connections
- Boston Central Artery/Tunnel - Boston, MA: Ultrasonic testing of High Mast Light Tower anchors
- Main Street Bridge - Jacksonville, FL: Ultrasonic testing of vertical lift span bridge trunnions