



EDUCATION

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

PRACTICE AREAS

- Bridge Engineering
- Collapse Investigation
- Nondestructive Testing
- Structural Analysis

REGISTRATIONS

- Structural Engineer in IL
- Professional Engineer in IN, MS, and OH
- Bridge Program Manager in IL
- Bridge Inspection Team Leader in IN
- AWS Certified Welding Inspector
- NHI Course 130055 - Safety Inspection of In-Service Bridges
- NHI Course 130078 - Fracture Critical Inspection Techniques for Steel Bridges

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 experience through extensive work on projects involving fatigue and fracture of steel bridge components, including the retrofit of fatigue sensitive details. Mr. Santosuosso has worked with nondestructive test methods including strain and displacement monitoring, ultrasonic testing, magnetic particle testing, and visual inspection.

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

As a graduate research assistant, Mr. Santosuosso studied lateral load distribution on composite concrete and steel bridge decks. This work included formulation and implementation of an instrumentation plan, several field tests, data reduction, and computer modeling and analysis of the structure under study.

REPRESENTATIVE PROJECTS

Bridge Engineering

- 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 - 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

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
- I-480 over the Missouri River - Omaha, NE: Instrumentation and structural evaluation
- IL 100/106 over the Illinois River - Florence, IL: Balancing of vertical lift span
- 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

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
- MWRD of Chicago - Hodgkins, IL: Ultrasonic testing of steel pressure piping