

Casey Clay | Structural and Forensic Engineer, PE

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Professional Summary:

Mr. Clay is a licensed Professional Engineer in multiple jurisdictions throughout the United States with over 19 years of engineering experience that includes forensic engineering investigations, project management and structural design of residential and commercial structures. Before joining EFI Global, Mr. Clay performed structural designs of various commercial projects, primarily based in Florida, to include mid-rise condominiums, parking garages, banks, hotels, medical office buildings, and retaining walls. Mr. Clay was also tasked as project manager for the structural design and coordination of thousands of residential homes (track, semi-custom, and custom-built homes) for many of Texas' largest homebuilders. Mr. Clay's extensive experience in both the residential and commercial construction industries provides a unique insight into forensic investigations in all types of structures.

Mr. Clay's general areas of expertise include:

- Forensic Civil/Structural Investigations
- Forensic and Failure Analysis
- Residential and Commercial Roof Investigations
- Structural Evaluations of Fire-Damaged Structures
- Natural Disaster Building Evaluations
- Seismic and Vibration Investigations
- Structural Design of Residential and Commercial Structures
- Foundation and Retaining Wall Investigations
- Collapse Evaluations and Investigations
- Moisture Intrusion Investigations

Licenses and Certifications:

Professional Engineer (Additional states available upon application):

Missouri, #2015037541

Nebraska, #E-15798

Kansas, #24669

Iowa, #23045

Texas, #112747

Oklahoma, #28777

South Carolina, #34083

Florida, #83820

Arkansas, #19601

HAAG Certified Residential Roof Inspector, ID#201605306 (Originally obtained 2016)

HAAG Certified Commercial Roof Inspector, ID#201605306 (Originally obtained 2016)

Project Experience:

The sample projects here outline a small sampling of the types of projects and losses Mr. Clay regularly investigates or has participated in past experience. For further information or additional examples, please contact EFI Global

EFI Global, Inc., Structural and Forensic Roof Investigations, Kansas, Missouri, Florida, Arkansas, South Carolina, Texas, Oklahoma, Iowa, Nebraska

Investigated over 1,000 residential and commercial structures for areas of damage or failure resulting from hailstorms, windstorms, tornadoes, earthquakes, moisture intrusions, hurricanes, floods, fires, vehicle impacts and foundation-related distress.

EFI Global, Inc., Partial Plaster Ceiling Collapse, Jefferson City, MO

Hired by insurance carrier's attorney to investigate the cause and origin of a partial plaster ceiling collapse of a church sanctuary, finding that failure originated from historic repairs due to excessive sag and deflection with sistered wood framing.

EFI Global, Inc., Partial Roof Collapse, Hamilton, MO

Investigated the cause and origin of the collapse of a multi-story building's roof, finding that failure was caused by severe deterioration in the wood of a stud pack that supported one end of the collapsed truss.

EFI Global, Inc., Truss Structural and Failure Analysis, Topeka, KS

Investigated wood trusses of multiple World War 2-era industrial buildings for structural damages related to heavy snow events and performed structural analysis and repair recommendations for continued use of the buildings.

Strand Systems Engineering, Dallas, TX

Project Manager

Project Manager for structural design, coordination, evaluation and implementation of residential structures. Coordinate structural design with architects, designers, engineers, and construction personnel in a fast-paced environment to effectively and efficiently deliver products to the client. Review shop drawings, resolve field issues and perform site investigations and evaluations. Train personnel and communicate effectively with colleagues and clients.

U.S. Army Medical Command, Pinellas Park, FL

Senior Systems Analyst

Analyze and interpret the measured resource areas of personnel, equipment on-hand, equipment serviceability, and training for U.S. Army Reserve units. Improve the processes and procedures for tracking and predicting accurate soldier and unit readiness and

resolution accountability. Research, design, and implement software programs to improve the efficiency of readiness measures utilizing a U.S. Top Secret clearance.

**Structures One, Tampa, FL
Project Structural Engineer**

Project lead engineer tasked with structural design of various commercial structures to include mid-rise condominiums, parking garages, banks, hotels, medical office buildings, and retaining walls. Coordinate projects, schedules, and design with the architect, contractors, and other engineering disciplines. Review shop drawings, resolve field issues and perform site investigations and evaluations.

Expert Witness Testimony: Court Qualifications/Depositions/Testimony:

Mr. Clay has experience testifying as an expert witness in depositions and trial.

**List of Expert Witness Testimony Experience is Available Upon Request*

Professional Experience:

EFI Global/ Unified Investigations & Sciences, Inc., Structural Forensic Engineer, 2015-Present
Strand Systems Engineering, Project Manager, 2010-2015
US Army Medical Command, Senior Systems Analyst, 2009-2010
Structures One, Inc., Project Structural Engineer, 2006-2009

Specialized Education:

Deflection Calculation of Concrete Floors, 2024
Avoiding Problems in Specifying Metal Roofing, 2024
Practical Design of Bolted and Welded Steel Connections, 2024
Lessons From Failures of Wood-Framed Structures, 2024
Investigation and Repair of Fire-Damaged Framing, 2024
Lessons From Failures of Building Envelope, 2023
Design and Construction on Expansive Soils, 2023
Basement Design and Construction, 2023
How Do Roofs Defend Against Hail Damage, 2022
Investigations of Winter Roof Failures, 2022
Engineering Investigations of Hurricane Damage: Wind vs. Water, 2022
Coastal Const, Designing the Building, 2021
Engineering Laws, Rules, and Ethics for FL PEs, 2021
Development and Enforcement of the IRC (2018), 2020
Foundation Damage and Repair Webinar, 2020
International Residential Code, 2018
Soil Mechanics, Bearing Capacity and Slope Stabilization, 2017
HAAG Certified Residential Roof Inspector, 2016
Engineered Wood Products, Truss Joist Engineered Wood Products Design & Installation, 2014

Education:

Bachelor of Science Civil Engineering (Structural Focus), North Carolina State University, Raleigh, NC, 2006

Honors and Awards:

Summit Award, Unified Investigations, 2017
Top Engineering Producer, 2023-2024

Professional Organizations (Past and Present):

National Society of Professional Engineers (NSPE)

American Society of Civil Engineers (ASCE)