
Frank D. Atwood | Senior Forensic Engineer, PE, LEED AP

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Professional Summary:

Mr. Atwood is a licensed professional engineer and certified green building accredited professional with over 24 years of experience in architectural and structural engineering. He has conducted over 4,000 forensic engineering investigations, most of which have involved structural and building envelope (roof coverings, wall cladding, windows/fenestrations) damage and/or failures. His engineering experience includes root cause studies of structural failures and collapses, moisture intrusion and condensation, soil subsidence, foundation settlement and heaving, damage assessment related to earthquake, fire, and storm events (wind, flood, snow, and ice), water testing and destructive testing of various building assemblies including wood-based siding and stucco as well as EIFS testing, design of temporary and permanent repairs for damaged structures and building envelope systems, structural framing, and foundation design and analysis. Other experience includes expert witness testimony in depositions and mediations, property condition assessment, and residential, commercial, and industrial building inspections and assessments.

Licenses and Certifications:

Professional Civil Engineer, California, C 61430

Professional Civil Engineer, Arizona, 43111

Professional Engineer, Florida, 76484

Professional Civil Engineer, Nevada, 023046

Professional Engineer, Colorado, 64398

Leadership in Energy and Environmental Design (LEED) Accredited Professional, Building Design and Construction Specialty, 10616342

Certified Level I EIFS Inspector, Level II Building Envelope Inspector, and Adhered Stone Veneer Inspector, #CA-041, Exterior Design Institute

Project Experience:

Fourth of July Yacht Club, Avalon, CA Flood Damage Investigation

Performed forensic engineering investigation of a hillside, wood-framed cabins, detached structures including restrooms and decks, and septic systems for flood damage and provided a written report of findings and recommendations.

Baumann Residence, Scottsdale, AZ Hail and Wind Damage Investigation

Performed forensic engineering investigation of a wood-framed residence for the extent of wind and hail damage and provided written reports of findings and recommendations. The roofing materials included concrete flat tile roofing at the steep sloped areas and spray polyurethane foam (SPF) roofing at the low sloped areas.

**Duke Realty Corporation, Redlands, CA
Flood Damage Investigation**

Performed forensic engineering investigation of the earth dam retaining walls and base soils for flood damage and provided written reports of findings and recommendations.

**Moeljadi Residence, Los Angeles, CA
Structural Condition Assessment**

Investigated a fire-damaged single-family wood-framed residence. Analysis of the structure included repair recommendations of the replacement of fire-damaged posts, beams, girders, and sheathing as well as wood trusses and sheathing damaged from firefighting efforts.

**Nicholas Residence, Laguna Beach, CA
Stairs Condition Evaluation**

Performed forensic engineering investigation of a single-family residence and provided a written report of findings and recommendations related to building code compliance of exterior stairs.

**Gunderson Residence, Big Bear Lake, CA
Structural Condition Assessment**

Performed structural engineering investigation of a deck collapse, structural design and calculations of a new deck structure, and provided a written report of findings and recommendations. Building featured a wood-framed deck and a portion of the residence exterior wall that were damaged by a vehicle collision.

**Rocky Hill Veterans Housing, Vacaville, CA
Construction Defect Investigation**

Performed forensic engineering investigation of an apartment complex for the assessment of construction defect damage and provided a written report of findings and repair recommendations. Investigation included testing of the refurbished shipping container systems window and roof assemblies.

**Custom Single-Family Residences, Montecito, CA
Flood Damage Investigation**

Performed structural engineering investigation of several single-family residences and detached structures for flood damage and provided written reports of findings and recommendations. Buildings consisted of wood-framed walls supported with conventionally reinforced concrete footings and slab-on-grade. Detached structures included reinforced and unreinforced retaining structures.

**Thunder Valley Casino Resort, Lincoln, CA
Construction Defect Investigation**

Performed forensic engineering investigation of a casino hotel tower for the assessment of construction defect damage and provided a written report of findings and repair recommendations. Investigation included exterior insulation and finish (EIFS) system testing of window and parapet wall assemblies of the steel-framed structure and a multistory prestressed concrete parking structure.

Maloco Residence, Montecito, CA**Construction Defect Investigation and Structural Condition Assessment**

Performed forensic engineering investigation of a custom single-family housing development for the assessment of construction defect damage and provided a written report of findings and repair recommendations and provided repair details. Investigation included stucco and masonry testing of door, deck, and exterior wall assemblies and clay tile roof testing with underlayment. Buildings featured wood-framed walls supported by conventionally reinforced concrete footings and slab-on-grade.

Sterling Homes, Roseville, CA**Construction Defect Investigation and Structural Condition Assessment**

Performed forensic engineering investigation of a single-family housing development for the assessment of construction defect damage and provided a written report of findings and repair recommendations. Investigation included stucco testing of window assemblies and concrete tile roof testing with felt underlayment and assessment of wind damage. Buildings featured wood-framed walls supported by conventionally reinforced concrete footings and slab-on-grade.

Habitat for Humanity, Pittsburg, CA**Structural Engineering Design of Single-Family Residences**

Produced structural drawings and engineering calculations for three wood-framed single-family residences and a detached carport. The structures were wood-framed with supported by reinforced concrete foundations.

Regency Park Patio, Modesto, CA**Construction Defect Investigation**

Performed forensic engineering investigation of a single-family housing development for the assessment of construction defect damage and provided a written report of findings and repair recommendations. Investigation included testing of hardboard siding wall and window assemblies. Buildings featured wood-framed walls supported by conventionally reinforced concrete footings and slab-on-grade.

Court Qualifications/ Depositions:

Litigation CV available upon request.

Professional Experience:

EFI Global, Inc., Senior Forensic Engineer, 2020 – Present

Harris & Sloan, Project Manager, 2018 – 2020

Jax Kneppers Associates, Inc., Civil Engineer and Construction Consultant, 1997 – 2018

Specialized Education:

Roof Technology and Science - II, IIBEC, 2021

Roof Technology and Science - I, IIBEC, 2020

Foundation Design, Damage and Repair, Half Moon Education, 2019

Designing for Accessibility under ADA Standards & the CBC, Half Moon Education, 2017

Significant Changes in the 2016 CBC and ACI 318-14, S.K. Ghosh, 2016

2015 Green California Schools and Colleges Summit, Green Technology, 2015

ACI 318-14: Reorganized for Design, ACI, 2015



Advanced Diaphragm – Analysis Workshop, Woodworks, 2015
Wood Solutions Fair, Woodworks, 2014
2006 IBC to the 2009 IBC Structural Provisions, S.K. Ghosh, 2011
Seismic Braced Frames – Design Concepts & Connections, AISC, 2011

Education:

Master of Science, Civil Engineering, California State University, Fullerton, California, 2011
Bachelor of Science, Civil Engineering, University of California, Los Angeles, California, 1997

Affiliations:

American Society of Civil Engineers
ASTM International