Kyle Meehan, MSCE, PE, SE | Senior Forensic Engineer

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Professional Summary:

Mr. Meehan has design and analysis experience in existing steel, concrete, and timber structures such as telecommunication towers, utility poles, water tanks, silos, and guard towers as well as existing foundation systems such as slab-on-grade foundation systems, drilled piers, mat foundations, spread footings, piles, and guy anchors. As a certified tower climber (currently expired), Mr. Meehan frequented sites to obtain information pertinent to a structural analysis or a retrofitting design, to provide post modification inspections, and/or to provide maintenance inspections. Mr. Meehan has investigative experience in root cause studies of structural failures and collapses, moisture intrusion and condensation, foundation settlement, damage assessment related to fire, storm events (hail, wind, hurricane, tornado, snow and ice), wind vs wave damage assessment, and earthquakes.

His general range of expertise includes:

- Forensic Civil/Structural Investigations
- Steel Analysis/Design/Retrofit Design/Construction Methods
- Wood Analysis/Design/Retrofit Design/Construction Methods
- Concrete Analysis/Design/Retrofit Design/Construction Methods
- Foundation Analysis/Design/Retrofit Design/Construction Methods
- Topographic Wind Speed-Up Analysis
- Seismic Analysis
- Construction Inspections
- Steel Structure Inspections
- Roof – Storm Damage Inspections

Licenses and Certifications:

Professional Engineer:

Alabama (PE), 40021
California (PE), 81654
California (SE), 6066
Florida (PE), 92670
Georgia (PE), PE046983
Georgia (SE), SE001130
Hawaii (SE), PE - 17310
Indiana (PE), PE12100166
Kentucky (PE), 26435
Louisiana (PE), PE.0045970
Mississippi (PE), 31714
Nevada (SE), 025476
North Carolina (PE), 58873
Ohio (PE), PE.86649
Oregon (SE), 88052PE
Tennessee (PE), 122011
Texas (PE), 153798
Utah (SE), 8591987-2203
Washington (SE), 49759
West Virginia, 24653

National Engineering Registration, NCEES, 12-972-01

FAA Part 107 Small Unmanned Aircraft Systems (sUAS) Remote Pilot Certification

Vale Advanced Roof Certification

Residential Earthquake Damage Assessment (REDA), California Earthquake Authority

Project Experience:

Structural Collapse Cause and Origin Investigation and Repair, KY,
Performed engineering investigations of wood-framed, masonry-framed, and steel-framed residential and commercial structures that experienced collapsed roofs, vertical gravity load bearing components, cladding, and/or foundations. Recommended structural scopes of repair required, addressed code upgrades, and/or recommended razing.

Roof Damage Assessments, CA, FL, GA, IN, KY, LA, OH, TN, WV,
Performed roof inspections of residential and commercial structures to assess storm related damage such as wind and hail activity and/or cause of moisture intrusion. Evaluations typically include the assessment of materials ranging from asphalt shingles, built up roofing (BUR), modified (asphalt) bituminous membranes, PVC (Polyvinyl Chloride), TPO (Thermoplastic Polyolefin), and EPDM (Ethylene Propylene Diene Monomer).

Tornado Damage Assessments, KY, IN
Determined the extent of structural damage caused by tornadic winds to wood-framed, masonry-framed, and steel-framed residential and commercial structures. Provided conceptual repairs required and addressed code upgrades.

Fire Damage Assessments, GA, IN, KY, OH, WV
Determined the extent of structural damage caused by a fire and/or the fire extinguishing efforts to wood-framed, steel-framed, and concrete residential and commercial structures. Provided conceptual repairs required and addressed code upgrades.

Tree Strike Assessments, CA, GA, IN, KY, TN
Assess structural impact of tree strikes at wood-framed residential and commercial structures over concrete slab, crawlspace, and basement foundations. Distinguish between impact-related damage and pre-existing foundation or framing movement. Recommend structural scopes of repairs to framing and foundation systems.

Vehicle Impact Assessments, CA, KY
Assess structural impact of vehicle strikes at wood-framed and masonry-framed residential and commercial structures over concrete slab, crawlspace, and basement foundations. Distinguish between impact-related damage and pre-existing foundation or framing movement. Recommend structural scopes of repairs to framing and foundation systems.

Flood Damage Assessments – KY, TN, WV
Asses structural impact of hydrostatic and/or hydrodynamic forces associated with flood events. Distinguish between flood-related damage and pre-existing damage. Recommend structural scopes of repairs.

Snow/Ice Damage Assessments, CA, KY, WV
Assess structural impact of excessive snow and ice accumulation on wood-framed, masonry-framed and steel-framed residential and commercial structures over concrete slab, crawlspace, and basement foundations. Distinguish between snow/ice load related damage and pre-existing damage. Recommend structural scopes of repairs to framing and foundation systems

Blast/Vibration Damage Assessments
Determined the extent of structural damage caused by vibrations induced by blasting from construction activities, terrorism, a factory explosion, and a plane crash to wood-framed, steel-framed, and concrete structures.

Foundation Installation Inspection, Bluefield, VA
Inspected and supervised complex foundation pour at a remote location on East River Mountain. Due to site constraints, a cold joint was required and designed on site during the pour.

AT&T, Verizon, T-Mobile, Sprint, Nationwide
2G, 3G, 4G, and 5G New Site Builds and Upgrades to Existing Facilities
Structural analysis and design of several thousand sites nationwide through the evolution of wireless telecommunication technologies. Structural design of upgrades to existing structures to increase structural capacity of existing facilities and to meet current building codes.

Stair and Catwalk Design, KY
Design and analysis of a proposed stair and catwalk installation at manufacturing facilities.

Blast Design, TX, LA, SC, MI
Design and analysis of blast resistant guard towers and stair structures at various nuclear facilities in accordance with the IBC and ASCE Standards and to conform design packages to meet plant standards and peer review.

Tower Assessments, AZ, CA, GA, IN, FL, KY, NM, OH, OK, TN, WA
Inspected various towers less than 500' tall and one tower more than 1000' tall. Inspected structures included monopoles, self-supporting towers, guyed towers, and rooftop structures.

Expert Witness Testimony: Court Qualifications/Depositions/Testimony:

List of Expert Witness Testimony Experience is Available Upon Request

Professional Experience:

EFI Global, Senior Forensic Engineer, 2020 - Present

Vertical Structures, Vice President - Engineering, 2017 - 2020

Vertical Structures, Structural Engineer, 2009 - 2017

Vertical Structures, Project Engineer, 2004 - 2009

Formal Education:

Master of Science, Civil Engineering, University of Kentucky, Lexington, KY, 2005

Bachelor of Science, Civil Engineering, University of Kentucky, Lexington, KY, 2003

Specialized Education/Training:

"Structural Thermal Bridging in the Building Envelope," ASCE, December 2025

"Petrographic Analysis of Concrete Deterioration," ASCE, December 2025

"Wind Design for Industrial Facilities," ASCE, December 2025

"Joints in Buildings," ASCE, December 2025

"Additional Current Day Structural Systems,", ASCE, December 2025

"Examples of Vintage to Current Day Structural Systems – Parts 1 – 3," ASCE, November-December 2025

"Success & Failures: Case Studies of Mistakes," ASCE, December 2025

"Deflection Calculation of Floors," ASCE, December 2024

"Design of Anchor Bolts in Accordance with ACI 318-19," ASCE, December 2024

"Graphics Statics – Primer on Trusses." ASCE, December 2024

"Investigation and Repair of Fire-Damaged Framing," ASCE, December 2024

"Gray Areas of Responsibility in Masonry Design," ASCE, December 2023

"ASCE 41/17 Analysis Procedure Changes,", ASCE, December 2023

"Evaluation of Building Structural Stability – A Qualitative Approach," ASCE, December 2023

"Engineering Judgment – Low-Rise Building Design and Detailing," ASCE, December 2023

"Engineering of Mid-Rise Wood Construction," ASCE, December 2023

"Design of Wood Beams and Joists," ASCE, November 2023

"ASCE 59-11 Blast Protection of Buildings – Blast-Resistant Design of Systems, and Components," ASCE, December 2022

"Structural Building Condition Surveys," ASCE, December 2022

"Flood Design for a Changing Climate," ASCE, December 2022

"Design of Foundations for Coastal Flooding", ASCE, December 2022

"Settlement Characteristics, Sources, and Movement," ASCE, December 2022

"Seismic Assessment and Strengthening of Buildings in Areas of Low to Moderate Seismicity," ASCE, December 2022

"Investigation of Winter Roof Failures – Lessons Learned," ASCE, February 2021

"Engineering Investigations of Hurricane Damage – Wind versus Water," ASCE, February 2021

"Fatigue of Welded Connections," AISC, April 2020

"Erection Bracing of Low-Rise Structural Steel Buildings," AISC, April 2020

"Vibration Analysis of Steel Joist Concrete Slab Floors," AISC, April 2020

"Building Structures w/ Fluid Viscous Dampers for Seismic," AISC, April 2020

"Serviceability Considerations," AISC, April 2020

"Designing Built-Up Flexural Members," AISC, April 2020

Specialized Education/Training (Cont'd):

"Connection Design for Moment Frames and Braced Frames – Moment Connections," AISC, February 2020

"Are You Properly Specifying Materials?" AISC, January 2020

"Building Pathology: Parapets & Decks," RedVector, November 2019

"Kinked Connections," AISC, July 2019

"Wind Design using ASCE 7-16," RedVector, October 2018

"Protecting People Against Terrorist Attacks: Design Considerations for Safe Rooms and Shelters," RedVector, October 2018

"Driven Piles: Static Analysis – Pile Groups," RedVector, October 2018

"Soils and Foundations: The Low Down on Dirt," RedVector, October 2018

"Designing Foundation Repairs," RedVector, December 2017

"Coastal Engineering: Hurricanes and Nor'easters," RedVector, December 2017

"Choosing the Best Structural Lateral Force Resisting Systerm," RedVector, December 2017

"Design of Steel Elements for Second Order Effects," RedVector, December 2017

"Seismic Equivalent Lateral Force Base Shear," RedVector, December 2017

"Welded Connections," AISC, June 2017

"A Practical Approach to Designing, Placing, and Protecting Mass Concrete," ACI, June 2017

"Weld Details," AISC, December 2015

Affiliations:

American Society of Civil Engineers (ASCE)