



Andrew Vane

PE, MBA

Senior Managing Engineer

Department

Engineering Services

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Locations

Detroit, MI

Biography

Andrew Vane is a forensic engineer with approximately 10 years of experience in various mechanical and civil/structural investigations. His forensic investigations have taken place in diverse settings, including residential, commercial, agricultural, educational, municipal, and light and heavy industrial structures. Mr. Vane has extensive experience in catastrophe response, including seven hurricanes, multiple tornado outbreaks and derecho windstorms, Midwest floods, and other severe weather events. His areas of forensic expertise include residential and commercial roof systems; water intrusion, moisture, and mold problems; structural component failures; construction defects; impact damage assessments; foundation systems; piping system failures; appliance failures; product liability/failures; door and window system failures; and other various mechanical and machinery system failures, among others. Mr. Vane's litigation support and expert witness services have included successful trials, depositions, and settlement negotiations.

Before entering the forensic field, Andrew gained more than eight years of experience in various mechanical and structural engineering design, construction, and investigative roles. From 2007 to 2013, at the General Dynamics NASSCO shipyard in San Diego, he contributed to designing, constructing, and repairing U.S. Naval ships, specializing in large machinery systems and mechanical deck equipment. From 2013 to 2015 at International Door in Canton, Michigan, he was a lead engineer and project manager in designing, fabricating, installing, and supporting large-scale, custom industrial door systems. Andrew is a licensed professional engineer in 20 states across the country and earned an MBA with a concentration in finance in 2020.

Credentials

- PE | Professional Engineer
- MBA | Masters in Business Administration

Representative Consulting Assignments

- Civil/Structural | Investigation of hail, wind, storm, and construction related damages to residential, commercial, and industrial roofing systems.
- Civil/Structural | Determination of the cause, extent, and duration of water intrusion, moisture, and mold problems.
- Civil/Structural | Determination of the cause, extent, and reparability of structural failures, construction deficiencies, and vehicle and tree impact damages to structures.
- Civil/Structural | Determination of the cause, extent, and reparability of foundation problems and failures.
- Civil/Structural | Investigation of residential and commercial window and door system failures following severe wind, tornado, and hurricane events.
- Mechanical | Investigation of piping system failures, including freeze events and building heating analyses.
- Mechanical | Investigation of residential, commercial, and industrial appliances and various mechanical and machinery system failures.

- Catastrophe | Investigation of hundreds of residential, commercial, and industrial structures for wind and flood-related damages following Gulf Coast hurricanes.
- Catastrophe | Investigation of numerous residential, commercial, and agricultural structures for wind damage following tornados and derecho wind events.
- Catastrophe | Investigation of numerous residential, commercial, and agricultural structures for flood-related damage following flood events along major rivers and lakes.
- Litigation | Expert witness in multiple civil/structural, mechanical, and catastrophe-related matters.
- Litigation | Retained as plaintiff's expert in determination of cause of commercial door system failure and resulting personal injury.

Professional Experience

- 2023 - Current | Senior Managing Engineer | YA Engineering Services
- 2019 - 2023 | Senior Forensic Engineer | Donan Engineering
- 2015 - 2019 | Forensic Engineer | Donan Engineering
- 2013 - 2015 | Lead Engineer/Project Manager | International Door
- 2009 - 2013 | Marine Mechanical Engineer | General Dynamics NASSCO
- 2007 - 2009 | Project Manager, New Construction | General Dynamics NASSCO
- 2006 - 2006 | Forensic Engineer Intern | Design Research Engineering

Area of Practice

- Building Envelope
- Condition Assessment
- Damage Assessment
- Failure Analysis
- HVAC and Mechanical Systems
- Litigation Support
- Marine Structures
- Non-Destructive Testing
- Plumbing Systems
- Roofing
- Structural Analysis
- Water Leakage Testing and Analysis

Education

- Eastern Michigan University - Master of Business Administration - Finance - Ypsilanti - Michigan
- University of Michigan - Bachelor of Science - Naval Architecture & Marine Engineering - Ann Arbor - Michigan

Licenses

- 39960-E - Alabama - Professional Engineer
- 76259 - Arizona - Professional Engineer
- M 36107 - California - Professional Engineer
- PE.0051534 - Colorado - Professional Engineer
- 81952 - Florida - Professional Engineer
- PE041703 - Georgia - Professional Engineer
- 062.067772 - Illinois - Professional Engineer

- 11500470 - Indiana - Professional Engineer
 - P25239 - Iowa - Professional Engineer
 - 35946 - Kentucky - Professional Engineer
 - 45338 - Louisiana - Professional Engineer
 - 6201060841 - Michigan - Professional Engineer
 - 60710 - Minnesota - Professional Engineer
 - 31675 - Mississippi - Professional Engineer
 - 23753 - New Mexico - Professional Engineer
 - 106934 - New York - Professional Engineer
 - 80415 - Ohio - Professional Engineer
 - 33833 - South Carolina - Professional Engineer
 - 125293 - Tennessee - Professional Engineer
 - 122559 - Texas - Professional Engineer
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